ENHANCING QUALITY AND VISIBILITY OF RESEARCH THROUGH OPEN ACCESS SCHOLARLY PUBLISHING IN SELECTED UNIVERSITIES IN KENYA

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DECLARATION

I declare that this dissertation is my original work, and as far as I am aware, it has not been presented for the award of a degree in any university.

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DEDICATION

This dissertation is dedicated to my beloved parents, Mr. & Mrs. Joseph Adika, I am grateful to my parents for instilling the value of education and all their encouragement.

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OPERATIONAL DEFINITIONS

Copyright – Refers to the absolute and transferrable lawful right, accorded to the author or creator of a work for a predetermined number of years, to reproduce, issue, act, film, or document scholarly, artistic, or melodic material (Stim, 2018).

Gold Open Access - Refers to journals that avail articles and content in open access, accessible to everyone on the internet devoid of subscription charges or sign-in (Owens & Thaw, 2022).

Green Open Access - Happens when the publisher of a paid up journal permits the author to retain the non-commercial privileges to his/her article for it to be displayed in open internet archives (Owens & Thaw, 2022).

Hybrid Open Access - Hybrid" open access portends that articles in a paid up journal may be open to everyone on the internet however other content is accessible merely by people and organizations with up to date subscriptions (Owens & Thaw, 2022).

Institutional Repositories – Are virtual archives for gathering, conserving, and publishing online scholarly work of an organization, predominantly a research organizations (Mahanta, 2021).

Open access - OA refers to unrestricted, fast, and perpetual online access to complete text of research articles for anybody, globally, devoid of firm limitations on usage usually compelled by publishers' copyright settlements (Owens & Thaw, 2022).

Open Data - Refers to data that is unreservedly utilized, used again and restructured by everyone subject only, at most, on condition to credit and share alike (Terzić & Majstorović, 2019).

Open Source Software – Refers to computer software with its foundation protocol availed and registered with a license where the exclusive rights holder gives the rights to study variation and assign the software to any person and resolve (Brown, 2017).

Self-archiving – Is a process whereby the author of a given work deposit unrestricted version of a digital work electronically so as to offer unrestricted access (Goben & Akers, 2020).

Scholarly publishing - Is the process by which investigation and extra intellectual works are founded, appraised for excellence, distributed to the intellectual society, and kept for impending use (Weingart & Taubert, 2017).

Visibility - Scholarly communication visibility refers to how exact knowledge and authored works can be revealed since they are traceable (Pinho & Diogo, 2018).

Quality - Denotes to the mark of service, outcome, consistency, protection, dependability and consumer's discernment (Summers, 2018).

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LIST OF ABBREVIATIONS AND ACRONYMS

ACCA   Association of Chartered Certified Accountants

ANT   Actor-Network Theory

BAT   British American Tobacco

BBB   Budapest, Berlin and Bethesda

BMC   Biomed Central

BOAI   Budapest Open Access Initiative

CUE   Commission for University Education

DFG   Deutsche Forschungs Gemeinschaft

DOAJ   Directory of Open Access Journal

EU   European Union

ICT   Information and Communication Technology

JISC   Joint Information Systems Committee

LOCKSS   Lots of Copies Keep Stuff Safe

MEO   Medical Education Online

MoEST   Ministry of Education Science and Technology

NJP   New Journal of Physics

OA   Open Access

OJS   Open Journal Systems

OASPA   Open Access Scholarly Publishers Association

OECD   Organisation for Economic Co-Operation & Development

PLOS   Public Library of Science

RTC   Royal Technical College

SU   Strathmore University

TUK   Technical University of Kenya

USA   United States of America

ABSTRACT

The landscape of scholarly publishing is evolving rapidly due to the influence of the Internet and open access practices, including disciplinary and institutional repositories, and open access journals. This study aimed to explore how researchers at Technical University of Kenya and Strathmore University can enhance quality and visibility of their research through open access scholarly publishing practices. The specific objectives were to: Examine the contribution of open access scholarly publishing to quality and visibility of research output by researchers at Technical University of Kenya and Strathmore University; Determine the benefits of enhancing quality and visibility of open access scholarly publishing at the Technical University of Kenya and Strathmore University; Determine the challenges faced by researchers in enhancing quality and visibility of open access scholarly publishing at the Technical University of Kenya and Strathmore University; establish how quality and visibility of scholarly publishing can be enhanced by researchers at Technical University of Kenya and Strathmore University; propose strategies to improve quality and visibility of open access scholarly publishing by researchers at Technical University of Kenya and Strathmore University.The study was guided by the Actor Network Theory and the Theory of Fair Use and utilized a convergent parallel mixed methods research design. The target population comprised 714 academic staff from Technical University of Kenya, 225 academic staff from Strathmore University, 190 postgraduate students from Technical University of Kenya, and 935 postgraduate students from Strathmore University, totaling 2064 subjects. A sample size of 324 respondents was selected using stratified random sampling. Data collection instruments included structured questionnaires and structured interviews. Quantitative data were analyzed using SPSS and presented through charts, tables, and graphs, while qualitative data were thematically analyzed and presented in narrative form. The study revealed variations in the understanding of open access scholarly publishing contributions, benefits, and challenges among graduate students and academic staff at the two universities. Open access was found to contribute to research quality and visibility through increased usage, improved decision-making, cost savings, citation impact, and greater research impact. However, challenges faced by respondents included lack of awareness, preservation issues, restrictive copyright assignments, inadequate funding, and the presence of predatory journals. Recommendations included the development of clear guidelines for promoting open access within the institutions, formulation of policies to support quality research, awareness campaigns on open access benefits, and implementation of stricter quality measures to enhance research output. Additionally, the study underscored the importance of improving support for open access publishing and fostering a culture of open access within the academic community.
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CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Today's publishing environment continues to evolve forcing the publishing industry to adjust to the prevalent transformations produced by the digital transformation over the past 10-15 years (Corti & Fielding, 2016). That notwithstanding, the right to use sufficient, contemporary scientific and technical knowledge is necessary for financial and social growth of universities in any country. The scientific and technical information analysis derives from scientific and academic research that remains validated, disseminated and communicated through publications. Access to evolving knowledge contained in current systems of scholarly publishing is becoming extremely expensive for researcher communities. The increasing number and cost of academic publications makes it difficult for Universities and their libraries to sustain the collection demands of their parent organizations (Mukherjee, 2010).

According to Kaba and Said (2015), the development of information and communication technology is not only for academics and researchers undertaking scientific research but also for the growth of world-wide science and technology knowledge base. A lot of money is devoted globally in research and development to unravel technological, scientific and social evils so as to improve our understanding of the present-day and the former (Turban et al., 2013). Statistics show that USA expenditure in research and development is 581.03 billion dollars, China 519.22 billion dollars, Japan 193.17 billion dollars, Kenya 788 million dollars, among others (Duffin, 2019). These research outcomes are disseminated in quality academic journals that are based on subscriptions or licenses. The importance of publications in the scholarly growth and

advancement of researchers is of utmost prominence to the academic community, which includes lecturers, researchers and academic librarians and students among others as this leads to improved visibility. They are important for providing solutions, hence promoting enthusiasm in the provision of library services, and as an answer to the unstable periods and environment (Ogbomo, 2010). The scholarly information setting is experiencing philosophical changes due to new technologies, permitting innovative methods of research dissemination, altering research practices and needs, with emphasis on research performance (Bailey, 2010). The Information and Communication Technologies (ICTs) in the late 20th Century had transformed into empowering citizens globally in all sectors. Sincerity in finding, processing, publication and disseminating research becomes effortlessly attainable because of the spread of ICTs and ICT-supported services (Sarkar, 2013). Democratization of information and knowledge acquires considerable stimulus, while knowledge and digital divides compelled with affirmative interventions through the inter-governmental settings (Madalli, 2015). According to Smith and Dickson (2016), conventional publishing no longer serve the interest of scholars due to unlimited access to the research outcomes, new developments in information technology, which promotes cost effective dissemination of findings and maximizes monetary and social revenues on investment in research and advancement. The significance of research cannot be overstated in academic setup. Current information and new knowledge is very important for scholars to be up-to-date in their areas of specialization, hence the dependence on scholarly journals to satisfy the need for information. The library as an information resource centre supports publications in different specialities in harmony through the drive of the mother organization. However, through the remarkable development of adaptation in several specialities, publications to be subscribed to

have multiplied. The main challenges faced by the library include rising fee of journals as well as the rigid library resources (Bawack & Nkolo, 2018).

A new concept titled "Scholarly Crisis" has emerged, libraries hither to have had to sustain the increasing needs of users despite the rising prices of journals (both hardcopy and digital) rising up, while library budgets continue to shrink (Kanjilal & Das, 2015). According to Suber (2012), open access refers to free accessibility of knowledge resources on the unrestricted online platforms, authorizing users to browse, download, reproduce, circulate, print, explore, or bond to the complete scripts of articles, scuttle them for indexing, or make use of them for legitimate reason, devoid of fiscal, lawful, or practical obstacles apart from those getting online access. In open access publishing, the constraints include reproduction and distribution, and as such the role of copyright gives authors rights over the quality of their work as well as merit to be accurately cited and acknowledged (BOAI, 2002).

Scholarly publishing

Scholarly publishing and communication refers to the process by which research as well as scholarly works are initiated, appraised to improve quality, circulated to learned population, and preserved for imminent usage (Rocco & Hatcher, 2011). The system comprises of prescribed ways of interaction, such as publishing in peer-reviewed journals and digital listservs. Intellectual exchange of ideas is a recurrent procedure where content is generated, appraised, published, assimilated, well-preserved, discovered, retrieved, and integrated for the expansion of scholarship (Dulle et al., 2013). The integration can possibly hint to the creation of new content and thus start a fresh repetition of the lifecycle process (Wang, 2019). Björk, Roos, and Lauri (2009), observed that scholars and academicians are endeavouring to publish and circulate the outcomes of their studies in authoritative journals ever since the publication of the first academic

journals namely: *Journal des Sçavans and the Philosophical Transactions of the Royal Society of London* in mid 1600s. Scholarly journals provide a platform for researchers to disseminate their research findings as well as act as a communal registry of scientific exchange of ideas.

Open access Scholalrly publishing

Open access to information is a universal phrase applied for information resources made accessible to the public for use, devoid of any limitation of subscription charge or access fees (Bawack & Nkolo, 2018). The theory of open access emphasizes two separate ways of access: human access to study, transfer, and re-use of the comprehensive script of distributed works; and digital admission to slither, index, or analyse the subject matter of articles and this actually increases visibility. Open access drive is a universal occurrence to alleviate difficulties encountered by world-wide libraries as well as research establishments linked to serials crisis. This is as a result of escalating impact of persistent increase in subscription charges of most academic journals and enormous increase of online access charges of e-journals which began in 1990s and led to decrease of subscriptions of several highly priced serials due to financial restrictions (Raju et al., 2015). OA programmes originally provided Gratis OA and afterwards Libre OA to academic literature. According to Rubow et al. (2018), there are three major types of open access namely:

Gold Open Access

Scholalrly publishing types such as Gold open access are journals where all contents are made accessible to everyone digitally devoid of any payment or sign-in (Rubow et al., 2018). Such publications are mostly sustained by their associations or financed by fees paid to the publisher or organisation to protect appraisal, structuring and archiving costs.

Green Open Access

Green open access happens as soon as the publisher of a pay to use journal permits the writer to retain the non-profitable privileges to his/her article such that it can be disseminated in open online collections. Archives can be institutional repositories like DSpace or subject-specific archives supported by academic societies(Rubow et al., 2018).

Hybrid Open Access

Hybrid open access requires that several publications in a paid up journal could be free to any person on the internet however much the rest of the subject is accessible merely to individuals and organizations through paid up subscriptions. Publication of an article in peer-reviewed journals is a major display of career repute for scholars as it fills additional obligations such as author acknowledgement, excellence check, ancient record besides archiving for the advancement of science (Rubow et al., 2018). Peer review of journals has prompted the exceptional evolution of academic peer journals.

Open Access (OA) ideas, activities and strategies hold a great influence on intellectual dissemination. Boudry and Chartron (2017), opines that information produced by way of research is a great general resource, that libraries all through have cared for knowledge, aiding inquiries to be preserved and shared. Similarly, Rubow et al. (2018) states that OA renders work extra valuable in equal means, by availing it to other individuals for use, and allowing the individuals to use and reuse it, and further observed that upon the advent of OA publishing, universities became champions of scholarly research whose impact is felt through increased access to scholarly work. This study will be done at The Technical University of Kenya and

Strathmore University in order to compare the contribution of open access to scholarly publishing in public and Private University.

1.1 Contextual Background

The study was undertaken the Technical University of Kenya and Strathmore University, a public and private institution of higher learning in Kenya

1.1.2 The Technical University of Kenya

The history of this institution dates as far back as 1961 as Kenya Technical Institute when students were relocated from tuition blocks of Royal Technical College (RTC). The Government of Kenya directly commenced the building of the Kenya Technical Institute at the current location in Nairobi central business district in three stages. Stage one 1957-1958, involved preparation and operational sketching. Undertakings of stage two involved building of administration unit, tuition block as well as availing of equipment between 1958-1959. Stage three of 1959-1960, included the building of laboratory section, workshops, roads and site work as well as supply of equipment. Later on it was renamed the Kenya Polytechnic. Afterwards, registration of The Kenya Polytechnic by the Ministry of Education followed as a tertiary learning institution on 18th January 1967 and allocated registration number 12715-registered The Kenya Polytechnic. Initially it was sanctioned to admit up to 2,075 students. Over the years, the Polytechnic has gone through notable growth in student enrolment, variety of academic courses and in overall span of operations (TUK, 2019). Since its establishment, The Kenya Polytechnic rapidly proved to be a hub of quality in educating intermediate equal labourers for Kenya and other East African nations. Kenyan government accordingly introduced the Sessional Paper No. 1 a Policy Framework for Education, Training, and Research. This paper offered for elevation of national polytechnics to train in undergraduate programs in their areas of know-how. The

elevation existed beneath the exceptional requirement that the polytechnics would nonetheless persist to extend their conventional secondary programs. The Ministry of Education initiated the process of upgrading the Polytechnic subsequent to the unveiling of the Sessional Paper in 2005. On 23rd August 2007, the Head of state of the Republic of Kenya signed the Kenya Polytechnic University College Lawful Order officially instituting the Kenya Polytechnic University College as a constituent college of the University of Nairobi. The college commenced its purpose as a university college in November 2008 after the Principal for the University College was hired. In July 2009, the Senate at the University of Nairobi ratified the first set of programs of study for the Kenya Polytechnic University College. The programmes existed in the areas of electrical and electronic engineering and comprised the Bachelor of Engineering (B. Eng.) in Electrical and Electronic Engineering, Bachelor of Technology (B.Tech.) in Electrical and Electronic Engineering Technology, and the Diploma in Technology (Dip. Tech.) in Electrical and Electronic Engineering. The College was elevated to a full university status, as the pioneer Technical University in Kenya according to the terms of the Universities Act, 2012. It was viewed as a different kind of university in Kenya, with an obligation to advance higher education and research in technology. TUK is a top-rated University in providing technological education, training, and contributing to the development of society by way of research and innovation. TUK as a higher institution of learning offers undergraduate degrees at Bachelors level as well as graduate courses at Masters and PhD levels (TUK, 2019). TUK best suits this study as it aims at supporting teaching and learning through scientific research and publishing in both subscription based and open access platforms by researchers, faculty and graduate students.

1.1.3 Strathmore University

Strathmore College began in 1961 as an Advanced-level sixth form College offering science and arts subjects by a group of experts, who created a charitable Educational Trust (now the Strathmore Educational Trust). Strathmore College was the first in Pre-independence Kenya to accommodate all races, religions and social standing. In March 1966, the college first admitted twenty-five students to pursue accountancy course. They enrolled the Sixth Form students, and commenced preparation for the examinations of the UK-based Association of Chartered Certified Accountants (ACCA). These pioneer Accountancy students were sponsored by Shell East Africa, BAT (East Africa) and the East African Breweries.

In 1986, in response to an appeal by the Trustees, Kenyan government offered 5 acres of land on Ole Sangale Road, Madaraka Estate. The European Union (EU) and the Italian Government consented to support the Madaraka Campus project. The donors were keen to support a co-educational College that would offer courses in Management and Accountancy. Building of the new campus began in September 1989. Meanwhile, in January 1991, the Information Technology Centre was started in the Lavington Campus to offer computer courses leading to the *Institute for the Management of Information Systems* Diploma and Higher Diploma. In January 1992, a Distance Learning Centre kicked off to advance correspondence courses in Accountancy to students who were incapable of attending classes. In January 1993, Strathmore College amalgamated with Kianda College and relocated to Ole Sangale Road, Madaraka Estate. In August 2002, the Commission of Higher Education awarded Strathmore a Letter of Interim Authority to operate as a University with a Faculty of Commerce and Faculty of Information Technology. In June 2007, Kenya's Commission for Higher Education consented to grant a charter to Strathmore University. The University offers all round quality education in an

environment of freedom and responsibility, research grant, moral and societal growth and service to humanity as well as to be a leading out-come driven innovative research University. Strathmore university recognises scholalrly research and scientific inventions as akey pillar of advancing change. Academic staffs and graduate students are encouraged to do research and disseminate their findings to improve the university's visibility and ranking. It is for this reason that this study was undertaken at Strathmore University.

Participant's overview

The study conducted at The Technical University of Kenya and Strathmore University focused on improving research quality and visibility through open access scholarly publishing. It involved three main participant groups: graduate students, faculty members, and researchers.

Graduate students, pursuing advanced degrees, likely contributed through research, data collection, and offering academic viewpoints on the accessibility and impact of open access publishing from a student's perspective.

Faculty members, who are academic staff involved in teaching and research, played diverse roles. They provided expertise in guiding the research, mentoring students, and offering insights into how open access publishing affects academic careers, university reputation, and the dissemination of scholarly work.

Researchers, primarily focused on conducting research in specific fields, brought in-depth knowledge, data, and experience in academic publishing. Their contributions involved discussing the advantages, challenges, benefits, and potential drawbacks of open access initiatives.

Each participant group offered unique perspectives, enriching the study with valuable insights. Their collective input helped create a comprehensive view of how open access scholarly publishing impacts research quality and visibility within the academic community, aiding in understanding the various dimensions and implications of open access publishing.

1.2 Statement of the problem

Scholarly communication involves the creation, evaluation, and dissemination of academic content, contributing to the advancement of learning. The changing landscape of scientific information includes various avenues for sharing research, such as journals and repositories (Jain et al., 2015). While electronic publication has expanded the accessibility of research, there are challenges, particularly related to open-access (OA) publishing. Many researchers aim to share their work widely for up-to-date knowledge dissemination, and OA journals are a potential option. However, issues like limited awareness, concerns about publication quality, predatory journals, and publication fees have hindered support for OA publishing (Grimaldo et al., 2018).

Predatory journals exacerbate the problem by publishing low-quality work without proper peer review and may even include plagiarized content, reducing the visibility of research. Quality and visibility are crucial factors in scholarly publishing. Quality is determined by factors like impact factor and peer review, while visibility reflects how widely a journal is read or subscribed to. A journal can have high visibility if many researchers publish or read it but may have a low reputation if it lacks quality (Grimaldo et al., 2018).

Despite the importance of quality, researchers often face difficulties in improving it, as many publishers do not adhere to standards that enhance publication quality. High-quality publications with wide dissemination receive more citations, increasing their impact, while low-quality or poorly disseminated publications have limited influence (Caon et al., 2020). This problem results

in a gap where articles may not reach their full research impact due to low quality or limited accessibility. Addressing this issue lies partly in the hands of authors and researchers, who can improve quality by selecting reputable OA journals or enhancing their work's quality before publication (Dwivedi et al., 2022). To address these challenges, this study aims to investigate how open-access scholarly publishing can enhance the quality and visibility of research publications authored by researchers at The Technical University of Kenya and Strathmore University.

1.3 Aim of the study

The aim of this study was to investigate how quality and visibility of research can be enhanced through open access scholarly publishing practices by researchers at the Technical University of Kenya and Strathmore University.

1.4 Objectives of the study

In order to achieve the general objective, the study sought to:

1. Examine the contribution of open access scholarly publishing to quality and visibility of research output by researchers at the Technical University of Kenya and Strathmore University.

2. Determine the benefits of enhancing quality and visibility of open access scholarly publishing at the Technical University of Kenya and Strathmore University.

3. Determine the challenges faced by researchers in enhancing quality and visibility of open access scholarly publishing at the Technical University of Kenya and Strathmore University.

4. Establish how quality of scholarly publishing can be enhanced by researchers to improve visibility at The Technical University of Kenya and Strathmore University.

5. Propose strategies to improve quality and visibility of open access scholarly publishing by researchers at the Technical University of Kenya and Strathmore University.

1.5 Research questions

1. What are the contributions of open access scholarly publishing to quality and visibility of research output by researchers at the Technical University of Kenya and Strathmore University?

2. What are the benefits of enhancing quality of open access scholarly publishing by researchers at the Technical University of Kenya and Strathmore University?

3. What are the challenges faced by researchers in enhancing quality and visibility of open access scholarly publishing at the Technical University of Kenya and Strathmore University?

4. How can quality of open access scholarly publishing be enhanced to increase visibility by researchers at The Technical University of Kenya and Strathmore University?

5. What strategies can be adopted to improve quality and visibility of scholarly open access publishing by researchers at The Technical University of Kenya and Strathmore University?

1.6 Assumptions of the study

This study is based on the assumption that numerous researchers encounter various challenges when publishing their scholarly work, encompassing both quality and visibility issues. The

underlying assumption of the researcher is that open access publishing enhances accessibility to scholarly content, consequently leading to increased visibility, significance, and utilization of research outputs within university settings.

1.7 Significance of the study

This study aimed to provide valuable insights to researchers and the entire university communities at both institutions regarding the positive impact of high-quality open access scholarly publishing on enhancing the visibility of the universities and their researchers. The anticipated outcomes of this research have the potential to assist universities in identifying optimal models for promoting open access scholarly publishing, thereby benefiting both academic staff and graduate students. Additionally, this research will be valuable for policymakers and decision-makers at Strathmore University, The Technical University of Kenya, and other universities in Kenya, as it will inform the development of strategies to improve the quality and visibility of research in alignment with the needs of academic staff and graduate students. Ultimately, increased provision of research works by academic staff may contribute to the enhancement of university academic databases, making them more competitive on a global scale through Institutional Repositories (IRs) and Open Access Journals (OAJ).

1.8 Scope of the study

This study was specifically conducted at The Technical University of Kenya and Strathmore University due to practical constraints. While it would have been ideal to encompass all universities in Kenya, limitations in terms of time and resources made it unfeasible to undertake such a comprehensive approach. Instead, the researcher deliberately chose these two institutions to facilitate a nuanced examination of open access scholarly publishing. The selection of these universities allowed for a focused exploration of the commonalities and distinctions in the

practices of researchers when it comes to open access publishing. Notably, this comparison was framed around the context of public and private universities in Kenya, with The Technical University of Kenya representing the public sector and Strathmore University representing the private sector.

It is crucial to acknowledge that the findings generated from this research are context-specific and applicable solely to the researchers within the selected universities. Therefore, the results should not be extrapolated to represent all universities in Kenya. Furthermore, the interpretation of these results is contingent upon the extent to which the researchers within these institutions report on the quality and visibility of their scholarly work within the domain of open access platforms.

1.9 Limitations of the study

The study had certain limitations that need to be acknowledged. Firstly, it was important to note that the concept of open access scholarly publishing is relatively new for many academic staff and graduate students. Consequently, the respondents in this study generally exhibited a lack of understanding about open access scholarly publishing and its potential benefits within an academic setting. This limitation may have influenced their responses and the depth of insights provided. Additionally, the researcher encountered challenges related to data collection due to the large number of respondents, consisting of academic staff and graduate students. The widespread remote work arrangements prompted by the Covid-19 pandemic further complicated the data collection process. In response to these challenges, the researcher took measures to mitigate their impact. This included providing clarification about the concept of open access scholarly publishing within the tools used for data collection. Moreover, the researcher

implemented a structured time schedule and scheduled appointments for the study and data collection from the respondents.

1.10 Dissemination strategy

The results and discoveries from this study will be shared with researchers and stakeholders at The Technical University of Kenya and Strathmore University through multiple avenues. Firstly, a digital copy of the research findings will be made available and uploaded to the respective institution's repository to ensure easy access for users. Additionally, these findings will be presented at the annual Information and Knowledge Management Conference. Lastly, the study's results will be published in a peer-reviewed open access journal, making them widely accessible to a broader academic audience.

1.11 Chapter Summary

Chapter one presented introduction to the study, statement of the problem, aim and objectives of the study, research questions, and assumptions of the study, significance of the study, scope and limitations of the study, dissemination strategies of the study outcome.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, an in-depth exploration and analysis of existing literature concerning open access publishing within higher education institutions, particularly universities, is undertaken. The purpose of this literature review is to enable the researcher to leverage prior research conducted by other scholars in the same or related fields. Several scholars have defined and described the concept of literature review: Gardner (2017) characterizes literature as the collective body of knowledge and works within a specific subject. Booth et al. (2022) define literature review as a comprehensive survey of scholarly sources that offers an overview of a particular topic and compiles the most relevant and significant publications related to that topic. This process aims to provide a comprehensive understanding of what has been said about the topic and by whom. Machi and McEvoy (2016) explain that a literature review involves the compilation, evaluation, and utilization of works by a researcher to classify and gather insights necessary to comprehend and investigate a research problem. Kumar (2019) highlights that a literature review underscores the existing body of work in the area of interest and establishes connections between current research outcomes and prior research. This literature review aligns with the objectives and research questions of the study. It critically examines available literature pertaining to open access publishing, emphasizing its significance and relevance in the realm of academic work.

2.2 Contribution of open access to scholarly publishing

Open access scholarly publishing has made the following contributions to scholarly publishing:

Enhancing the research process

Open access (OA) plays a crucial role in advancing research and development by ensuring unrestricted access to information resources and services. It is widely accepted that OA has a positive impact on research and development by enhancing availability, usability, efficiency, and sustainability within the scientific community (Gardner, 2017). In the realm of open literature, researchers can navigate more swiftly and efficiently. They are no longer required to invest valuable time searching for articles that may be inaccessible through their specific library. In a subscription-based model, accessing such articles often involves requests to colleagues in other institutions, correspondence with authors, or the use of inter-library borrowing agreements. In contrast, in the open access environment, access to an article is just a click away, facilitating not only the research process but also the peer review process.

Open access promotes multidisciplinary inquiries, which are becoming increasingly significant as complex issues increasingly require contributions from various fields. It encourages researchers in one domain to explore and utilize the works of others. Establishing successful interdisciplinary journals is expedited through the open access model, as the robust public demand for such journals makes it challenging to market subscription-based titles that cover a wide spectrum of scientific disciplines (Bawack & Nkolo, 2018). According to Budzinski et al., (2020), traditional, fee-based scientific publications have drawbacks, often rendering articles inaccessible to mainstream scientists in low-income and developing countries, where journal payments or one-time access fees may be unaffordable. OA publications, in which journals provide virtual access to articles at no cost, break down this barrier, allowing scholars worldwide unrestricted access to scientific and intellectual knowledge (Budzinski et al., 2020).

Visibility and usage of research output

According to Singh (2016), items in repositories or open access journals are effortlessly and instantly discoverable through network exploration using relevant keywords and can be retrieved in their entirety with a single click. Open access increases the potential for scientific outputs and thereby enhances their chances of being used Singh (2016). Open access provides the much-needed visibility for emerging global research, which has historically been hindered by limited access to established world researchers and the bias of large indexing and abstracting services towards established outputs (Kuchma, 2016). Open Access rectifies the imbalance in accessing online resources, allowing emerging researchers in the field to achieve visibility comparable to those in more prosperous and research-intensive areas (Martinez, 2016).

Impact on academic research

Open access enhances the visibility of online resources, resulting in increased usage and consequently, a greater impact on research. Substantial evidence suggests that open access can significantly boost influence through citations and usage impact. A study conducted by Lucraft et al. (2018) reveals that there have been thirty-five studies examining the academic impact of open access. Approximately 30 of these studies indicate that Open Access can increase citation impact by as much as 600% in some cases, although the average increase is around 200%. It's important to note that not all articles in open access will necessarily receive more citations, as not all articles merit citations regardless of their readership. However, open access maximizes the potential audience, ensuring that articles worthy of citation have a greater likelihood of being visible to anyone who may find a reason to reference them (Ezema & Onyancha, 2017).

Impact outside academia

Open access has a significant and valuable impact on various communities, with one notable example being its benefit to patients in accessing health research information. However, education experts, specialists, and commercial sectors also stand as potential consumers and beneficiaries of scientific research (Nunn, 2019). It's worth noting that individuals tend to consume information that is readily accessible to them. The European Union's Community Innovation Surveys, conducted periodically, recently revealed that "innovative enterprises find the information they need more easily from suppliers or customers than from universities or public research institutes"(Alquézar & Kwiatkowski, 2017). In a study focusing on the sharing of work through open access, Sanjaya and Kumar (2015) explain how Small and Medium-sized Enterprises (SMEs) provide fast, simple, and unrestricted access to scientific publications, facilitated by advanced computational technologies and the establishment of institutional repositories

2.3 Benefits of enhancing quality and visibility of open access scholarly publishing

Open access scholarly publishing offers numerous advantages, as highlighted by Allen and Mehler (2019), with one of its key benefits being the promotion of increased visibility on a global scale. The open access approach eliminates restrictions, bridging information gaps among researchers worldwide. Many of the advantages of open access publishing are intrinsically linked to the ubiquity of the internet. The internet brings all forms of virtual content to a universal or specific audience, depending on the nature of the content. Unrestricted subjects are accessible worldwide and are highly valued by global societies. Nevertheless, open access publishing also extends the potential reach and impact of disseminated research, as emphasized by (Wilson et al., 2020).

Widest possible dissemination of work

As Bailey (2017) points out, open access (OA) content is freely available online, allowing users to download, data-mine, read, store, and utilize electronic articles without the constraints of copyright or licensing limitations. This accessibility ensures that researchers worldwide can access research articles without the need for journal subscriptions. Open access licenses, such as the Creative Commons licenses, impose certain restrictions on commercial and derivative uses of OA works. There is evidence indicating that open access papers receive more citations compared to non-OA papers, as observed by (Kaba & Said, 2015).

Increased accessibility

In the realm of scientific research, access to information is not a significant concern for the majority of researchers in developed nations. In fact, there is a general belief among scholars that their access to information is gradually improving, as noted by (Jain, 2014). While unrestricted access to information tends to lead to wider dissemination, its overall impact on citation rates remains a subject of ongoing research. It is worth mentioning that the increased citation outcomes associated with greater access, as reported in several research studies, often pertain to articles that may have undergone limited assessment. Institutional repositories play a pivotal role in facilitating access to published content. Beyond this core function, many institutions have expanded the capabilities of their repositories to provide access to a broader range of information sources, including theses, dissertations, datasets, practical information, instructional resources, and other digital publications, as highlighted by (Smith & Dickson, 2016).

Increased citations

Smith and Dickson (2017), highlight that some research studies have equated the citation counts of open access (OA) articles. Many of these studies have reported higher citation numbers for OA articles, suggesting a potential 'open access citation advantage' (OACA). This phenomenon has garnered attention, leading to the creation of several notable reading lists aimed at tracking this literature (Tennant et al., 2016). However, it's important to note that the OACA is not universally accepted. Several studies supporting the concept of OACA have faced criticism on methodological grounds, with one inquiry utilizing a randomized-control trial approach failing to uncover conclusive evidence of an OACA (Basson et al., 2021). Ottaviani (2016) conducted a comprehensive study in which non-selected articles, initially subject to restrictions, were transformed into open access. This study reported a 19% OACA, highlighting that there was no discernible author selection preference for older articles, particularly beyond their primary citation years.

Increased collaborations (Institutional level and Individual level)

Scientific collaboration serves as an efficient means of accessing existing information and technologies while also allowing scholars in advanced nations to share their expertise with academicians in developing nations (Cary & Rockwell, 2020). Open access publishing plays a crucial role in facilitating global research collaboration. Open access journals, spanning various fields, not only help scholars connect more effectively but also enhance the visibility of their research (Allen & Mehler, 2019).

Increased altmetrics

Altmetrics represent how individuals engage with specific academic works (Kirchner, 2019). Networked platforms like Altmetrics.org and Altmetric.com advocate for the use of altmetrics.

The proliferation of electronic tools supporting altmetrics presents opportunities for libraries and librarians to stay current in scholarly research production practices and, in some cases, demonstrate their value to scholars in contemporary ways. The technological evolution from the 1990s to the mid-2000s, exemplified by the development of social networks and the internet, has enabled librarians to enhance open and widespread access to a multitude of scholarly works for scholars and academic communities (Dutta, 2016). The emergence and promotion of altmetrics, along with related websites, are outcomes of the evolution of communication technology, particularly in shared interactive spaces like Facebook and Twitter. Social networks provide immediate avenues for scholars to disseminate their research and offer modern methods for gauging the networked impact of academic publications, a dimension that has gained increasing significance (Dutta, 2016).

2.4 Challenges faced by researchers in enhancing quality and visibility of open access scholarly publishing

Open access is a relatively recent development, and its adoption has encountered numerous challenges. These challenges include scholars' lack of awareness regarding open access, sustainability and financial concerns, preservation issues, restrictive copyright assignments, the presence of hijacked or fake journals, and the prevalence of predatory publishers.

Lack of Awareness of Open Access

Open access initiatives are designed to benefit academics, experts, and scholars. Paradoxically, many individuals within this extensive global community remain unfamiliar with the concept of 'open access.' As Woszczynski and Whitman (2016) note, a substantial number of scholars lack awareness about open access and, consequently, have not integrated this form of publishing into their regular practices. Some authors even perceive that publications in institutional repositories

under the open access model do not receive the same recognition as those published in scholarly journals (Greussing et al., 2020).

While many authors acknowledge the significance of open access, they refrain from selecting open access journals for publishing their research articles due to the limited awareness of open access within the administrative bodies of their organizations and institutions. Most institutions still regard 'journal classification' as a key indicator of publication excellence, equating the number of publications in high-ranking journals as the standard of quality for performance evaluation (Ezema & Onyancha, 2017). These organizations often gauge their output by the number of such published works that receive support from their parent institutions in top-tier classified journals (Greussing et al., 2020).

Sustenance and Financial Matter

The primary challenge in establishing a new journal always revolves around its inception. In the case of open access journals, there is a common misconception that they are entirely free from financial implications (Woszczynski & Whitman, 2016). While open access is intended to provide open accessibility, the production of journals comes with associated costs. Gold open access typically involves charging authors publication fees. In traditional commercial journal publishing, authors used to bear the cost of publishing their articles. These journals generated revenue through publication fees and sustained their titles by advocating for subscriptions (Budzinski et al., 2020).

Journal publications are often supported by professional associations, research organizations, and foundations. For instance, the New Journal of Physics (NJP) was sustained through the Deutsche Physikalische Gesellschaft and the Institute of Physics. The German Research Foundation (Deutsche Forschungsgemeinschaft) offers formal grants to researchers seeking assistance with

publication costs. The Max Planck Society provides financial support for publications in the NJP from its central funds. The Joint Information Systems Committee (JISC) also provides financial aid for publications by British authors. Universities, university libraries, and research institutions likewise offer assistance for publication costs (Janger et al., 2019).

Preservation

Many authors express concerns about the potential loss of their ideas and hard work, while organizations worry about the accessibility and preservation of valuable information (Bulock & McAllister, 2019). There is a common anxiety about whether content might become inaccessible over time due to technological changes (Dowding, 2016). Publishers of business journals implement preservation strategies and may assign varying subscription charges for access to archived back volumes. Open access journals and repositories face the challenge of convincing potential authors and funding bodies that the content they generate will be adequately preserved for future generations. Fortunately, most preservation options are cost-free, benefiting both journals and users seeking access to content. Common methods for preserving digital content in an open access context include LOCKSS and DOAJ, which are accessible to journals without restrictions (OA for all). Another viable and unrestricted option is to deposit digital content with a trusted, financially secure, and well-equipped library. For example, BioMed Central has been archiving their digital productions with the National Library of the Netherlands since 2003.

Restrictive copyright assignments

Providers of open access content are committed to making their content freely accessible but do not impose specific copyright and licensing conditions on the open access content. It is crucial to recognize that copyright protects the rights of content creators, intermediaries, or sponsors.

Hence, authors or content creators should have the flexibility to determine what they wish to achieve with their content and which licensing options best suit their preferences.

The primary distinction between Gratis and Libre open access lies in the fact that Gratis OA removes cost barriers but not permission barriers (Allen & Mehler, 2019). While it allows free access to content without payment, it may not necessarily eliminate copyright or licensing restrictions. It provides users with free access for reading but does not grant them reuse rights. On the other hand, Libre OA not only eliminates cost barriers but also several permission barriers. It reduces certain copyright and licensing limitations and permits certain uses beyond fair use (Ezema & Onyancha, 2017). Awareness of the various licensing and constraints options helps authors choose the license that aligns with their goals. Creative Commons (CC) licenses, for example, are designed to allow authors to relinquish certain rights while retaining the ability to exercise the rights they wish to retain (Misra, 2020).

Hijacked or Fake Journals

Hijacked journals are fraudulent or counterfeit websites that mimic legitimate journals by using their titles and additional information. These deceptive websites are often created by malicious third parties who unfairly offer researchers the opportunity to quickly publish their studies online in exchange for a fee. They employ various methods to achieve this deception. For instance, if the legitimate journal has a website, cybercriminals might replicate it. These counterfeit journal websites are highly convincing and can easily deceive unsuspecting individuals (Dadkhah et al., 2016). In cases where the legitimate journal does not have a dedicated website and is available only in hard copy format, cybercriminals may establish a website and falsely claim ownership of the journal's online presence. Researchers are then lured into submitting their content to these fraudulent websites and are often required to pay author fees. Editors of legitimate journals

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typically cannot prevent the creation of these fake websites but often attempt to alert authors on the journal's genuine website (Dadkhah et al., 2016). Taking legal action against these deceptive websites is not straightforward because many of them are hosted in different countries from the legitimate journals, and financial transactions are similarly directed to bank accounts in different nations (Dadkhah et al., 2016).

Predatory Publishers

Predatory publishers are entities that disseminate fraudulent journals. The term "predatory publishers" was coined by Jeffrey Beall in 2010, and subsequently, he compiled a list of such publishers who unethically exploit the open access model for financial gain (Beall, 2016). The number of predatory journals has significantly increased since 2012, with estimates suggesting that 1%-10% of all open access content is published in such journals (Dadkhah et al., 2016). These journals misuse the author-funded gold model of open access publishing by charging fees but failing to deliver the promised publishing services in return (Dadkhah et al., 2016). They disregard established academic publishing standards and are primarily driven by profit from author fees (Beall, 2016). Some of these journals falsely claim that renowned academics are members of their editorial boards, even when these individuals have no affiliation with the journal and may not be aware of their inclusion. Occasionally, they demand fees after authors have already signed copyright transfer agreements, making it difficult to withdraw from the arrangement. These journals may also host researchers' articles on their websites without any cost or review. Additionally, they often disappear abruptly, leaving authors with no ownership of their publications and their articles vanishing from the internet (Abalkina, 2021). Predatory journals typically reach out to authors through various means, often via email, promoting the journal and requesting rapid submission of work by enticing researchers with the notion that their

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work is highly valued by this "so-called significant" journal. Due to their practice of sending unsolicited spam emails, these journals are also referred to as "spamnals" (short for spam journals). While the professional obligation to publish may drive individuals to seek journals that can quickly publish their work, reputable academic journals adhere to standards that guide their submissions and publications (Beall, 2016). Efforts to control predatory journals and establish a directory of journals that meet author standards are being made by organizations such as the Open Access Scholarly Publishers Association (OASPA) and the Directory of Open Access Journals (DOAJ), allowing authors to make informed choices before submitting their manuscripts to a journal (Da Silva et al., 2018).

2.5 How quality and visibility of scholarly publishing can be enhanced by researchers at The Technical University of Kenya and Strathmore University

Scholars disseminate their work with the hope of reaching the widest possible audience and maximizing the impact of their research. This impact can manifest as a deeper understanding of their field, enhanced collaboration across borders and institutions, the ability to secure future funding, and professional development. There is a growing demand for scholars in universities and research advocacy organizations to demonstrate the influence of their work, a requirement brought about by the expansion of research disciplines beyond the scope of individual groups and the scrutiny of funding organizations. To assess the impact and quality of research, various quality mechanisms are increasingly employed, often involving reports on publications and references in peer-reviewed journals (Dang, 2017). One commonly used metric for assessing the frequency with which a typical work in a journal is cited within a specific time frame is the impact factor (Caon, 2017). Academic libraries, which extend their support beyond formal education, play a crucial role in promoting and sustaining literacy and research development.

Consequently, libraries' collaboration and support should contribute to the enhancement of research quality. Open-access journals, by providing improved visibility, can garner global recognition and scientific impact in a shorter period (Dulle et al., 2013). Scholars can stay updated on the latest information in their field by accessing the wealth of information available through open access (Barik & Jena, 2019). The enhanced visibility offered by open access can lead to increased citation rates, thereby facilitating easier engagement with a global network of scholars (Kuchma, 2016). Open access also makes research publications more discoverable, retrievable, and valuable. In open-access journals, this heightened visibility can be leveraged to attract proposals and publicity, ultimately increasing the impact of sponsored research (Kuchma, 2016). Open access integrates indigenous research into the universal knowledge web, enhances the impact of local research, fosters new connections and research collaborations for authors, eliminates expert isolation, and strengthens markets by bolstering a robust and independent national science base (Dulle et al., 2013).

2.6 Strategies for improving quality and visibility of open access scholarly publishing

In the realm of open access scholarly publishing, there are various strategies that have been proposed to enhance its effectiveness and impact. These strategies, as outlined by Akidi et al.,(2021), encompass several key areas. Firstly, there is a call to reorganize the peer-review and publication procedures, leveraging server-side databases and software solutions. This approach aims to streamline and optimize the publishing process, making it more efficient and accessible to a broader audience. Another critical aspect involves actively involving authors in the publishing process. Authors play a pivotal role in championing open access practices and ensuring that their research is disseminated widely (Wenaas, 2022). Their engagement in promoting open access can significantly contribute to the success of this publishing model.

Academic librarians also emerge as important allies in the promotion of open access. Their expertise and appreciation of the value of open access publication make them valuable partners in advocating for and facilitating the dissemination of scholarly works. Finally, financial support is a fundamental requirement for sustaining open access initiatives. Securing funding from organizations, institutions, or government sources is crucial for the continued growth and success of open access publishing endeavors. These strategies collectively represent a multifaceted approach to improving open access scholarly publishing. They address various aspects of the publishing ecosystem, from workflow optimization to advocacy and financial sustainability. Implementing these strategies can contribute to the broader adoption and impact of open access in the academic and research communities (Kuchma, 2016).

Reorganising the peer-review and publication procedure through the help of server side databases and softwares

Beyond the cost savings associated with eliminating distribution expenses, the utilization of the internet can streamline and significantly reduce the costs and administrative burden associated with the peer review process, as noted by (Derickson, 2022). This transformation is particularly evident in the realm of medical education online (MEO), where the peer review process has been conducted online from its inception. Initially, MEO's peer review process was carried out manually through email, involving the exchange of scripts and evaluation documents as email attachments. However, a range of online software solutions designed to facilitate the peer review process and support the management of e-journals have since emerged. While many of these solutions are available for commercial use and come at a high cost, there is a notable exception—Open Journal Systems (OJS). Developed as part of the Public Knowledge Project, OJS is an easily accessible open-source system (Ndungu, 2020). In an automated peer review

system, scripts are submitted electronically via the internet, and reviewers are selected through an online process. Reviewers receive email invitations to assess specific documents and can accept the invitation electronically. Upon acceptance, they are provided with links to download the document for evaluation and are directed to a feedback web form where they can provide their responses and assessments. Throughout this process, all communication is meticulously tracked and stored in the server database. Once the review is complete, the editor has access to abstracts of individual assessments as well as a consolidated abstract summarizing all the reviews gathered for the document (Ndungu, 2020). Editors then submit their decision and comments via an online system, which is also stored in the server database along with the individual reviews. The system generates alerts to inform participating reviewers and authors of the outcomes and subsequent steps in the publication process. This digital approach to peer review not only enhances efficiency but also maintains a comprehensive record of the entire review process.

Registering the assistance of authors in the publishing practise

The peer-review process constitutes a significant aspect of journal management, involving tasks such as typesetting and copyediting of manuscripts, which can be time-consuming. One approach that can effectively reduce the workload associated with running a funded open access journal is to enlist the support of authors in handling typesetting and copyediting of their own documents, as suggested by (Singhal & Kalra, 2021). Day et al. (2020) further emphasize that income-based open access publishers have adopted this approach to efficiently control costs. They implement a specific command processing model that authors are required to follow when formatting their manuscripts. This not only reduces the journal's operational workload but also ensures that manuscripts adhere to the required formatting guidelines.

Registering support and know-how of academic librarians who appreciate the importance of open access publication

Research indicates that no group is more experienced and supportive of open access publication than academic librarians. These professionals possess extensive knowledge of the publication process, including the intricacies of indexing and archiving. Given their expertise, librarians represent a valuable resource for establishing and maintaining a sponsored open access journal. Libraries continue to develop strategies to support peer-reviewed open access journals and manuscript archives, as highlighted by (Leo, 2021).

Obtaining fiscal funding from organizations, organizations or government donations

Scientific communication stands as both a researcher's ultimate productivity and the most crucial resource for technical innovation. Open Access (OA) necessitates that the rights owner grants universal, unalterable access rights to reproduce, use, disseminate, transfer, and create copies of the works in any format for any legal purposes, while properly acknowledging the original author (Bailey, 2017). Open Access leverages Information and Communication Technology (ICT) to enhance the dissemination of research. The escalating costs of journal subscriptions remain a significant challenge in the era of the OA movement. The emergence of digitization and the internet has significantly improved the potential for providing information to anyone, anywhere, at any time, and in any format (Pahalson et al., 2021). Through Open Access, scholars and learners worldwide gain enhanced access to knowledge, publications achieve greater visibility and circulation, ultimately amplifying the potential impact of research. All of these endeavors require funding, which individual authors may not always be able to cover. In this

regard, they can seek assistance from various funding agencies, including government grants, foundations, and private organizations (Woszczynski & Whitman, 2016).

2.7 Theoretical Framework

This study drew upon two theories: Actor-Network Theory and the Theory of Fair Use. Actor-Network Theory was instrumental in explaining, predicting, and comprehending the dynamics of open access scholarly publishing, shedding light on the various actions involved in generating research-based knowledge. On the other hand, the Theory of Fair Use provided insights into the importance of utilizing scientific knowledge equitably while respecting the intellectual rights of the authors.

2.7.1 Actor-Network Theory

Actor-Network Theory (ANT) is a theoretical framework developed by French researchers Latour and Callon in the 1980s. It was originally created to better understand technological innovation, the creation of research-based knowledge, and scientific development. ANT posits that innovations are not isolated but are embedded within a network that includes both human and nonhuman participants, all of which are interconnected and integral to the innovation process (Dennehy & Conboy, 2017). One of the key concepts in ANT is "translation," which refers to the process of how systems are designed and transformed. Translation occurs in distinct stages, including problematization (defining the problem and proposing a solution), intersegmentation (involving additional actors in the proposed solution), enrollment (establishing relationships around the proposed solution), and mobilization (implementing the proposed solution) (Baxter & Fong, 2017).

ANT challenges traditional system theories that often prioritize human actors while overlooking the significance of nonhuman elements. For example, scientific journals are typically neglected in innovation studies, but ANT argues that they are crucial elements in the innovation process. According to ANT, all elements, both human and nonhuman, must be considered simultaneously in the analysis. ANT offers a relational perspective that treats technology, society, humans, and non-humans as outcomes rather than descriptive resources. In the context of scholarly publishing, ANT recognizes it as a mixed actor-network comprising various actors working together to form a complete scholarly publishing structure. ANT is particularly valuable in understanding situations where innovations thrive and where the nature of objects being considered varies, such as in scholarly publishing. It allows researchers to explore the roles of diverse actors as they network within this complex system. ANT encourages scholars to move beyond deterministic views, bridging the gap between human and nonhuman actors and considering both public and scientific processes as components of system building. In ANT, social actors do not merely impose their intentions on passive "objects," and objects themselves can influence how human actors behave. However, ANT also poses operational challenges in identifying and locating actors and actants (Shim & Shin, 2016). Nevertheless, it remains a valuable approach for studying issues and allowing actors to express themselves within complex systems. In the context of open access publishing, actors within the network can include scholars, scholarly papers, compensation methods, institutional repository technology, and library staff. Adopting ANT in research helps uncover the materiality, relationality, and uncertainty of processes involved in reshaping academic publishing. ANT provides a lens through which researchers can understand the intricate dynamics of actors and non-human elements in scholarly communication networks.
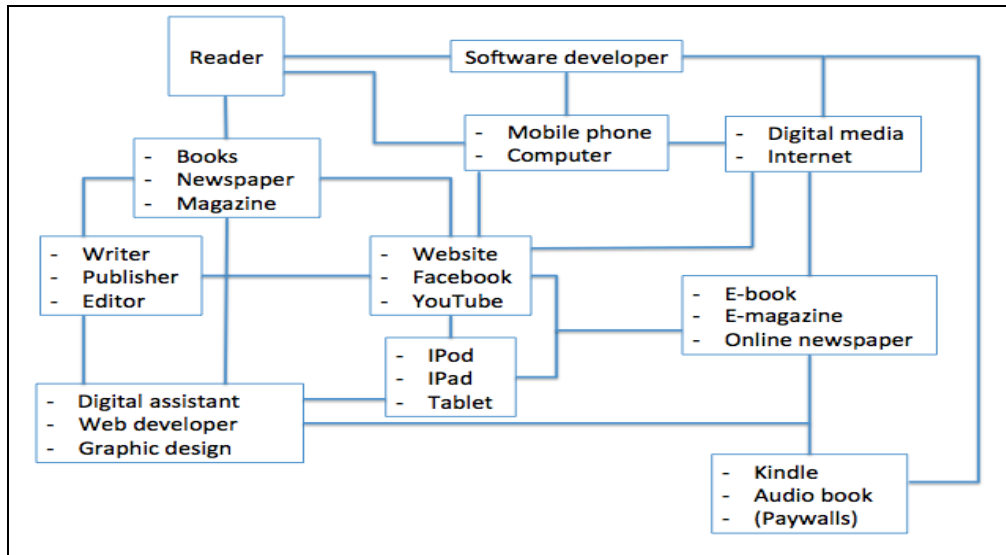
Figure 2.1: Actor Network

Source: Latour (2007)

The scholarly publishing landscape involves various actors with distinct roles, as illustrated in Figure 2.1. Researchers and academics, who are the content creators, play a crucial role not only as authors but also as readers of similar articles. They also contribute through the peer review process, while journals facilitate the dissemination of their work. Numerous entities and academic initiatives contribute to the visibility and accessibility of scholarly content. This includes journal publishers, who promote their journals through advertising and subscriber lists, as well as commercial abstracting and indexing organizations and libraries. While publishers primarily generate revenue, it can be argued that researchers and academics also benefit in terms of reputation, grants, ownership, and exposure, among other factors (Dennstedt & Koller, 2017). In this context, Actor-Network Theory (ANT) provides a valuable framework for understanding the dynamics of scholarly publishing. ANT helps us explore the intricate interactions among various actors involved in the decision-making and implementation of open access initiatives. It

offers a concrete tool to dissect the complexities of scholarly publishing by examining the roles and relationships of these diverse actors in the context of open access.

2.7.2 Theory of Fair Use

The Theory of Fair Use is a central concept in this study, grounded in the idea that it should ensure authors receive the recognition they deserve for their intellectual work. Moreover, it emphasizes the importance of rewarding diligence to enable authors to maintain control over the outcomes of their labor. For example, providing authors with full rights grants them a degree of authority and the opportunity to reap the benefits of their hard work (Aufderheide & Jaszi, 2018). Adhering to this philosophy necessitates ensuring fair compensation for authors through intricate mechanisms and robust protections for their creative works. Consequently, the primary focus of the fair use principle should revolve around upholding open rights for usages that offer the broadest and most extensive benefits to society at large. In essence, the fair use principle must permit users to engage with significant works without requiring the author's explicit consent, particularly when such uses result in substantial downstream benefits for the public (Bell & Parchomovsky, 2016).

According to Bell and Parchomovsky (2016)**,** fair use primarily applies to minor usages, where both users and authors can acknowledge the high costs associated with seeking each other out, engaging in discussions, and reaching mutual understanding. Challenging the conventional understanding of fair use implies that copyright law should be viewed as granting more extensive blocks of legal protections. This involves endowing the public with fair use rights while also granting special privileges to authors. Fair use rights should not be perceived as merely exceptional or extracted from authors' rights (Bell & Parchomovsky, 2016). Instead, it is more fitting to consider authors' rights as exceptional or set apart from the fair use license. This dual

allocation of rights to authors and licenses to users aims to support the dual objectives of recognizing authors for their content creation and fostering effective utilization of content by users (Angelopoulos, 2016). The theory of fair use underpins the promotion of equitable access, dissemination, and utilization of scholarly works, thereby contributing to enhanced respect for intellectual property.

2.8 Conceptual Framework

The conceptual framework is diagrammatically represented as shown in Figure: 2.2. It displays the relationship between independent variables, dependent variable and outcome in this study.

Independent Variables   **Dependent variable**

Figure 2.2: Conceptual Framework

2.9 Research gaps

The literature review has revealed a discernible connection between the variables being investigated. While the nature of this relationship may vary depending on the research methodology and location-specific data, there is a consistent pattern in the findings that leads to specific conclusions. Furthermore, the selection of variables for this study appears to be appropriate. However, certain gaps have been identified in the existing literature. Specifically,

there is a limited body of literature that explores strategies for enhancing the quality and visibility of research output through open access scholarly publishing.

Several studies have been reviewed as part of this literature analysis. For instance, Dulle et al. (2015) conducted a study focusing on open access scholarly publishing in public universities, but the research did not delve into the best standard practices for improving quality and visibility. Woszczynski and Whitman (2016) examined various concerns related to open access journals, including fees, quality, prestige, and impact factors. However, they did not address specific strategies for addressing these concerns to enhance the quality and visibility of open access publishing. Similarly, Smith and Dickson (2017) explored the case for open access on campus, delving into political and policy implications, library infrastructure issues, metadata standards, and research management services. Still, they did not offer insights into strategies that could be employed to improve the quality of research output in alignment with these policies. Additionally, Ezema and Onyancha (2017) concentrated on the open access environment in Africa but did not thoroughly examine the benefits of open access scholarly publishing or strategies for enhancing research quality to increase visibility.

Based on the literature reviewed, there is a noticeable absence of publications addressing best standard practices for open access scholarly publishing with a focus on enhancing quality, visibility, and the effective identification of authentic journals amidst predatory ones. Few studies have explored the challenges associated with improving the quality and visibility of open access publishing in Kenya and how to address them, particularly within the context of both public and private universities. Consequently, this study seeks to bridge these gaps by investigating methods to enhance the quality and visibility of research through open access scholarly publishing in selected Kenyan universities. The goal is to gain a deeper understanding

of the best practices and benefits associated with open access scholarly publishing while also addressing the specific challenges faced in distinguishing reputable journals from predatory ones within the Kenyan academic landscape.

Table 2. 1:Research gap matrix

Research Gap	Author & Year	Focus of Study	Study Findings
Lack of focus on best standard practices for enhancing quality and visibility in open access scholarly publishing, specifically in public universities	Dulle, (2010)	An Analysis of Open Access Scholarly Communication in Tanzanian Public Universities	Identified determinants for researchers' usage but did not delve into best practices to enhance quality and visibility in open access publishing.
Insufficient exploration of strategies to address concerns related to quality, prestige, and impact factors in open access journals	Woszczynski and Whitman (2016)	Perspectives on Open Access Opportunities for IS Research Publication: Potential Benefits for Researchers, Educators, and Students	Addressed concerns about quality, prestige, and impact factors but lacked strategies to improve quality and visibility.
Failure to address strategies that align with policies to improve the quality of research output in the context of open access on campus	Smith and Dickson (2017)	Open Access and the Future of Scholarly Communication: Policy and Infrastructure	Explored campus open access and policy implications but omitted strategies to enhance quality in line with policies.
Lack of discussion regarding the benefits of Open Access Scholarly Publishing (OASP) and strategies for enhancing the quality of research output to improve visibility, especially within the African context	Ezema and Onyancha (2017)	Status of Africa in the open access environment as well as the challenges of providing global visibility to African research outputs	Focused on slow adoption of OASP in Africa but missed addressing the benefits and strategies for improving research quality and visibility.
Failure to address Quality	Wenaas	Open Access: A	Focused on proactive approaches

Assurance Shortcomings, Mitigating Scientific Misconduct and Balancing Academic and Societal Impact:	(2022)	Change in Academic Publishing with Limited Reach?	and policies on open access and academic freedom in Norwegian Universities but fell short in fulfilling all the essential functions of academic journals, particularly in terms of certifying research quality and facilitating effective dissemination

2.10 Chapter Summary

Chapter two provided a comprehensive overview of the literature pertinent to open access scholarly publishing. It also presented the theoretical and conceptual frameworks that underpin this study and highlighted the research gaps identified through the literature review. Two prominent theories, Actor-Network Theory (ANT) and the Theory of Fair Use, were examined in relation to their applicability within the context of open access scholarly publishing. This chapter serves as a foundation for understanding the theoretical underpinnings of the study and the gaps in existing research.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology encompasses a structured approach to identifying, collecting, and evaluating data. It serves as a guide for researchers, outlining the steps and techniques employed to address the research problem effectively (Dubey & Kothari, 2022). In this chapter, we delve into the diverse methods adopted in this study, touching upon various aspects such as philosophical worldviews, research approach, design, study location, target population, sampling techniques, sample size determination, data collection tools, data collection procedures, pilot study, considerations of data validity and reliability, data acquisition methods, data analysis and presentation, and ethical considerations. This chapter provides a comprehensive overview of the research process undertaken in this study.

3.2 Research approach

Research approach encompasses the strategies and methodologies employed in a study, spanning from the initial broad hypotheses to the detailed procedures for collecting, analyzing, and interpreting data (Creswell & Creswell, 2018). It involves the overall plan for investigating a particular topic, which is guided by philosophical assumptions, the chosen research paradigm, research methods or designs, and the specific techniques for data collection and analysis dictated by the chosen design. In this study, a mixed-method research approach was adopted due to the dual nature of the data collected, which included both quantitative and qualitative data, and aimed to address the research questions comprehensively. This approach prioritized the research

questions and facilitated the systematic integration of both qualitative and quantitative data, enhancing the overall inquiry process (Creswell & Creswell, 2018).

3.3 Philosophical worldviews

A research philosophy encompasses the foundational principles that guide how data pertaining to a phenomenon should be gathered, assessed, and applied (Pring, 2015). It involves the distinction between epistemology, which deals with what is objectively proven as factual, and doxology, which concerns what is regarded as correct, and encompasses various philosophical approaches to research. In this study, a pragmatic philosophical worldview was adopted, combining elements of both positivist and interpretivist perspectives to comprehensively address and understand the research problems at hand (Saunders et al., 2019). Positivists favor scientific quantitative methods, often associated with experiments, and emphasize the need for impartial and unbiased knowledge, free from the researcher's personal values and principles. In contrast, interpretivists lean towards humanistic qualitative methods and argue that truth and knowledge are context-dependent and subjectively grounded in personal experiences and interpretations (Blaikie & Priest, 2017). It's essential to acknowledge that researchers are not entirely detached from their own values and beliefs, and these factors influenced the way data was collected, interpreted, and analyzed in this study.

3.4 Research Design

A research design encompasses the entire approach that guides the research process, from fundamental philosophical assumptions to the selection of participants, the methods of data collection, and the data analysis techniques to be employed (Creswell & Creswell, 2018). It serves as the foundation and rationale for the research, unifying all its components into a cohesive project. In this study, research was conducted in two different universities to enhance

the robustness of our research findings. To achieve this, a convergent mixed methods research design was employed, allowing simultaneously collection of both qualitative and quantitative data and analyzing them separately (Creswell & Creswell, 2018). The convergent mixed methods approach involved the collection, analysis, and interpretation of two distinct sets of data, one quantitative and one qualitative, in parallel stages. Quantitative data was collected using questionnaires and qualitative data through interviews concurrently. This design facilitated the integration of both qualitative and quantitative data, leading to a more comprehensive examination and interpretation of our research findings (Creswell & Creswell, 2018). This approach was chosen to provide a well-rounded perspective on the research questions and to enhance the overall quality of the study.

3.5 Study population

According to Leavy (2017), a population is defined as a complete group of individuals, persons, or features who share a common interest or characteristic. The target population, on the other hand, refers to the larger population from which a sample is selected. For the purposes of this study, the target population consisted of graduate students and academic staff members from both the Technical University of Kenya (TUK) and Strathmore University. Specifically, the target population encompassed a total of 2,064 subjects, comprising 714 academic staff members from TUK, 225 academic staff members from Strathmore University, 190 postgraduate students from TUK, and 935 postgraduate students from Strathmore University as shown in Table 3.1:

Table 3. 1: Population of the study

University	Category	Population
TUK	Academic staff	714
	Graduate students	190
SU	Academic staff	225
	Graduate students	935
Total		2064

3.6 Sampling techniques

Sampling techniques involve selecting a subset of entities from a larger population, with these chosen entities sharing similar characteristics with the entire group (Dubey & Kothari, 2022). In this study, the sample consisted of carefully chosen graduate students and academic staff members from both The Technical University of Kenya (TUK) and Strathmore University (SU) through a specific sampling method. The population was categorized into two primary strata, which represented TUK and SU separately. Within each of these strata, the researcher employed the stratified random sampling technique to extract samples. This technique aimed to ensure that the target population was divided into distinct subgroups, such as postgraduate students and staff members, within both TUK and SU. Subsequently, a simple random sampling approach was utilized to select respondents from each of these subgroups. By utilizing the stratified random sampling technique, the study sought to narrow down the potential samples to those that were not overly extreme. This method ensured that the entire population was well-represented in the sample, thereby enhancing the efficiency of the sampling process and reducing the potential for errors in estimation (Leavy, 2017).

3.6.1 Sample size

A sample refers to a subset of the entire population derived from a target population (Kothari, 2014). It allows the researcher to obtain findings from a fraction of the population and apply it to take a broad view of the whole population. Cochran's (2007), formula was used to obtain the sample size for this study which is given as follows: $n_0 = \frac{Z^2 pq}{e^2}$

Where: n_0 = the desired sample size (if the target population is greater than 10000).

Z = the standard normal deviation at the required confidence interval

p= Proportion in the target population with characteristics being used and q=1-p

e= the level of statistical significance set

Based on the above, the desired sample size is

$$n_0 = \frac{1.96^2(0.5)(0.5)}{0.05^2} = 384$$

Since the target population is finite and less than 10,000, the sample size obtained above can be adjusted using the following finite population correction formula for proportion.

$$n = \frac{n_0}{1 + \frac{n_0 - 1}{N}}$$

Where: n is the corrected sample size and N is the target population. Thus, the corrected sample size becomes $n = \frac{384}{1 + \frac{384 - 1}{2064}} = 324$

The respective stratum sample sizes were obtained through optimal allocation and using the following general formula and summarised in Table 3.2.

SU sample $=\frac{nN_1}{N}=\frac{324*1160}{2064}=182$. Of these, the sample size for academic staff and Graduate students were given as follows:

SU academic staff sample $=\frac{182*225}{1160}=35$

SU graduate students sample $=\frac{182*935}{1160}=147$

TUK sample $=\frac{nN_1}{N}=\frac{324*904}{2064}=142$.

TUK academic staff sample $=\frac{142*714}{904}=112$

TUK graduate students sample $=\frac{142*190}{904}=30$

Table 3.2: Sample size

University	Respondents	Population	Sample size
The Technical University of Kenya	Academic staff	714	112
	Graduate students	190	30
Strathmore University	Academic staff	225	35
	Graduate students	935	147
Total		**2064**	**324**

3.6.2 Sample frame

Strathmore University and The Technical University of Kenya were chosen as the study's focal points for examining open access scholarly publishing programs in universities. This selection aimed to enable a comprehensive analysis of open access scholarly publishing practices. By including both private (Strathmore University) and public (The Technical University of Kenya) institutions, the study sought to gain insights into the differences and similarities in open access scholarly publishing as perceived by researchers and postgraduate students from various university settings in Kenya

3.7 Data collection techniques

Data collection refers to the systematic gathering of information to support or verify specific facts. It involves the methodical collection of data related to the subjects of study, such as individuals, objects, events, and the contexts in which they occur (Creswell & Creswell, 2018). In this study, a variety of data collection techniques and sources were employed to enhance the credibility of the findings and to allow for diverse interpretations and insights to be incorporated into the data analysis process, a method known as triangulation (Flick, 2018). To collect quantitative data, structured questionnaires were administered to the participants. These questionnaires were designed to gather structured and standardized responses from the respondents. Additionally, interviews were conducted to collect qualitative data, enabling the researcher to obtain more in-depth information and allowing for follow-up questions to explore topics further (Billups, 2021).

3.7.1 Data Collection tools

Data collection tools are the instruments or methods employed to gather the necessary data or information for research purposes (Creswell et al., 2018). In this study, the data collection tools consisted of questionnaires distributed to graduate students and interview schedules conducted with academic staff. The use of an interview schedule was particularly beneficial as it ensured precision and facilitated follow-up inquiries during the collection of qualitative data.

Questionnaire

A questionnaire comprises a series of questions designed for respondents to provide individual responses, with the aim of collecting data for an investigative or numerical research study (Bryman, 2016). In this study, structured questionnaires were utilized to gather quantitative data from graduate student participants. These questionnaires consisted of closed-ended questions, with a few open-ended and Likert scale questions. The use of questionnaires offers several advantages, including ease of administration and analysis, ensuring the confidentiality of responses compared to other methods, and their suitability for studying people's knowledge, opinions, and behaviors while saving time by allowing multiple respondents to answer questions consistently and thus reducing bias (Bryman, 2016).

Interviews

An interview is a method of data collection that involves a conversation between two or more individuals (Taherdoost, 2021). It entails a direct interaction with a participant who is asked to respond to questions related to the research problem (King et al., 2019). The interview technique is highly flexible and well-suited for collecting substantial amounts of information. It allows the interviewer to capture the respondent's attention, clarify complex questions, guide the interview

process, explore issues in-depth, and probe further when necessary (Kabir, 2016). According to King et al. (2019), interviews offer several advantages in data collection, including the ability to prompt respondents by providing a set of example responses and being relatively quick and straightforward to conduct.

However, interviews also have their drawbacks. They can introduce bias depending on how questions are delivered or potential answers suggested by the investigator. Additionally, there may be limited opportunities for respondents to move beyond the predetermined questions unless prompted by the interviewer. In this study, an interview schedule was utilized to facilitate the interview process. Face-to-face interviews were conducted with academic staff members to gather data relevant to this research.

3.8 Pilot study

Before the main research project commenced, a pilot study was conducted to allow the researcher to test various aspects of the research methodology. The primary purpose of this pilot study was to identify and rectify any issues with the research tools, such as questionnaires and interviews, before implementing them in the actual study (Ullah et al., 2022). The pilot test played a crucial role in uncovering ambiguities in the questionnaires and interview protocols and in ensuring their reliability and validity. For this pilot study, the Catholic University of Eastern Africa was selected as the research organization. This choice was deliberate, as it shares similarities with the two main study organizations in its advocacy for open access scholarly publishing. Additionally, it possesses a robust ICT infrastructure that aligns with open access initiatives.

3.9 Data collection procedure

Data collection is the process of gathering information from various sources to establish specific facts (Dubey & Kothari, 2022). In this study, data collection was conducted through the use of questionnaires and interviews. To collect quantitative data, the researcher personally administered structured questionnaires to postgraduate students. The questionnaires were distributed using the drop-and-pick-later method, and an online shared Google form was also employed. This approach allowed the students sufficient time to respond to the questions at their convenience.

For the collection of qualitative data, academic staff members were interviewed using an interview schedule. The initial contact with the interviewees was made via telephone to arrange appointments, introduce the research, and explain the purpose of the interviews. This preliminary interaction was also used to schedule interview sessions. During the interviews, the researcher ensured an interactive atmosphere by allocating ample time for the interviewees to respond to the questions. Detailed notes were taken during the interviews to record the responses provided by the participants.

3.10 Data analysis and presentation

Data analysis involves the systematic application of statistical and logical methods to describe, illustrate, organize, and assess collected data (Creswell & Creswell, 2018). Various data analysis techniques can be employed to improve the inductive and deductive interpretation of the collected data. In the context of this study, the collected data was categorized into two main types: qualitative and quantitative. This categorization was done to facilitate the analysis process and ensure the clear presentation of findings.

Quantitative data

Quantitative data was gathered through the distribution of questionnaires to the respondents. Upon receiving the completed questionnaires, a thorough examination was conducted to ensure their consistency, completeness, and accuracy. The collected data was then subjected to a coding process, involving the identification and analysis of key constructs. The text was systematically segmented into analytical units, each of which was recorded and analyzed separately. For data analysis, the study employed the use of the Statistical Package for Social Sciences (SPSS) software. The analysis involved the application of both descriptive and inferential statistics. Descriptive statistics, such as frequency tables, were used to summarize the data, while inferential statistics, including cross-tabulations, were employed to draw meaningful conclusions. The results of the data analysis were presented effectively using various visual aids, including charts, tables, and graphs. This presentation approach enhanced the clarity and accessibility of the study's findings.

Qualitative data

In the qualitative data analysis process for this study, interviews served as the primary means of data collection. During these interview sessions, the researcher diligently recorded the data. Subsequently, the collected data underwent a structured analysis to extract meaningful insights and interpretations. The qualitative data analysis comprised several distinct steps, each contributing to the overall understanding of the data: *Data Collection:* Initially, qualitative data was gathered through the interview sessions. These interviews were designed to elicit responses and insights relevant to the research questions. *Data Review:* Following the completion of the interviews, the researcher conducted a comprehensive review of the recorded data. This review aimed to identify recurring themes and patterns within the qualitative responses, in line with the

guidance of Creswell and Creswell (2018). *Data Cleaning:* To ensure that the subsequent analysis focused on relevant and meaningful data, non-meaningful or extraneous information was removed. This step was guided by the research questions, helping to filter out data that did not align with the study's objectives. *Categorization and Theming*: The remaining qualitative data was organized into meaningful patterns and themes. This categorization allowed for a structured exploration of the data, emphasizing recurring ideas and concepts. *Thematic Evaluation:* Using the identified themes, the researcher proceeded to evaluate their meaning and relevance. This evaluation involved reflecting on the themes in the context of the research questions, seeking deeper understanding and interpretation. *Data Compilation:* The researcher collected, organized, and compressed the qualitative data to facilitate the drawing of conclusions. This process involved condensing the data while preserving its key insights. *Interpretation through Themes:* The themes that emerged from the qualitative data were instrumental in explaining percentages and frequencies, adding a layer of depth to the analysis. These themes helped contextualize the findings within the broader research framework.

By following these systematic steps, the qualitative data analysis ensured that the study's outcomes were rooted in the collected data, providing a clear and comprehensive interpretation of the research insights.

3.11 Ethical considerations

The researcher initiated the data collection process by securing necessary permissions and adhering to ethical guidelines. To commence this phase, the researcher obtained an introductory letter from the Department of Information and Library Science, as well as from the School of Graduate Studies at the Technical University of Kenya. Subsequently, the researcher diligently pursued ethical review and clearance through an institutional research body (IRB) to ensure

compliance with ethical standards. The obtained introduction letter from the School of Graduate Studies and the granted ethical clearance certificate were integral components of the subsequent steps. With the required documentation in hand, the researcher proceeded to seek permission from the National Commission for Science, Technology, and Innovation (NACOSTI) to conduct data collection within the study organizations. Upon receiving the NACOSTI permit, the researcher initiated communication with the administrative authorities at both the Technical University of Kenya (TUK) and Strathmore University. The communication involved the formal submission of a letter requesting authorization to collect data from academic staff and graduate students at these two universities. Once the request was accepted and permission granted, the researcher ensured that all participants provided informed consent and participated in the study on a voluntary basis. To maintain the confidentiality and privacy of the respondents, the researcher implemented measures such as using anonymized codes instead of actual names, as recommended by (Bos, 2020). These steps collectively ensured the ethical and methodological integrity of the data collection process.

3.12 Reliability and Validity

In the assessment of research quality, two crucial perspectives come into play: reliability and validity. These perspectives serve as metrics for evaluating the effectiveness of a method, technique, or test in assessing a particular subject or phenomenon. Reliability primarily addresses the degree of consistency exhibited by a measure, while validity focuses on the measure's ability to accurately and precisely capture the intended subject or concept.

Validity

Validity in research assesses whether an instrument effectively measures its intended target. It relies on both theoretical and empirical evidence (Noble & Smith, 2015; Mohajan, 2017). To

ensure validity, the researcher made certain that data collection tools accurately measured the desired variables. These tools were designed with simplicity to facilitate respondent comprehension. Content validity was ensured through expert evaluation, while pretesting and question review eliminated ambiguity. Construct validity was achieved by clearly defining key terms used in the study.

Reliability

Reliability in research pertains to the consistency of an instrument in measuring what it's meant to measure (Cooper & Schindler, 2018). To achieve dependable results, a researcher must ensure that measurements provide consistent outcomes upon repeated assessments. To ensure reliability, the researcher conducted a pilot study to test result consistency and used data triangulation, employing both questionnaires and interviews for data collection. Any identified weaknesses, inadequacies, or ambiguities from the pilot study were subsequently addressed.

3.13 Chapter Summary

This chapter provided an overview of the methodology used in conducting the study. It encompassed key elements such as the research approach, philosophical perspectives, research design, study population, sampling techniques, data collection tools and procedures, data analysis methods, presentation, and ethical considerations.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter covers data analysis and presentation. The presented data include response rate and demographic data, followed by quantitative and qualitative data for each research objective as appropriate.

4.2 Response rate

The response rate, a pivotal metric in our study, is determined by the proportion of participants who actively engaged in our research compared to the total sample size. To compute this rate, the researcher tallied the number of respondents who completed questionnaires or participated in interviews, divided by the overall sample size, and then multiplied by one hundred to express it as a percentage. This research encompassed a total sample size of 324 individuals, comprising 112 academic staff members and 30 graduate students from the Technical University of Kenya, as well as 35 academic staff members and 147 graduate students from Strathmore University, as detailed in Table 4.1. The data analyzed and presented in this study is derived from the valuable insights and feedback gathered through interviews and the returned questionnaires administered to our esteemed respondents.

Table 4. 1: Response rate

University	Respondents	Sample size	Number of Respondents	%	No response	%	Total %
The Technical University of Kenya	Academic staff	112	80	71.4%	32	28.6 %	100 %
	Graduate students	30	23	77%	7	23 %	100 %
Strathmore University	Academic staff	35	26	74.3%	9	25.7 %	100 %
	Graduate students	147	125	85%	22	15 %	100 %
Total		**324**	**254**		**70**		

The findings presented in Table 4.1 reveal a noteworthy difference in the distribution of respondents between Strathmore University and The Technical University of Kenya. Specifically, 151 respondents, constituting 59.4% of the total, were affiliated with Strathmore University, whereas 103 respondents, representing 40.6% of the sample, were associated with The Technical University of Kenya. It's also worth noting that there were 70 individuals, equivalent to 21.6% of the total respondents from both universities, who did not provide a response. This finding underscores the relatively higher response rate from Strathmore University in comparison to The Technical University of Kenya. The overall response rate for the study, considering both institutions, was 254 respondents, accounting for 78.4%. As suggested by Mugenda and Mugenda (2012), a response rate of 50% or more is generally considered adequate for data analysis, while a 60% response rate is deemed good, and anything exceeding 70% is considered excellent. Therefore, the data obtained in this study not only met

but exceeded the criteria for adequacy, indicating a strong representation of the sample and validating the study's findings.

4.3 Gender of the respondents

The study sought to understand the graduate students' response rate based on gender both from The Technical University (TUK) and Strathmore University (SU) as shown in Figure 4.1. The question was addressed to graduate students only (**n=148**).
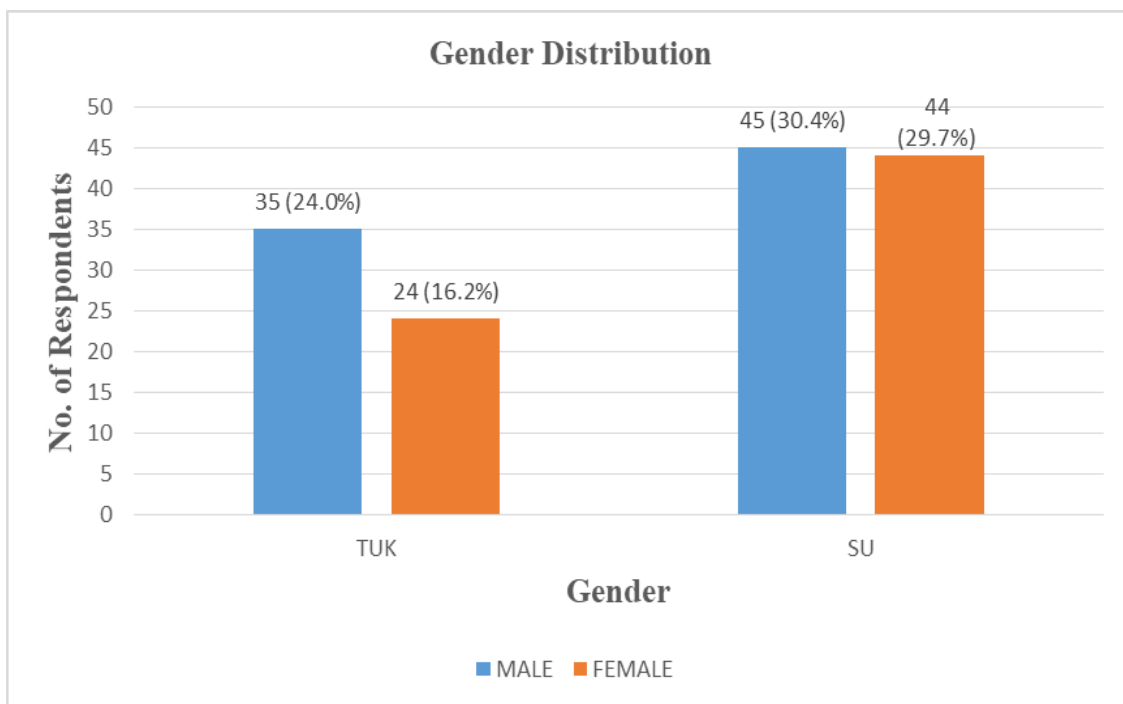
Figure 4. 1: Gender of the respondents

Figure 4.1 illustrates the gender distribution of respondents among graduate students who participated in the study. The analysis of the data revealed that out of the total respondents, 68 individuals, representing 45.9% of the sample, identified as female. Among these, 44 respondents (29.7%) were female students from Strathmore University, while 24 (16.2%) were female students from The Technical University of Kenya. In contrast, the study found that 80 respondents (54.1%) were male, with 45 (30.4%) of them being from Strathmore University and

35 (24%) male respondents from The Technical University of Kenya. This gender breakdown offers insight into the diverse views, experiences, and potential disparities that may exist in how male and female graduate students perceive and engage with open access scholarly publishing. The higher representation of female respondents from Strathmore University and a slightly lower number from The Technical University of Kenya, compared to their male counterparts, presents an opportunity to explore potential gender-related nuances in their perceptions of open access publishing. In justifying the emphasis on students as key stakeholders, the analysis of gender differences among graduate students adds depth to the research. It supports the study's credibility and relevance by ensuring a more inclusive examination of open access scholarly publishing, fostering equitable representation and consideration of diverse perspectives. By acknowledging and incorporating gender-related variations, the study aims to enhance the quality and reliability of its findings, contributing to a more robust and comprehensive understanding of open access scholarly publishing. This inclusive approach not only acknowledges the varied perspectives but also potentially aids in improving the visibility and effectiveness of scholarly publishing practices that cater to a broader spectrum of stakeholders.

4.4 Age distribution of the respondents

The researcher wanted to understand the age distribution of the respondents in the study from the two universities. The question was addressed to graduate students only (**n=148**). The findings are as shown in figure 4.2.
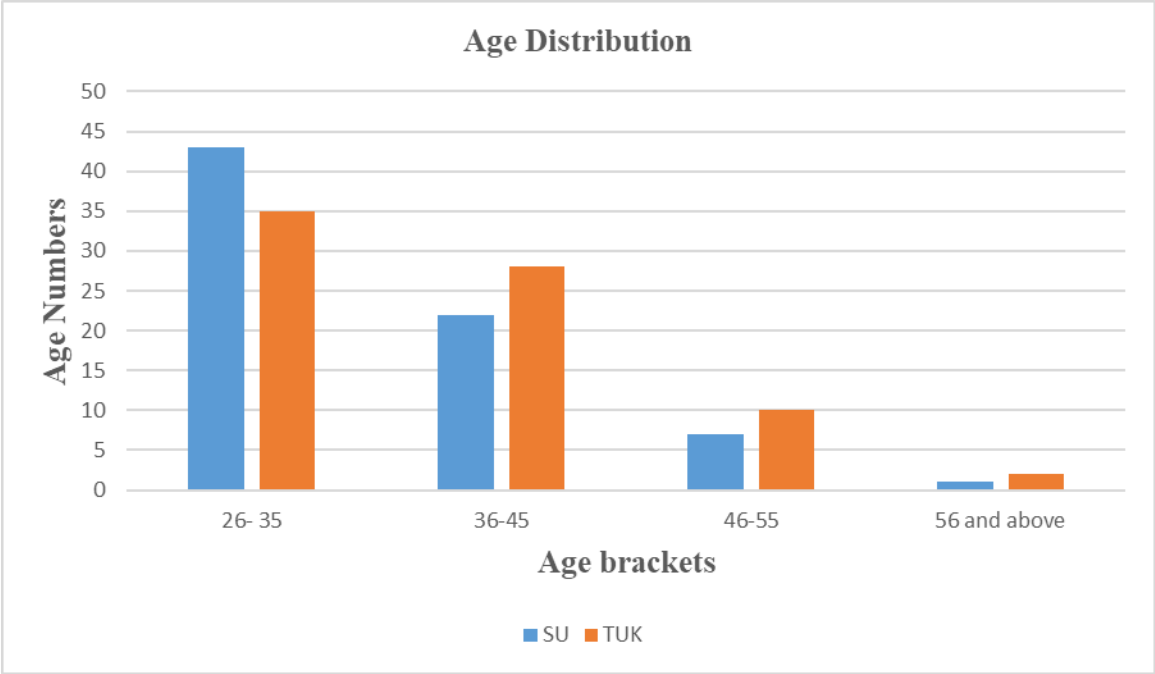
Figure 4. 2: Ages of the respondents

Figure 4.2 presents the age distribution of respondents from both institutions under examination. The data analysis revealed significant insights into the age demographics of the study participants. The majority of the respondents, comprising 78 individuals (52.7%), fell within the age range of 26 to 35 years. Additionally, a substantial portion of the sample, consisting of 50 respondents (33.8%), were aged between 36 and 45 years. A smaller but noteworthy group, comprising 17 respondents (11.5%), fell within the age group of 46 to 55 years. Notably, a minority of 3 respondents (2%) did not specify their age. Understanding varied age groups is crucial as it unveils potential generational disparities in attitudes towards open access platforms. Different age brackets may possess diverse experiences and acceptance levels of open access, shaping their scholarly publishing approaches. Younger individuals might be more familiar with digital platforms, while older age groups might have distinct perspectives rooted in earlier academic practices. Focusing on students within these age ranges is justified due to their essential role in academia. Individuals in their mid to late 20s and early 30s often transition into

influential positions or continue their academic journey, significantly impacting scholarly research. Grasping their preferences in open access publishing is crucial for shaping future practices and innovations in scholarly communication. The inclusion of age demographics not only affirms the study's inclusivity but also bolsters the credibility and relevance of its findings. This analysis fosters a more thorough understanding of open access scholarly publishing, ensuring that upcoming practices align with the diverse needs and perspectives of various age groups within the academic community.

4.6 Level of education

The study examined the educational levels being pursued by the respondents to gauge their comprehension of quality open access scholarly publishing across different educational backgrounds. This particular inquiry was directed exclusively to graduate students (**n=148**), and the findings regarding the educational levels they were pursuing are detailed in Table 4.2

Table 4. 2: Level of education being pursued

Responses	Institution				Total (n=148)
	SU		TUK		
	Number of Respondents	Percent %	Number of Respondents	Percent %	
Doctoral Degree	10	6.8%	5	3.4%	15(10.2%)
Master's Degree	117	79.1%	16	10.8%	133(89.9%)
Total	127	85.9	21	14.2%	148 (100%)

The findings presented in Table 4.2 reveal that the majority of respondents, comprising 133 individuals (89.9%), were pursuing master's degrees across both universities. There were 15

respondents (10.1%) pursuing doctorate degrees, with this distribution being consistent at both Strathmore University (SU) and The Technical University of Kenya (TUK). Specifically, at TUK, 16 respondents (10.8%) were pursuing master's degrees, while 5 respondents (3.4%) were pursuing PhDs. At Strathmore University, 117 respondents (79.1%) were pursuing master's degrees, and 10 respondents (6.8%) were undertaking PhD studies. The study specifically targeted students to indicate their education level as it is vital for comprehending the academic background of individuals involved in open access scholarly publishing. The analysis of the distribution between master's and doctoral students was crucial in revealing the educational levels of those actively participating in academic research and publishing. The focus on graduate students, specifically those pursuing master's and doctoral degrees, was pivotal as it aligned with the research goals. These individuals are deeply involved in scholarly activities, making their viewpoints and experiences highly relevant to the study's objectives.

4.7 The courses undertaken by respondents

The study examined the courses undertaken by respondents at The Technical University of Kenya (TUK) and Strathmore University. This specific question was directed exclusively to graduate students (n=148), and the outcomes are presented in Table 4.3 below.

Table 4. 3: The courses undertaken by the respondents

Courses	Institution				Total (n=148)
	SU		TUK		
	No. of Respondents	Percent %	No. of Respondents	Percent %	
Master of Applied Philosophy and Ethics	9	6.1%	0	0.0%	9 (6.1%)
Master of Commerce	23	15.5%	0	0.0%	23 (15.5%)
Master of Law	15	10.1%	0	0.0%	15 (10.1%)
Master of Management in Agribusiness	12	8.1%	0	0.0%	12 (8.1%)

Master of science in Applied Statistics	0	0.0%	1	0.7%	1 (0.7%)
Master of Science in Computing and Information Systems	8	5.4%	0	0.0%	8 (5.4%)
Master of Science in Development Finance	9	6.1%	0	0.0%	9 (6.1%)
Master's of Science in Information and Knowledge Management	0	0.0%	11	7.4%	11 (7.4%)
Master of Science in Information Systems Security	2	1.4%	0	0.0%	2 (1.4%)
Master of Science in Information Technology	12	8.1%	0	0.0%	12 (8.1%)
Master of science in mathematical finance and risk analytics	1	0.7%	0	0.0%	1 (0.7%)
Master of Science in Statistical Science	7	4.7%	0	0.0%	7 (4.7%)
Master of Technology in Mechanical Engineering Technology	0	0.0%	3	2.0%	3 (2.0%)
Masters in Computer Science	1	0.7%	0	0.0%	1 (0.7%)
Master's in Public Policy and Management	3	2.0%	0	0.0%	2 (1.4%)
Masters of Science in Education Management	5	3.4%	0	0.0%	5 (3.4%)
MBA - Healthcare Management	11	7.4%	0	0.0%	11 (7.4%)
PhD in Business and Management	2	1.4%	0	0.0%	2 (1.4%)
PhD in Computer Science	7	4.7%	0	0.0%	7 (4.7%)
PhD in Human resource management	1	0.7%	0	0.0%	1 (0.7%)
PhD in Information and Knowledge Management	0	0.0%	5	3.3%	5 (3.3%)
Total	127	85.8%	21	14.2%	148 (100.0%)

Findings from Table 4.3 reveal that a significant majority of the respondents, accounting for 133 individuals (89.9%), were pursuing master's degrees, while 15 individuals (10.1%) were doctoral (PhD) students. When examining specific academic programs, it was observed that:

Strathmore University (SU): Among the respondents at SU, 9 (6.1%) were pursuing a Master of Applied Philosophy and Ethics program, whereas none were enrolled in this program at The Technical University of Kenya (TUK). Furthermore, 23 (15.5%) respondents were undertaking a Master of Commerce program at SU, whereas no respondents from TUK were in this program. Additionally, 15 (10.1%) were pursuing a Master of Law program at SU, with no corresponding students at TUK.

The Technical University of Kenya (TUK): At TUK, 1 (0.7%) respondent was enrolled in a Master of Science in Applied Statistics program, while none were enrolled in this program at SU. Furthermore, 11 (7.4%) respondents were pursuing a Master of Science in Information and Knowledge Management program at TUK, whereas none were enrolled in this program at SU.

Other Programs: Several programs were found to have respondents from only one of the two universities. For example, Master of Science in Computing and Information Systems was pursued by 8 (5.4%) respondents at SU, with none at TUK. Similarly, Master of Science in Development Finance had 9 (6.1%) respondents at SU, but none at TUK.

PhD Programs: Among the respondents pursuing PhD programs, 2 (1.4%) were enrolled in a PhD in Business Management program at SU, with no respondents from TUK in this program. Additionally, 7 (4.7%) were pursuing a PhD in Computer Science at SU, with none at TUK. These findings indicate a predominant presence of master's degree students in both universities. The data also highlight variations in the distribution of specific academic programs between the two institutions, which may be important for program development and curriculum enhancement.

4. 8 Respondents Understanding of open access scholarly publishing.

The aim of this inquiry was to assess the respondents' comprehension of the term "open access scholarly publishing." This investigation was instrumental in ascertaining the extent of the respondents' familiarity with the subject under investigation. The query was directed at both graduate students and academic staff members, constituting a total of 254 participants. The responses from graduate students are presented in Table 4.4:

Table 4. 4: Respondents Understanding of open access scholarly publishing.

| Responses | Institution | | | | Total (n=148) |
| | SU | | TUK | | |
	Number of Respondents	Percent %	Number of Respondents	Percent %	
Access to information online without payment and restrictions	4	2.7%	1	0.6%	5 (3.4%)
Access to online resources at no cost and without any restriction	1	0.6%	1	0.6%	2 (1.4%)
Accessibility of research materials on online platform	12	8.1%	0	0.0%	12 (8.1%)
Availability of intellectual output on a non-payment basis	0	0.0%	1	0.6%	1 (0.6%
Easy access and use of academic resources	1	0.6%	0	0.0%	1 (0.6%
Easy to access, retrieve and download online resources at no cost	1	0.6%	0	0.0%	1 (0.6%)
Free availability and access to online resources on open platforms	92	62.2%	18	12.5%	110(74.3%)
Granting access to research output at no cost	11	7.4%	0	0.0%	11 (7.1%)
No copyrights on academic material and software	1	0.6%	0	0.0%	1 (0.6%)
Publishing model for scholarly communication	1	0.6%	0	0.0%	1(0.6%)
Removing barriers that hinder accessibility of scholarly works	1	0.6%	0	0.0%	1 (0.6%)
Unlimited pathway to accessing online research publications	1	0.6%	0	0.0%	1 (0.6%)
Unrestricted access to online research output	1	0.6%	0	0.0%	1(0.6%)
Total	127	49.8%	21	8.3%	148(58.3%)

The data in Table 4.4 reveals the respondents' varying interpretations of the term "open access scholarly publishing." Among the graduate students, it was found that:

4 (2.7%) at Strathmore University and 1 (0.6%) at The Technical University of Kenya understood open access as online access to information without payment or restrictions, 1 (0.6%) at Strathmore University and 1 (0.6%) at The Technical University of Kenya defined open access as free online resource access without restrictions, 12 (8.1%) at Strathmore

University believed open access meant accessing online materials from online platforms, while there were no such responses at The Technical University of Kenya, 1 (0.6%) at The Technical University of Kenya thought open access referred to the availability of intellectual output without payment, with no corresponding response at Strathmore University.

Additionally, there were other interpretations provided by the respondents: Easy access and use of academic resources: 1 (0.6%) at Strathmore University and 0 (0%) at The Technical University of Kenya, Easy, free access, retrieval, and download of online resources: 1 (0.6%) at Strathmore University and 0 (0%) at The Technical University of Kenya, Free availability and access to online resources on open platforms: 92 (62.2%) at Strathmore University and 18 (12.5%) at The Technical University of Kenya, Granting research output at no cost: 11 (7.4%) at Strathmore University and 0 (0%) at The Technical University of Kenya, No copyrights on academic material and software: 1 (0.6%) at Strathmore University and 0 (0%) at The Technical University of Kenya, Publishing models for scholarly communication: 1 (0.6%) at Strathmore University and 0 (0%) at The Technical University of Kenya, Removing barriers hindering accessibility of scholarly works: 1 (0.6%) at Strathmore University and 0 (0%) at The Technical University of Kenya, Unlimited pathway to accessing online research publications: 1 (0.6%) at Strathmore University and 0 (0%) at The Technical University of Kenya, Unrestricted access to online research output: 1 (0.6%) at Strathmore University and 0 (0%) at The Technical University of Kenya. These diverse responses demonstrate varying levels of understanding of open access scholarly publishing among the graduate student respondents at both institutions.

Academic staff response on understanding of open access

The themes that emerged from the exploration of open access publishing understanding among academic staff at Strathmore University (SU) and The Technical University of Kenya (TUK) can be categorized as follows:

Freedom and Unrestricted Access: At Strathmore University, a prevalent viewpoint emphasized open access as the unrestricted and seamless retrieval of scholarly work from online platforms. This perspective highlighted the freedom and ease of access without limitations. This theme underscores the idea of unrestricted accessibility for users without hindrances.

Holistic View of Open Access: Another theme at Strathmore University was the perspective of open access as a holistic process involving both the publishing and accessing of scholarly content without financial or access restrictions. This broader view emphasizes a comprehensive approach to open access beyond mere access and retrieval, encompassing the entire process from creation to accessibility.

Convenient and Cost-Free Access: The majority of participants from The Technical University of Kenya perceived open access as convenient and cost-free availability of published work. This theme accentuates the ease with which users can access scholarly materials without financial barriers, focusing on the practical aspect of accessible and free content.

Need for Structural Changes: A smaller subset of respondents from TUK conceptualized open access as a mechanism for enhancing access to scholarly resources by removing subscription barriers. This theme highlights the necessity for structural changes within scholarly publishing, suggesting the need to remove barriers that limit wider access to scholarly materials.

These themes reflect diverse understandings of open access publishing. They include the ideas of freedom and accessibility, the holistic nature of open access, the practicality of cost-free access,

and the need for systematic changes to ensure broader availability within the academic community.

Selected responses from the interviews provided additional insights into the participants' views: One TUK respondent emphasized, *"Peer-reviewed work that has passed through editorial procedures and rigor of research with unlimited and non-restricted access."*

A respondent from SU articulated, *"Publishing scholarly research work in peer-reviewed journals of high quality and devoid of any access restrictions."*

These findings underscore the diversity of interpretations regarding open access publishing within the academic staff community. While some emphasize the liberty of accessing and retrieving scholarly content without hindrance, others focus on the broader objective of facilitating uncomplicated and cost-free access to scholarly materials. Furthermore, the removal of barriers to access and the assurance of quality through peer review emerged as prominent themes in respondents' conceptualizations of open access publishing.

Academic staff awareness on types of open access

In the exploration of academic staff awareness and utilization of different types of open access through interviews, key themes emerged:

Awareness of Open Access Types

At Strathmore University (SU), there was a notable level of awareness among participants regarding specific open access types. Many respondents displayed familiarity with "hybrid open access," indicating a solid understanding of this model. However, a smaller group exhibited awareness of "Gold open access," suggesting a more limited familiarity with this specific type.

Additionally, a portion of respondents admitted to a lack of familiarity with any form of open access publishing.

Similar patterns emerged at The Technical University of Kenya (TUK). A substantial proportion demonstrated familiarity with "hybrid open access," indicating a prevalent understanding of this particular model. However, a smaller group showed awareness of "Gold open access." Notably, a significant number acknowledged their lack of familiarity with any type of open access publishing.

Extent of Open Access Usage

Regarding the extent of open access utilization, diverse responses were observed in both institutions. At Strathmore University, while a few individuals confirmed a considerable employment of various types of open access, a notable number expressed uncertainty about the extensive use of these methods within the institution. Similarly, at The Technical University of Kenya, some individuals affirmed significant utilization of open access types, yet a substantial portion appeared uncertain about the extent to which these methods were integrated into their scholarly practices.

The themes suggest varied levels of awareness and utilization of different open access types among academic staff at both institutions. The data reflects a spectrum of familiarity and usage, along with uncertainties, demonstrating the different degrees of awareness and application of various forms of open access publishing. The data underscores the need for enhanced awareness and understanding of open access publishing within academic institutions, as well as potential variations in its adoption among staff members.

Academic staff understanding of quality open access scholarly publishing

In the pursuit of comprehending the academic staff's perceptions of quality open access scholarly publishing, the researcher conducted interviews within both academic institutions. The qualitative data analysis yielded valuable insights into the understanding of quality within this context.

Quality Defined through Rigorous Process and Unrestricted Access: At The Technical University of Kenya (TUK), a significant segment of respondents agreed on a shared viewpoint. They defined quality open access as access to "peer-reviewed work that has undergone rigorous editorial procedures and research scrutiny, offering unrestricted and unlimited access." This definition highlighted the importance of stringent research standards and the freedom of access.

Consensus on Peer-Reviewed Work and Unrestricted Accessibility: A considerable portion of academic staff at Strathmore University (SU) shared the same perspective as TUK. They emphasized quality open access as "access to peer-reviewed work that has passed through rigorous editorial procedures and research rigor, enabling unrestricted and unlimited access." This viewpoint aligned closely with the perspective shared by respondents from TUK.

Broader Interpretation Emphasizing Publishing Process and Research Protocols: However, a distinct interpretation arose from a subset of SU respondents. They described quality open access scholarly publishing as "publishing research work in peer-reviewed journals while adhering to research protocols and procedures." This nuanced definition underlined the significance of the entire publishing process, encompassing adherence to research guidelines and protocols, particularly within the context of peer-reviewed journals.

Comprehensive Understanding of Quality Open Access: The verbatim responses from academic staff at both institutions highlighted nuanced and comprehensive understandings of quality open access scholarly publishing. These findings underscored the significance of rigorous research procedures, peer review, and unhindered accessibility as central components of quality within the realm of open access scholarly publishing. The variations in interpretations also highlighted the dynamic nature of academic discourse and the multifaceted perspectives held by academic staff members in these institutions. The insights collectively depict a comprehensive approach to quality within open access scholarly publishing.

Academic staff observation of open access prominence at TUK and SU

The researcher aimed to discern the degree of significance attributed to open access publishing within the two academic institutions. Academic staff members were specifically questioned about any noticeable changes or efforts directed towards the promotion of open access publishing (OAP) within their respective institutions. Qualitative data analysis revealed varied perspectives among the respondents, shedding light on the evolving landscape of OAP promotion.

Strathmore University (SU)

Training Initiatives for OAP: A subset of respondents highlighted the initiation of training programs aimed at equipping staff with skills and knowledge related to open access publishing. This demonstrates the institution's proactive approach to educate staff about OAP, aligning with a goal to enhance understanding and proficiency in this area.

Enhanced Use of Library Repository: Respondents observed increased utilization of the university library's repository for storing academic work. Accompanied by reminders

encouraging staff to deposit their work, this initiative signifies a shift toward centralizing academic content in a single accessible platform, promoting open access practices.

Allocated Funding for OAP Initiatives: A smaller group highlighted the allocation of specific funding resources toward advancing open access publishing initiatives. This targeted financial investment suggests a commitment to bolstering OAP within the institution.

Uncertainty in OAP Changes: Some respondents expressed uncertainty regarding noticeable changes in OAP promotion within Strathmore University, indicating potential gaps in communication or awareness regarding OAP initiatives.

The Technical University of Kenya (TUK)

Library Repository Usage Increase: A considerable number of respondents noted an increase in the usage of the university's library repository. This trend suggests a movement toward utilizing institutional repositories for disseminating academic research, reflecting an effort to support open access publishing.

Increased Training on OAP: A subset of respondents confirmed a rise in the frequency of training sessions focusing on open access publishing. This increase suggests an intentional effort to enhance academic staff's engagement and understanding of OAP practices, aligning with a goal to improve knowledge and utilization of open access initiatives.

Uncertainty in OAP Changes: A majority of respondents conveyed uncertainty regarding significant changes related to OAP promotion, indicating a lack of clarity or awareness regarding initiatives at TUK. This points to a potential need for more transparent communication and awareness-building concerning open access publishing.

Among the responses, the following examples were provided to illustrate the varying perspectives:

Strathmore University (SU):

"Yes, the university has scaled the use of the library repository to store published works as well as sending reminders via email to researchers to deposit their work with the library."

The Technical University of Kenya (TUK):

"No, I am not aware of any way open access publishing is being promoted."

The thematic analysis reveals varying levels of commitment and initiatives toward promoting open access publishing at both institutions. While efforts such as training programs, library repository utilization, and funding allocation are observed, uncertainty among some respondents highlights the necessity for more transparent communication and comprehensive awareness-building about open access initiatives within academic institutions.

4.9 Contribution of open access scholarly publishing

This study aimed to investigate how open access scholarly publishing influences the quality and visibility of research output among researchers at Strathmore University (SU) and The Technical University of Kenya (TUK). To gain insights into this aspect, the researcher collected data from graduate students, and the responses are presented in Table 4.5 below.

Table 4. 5: Contribution of open access scholarly publishing

Responses	Institution				
	SU		TUK		Total (n=148)
	Number of Respondents	Percent %	Number of Respondents	Percent %	
Increased usage	14	9.4%	12	11.3%	26 (17.6%)
Cost savings and efficiency	8	5.4%	10	6.8%	18 (12.2%)
Improved decision making	16	10.8%	7	4.7%	23 (15.5%)
Improved access	14	9.5%	10	6.8%	24(16.2%)
Citation impact	4	2.7%	14	9.5%	18(12.2%)
Greater research impact	10	6.8%	12	11.3%	22(14.9%)
Increased impact factor	4	2.7%	10	6.8%	14(9.5%)
Not sure	2	1.4%	1	0.7%	3(2.0%)

The study aimed to explore the perceived contribution of open access scholarly publishing among graduate student respondents. The data presented in Table 4.5 shed light on the various aspects of open access scholarly publishing and its impact, as reported by the respondents.

Increased Usage of Scholarly Resources: A portion of the respondents from both SU (9.4%) and TUK (11.3%) acknowledged that open access scholarly publishing contributes to increased usage of scholarly resources. Cost Savings and Efficiency: Respondents from SU (5.4%) and TUK (6.8%) recognized open access scholarly publishing as a means to promote cost savings and efficiency in scholarly publishing. Improved Decision Making: Some respondents at SU (10.8%) and TUK (4.7%) believed that open access scholarly publishing leads to improved decision-making. Enhanced Access: Open access scholarly publishing was perceived to enhance access by 9.5% of SU respondents and 6.8% of TUK respondents. Increased Citation Impact: A group of

respondents at SU (2.7%) and TUK (9.5%) mentioned that open access scholarly publishing contributes to increased citation impact. Greater Research Impact: A portion of the respondents, 6.8% from SU and 11.3% from TUK, believed that open access scholarly publishing enhances greater research impact. Increased Impact Factor: Some respondents at SU (2.7%) and TUK (6.8%) noted that open access scholarly publishing is associated with an increased impact factor.

Additionally, a small percentage of respondents were unsure about the impact of open access scholarly publishing, with 1.4% at SU and 0.7% at TUK falling into this category. These findings provide insights into the perceived benefits of open access scholarly publishing among graduate students.

Academic staff on contribution of open access at TUK and SU

The research aimed to gather insights from academic staff members regarding the contribution of open access scholarly publishing to their respective institutions. The findings, based on multiple responses, provide a nuanced understanding of the perceived impact of open access scholarly publishing in both Strathmore University (SU) and The Technical University of Kenya (TUK).

Strathmore University (SU)

Increased Access to Research Publications: A majority of respondents recognized the significant role of open access scholarly publishing in enhancing access to research publications. This emphasizes the platform's role in breaking down barriers to access and promoting wider dissemination of academic work.

Enhanced Visibility of Authors: A smaller portion of respondents mentioned that open access publishing has contributed to boosting the visibility of authors and their published works. This suggests that the openness of this platform helps in increasing exposure for academic authors.

Promotion of Collaboration: Similarly, a fraction of SU respondents highlighted open access publishing as a facilitator of collaboration among authors in the same field. This indicates that this platform encourages collaboration and teamwork in scholarly endeavors.

Promotion of Information Sharing: Some respondents identified open access scholarly publishing as a tool that promotes information sharing. By eliminating access restrictions, scholars can readily access information, fostering a more open and collaborative environment for the exchange of academic knowledge.

Uncertainty About Contributions: A minor percentage of respondents expressed uncertainty regarding the specific contributions of open access scholarly publishing to their institution, indicating potential gaps in understanding or clarity about its overall impact.

The Technical University of Kenya (TUK)

Increased Access to Research Publications: A significant proportion of TUK respondents acknowledged the pivotal role of open access publishing in significantly increasing access to research publications. This reaffirms the platform's effectiveness in widening access to academic resources.

Enhanced Authors' Visibility: A segment of respondents believed that open access scholarly publishing contributes to enhancing the visibility of authors. This emphasizes how the open nature of this platform potentially increases recognition for academic authors.

Promotion of Collaboration: A smaller portion of TUK respondents recognized open access publishing as a catalyst for fostering collaboration among authors. This highlights its potential to encourage teamwork and cooperation within academic fields.

Promotion of Information Sharing: Additional TUK respondents stressed that open access scholarly publishing is a promoter of information sharing. By facilitating unrestricted access to information, scholars can exchange knowledge more readily and effectively.

Uncertainty About Contributions: A minority of respondents at TUK expressed uncertainty about the specific contributions of open access scholarly publishing to their institution, reflecting a lack of clarity or awareness about its precise impact.

Both SU and TUK academic staff respondents concur on the significant role of open access scholarly publishing in enhancing access to research publications and promoting information sharing. They also note its potential to increase authors' visibility and foster collaboration. However, a certain portion at both institutions expresses uncertainty about its specific contributions, suggesting potential gaps in understanding or awareness regarding its tangible impact on their academic settings.

Academic staff on promotion of open acess at TUK and SU

The study aimed to investigate whether academic staff members and graduate students had observed any changes in the way open access publishing was being promoted in their respective institutions. The findings provide insights into the perceptions of academic stakeholders regarding changes related to open access promotion at Strathmore University (SU) and The Technical University of Kenya (TUK).

Strathmore University (SU)

Change in Open Access Promotion: A notable proportion of respondents observed a shift or evolution in the promotion of open access within the institution. This suggests that certain

students have recognized changes in how open access is being advocated or facilitated at Strathmore University.

No Change Observed: Conversely, a smaller subset of respondents mentioned that they had not perceived any alterations in the strategies or methods for promoting open access at SU. This indicates a perception of consistency or minimal change within this segment of respondents.

The Technical University of Kenya (TUK)

No Change Observed: A significant majority of respondents at TUK stated that they had not observed any changes in the promotion of open access publishing within the institution. This substantial segment perceives the methods or strategies for promoting open access as consistent without any notable change.

Change in Open Access Promotion: In contrast, a considerable portion of TUK respondents acknowledged that they had observed changes in how open access publishing was being promoted at the institution. This indicates a discernible shift or evolution in the strategies or methods for promoting open access within this group of respondents.

Uncertainty About Changes: Additionally, some respondents at TUK expressed uncertainty or were unsure about whether they had observed any changes related to the promotion of open access. This uncertainty signifies a lack of clarity or knowledge about the specific changes in open access promotion within this subset of respondents.

Selected verbatim Respondent Statements:

One respondent at SU stated, *"Yes, The university has scaled the use of the library repository to store published works as well as sending reminders via email to researchers to deposit their work with the library."*

Another respondent at TUK expressed, "*No, not aware of any way open access publishing is being promoted."*

The qualitative analysis revealed two primary themes across both institutions: "Change in Open Access Promotion" and "No Change Observed." Within each institution, there were groups of respondents who observed alterations in the promotion of open access, indicating an evolving landscape in the strategies or methods for open access promotion. Conversely, there were other segments who reported no notable changes, signifying a perception of consistency or minimal evolution in how open access is promoted. Additionally, a subset of respondents, particularly at TUK, expressed uncertainty about whether changes in open access promotion were noticeable, indicating a lack of clarity within this group regarding any observed alterations.

4.10 Benefits of enhancing quality and visibility of open access scholarly publishing

The researcher aimed to evaluate the awareness of both staff and students regarding the benefits linked to enhanced quality and visibility of open access scholarly publishing in the two universities. The responses pertaining to the benefits are presented in Table 4.6.

Table 4. 6: Benefits of enhanced quality open access scholarly publishing.

	Institution				Total (n=148)
	SU		TUK		
	Number of Respondents	**Percent %**	**Number of Respondents**	**Percent %**	
Widest dissemination of research work	22	14.9%	14	9.5%	36(24.3%)
Increased accessibility to research work	40	27%	16	10.8%	56(37.8%)
Increased citations	15	10.1%	10	6.8%	25(16.9%)
Increased collaborations	10	6.8%	8	5.4%	18(12.2)
Increased altmetrics	10	6.8%	3	2.0%	13 (8.8%)
Total	97		51		148 (100%)

The study findings, as summarized in Table 4.6, shed light on the perceptions of graduate students concerning the benefits associated with open access scholarly publishing. Here are the key study findings: Widest Dissemination of Research Work: A significant benefit observed in the study is the extensive dissemination of research work through scholarly open access publishing. At SU, 22 graduate respondents (14.9%) and at TUK, 14 respondents (9.5%) recognized this advantage. Increased Accessibility to Research Work: The respondents acknowledged that open access scholarly publishing results in improved access to research work. A total of 40 respondents (27%) at SU and 16 (10.8%) at TUK identified this as a valuable benefit. Increased Citations: Open access publishing is perceived to contribute to higher citation rates for research work. This benefit was acknowledged by 15 respondents (10.1%) at SU and 10 (6.8%) at TUK. Enhanced Collaboration: Another significant benefit highlighted by the respondents was the facilitation of increased collaboration through open access scholarly publishing. This was recognized by 10 respondents (6.8%) at SU and 8 (5.4%) at TUK. Increased Altmetrics: Some respondents noted that open access publishing can lead to

heightened attention in altmetrics. This benefit was mentioned by 10 respondents (6.8%) at SU and 3 (2.0%) at TUK. Overall, these study findings underscore the awareness among the respondents of the diverse benefits associated with open access scholarly publishing. These study findings underscore the awareness among respondents of the diverse benefits associated with open access scholarly publishing, highlighting its potential to significantly impact academic research and dissemination.

Academic staff awareness on benefits of open access

In exploring the perceived benefits of open access scholarly publishing at Strathmore University (SU) and the Technical University of Kenya (TUK) by academic staffs, several key themes emerge:

Strathmore University (SU)

Increased Access to Scholarly Publications: A majority of academic staff highlighted the value of open access in broadening access to scholarly publications. They recognized that open access initiatives enable research materials to reach a wider audience, enhancing accessibility without constraints or barriers.

Enhanced Visibility of Published Work: Another group at SU acknowledged that open access positively influences the visibility of published scholarly work. This increased visibility is seen as beneficial to authors, as it broadens the reach of their research to a wider readership, amplifying the dissemination of their work.

Enhanced Collaboration Among Scholars: A smaller subset of respondents expressed a belief that open access scholarly publishing fosters collaboration among scholars. They emphasized

that open access promotes an environment conducive to more robust research outcomes and interdisciplinary networking.

Technical University of Kenya (TUK)

Increased Access to Scholarly Publications: A significant portion of TUK's academic staff emphasized the impact of open access in removing barriers to accessing scholarly publications. They recognized that open access facilitates the removal of constraints, allowing easier access to research materials.

These data findings demonstrate that academic staff members at both Strathmore University and the Technical University of Kenya perceive several benefits associated with open access scholarly publishing. These benefits include increased access to research, enhanced visibility of scholarly work, and the promotion of collaboration within the academic community. The verbatim responses provided by some respondents further illustrate their perspectives on these benefits.

4.11 Challenges faced by researchers in enhancing quality and visibility of open access scholarly publishing

In pursuit of the second objective, the researcher delved into the challenges linked with open access scholarly publishing. This inquiry aimed to discern the perceptions of respondents regarding the obstacles associated with open access scholarly publishing. The responses to these challenges are presented in Table 4.7:

Table 4.7: Challenges in enhancing quality and visibility of open access scholarly publishing.

	Institution				Total (n=148)
	SU		TUK		
	Number of Respondents	Percent %	Number of Respondents	Percent %	
Lack of awareness of open access publishing	44	29.7%	10	6.8%	54(36.5)
Sustenance and financial constraints	15	10.1%	7	4.7%	22(14.9%)
Preservation challenges	20	13.5%	5	7.4%	25(16.9%)
Restrictive copyright assignments	10	6.8%	4	2.7%	14(9.5%)
Hijacked /fake journals	5	3.4%	2	1.4%	7(4.7%)
Predatory journals	20	13.5%	6	4.1%	26(17.6%)
Total	114		34		148(100%)

Findings from Table 4.7 reveal that 44(29.7%) of the respondents from SU and 10(6.8%) from TUK identified a lack of awareness as a major challenge associated with enhancing open access scholarly publishing. Additionally, 15(10.1%) at SU and 7(4.7%) at TUK indicated that sustaining open access initiatives amidst financial constraints posed a significant challenge. Preservation concerns were also noted, with 20(13.5%) at SU and 5(7.4%) at TUK highlighting this challenge. Other challenges reported included restrictive copyright assignments, which affected 10(6.8%) at SU and 4(2.7%) at TUK, as well as issues related to hijacked or fake journals, impacting 5(3.4%) at SU and 2(1.4%) at TUK. Predatory journals were identified as a challenge by 20(13.5%) at SU and 6(4.1%) at TUK. The findings reveal various obstacles that are faced in the context of open access scholarly publishing. These challenges include a lack of awareness, financial constraints, preservation issues, copyright restrictions, and concerns about the authenticity of journals.

Academic staff on challenges associated with open access

The study also aimed to identify challenges associated with open access publishing through interviews with academic staff. At both Strathmore University (SU) and the Technical University of Kenya (TUK), several prevalent challenges associated with open access publishing were identified:

Strathmore University (SU)

Predatory Journals: The majority of respondents at SU identified predatory journals as the primary challenge in open access publishing. This concern revolves around the proliferation of questionable or substandard journals that exploit the open access model.

Quality of Open Access Publications: A subset of respondents expressed concerns about the quality of open access publications. They highlighted worries regarding the credibility and standards of research disseminated through open access channels.

Policy-related Issues: Some respondents at SU mentioned policy-related concerns, particularly surrounding copyright issues. These challenges pertain to the governance and legal aspects associated with open access publishing.

Cost-Related Challenges: A smaller segment raised concerns about the costs linked with open access, reflecting worries about the financial implications associated with publishing through open access channels.

Technical University of Kenya (TUK)

Predatory Journals: Similarly, the majority of respondents at TUK pointed out predatory journals as the main challenge within open access publishing. This echoes concerns about the prevalence of untrustworthy or questionable publishing platforms.

Cost of Publishing: A significant portion of TUK respondents expressed concerns about the costs involved in open access publishing. Financial considerations related to publishing in open access formats were a major point of concern.

Quality Issues: Some TUK respondents highlighted challenges regarding the quality and credibility of open access publications. This emphasizes concerns about maintaining high standards and credibility in scholarly outputs.

Policy-related Challenges: A smaller subset of respondents raised policy-related issues associated with open access, specifically focusing on governance and policy concerns. Across both institutions, concerns about predatory journals were notably prominent. Issues regarding quality and credibility of open access publications were another shared concern, while policy-related challenges and financial considerations varied but were recognized as challenges at both Strathmore University and the Technical University of Kenya.

Academc staff understanding of instutional challenges on open access

The study also aimed to understand the challenges faced by Strathmore University and The Technical University of Kenya concerning open access scholarly publishing. The challenges related to open access scholarly publishing reported by academic staff from both Strathmore University and The Technical University of Kenya reveal similar themes:

Strathmore University Challenges

Inadequate Funding: The majority of respondents at Strathmore University highlighted insufficient funding as a significant challenge. This issue revolves around the scarcity of financial resources allocated towards open access initiatives and research dissemination.

Lack of Scholar Awareness: Another noteworthy challenge identified was the lack of awareness among scholars about open access publishing. This issue suggests a need for enhanced education and information dissemination among scholars regarding open access practices and benefits.

Predatory Journals: A notable challenge was the existence of predatory journals, which was highlighted by a subset of respondents. This issue emphasizes concerns regarding the proliferation of unreliable or questionable publishing platforms within the open access landscape.

Uncertainty About Challenges: A minority of respondents expressed uncertainty regarding the specific challenges faced by Strathmore University concerning open access publishing.

The Technical University of Kenya Challenges

Inadequate Funding: Similar to Strathmore University, inadequate funding was reported as the primary challenge at The Technical University of Kenya. The insufficiency of financial resources specifically allocated for open access initiatives was a prevalent concern.

Lack of Scholar Awareness: A significant portion of respondents also identified a lack of awareness among scholars about open access publishing. This reflects a need for increased education and awareness programs among scholars.

Predatory Journals: The issue of predatory journals was equally notable at The Technical University of Kenya. This challenge mirrors the concerns at Strathmore University, indicating worries about unreliable or questionable publishing platforms.

Uncertainty About Challenges: A smaller subset of respondents expressed uncertainty about the specific challenges faced by The Technical University of Kenya concerning open access publishing. The shared challenges encompassed inadequate funding, lack of scholar awareness, concerns about predatory journals, and a small segment expressing uncertainty about the challenges faced by both institutions. These findings suggest a need for targeted solutions and educational initiatives to address these challenges concerning open access scholarly publishing.

Verbatim responses from participants highlighted additional challenges, *including difficulties in differentiating predatory journals from legitimate ones*, *concerns about the quality of open access works, and the perception of free access affecting the credibility of open access publications*.

4.12 How quality and visibility of Open access scholarly publishing can be enhanced by researchers at TUK and SU.

The third objective of the study aimed to investigate the means through which researchers can enhance the quality and visibility of scholarly publishing. The study began by soliciting respondents' opinions on the extent to which they agreed or disagreed with various statements regarding how open access contributes to improving the quality and visibility of scholarly publishing by researchers. Participants were asked to rate their agreement on a Likert scale of 1-5, where 5 represented "strongly agree," 4 denoted "agree," 3 indicated "moderately agreed," 2 signified "disagree," and 1 corresponded to "strongly disagree." The results of this assessment are presented in Table 4.8.

Table 4. 8: Enhancement of quality and visibility of scholarly publishing by researchers

| Statements | | Institution | | | | Total |
| | | SU | | TUK | | |
		No. of Respondents	Percent %	No. of Respondents	Percent %	(n-148)
High Quality Research (HQR)	Strongly agree	21	14.2%	4	2.7%	25(16.9%)
	Agree	66	44.6%	9	6.1%	75(50.7%)
	Neutral	28	18.9%	7	4.7%	35(23.6%)
	Disagree	4	2.7%	1	0.7%	5(3.4%)
	Strongly disagree	8	5.4%	0	0.0%	8(5.4%)
Enhanced Visibility (EV)	Strongly agree	42	28.4%	11	7.4%	53(35.8%)
	Agree	70	47.3%	9	6.1%	79(53.4%)
	Neutral	5	3.4%	0	0.0%	5(3.4%)
	Disagree	7	4.7%	0	0.0%	7(4.7%)
	Strongly disagree	3	2.2%	1	0.7%	4(2.7%)
Devoid of Open Access Restrictions (DAR)	Strongly agree	54	36.5%	15	10.1%	69(46.6%)
	Agree	56	37.8%	6	4.0%	62(41.9%)
	Neutral	9	6.1%	0	0.0%	9(6.1%)
	Disagree	4	2.7%	0	0.0%	4(2.7%)
	Strongly disagree	4	2.7%	0	0.0%	4(2.7%)
Quality Works Effortlessly (QWE)	Strongly agree	30	20.3%	8	5.4%	38(25.7%)
	Agree	74	50%	8	5.4%	82(55.4%)
	Neutral	12	8.1%	3	2.0%	15(10.1%)
	Disagree	6	4.0%	0	0.0%	6(4.0%)
	Strongly disagree	5	3.8%	2	1.4%	7(4.7%)
Huge Prospective Readership (HPR)	Strongly agree	55	37.2%	9	6.1%	64(43.2%)
	Agree	53	35.8%	10	6.8%	63(42.6%)
	Neutral	10	6.8%	2	1.4%	12(8.1%)
	Disagree	6	4.0%	0	0.0%	6(4.0%)
	Strongly disagree	3	2.0%	0	0.0%	3(2.0%)

The study findings, as presented in Table 4.8, reveal the responses of the respondents regarding statements related to the enhancement of quality and visibility in scholarly publishing by researchers.

High-Quality Research (**HQR**): 21(14.2%) respondents at SU and 4(2.7%) at TUK strongly agreed that enhanced quality and visibility of open access scholarly publications enhance high-quality research. Additionally, 66(44.6%) at SU and 9(6.1%) at TUK agreed with this statement. A total of 28(18.9%) at SU and 7(4.7%) at TUK gave a neutral response, 4(2.7%) at SU and 1(0.7%) at TUK disagreed, while 8(5.4%) at SU strongly disagreed with no response from TUK.

Enhanced Visibility (**EV**): 42(28.4%) respondents at SU and 11(7.4%) at TUK strongly agreed that enhanced quality of open access scholarly publications enhances visibility. Moreover, 70(47.3%) at SU and 9(6.1%) at TUK agreed with this statement. Only 5(3.4%) at SU were neutral, 7(4.7%) at SU disagreed, while 3(2.2%) at SU and 1(0.7%) at TUK strongly disagreed regarding enhanced visibility.

Devoid of Open Access Restrictions (**DAR**): 54(36.5%) at SU and 15(10.1%) strongly agreed that access to open access scholarly publishing devoid of any restriction enhances the quality and visibility of scholarly work. Additionally, 56(37.8%) at SU and 6(4.0%) at TUK agreed with this statement. A total of 9(6.1%) at SU were neutral, 4(2.7%) at SU disagreed, and 4(2.7%) at SU strongly disagreed with no response from TUK.

Retrieving Quality Works Effortlessly (**QWE**): 30(20.3%) at SU and 8(5.4%) strongly agreed that the effortless retrieval of quality work enhances the quality and visibility of scholarly work. Moreover, 74(50%) at SU and 8(5.4%) at TUK agreed with this statement. A total of 12(8.1%) at

SU and 3(2.0%) at TUK were neutral, 6(4.0%) at SU disagreed, and 5(3.8%) at SU and 2(1.4%) at TUK strongly disagreed.

Revealing Content to a Huge Prospective Readership (**HPR**): 55(37.2%) at SU and 9(6.1%) at TUK strongly agreed that revealing content to a large prospective readership enhances the quality and visibility of scholarly publishing by researchers. Furthermore, 53(35.8%) at SU and 10(6.8%) at TUK agreed with this statement. A total of 10(6.8%) at SU and 2(1.4%) at TUK were neutral, 6(4.0%) at SU disagreed, while 3(2.0%) at SU strongly disagreed. These findings provide insights into how respondents perceive the relationship between open access and the enhancement of quality and visibility in scholarly publishing by researchers

Extent to which quality open access publishing has increased visibility of research publications from academic staffs

The study aimed to assess the extent to which quality open access publishing has increased the visibility of research publications among academic staff. The findings can be categorized into the following themes:

Increased Visibility with Strong Agreement

Strathmore University and The Technical University of Kenya: A significant number of respondents from both institutions strongly agreed that quality open access publishing substantially enhances the visibility of research publications. At Strathmore University, a notable segment of respondents held this perspective, and at TUK, an even larger group of respondents strongly agreed with this notion. This category represents a robust consensus among respondents from both institutions regarding the significant enhancement of research visibility due to quality open access publishing.

Increased Visibility with Agreement

Strathmore University and The Technical University of Kenya: Apart from the strong agreement, there were additional respondents who simply agreed that quality open access publishing contributed to a significant increase in research visibility. Both institutions had respondents who acknowledged the positive impact of quality open access on the visibility of research publications. This category represents a subset of respondents who support the notion of increased visibility but with a level of agreement that might be less emphatic than the previous group. These thematic categories highlight a general agreement and consensus among respondents from both Strathmore University and The Technical University of Kenya regarding the role of quality open access publishing in significantly boosting the visibility of research publications. The distinction between "strong agreement" and "agreement" provides insight into the varying degrees of conviction among respondents regarding the impact of open access on research visibility. Verbatim Responses:

"Open access scholarly publishing greatly increases visibility of research publications by providing more access to publications, thus increased visibility" (TUK 1).

"It greatly increases visibility of research publications" (TUK).

These findings reveal a consensus among academic staff at both institutions regarding the positive impact of quality open access publishing on the visibility of research publications. The majority either strongly agreed or agreed with this notion, indicating the importance of open access in enhancing the reach and exposure of scholarly work.

4.12.1 Open access publishing models.

The research specifically asked graduate students about the open access publishing models employed within the study institutions. This approach aimed to gain insights into the variety of publishing models and their utilization across the two universities. Respondents were allowed to select multiple responses, and the results are presented in Table 4.9.

Table 4. 9: Open access publishing models.

Publishing models	Institution				Total (n=148)
	Strathmore University		The Technical University of Kenya		
	Count	%	Count	%	
Article processing charges	20	13.5%	5	3.4%	25 (16.9%)
Institutional membership scheme	60	40.5%	7	4.7%	67 (45.3%)
Community Publishing	10	6.8%	0	0.0%	10 (6.8%)
Advertising or sponsorship supported efforts	5	3.4%	2	1.4%	7 (4.7%)
Institutional subsidy	20	13.5%	4	2.7%	24(16.2%)
Hard copy sales	4	2.7%	2	1.4%	6 (4.1%)
Collaborative purchasing models/cooperative initiatives	5	3.4%	2	1.4%	7(4.7%)
Cross-Financing	2	1.4%	0	0.0%	2(1.4%)
Total	126		22		148(100%)

The study provided insights into the open access publishing models implemented by the two universities. Among the 148 respondents, 20 (13.5%) from Strathmore University stated that their institution employs the article processing charges (APC) model, while only 5 (3.4%) respondents from the Technical University of Kenya (TUK) reported using the same model. Conversely, all 10 respondents from Strathmore University (6.8%) indicated the usage of the community publishing model, whereas none from TUK confirmed its implementation.

Furthermore, a majority of respondents from Strathmore University, 60 (40.5%), affirmed their institution's utilization of an institutional membership scheme as the open access publishing model, while only 7 (4.7%) respondents from the Technical University of Kenya confirmed a similar scheme at their institution. Additionally, a small number of respondents at both universities indicated the use of advertising or supported efforts, with 5 (3.4%) at Strathmore University and 2 (1.4%) at TUK mentioning this model. Regarding institutional subsidy, 20 (13.5%) respondents at Strathmore University and 4 (2.7%) at TUK acknowledged its utilization as an open access publishing model. Similarly, 4 (2.7%) respondents at Strathmore University and 2 (1.4%) at TUK mentioned the existence of hard copy sales as a model employed by their institutions. Lastly, 5 (3.4%) respondents at Strathmore University and 2 (1.4%) at TUK confirmed the usage of collaborative or cooperative initiatives. Strathmore University also indicated the presence of a cross-financing model, though no respondents from the Technical University of Kenya confirmed the use of this model.

Academic staff awareness of the budget allocation for Open access

The study aimed to determine if academic staff members were aware of the budget allocations for open access scholarly publishing in their respective institutions. The study results unveiled two primary themes relating to the awareness of budget allocations for open access publishing among academic staff members from Strathmore University and The Technical University of Kenya (TUK):

Lack of Awareness

In both Strathmore University and TUK, a substantial number of respondents admitted to a general lack of awareness concerning the budget allocations for open access publishing.

Verbatim responses echoed this sentiment, with participants expressing uncertainty about the specific financial allocations intended for open access scholarly publishing and research initiatives.

Prevalent Lack of Awareness

The thematic analysis highlighted a prevailing trend across both institutions, indicating a widespread lack of awareness among academic staff members concerning the budget allocations allocated for open access publishing. Verbatim responses accentuated the prevalent theme of uncertainty and lack of clarity among respondents regarding the financial provisions directed towards open access scholarly publishing initiatives. These thematic findings underscore the critical need for enhanced communication, education, or transparency within academic institutions to ensure that academic staff members are adequately informed about the budget allocations dedicated to open access scholarly publishing.

4.12.2 Open access influence on quality scholarly publishing in an institution

In this study, the researcher aimed at understanding the role of open access in shaping the quality of scholarly publishing within academic institutions. To achieve this goal, respondents were requested to assess the extent to which open access has influenced the quality of scholarly publishing in their respective institutions. This assessment was conducted using a likert scale, allowing respondents to express the level of influence as follows: 1- No extent; 2- Less extent, 3- Great extent 4- Very great extent.

Table 4. 10: Open access influence on quality scholarly publishing

		SU		TUK		Total (n=148)
		Number of Respondents	Percent %	**Number of Respondents**	Percent %	
Improved visibility and usage	No extent	2	1.4%	4	2.7%	6(4.1%)
	Less extent	8	5.4%	1	0.7%	9(6.1%)
	Great extent	47	31.8%	10	6.8%	57(38.5%)
	Very great extent	70	47.3%	6	4.1%	76(51.2%)
Increased accessibility	No extent	4	2.7%	5	3.4%	9(6.1%)
	Less extent	7	4.7%	0	0.0%	7(4.7%)
	Great extent	36	24.3%	7	4.7%	43(29.1%)
	Very great extent	80	54.1%	9	6.1%	89(60.1%)
Increased collaboration	No extent	3	2.0%	3	2.0%	6(4.1%)
	Less extent	14	9.5%	8	5.4%	22(14.9%)
	Great extent	74	50%	7	4.7%	81(54.7%)
	Very great extent	36	24.3%	3	2.0%	39(26.4%)
Enhanced research process	No extent	3	2.0%	5	3.4%	8(5.4%)
	Less extent	16	10.8%	3	2.0%	19(12.8%)
	Great extent	66	44.6%	11	7.4%	77(52%)
	Very great extent	42	28.4%	2	1.4%	44(29.7%)
Efficient and wide research dissemination	No extent	2	1.4%	3	2.0%	5(3.4%)
	Less extent	13	8.8%	4	2.7%	17(11.5%)
	Great extent	48	32.4%	7	4.7%	55(37.7%)
	Very great extent	64	43.2%	7	4.7%	71(47.9%)
Cost saving	No extent	3	2.0%	4	2.7%	7(4.7%)
	Less extent	16	10.8%	3	2.0%	19(12.8%)
	Great extent	80	54.1%	8	5.4%	88(59.5%)
	Very great extent	28	18.9%	6	4.1%	34(22.9%)

The data presented in Table 4.10 illustrates the extent to which open access has influenced various aspects of quality scholarly publishing within academic institutions. Here is a summary of the findings:

Improved Visibility and Usage: SU: 2(1.4%) respondents reported very great extent, TUK: 4(2.7%) respondents did not provide an extent of visibility and usage, SU: 8(5.4%) respondents indicated less extent, TUK: 1(0.7%) respondent reported less extent, SU: 47(31.8%) respondents indicated great extent, TUK: 10 (6.8%) respondents reported great extent, SU: 70(47.3%) respondents indicated very great extent, TUK: 6 (4.1%) respondents reported very great extent.

Increased Accessibility: SU: 4(2.7%) respondents reported no extent, TUK: 5(3.4%) respondents reported no extent, SU: 7(4.7%) respondents reported less extent, TUK: 7(4.7%) respondents reported less extent, SU: 36(24.3%) respondents reported great extent, TUK: 7 (4.7%) respondents reported great extent, SU: 80(54.1%) respondents indicated very great extent, TUK: 9(6.1%) respondents indicated very great extent.

Increased Collaboration: SU: 3(2.0%) respondents reported no extent, TUK: 3(2.0%) respondents reported no extent, SU: 14(9.5%) respondents reported less extent, TUK: 8(5.4%) respondents reported less extent, SU: 74(50%) respondents reported great extent, TUK: 7(4.7%) respondents reported great extent, SU: 36(24.3%) respondents reported very great extent, TUK: 3(2.0%) respondents reported very great extent.

Enhanced Research Process: SU:3(2.0%) respondents reported no extent, TUK: 5(3.4%) respondents reported no extent, SU: 16(10.8%) respondents reported less extent,TUK: 3(2.0%) respondents reported less extent, SU: 66(44.6%) respondents reported great extent,TUK:

11(7.4%) respondents reported great extent, SU: 42(28.4%) respondents reported very great extent,TUK: 2(1.4%) respondents reported very great extent.

Efficient and Wide Research Dissemination: SU: 2(1.4%) respondents reported no extent, TUK: 3(2.0%) respondents reported no extent, SU: 13(8.8%) respondents reported less extent,TUK: 4(2.7%) respondents reported less extent, SU: 48(32.4%) respondents reported great extent,TUK: 7(4.7%) respondents reported great extent, SU: 64(43.2%) respondents reported very great extent,TUK: 7(4.7%) respondents reported very great extent.

Cost Saving: SU: 3(2.0%) respondents reported no extent, TUK: 4(2.7%) respondents reported no extent, SU: 16(10.8%) respondents reported less extent,TUK: 3(2.0%) respondents reported less extent, SU: 80(54.1%) respondents reported great extent,TUK: 8(5.4%) respondents reported great extent, SU: 28(18.9%) respondents reported very great extent,TUK: 6(4.1%) respondents reported very great extent. These findings provide insights into how open access has influenced the quality and various aspects of scholarly publishing within the surveyed academic institutions.

Academic staff on how open access contributes to quality of research publishing

The researcher sought to understand how open access contributes to the quality of research publishing from academic staff in the respective institutions. Here are the summarized findings:

At Strathmore University, several respondents believed that open access publishing enhances the quality of research publications by allowing wide information access, enabling comparative research, and acknowledging cited work, thus improving the overall quality of the published material. A smaller group mentioned that the emphasis on peer review in published work enhances quality by ensuring expert scrutiny and validation in the same field.

At Technical University of Kenya (TUK), many respondents highlighted that open access publishing has led to increased access to research output, fostering the development of credible and authentic publications meeting scholarly publication standards. Additionally, a significant proportion emphasized that peer review processes contribute to quality publications by ensuring consistency and accuracy in the published work.

Verbatim Responses:

"It enhances the generation of new, better knowledge and new inventions of good quality" (TUK 1).

"Enhances the quality output of research by staff and students" (TUK 2).

"Promoting wide access to information, research, teaching, learning, and access and visibility" (SU 1).

"Provides wide access to resources as well as increased collaboration between scholars" (SU 2).

These findings illustrate that open access contributes to the quality of research publishing by facilitating access to information, promoting peer review, and fostering collaboration among scholars, ultimately enhancing the overall quality of scholarly publications.

4.13 Strategies for improving open access scholarly publishing.

The fourth objective of the study aimed to identify strategies that can enhance open access scholarly publishing by researchers in the two universities. Graduate students were asked to rate these strategies on a Likert scale ranging from 1 to 5, with 5 indicating strong agreement and 1 representing strong disagreement. The results are summarized in Table 4.11.

Table 4.11: Strategies for improving open access publishing

		Institution				Total (n=148)
		SU		TUK		
		Number of Respondents	Percent %	Number of Respondents	Percent %	
Streamlining the peer review and publication procedure	Agree	75	50.7%	7	4.7%	82(55.4%)
	Disagree	0	0.0%	1	0.7%	1(0.7%)
	Neutral	23	15.5%	8	5.4%	31(20.9%)
	Strongly Agree (SA)	28	18.9%	3	2.0%	31(20.9%)
	Strongly Disagree(SD)	1	0.7%	2	1.4%	3(2.0%)
Registering the support of authors in the publishing procedure	Agree	71	47.9%	12	8.1%	83(56.1%)
	Disagree	2	1.4%	0	0.0%	2 (1.4%)
	Neutral	30	20.3%	6	4.1%	36(2.3%)
	Strongly Agree (SA)	23	15.5%	1	0.7%	24(16.2%)
	Strongly Disagree(SD)	1	0.7%	2	1.4%	3(2.0%)
Registering the backing and capability of research librarians	Agree	43	29.1%	9	6.1%	52(35.1%)
	Disagree	0	0.0%	1	0.7%	1(0.7%)
	Neutral	7	4.7%	8	5.4%	15(10.1%)
	Strongly Agree (SA)	76	51.4%	3	2.0%	79(53.4%)
	Strongly Disagree(SD)	1	0.7%	0	0.0%	1(0.7%)
Pursuing monetary funds from institutions, establishments or government donations	Agree	50	33.8%	11	7.4%	61(41.2%)
	Disagree	9	6.1%	1	0.7%	10(6.8%)
	Neutral	43	29.1%	6	4.1%	49(33.1%)
	Strongly Agree (SA)	15	10.1%	2	1.4%	17(11.5%)
	Strongly Disagree (SD)	10	6.8%	1	0.7%	11(7.4%)

Table 4.11 presents the findings regarding the strategies that can enhance open access scholarly publishing. Respondents' opinions were collected using a Likert scale, where 5 indicated strong agreement and 1 represented strong disagreement. Here are the summarized findings:

Streamlining Peer Review and Publication Procedure: Strathmore University (SU): 75 (50.7%) respondents agreed that streamlining the peer review and publication procedure would improve open access publishing. Technical University of Kenya (TUK): 7 (4.7%) respondents from TUK agreed with this strategy.

Registering Support of Authors: SU: 71 (47.9%) respondents at SU agreed that registering the support of authors in the publishing procedure would enhance open access publishing. TUK: 12 (8.1%) respondents at TUK also agreed with this strategy.

Involving Research Librarians: SU: 43 (29.1%) respondents at SU agreed that involving research librarians would improve open access publishing. TUK: 9 (6.1%) respondents at TUK agreed with this strategy.

Pursuing Monetary Funds from Institutions: SU: 50 (33.8%) respondents at SU agreed that pursuing monetary funds from institutions would enhance open access publishing. TUK: 11 (7.4%) respondents at TUK agreed with this strategy. In addition to agreement, there were responses indicating disagreement, neutrality, strong agreement, and strong disagreement from both universities regarding these strategies.

Academic staff on startegies for improving open access pblishing

The study aimed to identify the strategies employed by academic staff in promoting quality open access scholarly publishing (OASP) in their respective institutions, Technical University of Kenya (TUK) and Strathmore University (SU). Here are the key findings and a summary of the responses:

At Strathmore University (SU), the efforts to promote Open Access Scholarly Publishing (OASP) involve several key strategies. The university is actively engaged in reviewing journals

to eliminate predatory ones, as indicated by a significant proportion of respondents. Additionally, the institution is conducting awareness campaigns to educate researchers about the significance of publishing on open access platforms. Moreover, there is a deliberate push to improve the quality of publications through a dedicated review team that ensures research standards and ethics are met. However, a subset of respondents expressed a lack of awareness regarding the institution's efforts in promoting OASP.

Likewise, at the Technical University of Kenya (TUK), the endeavor to encourage OASP is characterized by multiple strategies. One major strategy involves enhancing the quality of published work, which was highlighted by a substantial number of respondents. TUK is also actively engaged in awareness campaigns specifically focusing on OASP to educate researchers about its importance. Furthermore, there are efforts aimed at reviewing journals for predatory content. Despite these strategies, a notable portion of respondents perceived that the institution is exerting relatively little effort to promote open access publishing.

The verbatim responses from academic staff shed light on various initiatives and perspectives, including *training and financing of researchers, generating lists of accredited journals to differentiate predatory ones, encouraging scholars to become consumers of open access, creating institutional journals, conducting sensitization sessions, and rewarding staff for high-quality publications.* These responses reflect a diverse range of strategies and ideas for promoting quality OASP.

Academic staff on how open access scholarly publishing is encouraged across academic faculties

The study aimed to determine how open access scholarly publishing is encouraged across academic faculties at both Strathmore University (SU) and the Technical University of Kenya (TUK). The study reveals common strategies and some issues related to the encouragement of Open Access Scholarly Publishing (OASP) among academic faculty members at both Strathmore University (SU) and the Technical University of Kenya (TUK).

Strathmore University (SU)

Conferences and Workshops: The predominant approach at SU for promoting OASP is through conferences and workshops. Respondents noted that participant presentations from these events are compiled and subsequently published in open access journals.

Institutional Repositories: SU also employs the use of institutional repositories to facilitate the publication, storage, and sharing of research output among scholars. This approach aims to enhance accessibility to scholarly work.

Lack of Awareness: However, a noteworthy challenge within SU is a perceived lack of awareness among some respondents regarding how OASP is encouraged within the institution. This raises questions about the effectiveness of communication and information dissemination about OASP initiatives.

Technical University of Kenya (TUK)

Conferences and Workshops: Similar to SU, TUK extensively relies on conferences and workshops as a primary strategy to promote OASP. Many respondents indicated that participant presentations from these events are compiled and published in open access journals.

Institutional Repositories: TUK, like SU, utilizes institutional repositories for the publication, storage, and sharing of research output among scholars, promoting accessibility.

Perceived Lack of Effort: Interestingly, a significant proportion of respondents at TUK expressed a perceived lack of awareness regarding how OASP is being encouraged within the institution. This suggests a potential gap in communication or a need for improved information dissemination about OASP initiatives at TUK.

Both institutions heavily rely on conferences, workshops, and institutional repositories to encourage OASP. However, the issue of perceived lack of awareness among some respondents in both institutions highlights the importance of clear and effective communication and awareness campaigns to promote OASP effectively.

The verbatim responses from academic staff members highlighted strategies such as:

''*Organizing conferences, seminars, and research symposiums''*.

These initiatives aim to create platforms for sharing research findings and promoting open access publishing among scholars.

4.14 Respondents suggestion on Strategies to be adopted by institutions

The researcher sought proposals from graduate students on other strategies they think the institutions should adopt to help enhance open access scholarly publishing. The responses are as tabulated in Table 4.12.

Table 4. 12: Other Strategies to be adopted by institutions.

	Institution				Total (n=148)	
	Strathmore University		The Technical University of Kenya			
All publications should be reviewed by experts before being exposed to open access	1	0.7%	0	0.00%	1	0.7%
All universities in Kenya should open a portal to share all research outputs	1	0.7%	0	0.00%	1	0.7%
Avail funds to researchers	12	8.1%	3	2.0%	15	10.1%
Centralized finance pool to finance open access publishers	1	0.7%	0	0.00%	1	0.7%
Collaboration with other institutions of higher enhancing wide catchment of research work	30	20.3%	6	4.1%	36	24.3%
Conducting frequent webinars on the topic	1	0.7%	0	0.00%	1	0.7%
Constant training of researchers on how to come up with high quality and authoritative research output	1	0.7%	0	0.00%	1	0.7%
Create clear publishing procedures	1	0.7%	0	0.00%	1	0.7%
Creating awareness about open access publishing	9	6.1%	2	1.4%	11	7.4%
Efforts should be made to ensure that all journals in the country have e versions to ensure maximum benefits of open access	1	0.7%	0	0.00%	1	0.7%
Enhance marketing or open access to improve awareness	0	0.00%	1	0.7%	1	0.7%
Ensure strict supervision of research work by qualified researchers so as to guide those writing to come up with high quality publications	2	1.4%	0	0.00%	2	1.4%
Establish authoritative journals for open access publications	1	0.7%	0	0.00%	1	0.7%
Establish quality checks such as antiplagiarism checkers to ensure publications adhere to originality	4	2.7%	0	0.00%	4	2.7%
Establishing and running more open access journals at the university	0	0.00%	1	0.7%	1	0.7%
Formulate research policies to guide the research processes	3	2.0%	1	0.7%	4	2.7%
Identifying a list of authoritative journals to publish with	1	0.7%	0	0.00%	1	0.7%
Incentivize publishing in Open Access journals	0	0.00%	1	0.7%	1	0.7%
Make it a national concern so its effected in the national policies	1	0.7%	0	0.00%	1	0.7%

Mapping of researchers to experts	1	0.7%	0	0.00%	1	0.7%
Market the concept of open access	2	1.4%	1	0.7%	3	2.0%
Monthly email notifications	1	0.7%	0	0.00%	1	0.7%
None	14	9.5%	3	2.0%	17	11.5%
Open publishing and storage of published works on databases	3	2.0%	0	0.00%	3	2.0%
Organize research symposiums for researchers to exhibit their works to the audience to give their opinions before approval for publishing	4	2.7%	0	0.00%	4	2.7%
Promoting self-archiving as one of the ways of improving open access publishing	1	0.7%	0	0.00%	1	0.7%
Provide checks and balances for the open access publishing	1	0.7%	0	0.00%	1	0.7%
Provide institutional support to researchers	1	0.7%	0	0.00%	1	0.7%
Provide professional support to publishers	1	0.7%	1	0.7%	2	1.4%
Publicise open access for many people to know it	3	2.0%	0	0.00%	3	2.0%
Rewarding/recognition of researchers	4	2.7%	2	1.4%	6	4.1%
Set research quality assurance in universities to check on the content to be published on open access	1	0.7%	0	0.00%	1	0.7%
Setting up of research departments to streamline research processes in the University	4	2.7%	1	0.7%	5	3.4%
Strongly support self-archiving and institutional repositories	0	0.00%	1	0.7%	1	0.7%
Subject research proposals to scrutiny before publication	1	0.7%	0	0.00%	1	0.7%
There is need to guide researchers on how to publish their work on open access	1	0.7%	0	0.00%	1	0.7%
Training of researchers and graduate students on open access	9	6.1%	0	0.00%	9	6.1%
Unlimited access to institutions research library	1	0.7%	0	0.00%	1	0.7%
Use of Directory Of Open Access Journals (DOAJ)	0	0.00%	1	0.7%	1	0.7%
Total	123	83.1%	25	16.7%	148	58.3%

The data in Table 4.12 offers insights into strategies proposed by respondents from both Strathmore University (SU) and the Technical University of Kenya (TUK) to improve the quality of open access scholarly publishing. The strategies proposed by the respondents cover diverse thematic areas and provide a comprehensive perspective on how to enhance the open access publication landscape.

Strathmore University: The respondents from Strathmore University emphasized a wide array of strategies. Notably, they proposed measures such as instituting expert review processes before publications become openly accessible, creating a national repository for all research outputs, centralizing financial support for open access initiatives, and conducting regular webinars to educate on open access principles. Additionally, they highlighted the importance of continuous training for researchers to produce high-quality work and ensuring that all journals have electronic versions for maximal open access benefits. The suggestions also included establishing authoritative journals, mapping researchers to experts, and subjecting research proposals to scrutiny before publication. Ensuring clear publishing procedures, institutional support for researchers, and maintaining research quality assurance standards were among the various strategies recommended.

The Technical University of Kenya: On the other hand, respondents from the Technical University of Kenya proposed strategies that primarily focused on raising awareness and providing support mechanisms. They suggested enhancing the marketing of open access to improve awareness, offering incentives for publishing in open access journals, and strongly supporting self-archiving and institutional repositories. Utilizing directories of open access journals and establishing more open access journals within the university were other proposed

initiatives. Financial support for researchers, collaboration with other institutions, wide-reaching promotion of research works, and strict supervision of research work were among the highlighted strategies. They also emphasized the importance of quality checks, policy formulation, conducting symposiums, professional support for publishers, and training researchers and graduate students on open access.

Overall, the suggestions put forth by respondents from both universities covered a wide spectrum of strategies aimed at enhancing the quality of open access scholarly publishing. These proposals encompassed aspects of policy development, awareness campaigns, financial support, quality assurance, collaboration, and educational initiatives. The combined recommendations underline a collective effort towards promoting better practices and standards within the domain of open access publishing in both academic institutions.

Academic staff understanding of controls put by management of the respective institutions

The study aimed to understand the controls implemented by the management of the respective institutions to promote quality open access scholarly publishing (OASP) from academic staff perspectives. The findings from academic staff members (n=106) at both Strathmore University (SU) and the Technical University of Kenya (TUK) revealed several themes related to controls to promote quality OASP. Here are the key themes:

Strathmore University (SU)

Development of Credible Journal Lists: A prevalent theme at SU was the establishment of credible journal lists to guide researchers in avoiding predatory journals, noted by a substantial portion of respondents.

Departmental Quality Assurance: There was an evident commitment at the departmental level to ensure the compliance of submitted research work with the standards of Open Access Scholarly Publishing (OASP). Departments actively conducted checks on the content quality, showcasing a departmental emphasis on quality control measures.

Establishment of Review Teams: SU had dedicated teams responsible for evaluating research publications to maintain and enhance quality standards, reflecting a structured approach to maintain the credibility of scholarly works.

Plagiarism Checks: The institution actively invested in plagiarism detection software to ensure the authenticity of published works, emphasizing proper citation and original content, highlighting a significant focus on maintaining publication credibility.

Uncertainty: Despite the presence of various quality control mechanisms, a few respondents expressed uncertainty regarding the existence of robust control measures, indicating a need for clearer communication or awareness about these existing initiatives.

Technical University of Kenya (TUK)

Departmental Emphasis on Quality: Similarly, to SU, TUK showcased a departmental focus on maintaining quality in Open Access Scholarly Publishing, ensuring that published works met set standards, reflecting a similar approach to maintain publication credibility.

Compilation of Credible Journals: TUK, like SU, compiled lists of credible and predatory journals to assist researchers in making informed decisions regarding where to publish their work, reflecting an institutional strategy to steer researchers away from predatory publishing.

Utilization of Plagiarism Detection Software: TUK actively utilized plagiarism detection software to ensure the integrity of scholarly works, indicating a commitment to upholding originality and citation standards.

Involvement of Peer Reviewers: TUK also engaged peer reviewers to scrutinize published works, reinforcing quality standards and ethical considerations within scholarly publications.

Uncertainty: A notable number of respondents from TUK also expressed uncertainty about the existence or implementation of effective quality control measures, suggesting the need for clearer communication or awareness about the institution's initiatives to ensure quality scholarly publishing.

Both SU and TUK showcased similar strategies to maintain quality in Open Access Scholarly Publishing, including the development of credible journal lists, departmental quality checks, involvement of review teams, plagiarism checks, and the use of peer reviewers. However, the presence of uncertainty among some academic staff regarding the effectiveness or existence of these controls suggests a necessity for clearer communication or greater awareness about these quality control initiatives.

All respondents suggestions on ways to adopt to enhance open access at TUK and SU

The study aimed to gather suggestions from both graduate students and academic staff on ways their respective institutions could enhance open access scholarly publishing (OASP). The quantitative data from graduate students and academic staff were converged to provide insights into these suggestions (n=254). Here are the key findings:

Strathmore University (SU): Institutional Repositories: The majority of respondents, 25 (9.8%), from SU suggested that the use of institutional repositories to promote, publish, and disseminate

scholarly work would enhance open access. Institutional Trainings: 20 (7.9%) of the respondents proposed that institutional trainings on open access should be conducted to increase awareness and knowledge among scholars. Awareness Campaigns: Another 20 (7.9%) respondents advocated for awareness campaigns to make open access well-known and accessible among the academic community. Funding: 30 (11.8%) of the respondents suggested that funding initiatives should be put in place to support open access scholarly publishing.

Technical University of Kenya (TUK): Awareness Campaigns: The findings from TUK revealed that 50 (19.7%) of the respondents suggested conducting awareness campaigns through seminars, symposiums, and workshops to promote OASP. OASP Trainings: OASP trainings also stood out as a potential measure to promote OASP, with 40 (15.7%) of the respondents recommending educational initiatives to enhance awareness and understanding of open access. Institutional Repositories: Similar to SU, 24 (9.4%) of the TUK respondents emphasized the importance of using institutional repositories to promote and store published scholarly work as a way of enhancing OASP. Policy Formulation: The issue of policy formulation on patent and copyright was also suggested as a means to safeguard authors' work and encourage more people to publish. This was indicated by 30 (11.8%) of the TUK respondents. No Suggestions: 15 (5.9%) respondents from TUK indicated that they had no specific suggestions. In summary, both graduate students and academic staff from SU and TUK converged in their suggestions for enhancing open access scholarly publishing. These suggestions included the use of institutional repositories, awareness campaigns, OASP trainings, funding support, and policy formulation. These recommendations provide valuable insights into the strategies that could be adopted by their respective institutions to promote OASP effectively.

4.15 Additional information to enhance open access scholarly publishing

The researcher aimed to gather insights from graduate students on additional information they could provide to improve open access scholarly publishing in the two universities. The responses are presented in tabular form and further elaborated upon below:

Table 4. 13: Additional information to enhance open access scholarly publishing.

	Institution				Total (n=148)	
	SU		TUK			
A system to identify fake research articles before they can be accessed by the students	0	0%	1	0.7%	1	0.7%
Adequate marketing and awareness is necessary	35	23.6%	2	1.4%	37	25%
Adequate time ought to be provided for students to engage with opportunities for research outside classrooms	1	0.7%	0	0%	1	0.7%
Collaborative research	1	0.7%	0	0%	1	0.7%
Create more partnerships with more journals to be able to access published work which are currently paid for to access.	1	0.7%	0	0%	1	0.7%
Delisting predatory journals to ensure quality work	4	2.7%	0	0%	4	2.7%
Develop institutional repositories to act as channels of publicizing research works within individual institutions	1	0.7%	0	0%	1	0.7%
Enhance peer review mechanisms	7	4.7%	2	1.4%	9	6.1%
Ensure journals are deposited with the institution	1	0.7%	0	0%	1	0.7%
Ensure thorough scrutiny of publications before being availed on open access platforms	2	1.4%	0	0%	2	1.4%
Establish checks such as plagiarism checkers to promote integrity	1	0.7%	0	0%	1	0.7%
Establish reward schemes for best quality open a access publishing	3	2.0%	0	0%	3	2.0%
Experts to guide new entrants in research up to publication to ensure quality and reliability of research output	3	2.0%	0	0%	3	2.0%
Formulate Institutional policies on open access/research publications	3	2.0%	2	1.4%	5	3.4%
Institutional support, incentives to authors and conducive working environment and ICT and research infrastructure.	1	0.7%	1	0.7%	2	1.4%
More and very authoritative published information materials be subscribed to.	0	0%	1	0.7%	1	0.7%
None	35	23.6%	7	4.7%	42	28.4%
Provide financial support to researchers to enhance open access	20	13.5%	1	0.7%	21	14.2%
Research materials, data from government agencies. Updating of the research articles on regular basis in order to enable researchers look for gaps on recent research findings	1	0.7%	0	0%	1	0.7%
Subject research works to originality test through plagiarism checkers	1	0.7%	0	0%	1	0.7%

There is need to establish a national platform / database for all active open access journals in the country	1	0.7%	0	0%	1	0.7%
Train researchers on best open access publishing models	4	2.7%	4	2.7%	8	5.4%
User education	1	0.7%	0	0%	1	0.7%
Total	127	50.3%	21	8.4%	148	100%

The data presented in Table 4.13 summarizes the suggestions provided by the respondents on how to enhance open access scholarly publishing. The responses from both Strathmore University (SU) and Technical University of Kenya (TUK) were as follows:

Adequate Time for Research Opportunities: Respondents suggested that students should be given sufficient time to engage in research activities beyond their classrooms. Collaborative Research: They recommended promoting collaborative research efforts. Partnerships with Journals: Creating more partnerships with journals to provide easier access to published works, which are currently behind paywalls. Institutional Repositories: Developing institutional repositories to serve as channels for publicizing research works within individual institutions. Journals Deposits: Ensuring that journals are deposited within the institution. Plagiarism Checkers: Establishing checks, such as plagiarism checkers, to promote integrity in research. Access to Research Materials: Providing access to research materials and data from government agencies. Regular Updates: Updating research articles regularly to enable researchers to identify gaps in recent research findings. Originality Tests: Subjecting research works to originality tests through plagiarism checkers. National Platform for Journals: Creating a national platform or database for all active open access journals in the country. User Education: Educating users on how to navigate and utilize open access resources effectively. Identifying Fake Research: Implementing a system to identify fake research articles before they can be accessed. Marketing and Awareness: Promoting open access through marketing and awareness campaigns. Delisting

Predatory Journals: Removing predatory journals to ensure the quality of published work. Enhanced Peer Review: Strengthening peer review mechanisms. Thorough Scrutiny: Ensuring thorough scrutiny of publications before they are made available on open access platforms. Reward Schemes: Establishing reward schemes for the best quality open access publishing. Guidance from Experts: Providing guidance from experts to guide new researchers up to the publication stage. Institutional Policies: Formulating institutional policies on open access and research publications. Institutional Support: Offering institutional support, incentives to authors, and creating a conducive working environment with adequate ICT and research infrastructure. Access to Authoritative Information: Subscribing to more authoritative published information materials. Financial Support: Providing financial support to researchers to enhance open access. Training: Training researchers on the best open access publishing models. None: Some respondents did not provide specific suggestions.

These findings highlight a wide range of strategies and recommendations for enhancing open access scholarly publishing, covering various aspects from institutional policies to individual researcher support and awareness campaigns.

Additional information to enhance open access scholarly publishing from academic staffs

The findings from academic staff at Strathmore University (SU) and Technical University of Kenya (TUK) on how open access scholarly publishing in universities can be enhanced revealed several key themes in enhancing open access scholarly publishing. These themes were identified and organized through a code-based approach:

Theme 1: Promoting Research Collaboration (RSC): This theme emphasizes the critical role of fostering collaboration among universities to strengthen open access scholarly publishing. It

highlights the value of collective efforts among institutions to enhance the accessibility and dissemination of scholarly works.

Theme 2: Creating Awareness (CA): This theme underscores the importance of educating students and staff about open access publishing. It aims to raise awareness and understanding regarding the benefits and mechanisms of open access scholarly publishing, emphasizing the need for comprehensive education within academic communities.

Theme 3: Infrastructure Development (ID): The suggestion of investing in technological and digital infrastructure to support open access scholarly publishing forms this theme. It focuses on the necessity of establishing the required digital platforms and infrastructure to facilitate the dissemination and accessibility of research works.

Theme 4: Policy Formulation (PF): This theme involves proposing and implementing policies that encourage the creation of open access repositories within academic institutions. It underscores the significant role of institutional policies in promoting and sustaining open access practices.

Theme 5: Capacity Building and Funding (CBF): This theme highlights the significance of investing in training programs and providing financial support to promote research and open access within academic institutions. It emphasizes the necessity of building capabilities and allocating resources for advancing open access initiatives.

Theme 6: Advocacy and Sensitization (AS): This theme stresses the crucial role of advocacy and sensitization efforts in advocating for open access practices. It extends the importance of these efforts not only to staff members but also to undergraduate and postgraduate students within academic settings.

This code-based organization of thematic breakdown aids in categorizing and comprehending the suggestions provided by academic staff from both institutions regarding the enhancement of open access scholarly publishing.

Convergent parallel mixed methods research fits within the broader context of this study as a research approach used to collect and analyze data. The study primarily involved the collection and analysis of qualitative and quantitative data related to the perceived benefits of open access scholarly publishing among academic staff members at two different institutions: Strathmore University (SU) and the Technical University of Kenya (TUK). The qualitative data involves verbatim responses and statements from academic staff members, reflecting their nuanced understanding and perspectives on open access scholarly publishing. This qualitative data reveals the diversity of opinions and perspectives within the academic community regarding open access publishing. The quantitative data includes percentages and numerical figures that summarize the responses and perceptions of academic staff members at both institutions. These figures show the distribution of responses and quantify the extent to which certain benefits are perceived by respondents. For example, it quantifies the percentage of respondents who acknowledge the benefits of open access publishing in terms of increased accessibility, citations, collaboration, altmetrics, etc.

In summary, academic staff from both universities provided valuable insights on how to enhance open access scholarly publishing. Their suggestions encompassed collaboration, awareness creation, infrastructure development, policy formulation, capacity building, funding, and advocacy. These themes collectively underscore the multifaceted approach required to promote open access within academic institutions. Convergent parallel mixed methods research involves collecting both qualitative and quantitative data in parallel and then comparing or converging the

results to provide a more comprehensive understanding of the research topic. In this case, the study collects qualitative data through verbatim responses and quantitative data through survey responses, and the results are presented side by side to provide a richer and more multifaceted view of the perceived benefits of open access scholarly publishing. This approach helps to triangulate the findings and gain a deeper insight into the research subject. The role of convergent parallel mixed methods research in this study was to offer a more holistic understanding of how academic staff members perceive the benefits of open access publishing by presenting both qualitative insights and quantitative statistics side by side.

4.16 Chapter summary

Chapter Four provides an analysis and interpretation of the data collected in accordance with the study's objectives and research questions. The primary focus was on exploring strategies to enhance the quality and visibility of research through open access scholarly publishing in selected universities.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

This chapter delves into the interpretation and discussion of the data analyzed in Chapter Four. Data interpretation involves the application of various analytical methods to review and draw meaningful conclusions from the information. It enables researchers to categorize, manipulate, and summarize the data to address key research questions (Creswell & Creswell, 2018). In this chapter, we critically examine the significance of the findings concerning the enhancement of research quality and visibility through open access scholarly publishing at The Technical University of Kenya and Strathmore University. This discussion links the research questions to the existing literature, bridging the gap between theory and empirical findings. The Convergent Parallel Mixed Methods Research design facilitates a thorough and multifaceted examination of research findings by harnessing the strengths of both qualitative and quantitative data to gain deeper insights into how graduate students and academic staff perceive the advantages of open access scholarly publishing. This method amplifies the study's credibility and enriches the depth of its conclusions. The findings presented in this chapter are contextualized within the framework of the existing literature on enhancing research quality and visibility through open access scholarly publishing. The study focused on academic institutions in Kenya, aiming to investigate how researchers at The Technical University of Kenya and Strathmore University can improve the quality and visibility of their research through open access publishing practices. To achieve this, five main objectives and corresponding research questions were formulated, as outlined in sections 1.4 and 1.5 of Chapter One. The discussion of the study's findings is aligned to the objectives of the study which are to:

1. Examine the contribution of open access scholarly publishing to quality and visibility of research output by researchers at the Technical University of Kenya and Strathmore University.

2. Determine the benefits of enhancing quality and visibility of open access scholarly publishing at the Technical University of Kenya and Strathmore University.

3. Determine the challenges faced by researchers in enhancing quality and visibility of open access scholarly publishing at the Technical University of Kenya and Strathmore University.

4. Establish how quality of scholarly publishing can be enhanced by researchers to improve visibility at The Technical University of Kenya and Strathmore University.

5. Propose strategies to improve quality and visibility of open access scholarly publishing by researchers at the Technical University of Kenya and Strathmore University.

5.2 Contribution of open access to scholarly publishing by researchers at TUK and SU

The study aimed to explore the perceived contribution of open access scholarly publishing among graduate student respondents at Strathmore University (SU) and The Technical University of Kenya (TUK). The data presented in the findings shed light on various aspects of open access scholarly publishing and its impact as reported by the respondents.

Perceived Benefits of Open Access Scholarly Publishing Among Graduate Students: Increased Usage of Scholarly Resources: A portion of respondents from both SU and TUK acknowledged that open access scholarly publishing contributes to increased usage of scholarly resources. Cost Savings and Efficiency: Respondents from both institutions recognized open access scholarly publishing as a means to promote cost savings and efficiency in scholarly publishing. Improved

Decision Making: Some respondents believed that open access scholarly publishing leads to improved decision-making. Enhanced Access: Open access scholarly publishing was perceived to enhance access to information. Increased Citation Impact: Some respondents mentioned that open access scholarly publishing contributes to increased citation impact. Greater Research Impact: A portion of the respondents believed that open access scholarly publishing enhances greater research impact. Increased Impact Factor: Some respondents noted that open access scholarly publishing is associated with an increased impact factor. Additionally, a small percentage of respondents were unsure about the impact of open access scholarly publishing. These findings provide insights into the perceived benefits of open access scholarly publishing among graduate students and concurs with the Ukwoma and Onyebinama (2021), who in their study found that access to resources is significant to information, research and development, and eradicating barriers to information access to encourages scholarship; therefore, librarians on their part should exploit strategies that would accelerate open access to resources to improve on service delivery.

The study also aimed to gather insights from academic staff members regarding the contribution of open access scholarly publishing to their respective institutions (SU and TUK). Perceived Benefits of Open Access Scholarly Publishing Among Academic Staff: Increased Access to Research Publications: Many respondents at both SU and TUK acknowledged that open access scholarly publishing has significantly increased access to research publications. Enhanced Authors' Visibility: Some respondents believed that open access scholarly publishing has helped increase the visibility of authors and their published works. Promotion of Collaboration: A portion of respondents at both institutions believed that open access publishing facilitates collaboration among authors working on projects in the same field. Promotion of Information

Sharing: Some respondents emphasized that open access scholarly publishing has promoted information sharing, as scholars can access information without restrictions. However, a small percentage of respondents in both groups expressed uncertainty about any specific contributions that open access scholarly publishing has made to their institution. The finding concurs with Koscinski (2020) that decision making necessitate sound, step-by-step evaluation of the available information or knowledge. The meticulous enquiry complements the other phases in the decision making process, for example recognizing the problem, working with affected parties to develop alternatives, sharing the idea with stakeholders and offering solutions to existing problems. Lastly, the study investigated whether academic staff members and graduate students had observed any changes in the way open access publishing was being promoted in their respective institutions (SU and TUK).

Observations Regarding Open Access Promotion

Strathmore University (SU): Some graduate students at SU had observed a change in the way open access is being promoted within the institution, while others had not noticed any changes. The Technical University of Kenya (TUK): At TUK, some respondents had observed changes in the way open access publishing was being promoted, while others had not noticed significant alterations or were uncertain about such changes. These findings underscore the varying perceptions of academic stakeholders regarding the impact and promotion of open access scholarly publishing within their institutions. While some have observed positive changes and benefits, others may require better communication and awareness of open access initiatives within their academic communities.

5.3 Benefits of enhancing quality and visibility of open access scholarly publishing

The second research question aimed to uncover the benefits associated with quality and visibility of open access scholarly publishing. It sought to assess respondents' awareness of the benefits and challenges related to open access scholarly publishing among researchers at the two universities. The findings on the benefits are discussed below:

Widest Dissemination of Research Work: A significant benefit of scholarly open access publishing is its ability to ensure the widest dissemination of research work. This benefit was acknowledged by a substantial number of graduate respondents at Strathmore University (SU) and The Technical University of Kenya (TUK).

Increased Accessibility to Research Work: Respondents recognized that open access scholarly publishing enhances increased accessibility to research work. A considerable proportion of respondents at both SU and TUK affirmed this as a valuable benefit, emphasizing how it facilitates broader access to academic resources.

Increased Citations: Open access publishing is perceived to lead to increased citations of research work. This benefit was noted by a notable number of respondents at SU and TUK, illustrating the belief that open access can contribute to greater academic impact and recognition.

Enhanced Collaboration: Respondents also emphasized the benefit of increased collaboration facilitated by open access scholarly publishing. This was acknowledged by respondents at both institutions, underlining how open access can foster interdisciplinary networking and more robust research outcomes.

Increased Altmetrics: Some respondents recognized that open access publishing can lead to increased attention in altmetrics, reflecting a broader recognition and engagement with research beyond traditional citation metrics.

These study finding is in agreement with Oluwasemilore (2018) that illiteracy or unawareness of open access publishing appears to be a major concern on the development of open access publishing in emerging economies and underscore the awareness among respondents of the diverse benefits associated with open access scholarly publishing. These benefits include broader dissemination, enhanced accessibility, increased citations, improved collaboration, and heightened attention in altmetrics. Collectively, these perceptions highlight the potential for open access publishing to significantly impact academic research and dissemination by fostering broader engagement and recognition (Eve & Gray, 2020).

In the subsequent section, we delve into the perceptions of academic staff members at Strathmore University (SU) and The Technical University of Kenya (TUK) regarding the benefits of open access scholarly publishing.

Strathmore University (SU)

Increased Access to Scholarly Publications: A majority of academic staff members highlighted that open access contributes to increased access to scholarly publications. They recognize that open access makes research materials more accessible to a wider audience.

Enhanced Visibility of Published Work: Another group of respondents at SU acknowledged that open access enhances the visibility of published scholarly work. This increased visibility can benefit authors and their research by reaching a broader readership. Enhanced Collaboration Among Scholars: A smaller subset of respondents at SU expressed the belief that open access

scholarly publishing promotes collaboration among scholars. This collaboration can lead to more robust research outcomes and interdisciplinary networking.

Technical University of Kenya (TUK)

Increased Access to Scholarly Publications: At TUK, a significant portion of academic staff members emphasized that open access scholarly publishing results in increased access to scholarly publications. They are aware that open access can remove barriers to accessing research materials.

Enhanced Visibility of Published Work: The majority of respondents at TUK recognized that open access enhances the visibility of published scholarly work. This visibility is seen as a valuable outcome for authors and their research.

Enhanced Collaboration Among Scholars: Some respondents at TUK also indicated that open access contributes to enhanced collaboration among scholars. Collaborative efforts and networking are facilitated when research is made more widely accessible. These aspects have been demonstrated to lead to improved collaboration and more frequent citations and are consistent with Bornmann (2017) who found out that ever-increasing collaboration pursuist (determined by the number of authors, affiliations, and countries) is linked to enhanced citation impact. These data findings also provide a nuanced understanding of how academic staff members at both institutions perceive several benefits associated with open access scholarly publishing. These include increased access to research, enhanced visibility of scholarly work, and the promotion of collaboration within the academic community. The verbatim responses provided by some respondents further illustrate their perspectives on these benefits, shedding light on their practical significance in academic life.

5.4 Challenges faced by researchers in enhancing quality and visibility of open access scholarly publishing

The findings regarding challenges associated with enhancing open access scholarly publishing reveal notable differences and commonalities between Strathmore University (SU) and The Technical University of Kenya (TUK).

Lack of Awareness: One prominent challenge that emerged in both institutions was the lack of awareness regarding open access scholarly publishing. Respondents from SU and TUK expressed concerns about the limited understanding of open access publishing within their academic communities. This shared challenge underscores the need for educational and awareness initiatives to promote open access.

Financial Constraints: Another common challenge identified in both institutions was the difficulty of sustaining open access initiatives amidst financial constraints. Respondents at SU and TUK recognized the financial aspects of open access publishing as a significant hurdle. This similarity highlights the universal need for resources to support and maintain open access initiatives.

Preservation Concerns: Preservation challenges were noted as a concern in both institutions, albeit to different degrees. Respondents from SU and TUK highlighted the importance of ensuring the long-term availability and accessibility of open access publications, reflecting a shared concern for the sustainability of scholarly work.

Copyright Assignments: The challenge of restrictive copyright assignments was more pronounced at SU, where a substantial number of respondents cited this issue. In contrast, it was

less prevalent at TUK. This discrepancy suggests varying practices or policies related to copyright assignments between the two institutions.

Hijacked or Fake Journals: Issues related to hijacked or fake journals were reported at both SU and TUK but were more prevalent at SU. This challenge, while not as common, raised concerns about the quality and credibility of open access publications.

Predatory Journals: Predatory journals emerged as a significant challenge in both institutions, with a substantial number of respondents at SU and TUK identifying this issue. The prevalence of predatory journals in scholarly communication was a shared concern among respondents.

On the perspectives of academic staff regarding challenges associated with open access, there were some differences between SU and TUK:

Strathmore University (SU)

Predatory journals were identified as the primary challenge by academic staff at SU, followed by concerns about the quality of open access publications. Policy-related issues, such as copyright concerns, were also mentioned, along with concerns about the cost associated with open access.

The Technical University of Kenya (TUK): At TUK, predatory journals were also recognized as the primary challenge by academic staff. Additionally, concerns about the cost of publishing in open access were prevalent. Quality issues related to credibility were mentioned, along with policy-related challenges related to open access.

When examining academic staff's understanding of institutional challenges related to open access, the following observations were made:

Strathmore University (SU): Inadequate funding was identified as the most significant challenge faced by SU concerning open access scholarly publishing. A lack of awareness among scholars regarding open access publishing was another major concern. The issue of predatory journals was also notable.

The Technical University of Kenya (TUK): At TUK, inadequate funding was likewise recognized as the primary challenge concerning open access publishing. Lack of awareness among scholars about open access publishing was the next major challenge. Predatory journals were also prominently mentioned. Some respondents expressed uncertainty about the challenges faced by TUK. Verbatim responses from participants further highlighted additional challenges, including difficulties in differentiating predatory journals from legitimate ones, concerns about the quality of open access works, and the perception of free access affecting the credibility of open access publications. The findings of this study are in agreements with those of Mwambari et al. (2022) who indicated that despite flourishing of OA in Kenya and Africa, actors still have different views on its influence on knowledge creation and use because of the challenges faced by scholars such as , inadequate awareness about open access, restrictive copyrights, predatory journals, lack of skills by faculties on open access outlets, financial challenges for publishers and authors, internet connectivity issues, content preservation challenges, sustainability of online content among others.

In summary, while there are common challenges such as awareness, financial constraints, and preservation concerns, there are also variations in the prominence of specific challenges between Strathmore University and The Technical University of Kenya. These findings underscore the complexity of open access scholarly publishing and the importance of tailored strategies to address challenges in different institutional contexts.

5.5 How quality and visibility of Open access scholarly publishing can be enhanced by researchers at TUK and SU.

The study's findings shed light on the respondents' perceptions concerning the relationship between open access publishing and the enhancement of quality and visibility in scholarly research. Here, we discuss these findings without percentages to provide a clear overview:

High-Quality Research (HQR): Respondents at Strathmore University (SU) and The Technical University of Kenya (TUK) expressed their opinions on whether enhanced quality and visibility of open access scholarly publications lead to high-quality research. A substantial number at SU strongly agreed or agreed, while at TUK, the agreement was less pronounced. A minority at SU disagreed with no response from TUK.

Enhanced Visibility (EV): Respondents considered whether the improved quality of open access scholarly publications contributes to enhanced visibility. A notable portion at SU strongly agreed or agreed with this statement, while the agreement was less prominent at TUK. Some respondents at SU and TUK had differing opinions, with a small number expressing disagreement or neutrality.

Devoid of Open Access Restrictions (DAR): Respondents were asked about their views on whether unrestricted access to open access scholarly publishing enhances quality and visibility. A considerable number at SU strongly agreed or agreed with this statement, while the agreement was less prevalent at TUK. Some respondents at SU disagreed or were neutral.

Retrieving Quality Works Effortlessly (QWE): Respondents assessed whether effortless retrieval of quality work enhances quality and visibility. A significant proportion at SU and a smaller

number at TUK strongly agreed or agreed with this statement. Some respondents at both institutions had differing opinions, including neutrality or disagreement.

Revealing Content to a Huge Prospective Readership (HPR): Respondents considered whether revealing content to a large prospective readership enhances quality and visibility. A notable number at SU and a smaller number at TUK strongly agreed or agreed with this statement. Some respondents at SU had differing opinions, including disagreement or neutrality.

These findings provide insights into how respondents perceive the relationship between open access publishing and the enhancement of quality and visibility in scholarly research and agrees with Akidi et al. (2021) that engaging in high-quality research produces high-quality journal paper, which attracts visibility.. While there is a general consensus on the positive impact of open access on research visibility, variations in responses suggest that individual perspectives may be influenced by institutional contexts or personal experiences. Additionally, the study assessed the extent to which quality open access publishing has increased the visibility of research publications among academic staff. The findings indicate a consensus among academic staff at both Strathmore University and The Technical University of Kenya regarding the positive impact of quality open access publishing on research visibility. The majority either strongly agreed or agreed with this notion, emphasizing the crucial role of open access in enhancing the reach and exposure of scholarly work. Verbatim responses from participants further reinforced these findings, highlighting the value of open access in increasing research visibility. The results also concur with Lund et al. (2023) that while individual strategies are mostly controlled by researchers, changes in policy and involvement of the institutions is essential to conquer the barriers to publishing to enhance quality and visibility of research output.

5.5.1 Open access publishing models.

The study uncovered diverse open access publishing models employed by the two universities, shedding light on their respective strategies.The key findings are presented below.

Article Processing Charges (APC) Model: Strathmore University had a higher representation of respondents mentioning the utilization of the Article Processing Charges (APC) model compared to the Technical University of Kenya (TUK). This model involves authors or institutions paying fees for publication.

Community Publishing Model: All respondents from Strathmore University indicated the use of the Community Publishing model, emphasizing a consistent approach to community-driven open access publishing. Conversely, none of the respondents from TUK reported using this model.

Institutional Membership Scheme: A majority of respondents from Strathmore University confirmed the presence of an institutional membership scheme, which facilitates open access publishing. This model involves institutions securing memberships with publishers or platforms for access.

Advertising or Supported Efforts: A limited number of respondents from both universities acknowledged the use of advertising or supported efforts as an open access publishing model. This suggests a partial reliance on external support or advertising for sustaining open access initiatives.

Institutional Subsidy: Strathmore University had a notable proportion of respondents confirming the use of institutional subsidy as an open access publishing model, indicating financial support from the institution to promote open access.

Hard Copy Sales: A small number of respondents from both institutions mentioned hard copy sales as a model employed by their universities. This suggests a dual approach, where both electronic and physical copies are utilized.

Collaborative or Cooperative Initiatives: Some respondents from both universities confirmed the utilization of collaborative or cooperative initiatives, indicating a joint effort or partnership in open access publishing.

Cross-Financing Model: While Strathmore University mentioned the presence of a cross-financing model, this was not confirmed by any respondents from the Technical University of Kenya (TUK). The specifics of this model remain unclear from the data.

Academic Staff Awareness of Budget Allocation for Open Access:

The study also aimed to gauge the awareness of academic staff members regarding budget allocations for open access scholarly publishing in their respective institutions. The findings uncovered a prevalent lack of awareness among academic staff members from both universities in this regard.

Lack of Awareness: A substantial portion of academic staff members from both Strathmore University and TUK expressed their lack of awareness concerning budget allocations for open access publishing. This prevailing theme highlights the need for improved communication and transparency regarding financial aspects of open access initiatives in academic institutions. Verbatim responses further emphasized the uncertainty surrounding budget allocations for open access scholarly publishing and research.

5.5.2 Influence of open access on quality scholarly publishing

The data provided offers insights into the extent to which open access has impacted various aspects of quality scholarly publishing within academic institutions.The key findings are summarized below.

Improved Visibility and Usage: Respondents from both Strathmore University (SU) and the Technical University of Kenya (TUK) reported varying extents of improvement in visibility and usage of scholarly publications due to open access. While some indicated very great and great extents, others reported less extent or provided no extent.

Increased Accessibility: Open access was seen to significantly increase accessibility to scholarly work. However, a minority of respondents reported no extent or less extent in this regard.

Increased Collaboration: Open access was perceived to enhance collaboration among scholars. Again, some respondents reported no extent or less extent, but the majority recognized a great or very great extent of impact.

Enhanced Research Process: Respondents believed that open access contributes to an improved research process, with the majority reporting great or very great extents of influence.

Efficient and Wide Research Dissemination: Open access was seen as efficient in disseminating research widely. While a few respondents reported no extent or less extent, most acknowledged great or very great influence in this area.

Cost Saving: Open access was viewed as a cost-saving approach in scholarly publishing. The majority of respondents reported great or very great extents of cost savings due to open access. The finding agrees with Ale and Bong (2017) that open access and sharing of information accelerates innovation in science and knowledge. Sharing of data is equally beneficial to

researchers, scientific community, and the public. It supports several prospects, enables identification of mistakes in research, trains new researchers and averts duplication in data collection in a study.

Contribution of Open Access to Quality Research Publishing:

The study also aimed to understand how open access contributes to the quality of research publishing, based on academic staff responses. Here are the summarized findings from both institutions:

Strathmore University: Respondents from SU believed that open access contributes to quality research publishing by offering wide access to information, enabling comparison of research, acknowledging cited work, and emphasizing peer review. Peer review was seen as a quality assurance process.

Technical University of Kenya (TUK): TUK respondents highlighted that open access has increased access to research output, leading to the development of credible and authentic publications that meet scholarly standards. Peer review was also emphasized as a means of ensuring the consistency and correctness of published work.

Verbatim responses from participants further emphasized the role of open access in enhancing the quality of research publishing by facilitating wide access to information, fostering collaboration, and promoting peer review. Open access was seen as a driver of better knowledge generation and high-quality publications. These findings collectively illustrate that open access plays a significant role in improving the visibility, accessibility, collaboration, research process, dissemination, and cost-effectiveness of scholarly publishing while also contributing to the overall quality of research publications within academic institutions. The findings are in

agreement with Dang (2017)   that open access promotes networking which promotes access to information from associate collaborators; it offers an approach to surmount the challenges of minor disciplinary units and increase intellectual stimulus; it   also enhances closer working relationships and collaboration between researchers and other scientists.

5.6 Strategies for improving quality and visibility of open access scholarly publishing

The data presented provides valuable insights into the strategies that can be adopted to enhance the quality of open access scholarly publishing (OASP) at Strathmore University (SU) and the Technical University of Kenya (TUK). Here, we discuss the key findings and their implications.

Strategies at Strathmore University (SU)

SU respondents suggested a diverse range of strategies to improve OASP. These strategies include: Expert Review: Some respondents recommended expert review before exposing publications to open access. This implies the importance of peer evaluation to ensure the quality and credibility of open access publications.

National Portal: Establishing a national portal to share all research outputs reflects a broader collaborative approach to OASP, enabling greater visibility and access to research.

Centralized Finance Pool: The suggestion of a centralized finance pool to support open access publishers highlights the financial aspect of sustaining quality OASP.

Webinars and Training: Continuous training of researchers through webinars and training programs was mentioned, emphasizing the role of education in producing high-quality research.

Clear Publishing Procedures: The need for clear and standardized publishing procedures ensures transparency and consistency in the publishing process.

Establishing Authoritative Journals: Creating authoritative journals for open access publications indicates the desire for recognized platforms that uphold quality standards.

Policy Advocacy: Making open access a national concern reflected in national policies suggests a broader advocacy approach to promoting OASP.

These suggestions collectively underscore the importance of a holistic approach, including education, policy advocacy, financial support, and collaboration, to enhance OASP at SU.

Strategies at Technical University of Kenya (TUK)

TUK respondents also offered a range of strategies, including: Enhancing Awareness: Strategies to enhance awareness about OASP through marketing and campaigns aim to increase understanding and participation in open access initiatives.

Incentives: Providing incentives for publishing in open access journals can motivate researchers to contribute to OASP.

Utilizing DOAJ: The use of the Directory of Open Access Journals (DOAJ) highlights the importance of using established directories to identify reputable open access journals.

Expanding Institutional Journals: Establishing and running more open access journals within the university demonstrates a commitment to providing open access publishing options.

Financial Support: Availing funds to researchers supports the financial aspect of open access publishing.

Collaboration: Collaborating with other institutions of higher learning signifies the importance of collective efforts in advancing OASP.

Quality Checks: Implementing quality checks such as anti-plagiarism checkers and peer review processes ensures the credibility of published work.

These strategies indicate the multifaceted nature of OASP enhancement at TUK, encompassing awareness-building, financial support, quality assurance, and collaboration with peers.

Controls to Promote Quality OASP: The study also sought to understand the controls implemented by the management of both institutions to promote quality OASP. Controls at both SU and TUK include developing lists of credible journals, departmental quality checks, review teams, plagiarism checks, and the use of peer reviewers. These controls reflect the institutions' commitment to maintaining the quality and integrity of scholarly publications. However, it's worth noting that some academic staff expressed uncertainty regarding the existence of these controls, suggesting the need for clearer communication and awareness within the academic community. The finding is supported by Speicher et al. (2018) that there is no single ideal business model for open access that can be adopted as standard, and that the business models adopted are from the point of view of publishers and service providers such as knowledge unlatched, including those that have emerged from elsewhere. Further, many publishers and service providers use a mixture of models in an effort to raise enough funds to cover their operating costs.

Strategies for Improving Open Access Publishing by Academic Staff

The study explored the strategies employed by academic staff to promote quality open access scholarly publishing (OASP) at SU and TUK. Here are the key findings and a summary of the responses:

Strathmore University (SU)

Predatory Journal Review: SU actively reviews journals to eliminate predatory ones, mentioned by some respondents. OASP Awareness Campaigns: SU raises awareness about OASP among researchers through campaigns. Quality Publishing Promotion: There is a deliberate attempt to enhance the quality of publications through a review team. Lack of Awareness: However, some respondents were not aware of any efforts made by the institution to promote OASP.

Technical University of Kenya (TUK)

Quality Publishing Promotion: A major strategy for promoting OASP at TUK is to enhance the quality of published work. OASP Awareness Campaigns: There are also awareness campaigns focusing on OASP. Predatory Journal Review: Some efforts are made to review journals. Perceived Lack of Effort: A substantial number of respondents felt that the institution is doing relatively little to promote open access publishing. The outcome on the awareness of open access publishing strategies concurs with Mahmud et al. (2020) recommendation that in spite of having a little perception on different OA concepts like OA publication strategies the usage of OARs are growing, concerned bodies should come forward to generate awareness to overcome open access related misconceptions.

Encouragement of Open Access Scholarly Publishing Across Academic Faculties

Strategies for encouraging open access scholarly publishing were explored across academic faculties at SU and TUK.

Strathmore University (SU)

 Conferences and Workshops: The most prominent strategy for encouraging OASP at SU is the use of conferences and workshops. Participant presentations from these events are compiled and published in open access journals. Institutional Repositories: Another strategy involves the use of

institutional repositories to publish, store, and share research output among scholars. Lack of Awareness: However, some respondents at SU indicated that they were not aware of how OASP is being encouraged within their institution.

Technical University of Kenya (TUK)

 Conferences and Workshops: TUK also heavily relies on conferences and workshops to promote OASP. Participant presentations at these events are compiled and published in open access journals. Institutional Repositories: TUK also employs the use of institutional repositories to publish, store, and share research output among scholars. Perceived Lack of Effort: Interestingly, a significant number of respondents at TUK felt that they were not aware of how OASP is being encouraged in their institution. A study carried by Hrynaszkiewicz (2019) found that the support of authors in the publishing procedure entails sharing research data, enhancing objectivity in the peer review process and increasing quality through the implemention of reporting procedures and checklists by means of technology to ascertain transgression, expanding scholarly communication infrastructure with journals that publish scientifically sound research, promoting study registration, partnering with data repositories and offering services that advances sharing and curation of data.

The study also established that registering the backing and capability of research librarians is an alternative strategy. Librarians are custodians of information and are in a position to advise on the best and authoritative sources that can enrich research in any given area. This finding concurs with the findings of Dandawate and Dhanamajaya (2019) who found that Librarians are supporting Open Access publishing and also playing an important role in promoting OA. But understanding the importance of open access by user community depend upon how actively that librarians promote OA. Getting right quality research materials can enable the researcher to come

up with good quality research publication which can attract a large readership hence increasing visibility.

In summary, both SU and TUK employ similar strategies, with conferences and workshops being the most prominent, followed by the use of institutional repositories. However, there is room for improvement in raising awareness and ensuring that academic staff members are well-informed about these OASP initiatives within their respective institutions.

Suggestions for Enhancing Open Access

Both graduate students and academic staff at SU and TUK converged in their suggestions for enhancing open access scholarly publishing. These suggestions included using institutional repositories, conducting awareness campaigns, providing OASP trainings, offering funding support, and formulating policies. These recommendations provide valuable guidance for their respective institutions to effectively promote OASP. The suggestion are in agreement with Bashorun et al. (2013) that though many efforts are being made by research institutions and various stakeholders both in developed and developing countries on the open access mandate, yet the noble objective of open access initiative will not be realized, if scholars in developing countries merely constitute "obligated parasite" and "passive contributors" under this initiative. Change is never easy and no doubt many obstacles remain like copyright, rising prices, serial crisis and other financial restraints.

In conclusion, the findings highlight the importance of a multifaceted approach to enhance the quality and accessibility of open access scholarly publishing. These strategies, controls, and suggestions collectively contribute to the ongoing development of open access initiatives at Strathmore University and the Technical University of Kenya.

5.7 Suggestions on how to enhance open access scholarly publishing

The data presented summarizes the insightful suggestions provided by respondents from both Strathmore University (SU) and Technical University of Kenya (TUK) on how to enhance open access scholarly publishing (OASP). These findings encompass a wide range of strategies and recommendations that are crucial for advancing OASP. Here, we present and discuss these findings.

Common Suggestions from SU and TUK Respondents

Adequate Time for Research Opportunities: Respondents emphasized the importance of providing students with sufficient time beyond classrooms to engage in research activities. This suggestion underscores the need for a conducive environment for research within academic institutions.

Collaborative Research: Promoting collaborative research efforts was recommended. Collaboration not only enhances the quality of research but also facilitates knowledge sharing and open access publishing.

Partnerships with Journals: Creating more partnerships with journals to provide easier access to published works, which are currently behind paywalls, was suggested. Such partnerships can expand access to scholarly content.

Institutional Repositories: Developing institutional repositories to serve as channels for publicizing research works within individual institutions is crucial for increasing the visibility of research outputs.

Plagiarism Checkers: Establishing checks, such as plagiarism checkers, to promote integrity in research reflects the importance of maintaining academic standards in open access publishing.

Access to Research Materials: Providing access to research materials and data from government agencies can support researchers in their work.

Marketing and Awareness: Promoting open access through marketing and awareness campaigns is essential to ensure that stakeholders are well-informed about the benefits of OASP.

Enhanced Peer Review: Strengthening peer review mechanisms was recommended to ensure the quality and credibility of open access publications.

Thorough Scrutiny: Ensuring thorough scrutiny of publications before they are made available on open access platforms is crucial for maintaining high standards.

Guidance from Experts: Providing guidance from experts to guide new researchers up to the publication stage can enhance the quality of open access publishing.

Institutional Policies: Formulating institutional policies on open access and research publications can provide a framework for supporting OASP.

Institutional Support: Offering institutional support, incentives to authors, and creating a conducive working environment with adequate ICT and research infrastructure are important for promoting OASP.

Additional Information from Academic Staff:

The academic staff at both SU and TUK also provided insights that can be categorized into several themes: Promoting Research Collaboration: Respondents emphasized the importance of promoting research collaboration across universities as a means to enhance open access. Collaboration facilitates knowledge exchange and the dissemination of research findings.

Creating Awareness: Creating awareness about open access, especially among students and staff, was highlighted as a key strategy. This emphasizes the role of education and advocacy in promoting OASP.

Infrastructure Development: Some respondents suggested investing in infrastructure, including technological and digital platforms, to support open access publishing. This infrastructure development is seen as crucial for facilitating OASP.

Policy Formulation: Policy-related suggestions emerged, with respondents proposing the formulation of policies that would encourage institutions to establish open access repositories for their published work. Policies play a critical role in shaping institutional practices.

Capacity Building and Funding: Capacity building through training and financial support for research and open access publishing was recommended. These initiatives can empower researchers and institutions to actively engage in OASP.

Advocacy and Sensitization: Advocacy and sensitization efforts were seen as essential to promoting open access. Extending these efforts to undergraduate and postgraduate students, as well as staff members, can foster a culture of open access within academic institutions.

In summary, the findings provide a comprehensive overview of the strategies and recommendations for enhancing open access scholarly publishing. These suggestions cover various aspects, from institutional policies to individual researcher support and awareness campaigns. They collectively emphasize the multifaceted approach required to promote open access effectively within academic institutions.

5.8 Chapter Summary

Chapter Five presented a comprehensive discussion of the research findings in line with the study's objectives. It explored methods to improve the quality and visibility of research through open access scholarly publishing at TUK and SU. The key areas covered include: Open Access Contribution to Scholarly Publishing; Benefits and Challenges in Enhancing Quality and Visibility; Benefits Linked to Quality and Visibility; Challenges in Quality and Visibility. Open Access Challenges; Enhancing Quality and Visibility Strategies; Open Access Influence on Quality; Open Access Publishing Strategies; Strategies for Quality and Visibility Improvement. Respondent Suggestions for Enhancement; This chapter also provided a detailed analysis of the findings, offering insights into open access scholarly publishing's impact and implications at TUK and SU. It presents an overview of the outcomes and addresses crucial factors affecting research quality and visibility in the digital era.

CHAPTER SIX

SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter offers a concise overview of the study's findings, conclusions, and recommendations, aligning with the research objectives.

6.2 Summary of the findings

The study aimed to explore how open access publishing enhances research quality and visibility among researchers at the Technical University of Kenya and Strathmore University. The objectives were to: Examine the contribution of open access scholarly publishing to quality and visibility of research output by researchers at The Technical University of Kenya and Strathmore Universty; determine the benefits and challenges faced by researchers in enhancing quality and visibility of open access scholarly publishing at TUK and SU, establish how quality and visibility of scholarly publishing can be enhanced by rearchers at TUK and SU, Propose strategies to improve quality and visibility of open access scholarly publishing by researchers at the Technical University of Kenya and Strathmore University. Below, we summarize the study's findings in line with these objectives.

6.2.1 Contribution of open access to scholarly publishing by researchers at TUK and SU

The study delved into the perceptions of graduate students and academic staff at Strathmore University (SU) and The Technical University of Kenya (TUK) regarding the contribution of open access scholarly publishing in their respective institutions. The findings shed light on various aspects of open access scholarly publishing and its perceived benefits.

Perceived Benefits among Graduate Students: Graduate students from both SU and TUK recognized several advantages of open access scholarly publishing. They believed that it contributed to increased usage of scholarly resources, promoting cost savings and efficiency in publishing. Some respondents noted improved decision-making and enhanced access to information. Additionally, open access was associated with increased citation impact, greater research impact, and higher impact factors in academic work. However, a minority of respondents expressed uncertainty about these benefits. Perceived Benefits among Academic Staff: Academic staff members at both institutions also identified benefits of open access publishing. They acknowledged that it significantly increased access to research publications, enhanced the visibility of authors and their work, and facilitated collaboration among authors in the same field. Furthermore, it was perceived as a means to promote information sharing within the academic community. Like the graduate students, a small percentage of academic staff members were uncertain about the specific contributions of open access scholarly publishing to their institutions. To enhance open access publishing at The Technical University of Kenya (TUK), the study's findings suggest a multifaceted approach. This includes implementing awareness campaigns to educate both students and academic staff about the benefits of open access publishing, organizing training and workshops for practical guidance, establishing institutional policies supporting open access, allocating funding for publishing initiatives, improving open access repositories' functionality and accessibility, recognizing and promoting contributions, fostering collaboration, creating feedback mechanisms for community input, providing support to address uncertainties, and maintaining a continuous process of monitoring and evaluation. These initiatives aim to promote open access awareness, accessibility, and engagement while addressing concerns within the academic community at TUK.

Observations Regarding Open Access Promotion: In terms of the promotion of open access publishing, there were varying observations at both institutions. At SU, some graduate students noticed changes in the way open access was being promoted, while others did not perceive significant alterations. At TUK, some respondents observed changes in the promotion of open access publishing, while others remained uncertain about any noticeable shifts. These findings underscore the diverse perceptions of academic stakeholders regarding the impact and promotion of open access scholarly publishing within their institutions. While some respondents recognized the benefits and observed positive changes, others may require improved communication and awareness of open access initiatives within their academic communities. Overall, the study provides valuable insights into the evolving landscape of open access publishing in academic institutions.

6.2.2 Benefits of enhancing quality and visibility of open access scholarly publishing

The study's findings reveal a comprehensive perspective on how both students and staff view the benefits of open access scholarly publishing:

Among Graduate Students (Strathmore University and The Technical University of Kenya): Widest Dissemination of Research Work: Open access scholarly publishing is seen as a valuable avenue for ensuring the widest possible dissemination of research findings. This benefit is widely recognized by a substantial number of graduate students at both Strathmore University (SU) and The Technical University of Kenya (TUK). Increased Accessibility to Research Work: Respondents emphasize that open access publishing significantly enhances the accessibility of academic research materials. This advantage is particularly crucial, with a considerable

proportion of students at both institutions emphasizing its value in providing broader access to scholarly resources. Increased Citations: Students acknowledge that open access scholarly publishing can lead to higher citation rates for research work. Many respondents at both SU and TUK see this as a means to achieve greater academic impact and recognition for their contributions. Enhanced Collaboration: Open access scholarly publishing is perceived as a catalyst for increased collaboration among scholars. Respondents from both institutions emphasize how open access can foster interdisciplinary networking and result in more robust research outcomes. Increased Altmetrics: Some respondents recognize that open access publishing can lead to greater visibility in altmetrics, indicating a broader recognition and engagement with research beyond traditional citation metrics.

These findings collectively underscore the awareness among students of the diverse benefits associated with open access scholarly publishing. These advantages encompass broader dissemination, improved accessibility, higher citation rates, enhanced collaboration, and increased attention in altmetrics. This recognition highlights the potential for open access publishing to significantly impact academic research and dissemination by promoting broader engagement and recognition.

Perceptions among Academic Staff Members (Strathmore University and The Technical University of Kenya):

Strathmore University (SU): Increased Access to Scholarly Publications: The majority of academic staff members at SU highlight that open access significantly increases access to scholarly publications, making research materials more readily available to a broader audience. Enhanced Visibility of Published Work: Another group of respondents at SU acknowledges that open access enhances the visibility of published scholarly work. This increased visibility benefits

authors and their research by reaching a wider readership. Enhanced Collaboration among Scholars: A smaller subset of SU respondents believes that open access scholarly publishing promotes collaboration among scholars, resulting in more robust research outcomes and interdisciplinary networking.

Technical University of Kenya (TUK): Increased Access to Scholarly Publications: At TUK, a significant portion of academic staff members emphasizes that open access scholarly publishing results in increased access to scholarly publications, removing barriers to accessing research materials. Enhanced Visibility of Published Work: The majority of TUK respondents recognize that open access enhances the visibility of published scholarly work, a valuable outcome for authors and their research. Enhanced Collaboration among Scholars: Some TUK respondents indicate that open access contributes to enhanced collaboration among scholars, facilitating collaborative efforts and networking when research is more widely accessible.

These data findings offer a nuanced understanding of how academic staff members at both institutions perceive several benefits associated with open access scholarly publishing. These benefits include increased access to research, enhanced visibility of scholarly work, and the promotion of collaboration within the academic community. The verbatim responses provided by some respondents further illustrate their perspectives on these benefits, shedding light on their practical significance in academic life. Overall, these findings highlight the potential of open access publishing to positively influence the academic research landscape.

6.2.3 Challenges faced by researchers in enhancing quality and visibility of open access scholarly publishing

The study's findings on challenges related to enhancing open access scholarly publishing highlight both commonalities and differences between Strathmore University (SU) and The Technical University of Kenya (TUK):

Common Challenges: Lack of Awareness: A significant challenge identified in both institutions was the limited understanding of open access scholarly publishing within their academic communities. This shared challenge emphasizes the need for educational and awareness initiatives to promote open access. Financial Constraints: Respondents at both SU and TUK recognized the financial aspects of open access publishing as a significant hurdle. Sustaining open access initiatives amidst financial constraints is a universal concern, underscoring the need for resources to support and maintain these initiatives. Preservation Concerns: Ensuring the long-term availability and accessibility of open access publications was noted as a concern in both institutions, reflecting a shared concern for the sustainability of scholarly work. Hijacked or Fake Journals: Issues related to hijacked or fake journals were reported at both SU and TUK, raising concerns about the quality and credibility of open access publications. While more prevalent at SU, this challenge is still relevant to both institutions. Predatory Journals: Predatory journals emerged as a significant challenge in both institutions, with a substantial number of respondents at SU and TUK identifying this issue. The prevalence of predatory journals in scholarly communication was a shared concern among respondents.

Differences between Institutions: Copyright Assignments: The challenge of restrictive copyright assignments was more pronounced at SU, where a substantial number of respondents cited this

issue. In contrast, it was less prevalent at TUK, suggesting varying practices or policies related to copyright assignments between the two institutions.

Perspectives of Academic Staff:

Strathmore University (SU): Predatory Journals: Academic staff at SU identified predatory journals as the primary challenge, followed by concerns about the quality of open access publications. Policy-related issues, such as copyright concerns, were also mentioned, along with concerns about the cost associated with open access.

The Technical University of Kenya (TUK): Predatory Journals: Predatory journals were also recognized as the primary challenge by academic staff at TUK, followed by concerns about the cost of publishing in open access. Quality issues related to credibility were mentioned, along with policy-related challenges related to open access. Combining qualitative and quantitative data enhances the study's depth and credibility, offering a comprehensive view of how open access publishing impacts research quality and visibility. It allows for the identification of common themes and variations, informing robust recommendations based on the prevalent perspectives within the academic community at TUK and SU.

In summary, while there are common challenges such as awareness, financial constraints, and preservation concerns, there are also variations in the prominence of specific challenges between Strathmore University and The Technical University of Kenya. These findings underscore the complexity of open access scholarly publishing and the importance of tailored strategies to address challenges in different institutional contexts. It is evident that addressing these challenges effectively will require a multifaceted approach that considers the unique

circumstances of each institution while also addressing common issues in the broader context of open access publishing.

6.2.4 How quality and visibility of Open access scholarly publishing can be enhanced by researchers at TUK and SU.

The study's findings reveal the perceptions of respondents at Strathmore University (SU) and The Technical University of Kenya (TUK) regarding the relationship between open access publishing and the enhancement of quality and visibility in scholarly research. Here, we summarize these findings without percentages to provide a clear overview:

High-Quality Research (HQR): Respondents were asked whether they believed that enhanced quality and visibility of open access scholarly publications lead to high-quality research. At SU, a substantial number strongly agreed or agreed, while at TUK, the agreement was less pronounced. A minority at SU disagreed with no response from TUK. Enhanced Visibility (EV): Respondents considered whether the improved quality of open access scholarly publications contributes to enhanced visibility. At SU, a notable portion strongly agreed or agreed with this statement, while the agreement was less prominent at TUK. Some respondents at SU and TUK had differing opinions, with a small number expressing disagreement or neutrality. Devoid of Open Access Restrictions (DAR): Respondents were asked about their views on whether unrestricted access to open access scholarly publishing enhances quality and visibility. At SU, a considerable number strongly agreed or agreed with this statement, while the agreement was less prevalent at TUK. Some respondents at SU disagreed or were neutral. Retrieving Quality Works Effortlessly (QWE): Respondents assessed whether effortless retrieval of quality work enhances quality and visibility. A significant proportion at SU and a smaller number at TUK strongly agreed or agreed with this statement. Some respondents at both institutions had differing

opinions, including neutrality or disagreement. Revealing Content to a Huge Prospective Readership (HPR): Respondents considered whether revealing content to a large prospective readership enhances quality and visibility. A notable number at SU and a smaller number at TUK strongly agreed or agreed with this statement. Some respondents at SU had differing opinions, including disagreement or neutrality. These findings provide insights into how respondents perceive the relationship between open access publishing and the enhancement of quality and visibility in scholarly research. While there is a general consensus on the positive impact of open access on research visibility, variations in responses suggest that individual perspectives may be influenced by institutional contexts or personal experiences. Additionally, the study assessed the extent to which quality open access publishing has increased the visibility of research publications among academic staff. The findings indicate a consensus among academic staff at both Strathmore University and The Technical University of Kenya regarding the positive impact of quality open access publishing on research visibility. The majority either strongly agreed or agreed with this notion, emphasizing the crucial role of open access in enhancing the reach and exposure of scholarly work. Verbatim responses from participants further reinforced these findings, highlighting the value of open access in increasing research visibility.

6.2.5 Influence of open access on quality scholarly publishing

The data provided valuable insights into how open access has impacted various aspects of quality scholarly publishing within academic institutions. Here is a summary of the key findings, with percentages omitted for clarity: Improved Visibility and Usage: Respondents from both Strathmore University (SU) and the Technical University of Kenya (TUK) reported varying extents of improvement in the visibility and usage of scholarly publications due to open access. While some indicated very great and great extents, others reported less extent or provided no

extent. Increased Accessibility: Open access was seen to significantly increase accessibility to scholarly work. However, a minority of respondents reported no extent or less extent in this regard. Increased Collaboration: Open access was perceived to enhance collaboration among scholars. Again, some respondents reported no extent or less extent, but the majority recognized a great or very great extent of impact. Enhanced Research Process: Respondents believed that open access contributes to an improved research process, with the majority reporting great or very great extents of influence. Efficient and Wide Research Dissemination: Open access was seen as efficient in disseminating research widely. While a few respondents reported no extent or less extent, most acknowledged great or very great influence in this area. Cost Saving: Open access was viewed as a cost-saving approach in scholarly publishing. The majority of respondents reported great or very great extents of cost savings due to open access.

Contribution of Open Access to Quality Research Publishing: The study also aimed to understand how open access contributes to the quality of research publishing, based on academic staff responses. Here are the summarized findings from both institutions:

Strathmore University: Respondents from SU believed that open access contributes to quality research publishing by offering wide access to information, enabling comparison of research, acknowledging cited work, and emphasizing peer review. Peer review was seen as a quality assurance process.

Technical University of Kenya (TUK): TUK respondents highlighted that open access has increased access to research output, leading to the development of credible and authentic publications that meet scholarly standards. Peer review was also emphasized as a means of ensuring the consistency and correctness of published work. Verbatim responses from participants further emphasized the role of open access in enhancing the quality of research

publishing by facilitating wide access to information, fostering collaboration, and promoting peer review. Open access was seen as a driver of better knowledge generation and high-quality publications. These findings collectively illustrate that open access plays a significant role in improving the visibility, accessibility, collaboration, research process, dissemination, and cost-effectiveness of scholarly publishing while also contributing to the overall quality of research publications within academic institutions.

6.2.6 Open access publishing models

The study's exploration of open access publishing models at Strathmore University and The Technical University of Kenya revealed valuable insights into their strategies. Here are the key findings: Article Processing Charges (APC) Model: Strathmore University had more respondents mentioning the use of the Article Processing Charges (APC) model compared to The Technical University of Kenya (TUK). This model involves authors or institutions paying fees for publication. Community Publishing Model: All respondents from Strathmore University indicated the adoption of the Community Publishing model, highlighting a consistent approach to community-driven open access publishing. Conversely, none of the respondents from TUK reported using this model. Institutional Membership Scheme: A majority of Strathmore University respondents confirmed the presence of an institutional membership scheme, facilitating open access publishing. This model involves institutions securing memberships with publishers or platforms for access. Advertising or Supported Efforts: A limited number of respondents from both universities acknowledged the use of advertising or supported efforts as an open access publishing model. This suggests a partial reliance on external support or advertising to sustain open access initiatives. Institutional Subsidy: Strathmore University had a notable proportion of respondents confirming the use of institutional subsidy as an open access

publishing model, indicating financial support from the institution to promote open access. Hard Copy Sales: A small number of respondents from both institutions mentioned hard copy sales as a model employed by their universities. This implies a dual approach, where both electronic and physical copies are utilized. Collaborative or Cooperative Initiatives: Some respondents from both universities confirmed the utilization of collaborative or cooperative initiatives, indicating joint efforts or partnerships in open access publishing. Cross-Financing Model: While Strathmore University mentioned the presence of a cross-financing model, no respondents from The Technical University of Kenya (TUK) confirmed this. The specific details of this model remain unclear from the data.

Academic Staff Awareness of Budget Allocation for Open Access: The study also aimed to gauge academic staff members' awareness of budget allocations for open access scholarly publishing in their respective institutions. The findings uncovered a prevalent lack of awareness among academic staff members from both universities. Lack of Awareness: A substantial portion of academic staff members from both Strathmore University and TUK expressed their lack of awareness concerning budget allocations for open access publishing. This prevailing theme underscores the need for improved communication and transparency regarding the financial aspects of open access initiatives within academic institutions. Verbatim responses further highlighted the uncertainty surrounding budget allocations for open access scholarly publishing and research.

6.2.7 Strategies for improving open access scholarly publishing

The findings provided insights into the strategies and controls employed by Strathmore University (SU) and the Technical University of Kenya (TUK) to enhance open access scholarly publishing (OASP) as summarized below:

Strategies to Enhance Open Access Publishing: Streamlining Peer Review and Publication Procedure: A significant number of respondents at SU and a smaller percentage at TUK agreed that streamlining the peer review and publication procedure would improve open access publishing, Registering Support of Authors: Both SU and TUK respondents agreed that registering the support of authors in the publishing procedure would enhance open access publishing, Involving Research Librarians: Some respondents at SU agreed that involving research librarians would improve open access publishing, while a smaller percentage at TUK agreed with this strategy, Pursuing Monetary Funds from Institutions: A portion of respondents at SU agreed that pursuing monetary funds from institutions would enhance open access publishing, with a similar trend observed at TUK, Strategies for Improving Open Access Publishing by Academic Staff:

Strathmore University (SU): SU academic staff employ strategies such as predatory journal review, OASP awareness campaigns, quality publishing promotion, and policy advocacy. However, some respondents were not aware of these efforts.

Technical University of Kenya (TUK): TUK academic staff focus on enhancing the quality of published work, conducting OASP awareness campaigns, and reviewing journals. Some respondents felt that the institution is doing relatively little to promote open access publishing.

Encouragement of Open Access Scholarly Publishing Across Academic Faculties: Strathmore University (SU): SU primarily uses conferences and workshops to encourage OASP, along with institutional repositories. However, some respondents at SU indicated a lack of awareness regarding how OASP is being encouraged within their institution.

Technical University of Kenya (TUK): TUK also relies on conferences and workshops for OASP promotion, in addition to institutional repositories. Similar to SU, some respondents at TUK felt unaware of how OASP is encouraged.

Controls to Promote Quality OASP: Both SU and TUK have implemented controls such as developing lists of credible journals, departmental quality checks, review teams, plagiarism checks, and using peer reviewers to ensure the quality and integrity of scholarly publications. However, some academic staff expressed uncertainty regarding the existence of these controls.

Suggestions for Enhancing Open Access: Respondents from both institutions suggested various strategies for enhancing open access scholarly publishing: Promoting research collaboration, Creating awareness about open access, Investing in infrastructure development, Formulating institutional policies, Providing capacity building and funding support, Advocacy and sensitization efforts, In summary, the findings emphasize the importance of a multifaceted approach to enhance the quality and accessibility of open access scholarly publishing. These strategies, controls, and suggestions collectively contribute to the ongoing development of open access initiatives at Strathmore University and the Technical University of Kenya.

6.3 Conclusion

In this study, the researcher investigated how open access publishing enhances research quality and visibility among researchers at the Technical University of Kenya and Strathmore University. The researcher also explored the perceived benefits, challenges, and strategies related to open access publishing. The following conclusions can be drawn from the findings:

Perceived Benefits of Open Access Publishing: Both graduate students and academic staff members at SU and TUK acknowledged several advantages of open access scholarly publishing.

These included increased usage of scholarly resources, cost savings, efficiency in publishing, improved decision-making, enhanced access to information, increased citation impact, greater research impact, and higher impact factors in academic work. Open access publishing was seen as a means to promote information sharing within the academic community and to facilitate collaboration among authors in the same field. It was also associated with greater visibility in altmetrics, indicating broader recognition and engagement with research beyond traditional citation metrics.

Observations Regarding Open Access Promotion: The study revealed varying observations regarding the promotion of open access publishing at both institutions. While some respondents noticed positive changes, others did not perceive significant alterations. This suggests the need for improved communication and awareness of open access initiatives within academic communities.

Challenges Associated with Open Access Publishing: Common challenges identified at both institutions included a lack of awareness, financial constraints, preservation concerns, issues related to hijacked or fake journals, and the prevalence of predatory journals. However, there were differences in the prominence of specific challenges between SU and TUK, with copyright assignments being more pronounced as a challenge at SU.

Impact on Quality and Visibility of Scholarly Research: Respondents perceived that open access publishing had a positive impact on the quality and visibility of scholarly research. It was associated with improved visibility and usage of research publications, increased accessibility, enhanced collaboration among scholars, an improved research process, efficient dissemination of research, and cost savings.

Open Access Publishing Models: The study revealed variations in the adoption of open access publishing models between SU and TUK. The Article Processing Charges (APC) model was more prevalent at SU, while the Community Publishing model was exclusive to SU. Both institutions employed other models such as institutional membership schemes, advertising or supported efforts, institutional subsidies, hard copy sales, collaborative or cooperative initiatives, and cross-financing models to varying extents.

Strategies for Improving Open Access Publishing: Strategies to enhance open access publishing included streamlining peer review and publication procedures, registering the support of authors, involving research librarians, and pursuing monetary funds from institutions. Both institutions also emphasized controls to promote the quality of open access scholarly publishing, such as developing lists of credible journals, departmental quality checks, review teams, plagiarism checks, and using peer reviewers.

6.4 Recommendations

Based on the findings, the study recommends the following actions to further promote and improve open access scholarly publishing at Strathmore University and The Technical University of Kenya:

i.   Enhanced Communication and Awareness: Both institutions should prioritize raising awareness and communication about open access initiatives. This includes educating academic staff and graduate students about the benefits of open access publishing and addressing misconceptions.

ii. Financial Support: Institutions should explore sustainable funding models for open access publishing to alleviate financial constraints. This may include seeking external grants and partnerships to support open access initiatives.

iii. Quality Control: Continue implementing controls to ensure the quality and integrity of open access publications, including maintaining lists of credible journals, peer review, and plagiarism checks.

iv. Collaboration: Promote collaboration among researchers, both within and between institutions, to leverage the benefits of open access publishing for interdisciplinary networking and more robust research outcomes.

v. Policy Development: Develop and implement institutional policies that support open access publishing, including copyright policies that address authors' concerns.

vi. Infrastructure Development: Invest in the necessary infrastructure, including institutional repositories and open access platforms, to facilitate the dissemination of research materials.

vii. Advocacy and Sensitization: Conduct advocacy and sensitization efforts to educate academic stakeholders about the risks of predatory journals and the importance of choosing reputable open access outlets.

viii. Streamlining Procedures: Continue streamlining peer review and publication procedures to make the open access publishing process more efficient and transparent.

ix. Author Support: Provide support and resources to authors, including workshops and training, to encourage their active participation in open access publishing.

x. Monitoring and Evaluation: Implement a system for monitoring and evaluating the impact of open access initiatives to assess their effectiveness and make necessary improvements.

These recommendations aim to strengthen open access scholarly publishing at both institutions, ultimately contributing to the broader dissemination of research, increased collaboration, and improved quality of scholarly work.

6.5 Implication of the study

The implications drawn from this study hold significant importance in comprehending the perceptions, obstacles, and strategies associated with open access scholarly publishing (OASP) in academic settings, specifically focusing on Strathmore University (SU) and the Technical University of Kenya (TUK). Here's a breakdown of the key takeaways:

Perceived Benefits: The study brings to light that both graduate students and academic staff acknowledge numerous advantages linked with open access publishing. These benefits encompass improved access to scholarly resources, cost-effectiveness, better decision-making, heightened research impact, and the promotion of collaboration among academics. These positive perceptions suggest that open access has the potential to make a positive impact within the academic community by facilitating the dissemination of research and fostering collaboration.

Challenges: Common challenges associated with open access publishing encompass a lack of awareness, financial limitations, preservation concerns, and the presence of predatory journals. Addressing these challenges is of paramount importance to create a conducive environment for open access initiatives.

Awareness and Communication: The study underscores the critical role of raising awareness and enhancing communication within academic institutions. Many respondents expressed a lack of awareness regarding open access initiatives and budget allocations. Clear and effective

communication is pivotal to ensure that stakeholders grasp both the advantages and challenges associated with open access publishing.

Quality and Visibility: Respondents believe that open access significantly enhances the quality and visibility of scholarly publishing. It facilitates broader dissemination, improved accessibility, higher citation rates, and the fostering of collaboration among scholars. Open access is seen as a catalyst for promoting high-quality research and scholarly communication.

Diverse Strategies: The study uncovers a diverse array of strategies that academic institutions employ to promote open access publishing. These strategies encompass streamlining the peer review process, involving research librarians, seeking financial support, and conducting awareness campaigns. Both SU and TUK utilize avenues such as conferences, workshops, and institutional repositories to encourage open access publishing.

Controls for Quality: Both institutions have instituted controls to ensure the quality of open access publications. These measures include peer review, plagiarism checks, and departmental quality assessments. Nevertheless, there exists room for improvement in terms of making academic staff more aware of and informed about these controls.

Recommendations: Respondents' recommendations for enhancing open access publishing span a wide spectrum of strategies, including fostering research collaboration, enhancing infrastructure, formulating institutional policies, building capacity, and engaging in advocacy efforts. These recommendations offer valuable insights to institutions looking to fortify their open access initiatives.

Budget Allocation: The study brings to light that many academic staff members lack awareness of budget allocations for open access publishing. Transparent budget allocation and financial backing for open access initiatives are pivotal for sustaining and expanding these endeavors.

These findings underscore the potential benefits of open access publishing, the urgency of addressing associated challenges, and the imperative need for clear communication and awareness-building efforts within academic institutions. Furthermore, the study highlights the multifaceted strategies and controls that can bolster the quality and accessibility of scholarly publishing. These implications have the potential to guide the development and enhancement of open access initiatives within academic institutions, ultimately benefiting researchers and the broader academic community.

6.6 Areas for further research

Further studies that can be beneficial in relation to this study would include:

1. Similar studies may be carried out in both private and public universities on the roles academic libraries can play in promoting the quality of research stemming from academic institutions in order to increase its visibility.

2. Further research may be carried out on how the adoption of quality in research can improve access to research grants thus increased competitiveness

3. Examine the effectiveness of awareness and advocacy campaigns in educating academic stakeholders about open access publishing. Assess the outcomes of such campaigns on attitudes, behaviors, and perceptions.

4. Examine the effectiveness of quality control measures such as peer review, plagiarism checks, and the maintenance of lists of credible journals in ensuring the integrity of open

access publications. Identify best practices for maintaining high-quality open access content.

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APPENDICES

Appendix 1: Work plan

Activity	Details of activity	Deliverable	Timeline
Proposal writing	Writing of proposal	Confirmed completion and submission of proposal	Aug 2019 - Feb 2020
Proposal defense	Finalising and handing over the proposal for defence	Confirmed Submission of proposal for defense	February 2020
Proposal correction	Correcting the proposal as per comments given during defence	Confirmed corrected proposal approved by supervisors	March - Dec 2020
Pilot testing	Pilot testing of all the research instruments and techniques	Pilot testing report	December 2020
Finalisation of research tools	Responding to the findings of the results of the pilot tests	Final research instruments and techniques	December 2020
Data collection	Collect data from respondents	Raw research data	March 2021
Data processing and analysis	Data cleaning and coding	Cleaned and coded research data	April 2021
Compilation of research findings	Compilation of chapter 4,5,6 (findings, discussions, conclusions and recommendations)	Draft chapters 4,5,6	Jan 2023
Attend to comments	Addressing comments on chapters 4,5,6 from supervisors	Revised chapters 4,5,6	Jan 2023
Compile draft thesis	Integrating all the chapters and components of the thesis	Complete draft thesis	Feb 2023
Final defence	Research defence to post graduate examination board	Examination thesis	September 2023
Attend to examiners comments	Correct thesis as per the comments of the examiners	Final thesis	November 2023
Dissemination of research outcomes			November 2023

Appendix 2: Budget for the research

Item	Quantity	Cost per Unit	Amount(Total)
Stationery (printing paper, binding materials, marker pens, etc.)	1	35,000	35000
Purchase of analytics software (SPSS and Atlas.ti)	2	20000	40000
Reproduction of questionnaires and interview schedules	1	5000	5000
Data cleaning and analysis	2	20000	40000
Airtime for communication with respondents	1	5000	5000
		Sub-total	**125,000**
Equipment			
Digital voice recorder	1	15000	15000
		Sub-total	**15,000**
Local travel			
Travel for pilot test at Catholic University	2	3000	6000
		Subtotal	**6000**
Documentation costs			
Thesis copy editing and proofreading fee	1	15000	15000
		Subtotal	**15000**
Total			**161,000**

Appendix 3: Introduction letter

Date: ……………...

The Technical University of Kenya

 Dear respondent,

Re: <u>Enhancing Quality and Visibility of Research Through Open Access Scholarly Publishing in Selected Universities in Kenya: The Technical University of Kenya and Strathmore University.</u>

I am Fredrick Odhiambo Adika, a Master's student in the Department of Information and Knowledge Management, Technical University of Kenya (TUK). I am conducting a study Titled: **Enhancing Quality and Visibility of Research Through Open Access Scholarly Publishing in Selected Universities in Kenya: The Technical University of Kenya and Strathmore University**. I'm kindly requesting your participation in this research and I undertake that data collected for this study will be handled with utmost confidentiality and will only be used for academic purposes only. Results for this study will be used supporting open access scholalrly publishing as a body of knowledge. The study findings will be availed to you on request. Your views and response in this study are highly considered important and vital.

Thank you
Yours faithfully,
Fredrick Adika

Researcher.

Appendix 4: Participant's information and consent form

ENHANCING QUALITY AND VISIBILITY OF RESEARCH THROUGH OPEN ACCESS SCHOLARLY PUBLISHING IN SELECTED UNIVERSITIES IN KENYA: THE TECHNICAL UNIVERSITY OF KENYA AND STRATHMORE UNIVERSITY

SECTION 1: INFORMATION SHEET

Investigator: F r e d r i c k O d h i a m b o A d i k a

Affiliated Institution: The Technical University of Kenya

SECTION 2: INFORMATION SHEET– THE STUDY

2.1: Reason for carrying out the study?

To help understand and investigate how quality and visibility of research can be enhanced through open access scholarly publishing practices by researchers at the Technical University of Kenya and Strathmore University. Organizations can develop ways of enhancing quality and visibility of their research output to bridge the knowledge gap from the results and gaps identified from the stduy.

2.2: Is it compulsory to take part?

No, P a r t i c i p a t i o n in the study is entirely voluntary and the decision is solely with the individual. Participants will be given the questionnaires to fill to obtain data. In the event that a participant is unable to answer all questions successfully on the first attempt, You will be given a second time to attempt the questions. Participation in this study is at the respondents discretion at each interval without giving any details.

2.3: Who is suitable to participate in this study?

☐ Graduate Students

☐ Academic staff

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

☐ Individuals without any knowledge of open access scholarly publishing

☐ Non graduate students and non-academic staff

2.5: What is my involvement in participating in this study?

The researcher, Fredrick O. Adika will reach out to you, with a request to participate in this study. If you are satisfied and totally understand the aim of this study, the researcher will then reach out to you and humbly request that you sign the informed consent form afterwards you will then be taken through the questionnaire to fill.

2.6: What probable dangers and risks will be encountered in participating in this study?

None…. we have not come across any dangers at this time and therefore, there is

no danger in participating in the study. Confidentiality to provided information

will be observed and data used only for this research.

2.7: How beneficial is it to take part in this study?

Data obtained shall be applied in advancing the awareness of the role open access publishing in the industry and towards improving visibility and quality of research publications.

2.8: What happens if I decline participating in this study?

Nothing… participation in the study is on voluntary basis. Should you participate and

later opt out, you are free to notify the researcher without giving any clarification or reason.

2.9: Who will have access to my data for the period of this study?

All research data collected will be kept in securely sealed cabinets. Recorded data will be sufficiently stored in the databse, coded and protected with a password. Only permitted individuals participating in the study will be given access to the information. Highest privacy to information provided will be heeded to.

2.10: Who should be contacted in case of additional questions?

Kindly contact Fredrick O. Adika at The Technical University of Kenya, or via e mail: (**fredrickadika@gmail.com**), or by phone (0727408627). You may also get in touch with my supervisors, **Dr. Grace Kamau,** at The Technical University of Kenya, Nairobi, or by e-mail (grace.kamau6@gmail.com) or by phone (0722674329) and **Dr. Ashah Owano**, at The Technical University of Kenya or by e-mail (maryowino715@gmail.com) or by phone (0722773856)

For any question regarding this study, Kindly contact:

The Secretary–Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu Tel number: +254 703 034 375

I, _____, confirm that this study has been explained to me. I have understood all that is expected of me. I have keenly understood the clarifications given, my concerns and questions have also been addressed sufficiently. I'm fully aware that I can rescind my resolve at any time.

Kindly tick the boxes as appropriate;

Participation in the research study

[ ]   I ADMIT to participate in this study

[ ]   I DON'T ADMIT to participate in this study

Preservation of information on the finalized questionnaire

[ ]   I UNDERTAKE that my completed questionnaires be kept for future data analysis

[ ]   I DON'T UNDERTAKE that my complete questionnaires be kept for future data analysis.

Participant's Signature: ……………………………………………………………

Date: _____/_____/_____

Participant's Name: _____

Time: _____ /_____

(Please print name)   ***HR / MN***

I, _____ wish to state that I have a greed to the accepted norms and ethics required for in this study and that I have provided the required information about the study to the above participant, and that s/he has understood the purpose of the study and accepted to willingly participate in this research. She/he is permitted to delve on questions considered to have been answered satisfactorily.

Investigator's Signature:

Date: ___3___/_02_____/_2021_____

Investigator's Name: Fredrick O. Adika

Appendix 5: Briefing Form

ENHANCING QUALITY AND VISIBILITY OF RESEARCH THROUGH OPEN ACCESS SCHOLARLY PUBLISHING IN SELECTED UNIVERSITIES IN KENYA

BRIEFING FORM

Dear Participant,

Thank you for participating in this research study. The purpose of this study is to investigate how **quality and visibility of research can be enhanced through open access scholarly publishing practices by researchers at the Technical University of Kenya and Strathmore University**. Your participation will help the researcher to gain more insight into how quality and visibility of research can be enhanced through open access scholarly publishing in the two institutions. In the event you have any concerns regarding the questions presented to you in this study, you may want to seek clarifications or discuss any of them with me. You may contact me using the email address or phone numbers below.

Thank you for your participation.

Sincerely,

Fredrick Odhiambo Adika

adika.fredrick@gmail.com

0727408627 or 0732408627

Appendix 6: Graduate Student Questionnaire

I am Fredrick Odhiambo Adika, a Master's student in the Department of Information and Knowledge Management, Technical University of Kenya (TUK). I am conducting a study Titled: **Enhancing Quality and Visibility of Research Through Open Access Scholarly Publishing in Selected Universities in Kenya: The Technical University of Kenya and Strathmore University**. You have been selected to participate in my study. Kindly note that participation is on voluntary basis and highly appreciated. The answers provided will be confidential and anonymity applied. Kindly answer the questions with honesty.

Contact; **fredrickadika@gmail.com**

SECTION A: DEMOGRAPHIC DATA

1. **Gender**
   ☐ **Male**
   ☐ **Female**

2. **Age**
   ☐ **Below 25**
   ☐ **26 – 35**
   ☐ **36 – 45**
   ☐ **46 – 55**
   ☐ **Over 55**

3. **Institution**
   ☐ **The Technical University of Kenya**
   ☐ **Strathmore University**

4. **What is your highest level of education?**
   ☐ **Doctoral Degree**
   ☐ **Master's Degree**
   ☐ **Bachelor's Degree**
   ☐ **Higher Diploma**
   ☐ **Diploma**
   ☐ **Others, please specify……………………………………………….**

5. Kindly indicate the course you are undertaking and the level of study

……………………………………………………………………………..

SECTION B: CONTRIBUTIONS OF OPEN ACCESS SCHOLARLY PUBLISHING

6. What is your understanding of open access?

……………………………………………………………………………………

7. In your own understanding, indicate the contributions of open access scholarly publishing.
   Indicate using a tick (√) as appropriate

Contributions	
Increased usage	
Cost savings and efficiency	
Improved decision making	
Improved access	
Citation impact	
Greater research impact	
Increased impact factor	
Not sure	

SECTION C: BENEFITS AND CHALLENGES ASSOCIATED WITH OPEN ACCESS SCHOLARLY PUBLISHING

8. In your understanding what are the benefits and challenges associated with enhanced
   quality open access scholarly publishing. Indicate using a tick (√) as appropriate

Benefits	
Widest dissemination of research work	
Increased accessibility to research work	
Increased citations	
Increased collaborations	
Increased altmetrics	
Challenges	
Lack of awareness of open access publishing	
Sustenance and financial constraints	
Preservation challenges	
Restrictive copyright assignments	
Hijacked /fake journals	
Predatory journals	

SECTION D: OPEN ACCESS SCHOLARLY PUBLISHING ON QUALITY AND VISIBILITY

9. To what extent do you agree or disagree with the following statements on how Open Access enhances quality and visibility of scholarly publishing by researchers. *(Tick one box against each statement - Key:1 = Strongly agree; 2 = Agree;3 = Disagree; 4 = Strongly disagree; 5 = I do not know/no opinion)*

Statement	1	2	3	4	5	6
Open access outlets permit researchers to publish high quality Research						
Publishing in open access channels boosts research impact by such content remain very much expended and cited thus enhanced visibility						
Open access publishing improves availability to academic works for it is open and devoid of access restrictions						
Open Access allows researchers to retrieve quality works very effortlessly						
Open access publishing outlets reveals scholarly content to a huge prospective readership						

10. Please indicate the open access publishing models you have used in your institution by researchers. Indicate using a tick (√) as appropriate

Publishing models	
Article processing charges	
Institutional membership scheme	
Community Publishing	
Advertising or sponsorship supported efforts	
Institutional subsidy	
Hard copy sales:	
Collaborative purchasing models/cooperative initiatives	
Cross-Financing	

11. Kindly indicate the extent to which open access has influenced quality scholarly publishing in your institution on a scale of 1- 4 (where: 1- No extent; 2- Less extent, 3- Great extent 4- Very great extent (Kindly indicate with (√) as appropriate

Publishing influence	1	2	3	5
Improved visibility and usage				
Increased accessibility				
Increased collaboration				
Enhanced research process				
Efficient and wide research dissemination				
Cost saving				

SECTION E: STRATEGIES FOR IMPROVING OPEN ACCESS SCHOLARLY PUBLISHING

12. Kindly indicate your understanding of the strategies your institution uses to help improve quality open accesses scholarly publishing by agreeing or disagreeing to the statements.

Statement	Strongly agree (SA)	Agree (A)	Neutral (N)	Disagree (D)	Strongly disagree (SD)
The institution streamlines the peer review and publication procedure by way of server side databanks and software					
Registering the support of authors in the publishing procedure					
Registering the backing and capability of research librarians who recognize the importance of open access publishing					
Pursuing monetary funds from institutions, establishments or government donations					

13. Kindly, suggest other strategies you feel your institution should adopt to enhance quality open access scholarly publishing.

……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………

14. Kindly, provide any additional information you wish to add to enhance quality open access scholarly publishing in Universities.

……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………

Appendix 7: Academic staff Interview schedule

Dear respondent,

I am Fredrick Odhiambo Adika, a Master's student in the Department of Information and Knowledge Management, Technical University of Kenya (TUK). I am conducting a study Titled: **Enhancing Quality and Visibility of Research Through Open Access Scholarly Publishing in Selected Universities in Kenya: The Technical University of Kenya and Strathmore University**. You have been selected to participate in my study. Kindly note that participation is on voluntary basis and highly appreciated. The answers provided will be confidential and anonymity applied. Kindly answer the questions with honesty.
Contact; **fredrickadika@gmail.com**

This section is divided into five, and it will take you 15 minutes or less to answer the questions.

SECTION A: GENERAL QUESTIONS

   i.   What do you understand by the concept open access?

   ii.   What are the different types of open access you know?

   iii.   How, and to what extent, the various types of open access are   used in the day to day research operations in your organization?

   iv.   Have you observed any change in the way in which open access publishing is being promoted in organization? If yes, in which way?

SECTION B: CONTRIBUTIONS OF OPEN ACCESS SCHOLARLY PUBLISHING

   v.   What are the contributions of open access scholarly publishing to your institution?

   vi.   What are the general benefits of open access scholarly publishing?

   vii.   To what extent do you think quality open access publishing can contribute to research and innovation in your organization?

SECTION C: ENHANCING QUALITY AND VISIBILITY OF RESEARCH THROUGH OPEN ACCESS

    viii.   What is your understanding of quality open access publishing?

    ix.   How does open access contribute to quality research publishing?

    x.   To what extent do you think quality open access publishing increases visibility of research publications?

SECTION D: BENEFITS AND CHALLENGES ASSOCIATED WITH OPEN ACCESS SCHOLARLY PUBLISHING

    xi.   What are the benefits and challenges associated with open access scholarly publishing?

    xii.   What are the controls that the management has put in place to promote quality open access scholarly publishing in your institution?

    xiii.   What challenges do you or your organization face in regard to open access scholarly publishing?

    xiv.   What budget allocation is currently given to open access publishing and research in your organization?

SECTION E: STRATEGIES FOR IMPROVING OPEN ACCESS SCHOLARLY PUBLISHING

    xv.   What strategies does your institution use to enhance quality of open accesses scholarly publishing?

    xvi.   How is open access scholarly publishing encouraged across academic faculties in your institution?

xvii. Kindly, suggest other strategies you feel your institution should adopt to improve open access scholarly publishing?

xviii. Kindly, provide any additional information you wish to add to enhance open access scholarly publishing in Universities?

Appendix 8: NACOSTI Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 359585

Date of Issue: 24/February/2021

RESEARCH LICENSE

This is to Certify that Mr.. Fredrick Odhiambo Adika of Technical University of Kenya, has been licensed to conduct research in Nairobi on the topic: ENHANCING QUALITY AND VISIBILITY OF RESEARCH THROUGH OPEN ACCESS SCHOLARLY PUBLISHING IN SELECTED UNIVERSITIES IN KENYA for the period ending : 24/February/2022.

License No: NACOSTI/P/21/9160

359585

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR
SCIENCE,TECHNOLOGY &
INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document,
Scan the QR Code using QR scanner application.

Appendix 9: Introdduction letter to Strathmore University

THE TECHNICAL UNIVERSITY OF KENYA

Haile Selassie Avenue, P. O. Box 52428, Nairobi, 00200, Tel: 254 (020) 3430 72, 2249974, 2251300, 341639, Fax: 2219689, E-mail: vc@tukenya.ac.ke, Website: www.tukenya.ac.ke

Office of the Director
School of Graduate and Advanced Studies

REF: AIIU/2696P/2018   **17th December, 2020**

The Chief Executive Officer
National Commission for Science, Technology and Innovation
NACOSTI Building, Off Waiyaki Way
P.O. Box 30623 - 00100
Nairobi, KENYA
Tel: 020 400 7000/0713788787/0735404245

Dear Sir/Madam,

REF: APPLICATION FOR RESEARCH PERMIT

This is to inform you that Mr. Fredrick Odhiambo Adika is a registered Masters' student in the Department of Library and Information Science, School of Information and Social Studies, The Technical University of Kenya. The course is offered by, Coursework, Research and Dissertation. The title of his dissertation is:

'Enhancing quality and visibility of research through open access scholarly publishing in selected Universities in Kenya.'

Mr. Adika has defended his research proposal and is currently proceeding for field work which will involve data collection using approved surveys and research methods.

This is to kindly request you to issue him with a research permit.

17 DEC 2020

Prof. Joseph O. Lalah
Director- School of Graduate and Advanced Studies
File Copy: PhD Student File
JOL/smm

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Appendix 10: Ethical Review report

16ᵗʰ February 2021

Strathmore
UNIVERSITY

Mr Adika, Fredrick
The Technical University of Kenya
fadika@strathmore.edu

Dear Mr Adika,

RE: Enhancing Quality and Visibility of Research Through Open Access Scholarly Publishing in Selected Universities in Kenya

This is to inform you that SU-IERC has reviewed and **approved** your above **external master's** research proposal. Your application reference number is **SU-IERC0965/20.** The approval period is **16ᵗʰ February 2021 to 15ᵗʰ February 2022.**

This approval is subject to compliance with the following requirements:

  i.   Only approved documents including (informed consents, study instruments, MTA) will be used
  ii.   All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-IERC.
  iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-IERC within 48 hours of notification
  iv.   Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-IERC within 48 hours
  v.   Clearance for export of biological specimens must be obtained from relevant institutions.
  vi.   Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
  vii. Submission of an executive summary report within 90 days upon completion of the study to SU-IERC.

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

Yours sincerely,

6t. Dr Virginia Gichuru,
Secretary; SU-IERC

Cc: Prof Fred Were,
Chairperson; SU-IERC

STRATHMORE UNIVERSITY INSTITUTIONAL
ETHICS REVIEW COMMITTEE
(SU-IERC)

1 6 FEB 2021

TEL: +254 (0)703 034 000
P. O. Box 59857 - 00200
NAIROBI - KENYA

Ole Sangale Rd, Madaraka Estate. **PO Box** 59857-00200, Nairobi, Kenya. **Tel** +254 (0)703 034000
Email info@strathmore.edu www.strathmore.edu

Appendix 11: TUK data collection authorization

THE TECHNICAL UNIVERSITY OF KENYA

Haile Selassie Avenue, P. O. Box 52428, Nairobi, 00200, Tel: +254 (020) 343672, 2249974, 2251300, 341639,
Fax: 2219085, E-mailtvc@tukenya.ac.ke, Website www.tukenya.ac.ke

Office of the Deputy Vice-Chancellor
Academics and Student Affairs

REF: TUK/DVCARS/ReKE/010/Vol.IV   April 20, 2021

Fredrick Odhiambo Adika
P.O. Box 59857 – 00200
NAIROBI

Dear Mr. Adika

SUBJECT: REQUEST TO COLLECT DATA FROM ACADEMICS STAFF AND GRADUATE STUDENTS

Reference is made to the above matter and your letter of 22ᵐᵈ March, 2021 addressed to the Vice-Chancellor, The Technical University of Kenya, through various administrative offices of the University.

Your request for authority to collect data for your research dissertation from the academic staff and graduate students of the Technical University of Kenya, has been carefully considered and reviewed in consultation with the Vice-Chancellor of the Technical University of Kenya. Consequently, you have been granted permission to collect data in line with the ethical review certificate and the NACOSTI permit. The granted permission for data collection is intended to assist you in fulfilling the requirements for the award of Master of Science in Information and Knowledge Management at the Technical University of Kenya **ONLY**.

Further, the institution expects you to treat all information given with utmost confidentiality and anonymity. In the meantime, the undersigned takes this opportunity to wish you all the best in your academic pursuits.

Yours sincerely,

Prof. Paul M. Shiundu
DEPUTY VICE CHANCELLOR- ACADEMICS & STUDENTS AFFAIRS AND
PROFESSOR OF CHEMISTRY

Copy to: Vice Chancellor – Technical University of Kenya

PMS/mns

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Appendix 12: Srtrathmore university data collection authorization

Strathmore
UNIVERSITY

March 25, 2021

Fredrick Adika,
Masters Student,
The Technical University of Kenya (TUK)
P. O. Box 52428 - 00200
Nairobi, Kenya
Email: adika.fredrick@gmail.com

Dear Fredrick,

RE: AUTHORIZATION TO COLLECT DATA AT STRATHMORE UNIVERSITY

The research office at Strathmore University has granted you the authorization to collect data within the University. The authorization is effective from 29th March to 28th April 2021. The data collection is for your Masters' Dissertation titled, **"Enhancing quality and visibility of research through open access scholarly publishing in selected Universities in Kenya"**

In particular, you shall administer;

  (a) Structured interviews to 35 academic staff
  (b) Self-admininistered hard copy questionnaires to 147 graduate Students

Please note that this is an administrative authorization does not constitute an ethical approval of your research.

Please sign the declaration form binding you to the ethical use of the data you will access from Strathmore university (meant strictly for the purposes of your study)

Yours faithfully,

25 MAR 2021

Prof. Izael da Silva
Deputy Vice Chancellor - Research and Innovation

Appendix 13: Strathmore University data confidentiality and sharing declaration

Strathmore
UNIVERSITY

APPENDIX 1: CONFIDENTIAL INFORMATION DECLARATION

I, _FREDRICK ODHAMBO ADIKA_, solemnly declare that I will NOT willingly divulge confidential information/data collected from Strathmore University without due consent from Strathmore University. I will strictly utilize the information for the purposes of my academic research.

Sign: _____

ID/ Passport No.: _____22509878_____

Date: _____05/04/2021_____

APPENDIX 2: INFORMATION SHARING DECLARATION

I, _FREDRICK ODHAMBO ADIKA_, solemnly declare that I will share the Research Results of the study by depositing a copy of the final research report at the Strathmore University Research Office.

Sign: _____

ID/ Passport No.: _____22509878_____

Date: _____05/04/2021_____

Page 2 of 2

Appendix 14: Plagiarism report