

**ADOPTING ATTENTION INTEREST DESIRE ACTION (AIDA) MODEL IN
ENHANCING ELECTRONIC RESOURCE UTILIZATION AMONG
POSTGRADUATE STUDENTS AT UNIVERSITIES IN MERU COUNTY,
KENYA**

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**A Thesis Submitted to the School of Science and Technology in Partial
Fulfilment of the Requirements for the Conferment of the Degree of Masters in
Information Science of Kenya Methodist University**

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DECLARATION AND RECOMMENDATION

Declaration

This proposal is my original work and has not been presented for the award of degree or any other award in any other university.

Signed:

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ISK-3-0290-2/2022

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Recommendation

We confirm that the candidate carried out the work reported in this proposal under our supervision.

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DEDICATION

To my late mother, Rose Mmbone, for laying a solid foundation in my academic journey.

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ABSTRACT

Electronic resources are revolutionizing global education by providing postgraduate students with swift access to information, powerful search capabilities, and seamless citation of scholarly works. These digital tools are not merely enhancing learning; they are transforming how knowledge is accessed and utilized, ushering in a new era of academic excellence. However, there is a noticeable research gap regarding the optimal utilization of these resources, especially among postgraduate students. Hence, the study aimed to fill this gap by proposing the adoption of the Attention Interest Desire Action (AIDA) model to enhance electronic resource utilization among postgraduate students at KeMU and Meru University of Science and Technology (MUST). The purpose of the study was to assess how the strategic application of the AIDA model can enhance the utilization of electronic resources, providing both short and long term best-practice recommendations. The specific objectives were to: assess postgraduate students' attention towards electronic resource utilization; determine their interest in such resources; examine their desire for electronic resource utilization; and evaluate their proactive actions in utilizing electronic resources. The study adopted a mixed-methods approach with a descriptive survey research design. The target population consisted of 13 library heads of sections and 800 postgraduate students from MUST and KeMU. Purposive sampling was used to select library head of sections, while stratified and simple random sampling was employed for postgraduate students, resulting in a total sample size of 260 postgraduate students and 13 heads of sections. Data was collected using questionnaires and interview guides. Data quality was ensured through construct, content, and face validity checks, and reliability was measured using Cronbach's alpha coefficient. Descriptive statistics such as mean and standard deviation were computed using SPSS version 26, while inferential statistics assessed the relationship between variables. Thematic analysis was utilized for open-ended questions and interview data. The study noted that extensive training programs and major advancements in technical infrastructure are necessary for the efficient utilization of e-resources. This is supported by regular training, awareness campaigns, tailored support, improved accessibility, and sufficient ICT infrastructure. The effective utilization of e-resources was curtailed by technical issues such as outdated computers and poor internet connectivity, limited IT illiteracy and financial constraints in some postgraduate students. The study noted that effective utilization of e-resources among postgraduate students is largely affected by training, technical infrastructure, and resource management. It requires collaboration between teachers, students, librarians, and university administration. The study recommended that, universities should prioritize significant technological infrastructure upgrades, such as raising internet speed and improving computer availability. University libraries should incorporate e-resources into the curriculum and hold frequent training sessions to improve students' e-resource literacy and navigation abilities. They should also implement policies that integrate e-resources into the curriculum, offering incentives for high usage, and continuously improving services based on postgraduate student feedback. The findings implicate on strategies such as targeted efforts to stimulate curiosity and relevance (Interest), cultivate strong motivations (Desire), and facilitate proactive engagement (Action) to enhance electronic resource utilization, ultimately improving academic outcomes and research capabilities among postgraduate students.

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LIST OF ABBREVIATIONS & ACRONYMS

AIDA	Attention Interest Desire Action
APA	American Psychological Association Citation
KeMU	Kenya Methodist University
KLISC	Kenya Library and Information Service Consortium
MUHAS	Health and Allied Sciences
MUST	Meru University of Science and Technology
NACOSTI	National Commission for Science Technology and Innovation
OEP	Open Educational Practices
OER	Open Educational Resources
OPAC	Online Public Access Catalogue
SPSS	Statistical Package for Social Sciences
SRL	Self-Regulated Learning
TAM	Technology Acceptance Model
UK	United Kingdom
UN	United Nations
USA	United States of America
UTAUT	Unified Theory of Acceptance and Use of Technology

CHAPTER ONE

INTRODUCTION

This chapter sets the foundation for discussing how adopting AIDA model improves the use of electronic resources by postgraduate students at KeMU and MUST Universities. It introduces the utilization of electronic resources by postgraduate students at KeMU and MUST Universities. The chapter also discussed how the components of the AIDA model, which constituted the independent variables of the study can be used in enhancing utilization of electronic resource in the two universities.

1.1 Background of the Study

Electronic resources significantly support education worldwide. This is by enabling postgraduate students have swift access to information, versatile search options and effortless citation of scholarly works. E-resources also enable seamless information uploading and updating, efficient storage and dissemination (Burhansab et al., 2020). Many other benefits comprise of; flexibility, time, space, cost-effectiveness, and ease of archiving (Burhansab et al., 2020). In addition, electronic resources provide postgraduate students with up-to-date information to support their research and foster academic growth through communication with peers across the globe (Osinulu, 2020a; Wagay & Dutta, 2023).

Electronic resources as defined by Anyim (2020) pertain to information materials accessible through computers or other electronic devices, often requiring an internet connection for retrieval. These resources can be subscription based or free. They include a wide range of content and formats, including but not limited to scholarly articles, e-books, online journals, databases, multimedia files, research repositories, and educational websites (Akuffo & Budu, 2019; Kassim & Mwantimwa, 2023). Electronic

resources allow users to access, search, retrieve, and utilize information electronically at their convenience (Akuffo & Budu, 2019). They can be accessible both on-campus and off-campus using application software such as MyLOFT through electronic devices like desktop computers, laptops, iPads, tablets, and mobile phones (Akuffo & Budu, 2019). Electronic resources play a crucial role in modern postgraduate studies and research. E-resources are like the backbone of university libraries, helping with teaching, learning and research (Kassim & Mwantimwa, 2023b; Ternenge & Kashimana, 2019). Librarians offer accessible and user-friendly platforms that provide a wide range of resources, including details about library services (Neerari et al., 2023).

Some of the electronic resources provided by librarians to postgraduate students include; e-databases such as Cengage, e-books like Gale Virtual Reference Library, e-journals, e-magazines, e-newspapers and theses and dissertations (Hussain & Saddiqa, 2019; Roman et al., 2020). Moreover, indexing and abstracting databases, electronic reference materials like biographies, dictionaries, directories and encyclopedias are also subscribed electronically (Chithra & Geetha, 2019). Apart from these, the libraries also subscribe to numeric and statistical materials, e-images and e-audio/visual information resources to build a diverse e-resource collection (Roman, 2020). The demand for electronic resources is growing rapidly owing to the liberalization of education through distance and electronic learning. A study conducted in the University of Calabar Library to assess the availability and use of electronic resources by postgraduate students revealed that e-journals are the most popular electronic resource (Salubi et al., 2018) also elaborate that e-resources are highly preferred by students to print information materials. The level of utilization is determined by information professionals through user surveys, assessments, and feedback (Namande et al., 2023a; Norch & Adzakpa, 2022). The results from survey analysis inform the future planning and acquisitions.

Key drivers of electronic resource utilization are their perceived usefulness, student ICT skills (Azonobi et al., 2020) open access availability, ICT infrastructure, training, librarian support and search proficiency (Azonobi et al., 2020). As Obande and Ayongo (2024) observed, the utilization of e-resources is hampered by digital illiteracy, poor network connectivity, irrelevant collection, and lack of information literacy among the postgraduate students.

The AIDA model is a marketing and advertising concept developed by Elmo Lewis in 1898 that guides businesses in developing effective communication strategies to promote their products or services (Montazeribarforoushi et al., 2017). AIDA stands for Attention, Interest, Desire, and Action, representing the four key stages in the process of engaging potential customers and motivating them to take action, typically leading to a purchase decision (Abdelkader & Rabie, 2019a). This model effectively evaluates advertising impact by tracking the complete psychological journey from initial exposure to the eventual purchase decision (Wei et al., 2022). This model is often employed as a theoretical framework in behavioral research to clarify how customer behaviors are influenced by promotional and advertising tactics. As the name of the model suggests, the main constructs are: attention, interest, stimulating desire and prompting action (Song et al., 2021).

The model has been tested and found applicable in various industries such as retailing, restaurants, banking, telecommunication industry, airline catering, hotels, hospitals, marketing agencies and other business related firms (Parmar et al., 2021; Song et al., 2021; Wei et al., 2022). Its adoption has been found to influence customer psychology towards products and services, behavioral change in buying patterns, improved perceptions and buying power when exposed to advertising, sponsorships, promotions and marketing (Song et al., 2021; Wei et al., 2022). This study adopted AIDA model to

determine its applicability in utilization of electronic information resources among postgraduate students at KeMU and MUST University. The application of the AIDA Model not only streamlines the process of resource engagement but also nurtures a culture of strategic information use. In a digital era marked by information saturation, the independent variable of AIDA offers a tailored pathway to harnessing electronic resources effectively, fostering improved learning outcomes and research acumen among postgraduate students.

Proper marketing and winning postgraduate student's attention, interest and desire to enable them undertake necessary action towards utilizing these resources is henceforth, needful. To do this effectively, librarians are expected to take charge (Ternenge & Kashimana, 2019). Specifically, the user services librarians are expected to train and create awareness to post graduate scholars on the value and implication of preferring electronic resources to the shelved information materials in the library (Burhansab et al., 2020; Yi, 2018). Librarians can achieve this by not only creating awareness on the resources in their custody but also customize trainings on how the patrons can access them on their own (Wagay & Dutta, 2023).

Globally, university libraries have put much emphasis on the utilization of e-resources and increased their subscriptions (Jan, 2019). This is evidenced by the tremendous investments that have been channeled towards impacting the availability, retrievability, usability and accessibility of resources in and outside library buildings (Ankrah & Atuase, 2018b; Jan, 2019; Wagay & Dutta, 2023). Most university libraries have enhanced remote access to information resources. This has been facilitated by the advanced library technological infrastructure, installed internet and Wi-Fi services in university buildings to increase utilization of e-resources (Jan, 2019; Wagay & Dutta, 2023). In the United States of America, the United Kingdom, China, India and Turkey,

the dominant determinant for utilization of electronic resources are triggered by intensive marketing and awareness services carried out by information professional (Baayel & Asante, 2019; Kumar & Anjaiah, 2017; Roman et al., 2020). To develop the library patrons' desire to use resources, libraries conduct comprehensive promotional programs, where they emphasize on the usefulness and benefits of electronic information resources (Hatti et al., 2023; Roman et al., 2020). Other promotional mechanisms include orientation of new patrons and regular trainings (Hatti et al., 2023). Open access databases have also been instrumental in driving electronic resources utilization (Baayel & Asante, 2019). In India, a study by Jogan and Hoovinbhavi (2019) indicated that most postgraduate students at Gulbarga University have neutral attitude towards e-resources. The study recommends to librarians to put efforts to win the attention of postgraduate students in accessing and utilizing e-resources. Apart from winning student interest through enlightening them on the usefulness of utilizing e-resources, financial investments have also been channeled to train librarians in Florida (Pinder-Darling, 2018).

Information professionals go through hands on, interpersonal, technical, ICT, information retrieval skills and marketing skills, and competencies to keep them abreast with the changing technologies and user needs (A'dillah & Noorhidawati, 2022; Pinder-Darling, 2018). These trainings and technical development of librarians are steered by the support of university management, and individual librarian concerns and empathy to meet user needs satisfactory (A'dillah & Noorhidawati, 2022; Dusane et al., 2021). Despite the immense benefits of e-resources, the utilization of e-resources by postgraduates in Pakistan, United Kingdom, India, Unites States and Indonesia is below average (Ahmad et al., 2019; Hoq & Haque, 2018; Krishnan & Balasubramanian, 2020; Roman et al., 2020). The trend is blamed to lack of adequate awareness on the

existence of e-resources, limited trainings on how to access e-resources since students are introduced to library services only during orientations and poor librarians marketing strategies (Ahmad et al., 2019; Hoq & Haque, 2018). Other outlined challenges hindering effective utilization of electronic information sources include inconsistent power supply, sluggish internet access and elevated expenses associated with data subscriptions (Ogunbodede et al., 2021).

Information overload is another drawback to the utilization of e-resources (Humbhi et al., 2023). In India, Veer and Panda, (2021) revealed that information overload and lack of knowhow on access and use of e-resources were the major impediments to resource utilization in Chandigarh University Library. It makes it difficult for users to identify the most relevant and reliable sources for their research (Bawden & Robinson, 2020; Fidelugwuowo, 2022; Ntaga, 2022). This deluge of information often hampers postgraduate students' ability to navigate the digital landscape efficiently, leading to a sense of discouragement and reduced resource utilization.

Regionally, African countries agree with the situation presented in developed nations following the great cherish for online and electronic information resources. Like other developing countries, Nigeria, Tanzania, South Africa, Zambia and Uganda, the desire to improve the usability of resources is pushed by the perceived usefulness, benefits and contributions to research, teaching and community development (Obande et al., 2020; Ruzegwa & Msonde, 2021a). Other benefits which have motivated the utilization of online information resources are: remote accessibility, simultaneous utility of similar information resources, and currency of resources and easy navigability of the databases (Fidelugwuowo, 2022; Isibika & Kavishe, 2018; Onuoha et al., 2020).

Various institutions have invested extensively to assure availability and accessibility to e-resources. These come in form of workshops, seminars and conference trainings on how to access and use e-information resources (Fidelugwuowo, 2022; Ruzegea & Msonde, 2021a). Also, awareness creation on the perceived usefulness and communicating the merits of online resources to library patrons has taken roots to win users interest (Fidelugwuowo, 2022). There are other measures put in place by university librarians to achieve perpetual availability and accessibility to resources through annual budgeting for renewing e-resources subscription fees, deploying infrastructure and technology, wifi and internet access and customized information search guides (Obande et al., 2020; Ruzegea & Msonde, 2021a).

Even though most university libraries in Africa have increased their subscriptions, they still experience under-utilization of e-resources (Obande et al., 2020; Onuoha et al., 2020; Salubi et al., 2018; Wakahia, 2019). The trend is attributed majorly to lack of information literacy, poor internet connectivity, and technological constraints (Obande et al., 2020). In South Africa, a study on the use of electronic resources by postgraduate students of the University of Cape Coast identified poor internet connectivity as the main cause of under-utilization of e-resources (Ankrah & Atuase, 2018a). Interestingly, according to Ruzegea and Msonde (2021b), of Health and Allied Sciences (MUHAS) in Tanzania, undergraduates utilize e-resources more than the postgraduates. The findings revealed that postgraduates had limited information literacy skills thus could not utilize the e-resources effectively. Information literacy is critical in promoting effective utilization of library resources. A study by Wakahia (2019) revealed that library users who were trained on e-resources had a 69.0% usage intensity compared to their counterparts who had not received a similar training.

Access restrictions are additional obstacle to utilizing online resources. Users' access to crucial resources might be hampered by limited institutional subscriptions, paywalls, and subscription charges, which can limit their ability to conduct research and pursue academic interests (Dhiman, 2021; Partap et al., 2021). Users who are denied access may feel frustrated and devoid of essential knowledge that would otherwise benefit their academic endeavors. In a study done at Jigawa State College of Education in Gumel, Nigeria, Shafiu et al. (2019) human factors that affect how effectively people use e-library resources include lack of technological skill as well as user knowledge and readiness to use e-library services.

Lack of knowledge and instruction is the principal barrier preventing postgraduate students at a South African university of technology from accessing and using e-resources (Mashaba & Pretorius, 2023). Limited knowledge of the existence and potential of specific e-resources can deter students from actively seeking and utilizing them. The majority of the postgraduate students in Kwafoa et al. (2019) study on the utilization of e-resources by University of Cape Coast students were aware of the e-resources in the library but listed a poor internet connection as the biggest barrier preventing efficient access to e-resources.

A study by Mwantimwa et al. (2021) in selected universities in Tanzania revealed that majority of the students are aware of the e-resources but a significant number have limited knowhow on access. Inadequate promotion and training on available e-resources may contribute to this lack of awareness, hindering their adoption and integration into students' academic routines. The existence of ICT policies in universities, coercive pressure supporting the use of ICT for training and research, and the perception of enough infrastructural support and capacity in utilizing ICT and e-

learning systems are among the elements that increase the chance of adopting e-resources (Kuzilwa & Kuzilwa, 2023).

Some patrons prefer print resources to online. The inclination to print materials derails the utilization of e-resources. Their choice stem from personal learning preferences or familiarity with traditional books and journals. Dhiman (2021) observed that most research scholars in Kurukshetra University (India) preferred print materials to e-resources. This preference for physical materials can create a reluctance to fully embrace the benefits of e-resources, limiting their exposure to the vast array of digital information available. Conversely, in Punjab University, majority of students prefer e-resources (Singh, 2020).

To address these challenges, librarians in Nigeria, South Africa, Uganda, Tanzania, Zambia and Zimbabwe are administering training programs for patrons on a regular basis (Kirita & Mwantimwa, 2021; Mashaba & Pretorius, 2023). Another remedy suggested to African libraries, is increasing their budget allocation for subscription to e-resources (Frimpong & Addo, 2020). Collection and digital librarians are also adopting strategies like scrutinizing suggestions from subscribers by involving users of information and teaching staff to evaluate, access, give opinions and suggest appropriateness of databases before subscribing them (Dhiman, 2021; Shafiu et al., 2019). Furthermore, information security systems, equipping digital library computers for accessing e-resources and other technological infrastructure have been recommended as remedial parameters to boost e-resources utilization (Onuoha et al., 2020; Ruzegea & Msonde, 2021a).

Locally, e-resources utilization is recognized for its tremendous contribution in effective teaching, quality research and community development (Memusi, 2022;

Merande et al., 2021). Consequently, libraries have invested infrastructure, information access software, human resources and ICT technologies to achieve effective utilization of information resources (Sebastian & Muthumari, 2020). Libraries also have set aside budgets to subscribe to online databases, build up digital collection and develop robust systems and platforms to support seamless access of electronic resources (Ruzegea & Msonde, 2021b). To facilitate information retrieval, librarians provide training sessions, workshops, and online tutorials to educate library patrons (Mwamasso & Onyango, 2020).

In spite of these investments, there is limited utilization of e-resources by postgraduate students (Memusi, 2022; Merande et al., 2021). The trend is attributed to lack of information literacy skills and inadequate access points (Memusi, 2022; Merande et al., 2021). According to Merande et al. (2021), Jomo Kenyatta University of Science & Technology, Multimedia University, Technical University of Kenya and Kenyatta University blame the poor utilization of e-resources to high subscription costs, limited information literacy, and lack of awareness as the main challenges impeding their access and utilization. Most of these critics require librarians to develop mechanisms to disseminate information and create awareness e-resources subscribed to by institutions. Relooking these impeding factors also call upon the need for library patrons to be influenced positively by noting the benefits of e-resources in order to boost their morale to take action in using them. The university libraries should therefore strategize on catching the users' attention, interest, desire and facilitate them to act on the available e-resources.

At KeMU and MUST University, e-resources are already in place. Users have online access to a large collection of e-books, e-journals, past papers and other e-resources. The library has subscribed to a number of databases including JSTOR, Springer,

Emerald, Taylor & Francis, Wiley Online among others. Through these, their users have unrestricted access to hundreds of thousands e-resources. These resources are valuable for both students and faculty members in advancing their academic pursuits. Despite the significant efforts and interventions undertaken by university libraries to enhance the availability and accessibility of electronic resources, there remains a persistent issue of limited utilization of these resources among postgraduate library users at these institutions. This ongoing trend has significant consequences, including the missed opportunities for learning, resource wastage, a decline in the quality of research, diminished returns on investment, and overlooked cost-saving potentials. It is, therefore, essential to turnaround this phenomenon in order to have maximum utilization of e-resources by postgraduate students in these universities. To achieve this, the study assessed how the AIDA (attention, interest, desire, and action) model can be adopted to enhance the utilization of online electronic resources by postgraduate students at KeMU and MUST University. By applying the AIDA model, the study sought to capture the students' attention toward available electronic resources, stimulate their interest in exploring these resources, create a desire to utilize them for academic and research purposes, and ultimately guide them to take action in incorporating these resources into their daily academic routines.

1.2 Statement of the Problem

Institutions of higher education globally have recognized and integrated electronic resources into their teaching and learning processes (Ruzegea & Msonde, 2021b). Electronic resources are predominantly current, thus enhancing the timeliness of research information (Wagay & Dutta, 2023). University libraries have, as a result, made substantial investments to ensure the availability and accessibility of e-resources (Mwamasso & Onyango, 2020; Sebastian & Muthumari, 2020). In contemporary times,

many libraries subscribe to online databases, build digital collections, and establish robust systems and platforms to facilitate seamless access to electronic resources (Ruzegea & Msonde, 2021b). To aid in information retrieval, librarians conduct training sessions, workshops, and online tutorials to educate library patrons (Burhansab et al., 2020).

In addition, libraries have made advancements in their infrastructure and technology to facilitate the effective use of e-resources. A substantial portion of libraries budgets is also dedicated to the procurement of electronic resources (Burhansab et al., 2020; Wagay & Dutta, 2023). To ensure adequate support, libraries have engaged qualified human resources that provide guidance and assistance to library patrons. Moreover, by collaborating through consortia, such as KLISC, libraries pool resources together and leverage on economies of scale to negotiate collectively, resulting in better pricing and access terms for e-resources (Che, 2022).

Despite the above measures implemented by most university libraries to improve the availability and accessibility of electronic resources, the utilization of e-resources by postgraduate library users at universities remains low (KeMU and MUST Universities online e-resource usage reports, 2023; Kipkosgei, 2020; Memusi, 2022). This might be attributed to lack of awareness, insufficient training, unreliable power supply, limited IT knowledge, subpar internet connectivity, inadequate modern ICT infrastructure, information overload, and a lack of interest among patrons (Kassim & Mwantimwa, 2023b; Osinulu, 2020; Vanik & Gamit, 2022). These attributes influence the utilization of e-resources which directly impacts the quality of student academic research.

Failure to address these challenges can result in missed learning opportunities, decreased productivity, digital divide and negate the investment done by universities

on electronic resources (Osinulu, 2020; Ruzegea & Msonde, 2021). It was of ultimate importance to conduct an investigation into strategies that could improve the utilization of electronic resources by postgraduate students. One such strategy is the adoption of the Attention Interest Desire Action (AIDA) model. This model illustrates the sequential process of grabbing attention, stimulating interest, recognizing desire, and inspiring people to act through advertising effectively (Wei et al., 2022). Studies exist which have successfully adopted the AIDA model such as Jiang et al. (2023) and Wei et al. (2022) in marketing organizations. Aspects of utilization of e-resources in libraries with respect to the AIDA model have not been investigated. This shows a research gap which the study wished to address by examining how the adoption of AIDA model can enhance e-resource utilization in university libraries. In the study, the AIDA model was envisaged to guide the strategies to be adapted, such as awareness campaigns, training workshops, user-friendly interfaces, and personalized recommendations to improve e-resource utilization in university libraries. The study, therefore, investigated the potential of adopting the Attention Interest Desire Action (AIDA) model in enhancing the utilization of electronic resources by postgraduate students at KeMU and MUST Universities.

1.3 Purpose of the Study

The study assessed how adaption of AIDA model enhance the utilization of e-resources by postgraduate students at KeMU and MUST University with a view to give short and long-term best-practice recommendations for improving e-resource utilization.

1.4 Objectives of the Study

The objectives of the study were to:

- i. Assess postgraduate students' attention towards utilization of electronic resources, at selected Universities in Meru County.
- ii. Determine postgraduate students' interest in electronic resource utilization at selected Universities in Meru County
- iii. Examine postgraduate students' desire for electronic resource utilization at selected Universities in Meru County
- iv. Evaluate postgraduate students' proactive actions in utilizing electronic resources at selected Universities in Meru County.

1.5 Research Questions

This research was guided by the following research questions:

- i. How is postgraduate students' attention towards electronic resource utilization at selected Universities in Meru County?
- ii. What drives postgraduate students' interest in using electronic resources at selected Universities in Meru County?
- iii. How is postgraduate students' desire for electronic resource utilization at selected Universities in Meru County?
- iv. What proactive actions are noticed among postgraduate students when utilizing electronic resources at selected Universities in Meru County?

1.6 Justification of the Study

It was important to investigate the applicability of the Attention Interest Desire Action (AIDA) model in enhancing the utilization of electronic resources by postgraduate students. It helped university libraries substantiate the need to subscribe to electronic resources. The model maximized value for money spent on e-resources, user training, and infrastructure by emphasizing measures for enhancing utilization. This was because

the study provided short and long-term solutions based on scientific evidence on how the utilization of e-resources by postgraduate students could be improved in university libraries. KeMU and MUST Universities were interested in knowing how and what to do to better their service provision to win customer interest, desire, and attention by taking appropriate actions. Failing to maximize these investments through effective utilization would have diminished their potential impact. Thus, the exploration of utilization factors and strategic approaches was pivotal to transforming investments into valuable scholarly assets.

1.7 Significance of the Study

The study assessed applicability of AIDA model aspects on utilization of e-resources among postgraduate students at KeMU and MUST University. The findings of the study will provide a good ground for scholars specialized in libraries to use the evidence to cover other gaps existing in the field. It contributes towards the growth and development of new knowledge and solutions in the subject of e-resources utilization. The librarians comprising of the university librarian, collection development and user service librarians will gain exposure and knowledge on what is expected of them and what to do in order to interest postgraduate students to utilize the resources at their disposal. This is achieved through the provided conclusions and recommendations that identifies gaps which interfere with student desire, interest, attention and action to utilize e-resources. These gaps include lack of awareness among students about available e-resources, insufficient user training programs, inadequate infrastructure to support e-resource access, and limited engagement strategies by librarians. Actionable plans to develop students' interest, desire, and attention to improve the utilization of online information resources will be developed.

By determining the impact of AIDA model (attention, interest, desire and action) on the utilization of e-resources, the university library committee and the management that allocates and approves the library budget gained very important insights on how to allocate finances for subscriptions, training, awareness, infrastructure maintenance, technology development and staff professional development.

Noting that postgraduate students are the main customers in focus in the study, they will also benefit from the findings. Recommendations given from the presented results will change the library working directives, guidelines, policies and procedures for assessing and utilizing electronic information resources. For this case, learners will be the prime beneficiaries of good customer service, satisfaction, quality research and hence academic achievement. Since utilization and access to information involves having knowledge and information retrieval skills, these students will benefit from trainings on information literacy and retrieval.

The findings of this study will also be very helpful to KLISC. The consortium will gainfully be informed on the benefits of using e-resources in university libraries. Since the body plays a fundamental intermediary role of negotiating and subscribing resources for universities in Kenya, they will revamp their policies to align with university library needs as far as resource subscription is concerned. Such noble decisions require elaborate requirements and needs from the consumers of electronic information resources.

The study will inform policy makers at the higher levels in libraries and information centers in Kenya on best practices modification, improvement, revision and enactment of e-resources utilization policies. This will enable the bodies to streamline their

operations as far as information service delivery in libraries and information centers is concerned.

1.8 Scope of the Study

This study focused on exploring how the AIDA model can enhance the utilization of electronic resources among postgraduate students at KeMU and MUST University. The study specifically applied the key elements of the AIDA model namely: attention, interest, desire, and action, as outlined by the research objectives. While other factors like technology and academic demands could influence resource usage, it is important to note that these factors were beyond this study's scope. This research specifically targeted postgraduate students and library staff at the main campus of KeMU and MUST universities; therefore, undergraduate students were not part of this study. This approach provided a complete picture of how students utilize resources and how the university supports this process.

1.9 Limitations of the Study

The study was limited to KeMU and MUST University. These universities have a diverse graduate student population and a wide range of electronic resources. Studying it closely, brought out more understanding on how postgraduate students use these resources better. Most universities libraries face similar challenges in improving resource use, so the insights from this study could be applied more broadly.

The expected results depended explicitly on the opinions and ideologies of the respondents. The dependence on postgraduate students and librarian's experiences, posed a limitation on individual biases. The study bridged the gap by requesting librarians and postgraduate students to be sincere, honest, and truthful while answering survey questions. Another constraint was the study's descriptive nature. If the study

was to opt for a longitudinal study, which involves observing subjects over an extended period, it will necessitate a substantial time commitment spanning several years. Given the study's academic context, closely aligned with the completion requirements of an academic degree within a specific timeframe, the challenge emerges from the extended duration that a longitudinal study demands. Balancing the thoroughness of the research with the time constraints of the academic program presents a significant challenge to overcome.

Lastly the study was limited to the four constructs of the AIDA model as guided by Elmo Lewis. Therefore, it was guided by attention, interest, desire and action for ascertaining the improving of e-resource utilization in selected universities in Meru County.

1.10 Assumptions of the Study

The study assumed that:

- The AIDA model constructs influence the utilization of electronic resources to postgraduate students at KeMU and MUST University.
- The library electronic resources are being underutilized by postgraduate students in the university.
- Postgraduate students are aware of the existence and availability of e-resources for their utilization.

1.11 Operational Definition of Terms

Action: A stage that is concerned with motivating library users to take concrete steps to access and utilize the resources and services available.

AIDA model: AIDA stands for Attention, Interest, Desire and Action, representing the four key stages in the process of engaging potential customers and motivating them to take action, typically leading to a purchase decision.

Attention: Pertains to capturing the concentration of library patrons and potential users of library services using eye-catching user-friendly website with a clear layout and easy navigation, promoting featured resources prominently on the homepage.

Desire: A stage in AIDA model stage, meant to showcase the benefits and practicality of accessing digital materials and databases so as to attract usability.

E-book: Refers to a digital version of a book that can be accessed and read on electronic devices, often made available to library patrons through online platforms or digital collections.

E-Journals: E-journals (electronic journals) are digital counterparts of traditional print journals. They contain scholarly articles, research papers, and academic content that can be accessed by library users through online databases or subscriptions, facilitating quick and convenient access to current research and information.

Electronic resources: electronic resources are information materials that are accessed by a computer or other device and, in certain cases, require an internet connection.

Interest: This is maintaining the engagement of library users and cultivating their curiosity about the resources and services offered

Online electronic resources: refer to digital materials and information sources that are accessible over the internet and are typically hosted on external servers or platforms and can be accessed remotely by library patrons with internet connectivity

Postgraduate students: These are individuals who have completed their undergraduate studies and are pursuing advanced academic degrees such as masters or doctoral degrees. They often engage with specialized research resources and services offered by university libraries to support their studies and research.

University libraries: University libraries are dedicated information centers located within academic institutions. They provide a range of resources, including books, journals, databases, and digital materials, to support the teaching, learning, and research activities of students, faculty, and researchers associated with the university.

Utilization: Refers to the act of making effective and purposeful use of the resources, services, and facilities provided by the library to meet specific information needs, research requirements, or educational goals.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter is structured to assess and critically analyze existing literature and research studies related to the AIDA model and electronic resources utilization in academic settings. The chapter presents; utilization of electronic resources, attention, interest, desire and proactive actions in utilizing electronic resources at selected Universities in Meru County. The chapter also covers the summary of the research gaps, theoretical framework and the study's conceptual framework.

2.2. Utilization of Electronic Resources by Postgraduate Students

Postgraduate education represents a critical phase where students engage in advanced academic research and scholarly activities. The integration of electronic resources into the learning and research processes of postgraduate students has significantly transformed academic landscapes (Mwantimwa et al., 2021). The emergence of electronic resources, including digital libraries, scholarly databases, e-journals, e-books, and other online repositories, has revolutionized information access and dissemination (Merande et al., 2021). These resources offer an extensive array of scholarly content, providing convenience, accessibility and immediacy compared to traditional print resources (Parmar et al., 2021).

Utilization of e-resources by postgraduate students refers to the act of making effective and purposeful use of the resources, services and facilities made available by the library to meet specific information needs, research requirements or educational goals (Ubogu, 2020). Consequently, the use of electronic resources is majorly determined by their

perceived usefulness and the student proficiency in ICT skills (Isibika & Kavishe, 2018). Apart from these, other enablers are the availability of the item in open access basis, ICT infrastructure, training, librarian support and search proficiency (Wagay & Dutta, 2023).

On utilization of electronic resources to postgraduate students, the study focused on the following components; resource accessibility and availability, utilization patterns, perceived ease of use, usefulness and the impact of utilization of e-resources (Ankrah & Atuase, 2018a; Merande et al., 2021). Measuring the use of e- resources among postgraduate students involves assessing various factors including: identifying the various e-resources accessible to postgraduate students. These comprise of; e-databases, e-journals, e-books, and online repositories; and the usage metrics: determining specific metrics for utilization such as frequency of access, duration of access, types of resources accessed, search behavior (Merande et al., 2021)

Postgraduate students heavily rely on electronic resources for their research, coursework, thesis writing, and academic endeavors (Akuffo & Budu, 2019). Electronic resources offer diverse and up-to-date information, facilitating in-depth exploration, critical analysis and synthesis of knowledge required for advanced research (Merande et al., 2021). Effective utilization of electronic resources positively influences research productivity among postgraduate students. Access to a wide range of e-resources also enhances the quality, depth and breadth of research conducted by students, contributing to the advancement of knowledge within their respective fields (Ruzegea & Msonde, 2021b).

Despite the advantages, several challenges deter the optimal use of e-resources among postgraduate students. These challenges encompass issues related to information

overload, limited ICT infrastructure and inadequate information literacy skills (Humbhi et al., 2023; Veer & Panda, 2021). Others are, difficulty in navigating complex databases, limited access to certain resources, and lack of awareness regarding the full spectrum of available resources (Abdulrahman & Onuoha, 2019). Some of the noted mechanisms which have been put in place to rectify the challenges include: training of postgraduate students, implementing function ICT policies, funding e-resources initiatives, building consortiums, employment of e-resources librarians and student support when accessing e-resources (Ruzegea & Msonde, 2021).

Globally, the utilization of e-resources is highly emphasized. Some notably practices put in place to ensure their utilization is first increasing their subscriptions (Jan, 2019). Also, utilization has been enhanced through ensuring e-resources are always available, accessible, retrievable and to the targeted population of users (Tarus et al., 2022). Moreover, this has been facilitated by the advanced library technological infrastructure, installed internet and Wi-Fi services in university buildings (Burhansab et al., 2020; Jan, 2019).

Respectively, research exist which has underpinned the subject of resources utilization among students. One of the subject utilization featured is the aspect of information resource accessibility and availability. This was well articulated in the research of study by Zhang et al. (2020) in the United States of America. Zhang et al. study was majorly a systematic review and it adopted 31 papers to explore the impact of resource accessibility to users with disabilities. Specifically, the nature of resources investigated were the open educational resources (OER) and open educational practices (OEP) for disabled learners. The review of the included papers downloaded from databases highlighted that, accessibility of resources was still in its infancy within OER. The review therefore recommended the need for strengthening four accessibility principles:

perceivable, operable, and understandable and robustness when providing OER. This research is potentially helpful in communicating the role of accessibility in the utilization of electronic resources. However, the research relied on existing literature which posed some limitations of understanding the experienced situation in the location of the study. The study adopted a mixed methods research design and gathered firsthand information from respondents through questionnaires and interview guides.

Another critical drive of utilization of e-resources to postgraduate students is the regular subscription of resources to ensure their availability. This was well articulated by Rudraksha et al. (2021) research which was based in Australia. Rudraksha et al. collected data using questionnaires to 1164 library users which were majorly postgraduate students, faculty and scholars. The results opined that, library users did not utilize e-resources optimally due to deficiencies in schools, technical know-how and limited subscriptions to e-resources. Surprisingly, out of the four universities which were sampled, one of them had not at all subscribed to any e-resources since it was not a technical university. The rest of the universities were found to majorly have resources provided by EEE, EBSCO, DELNET and Springer databases. Noting the limited subscription to resources, libraries were recommended to be allocated subscription funds to enhance their collection. Moreover, training and awareness creation to users was deemed needful. The current study differs with the outgone ones in that; only postgraduate learners were sampled to participate in the study as respondents. Moreover, other notable differences are on the tools of data collection where here, questionnaires and interview guides were developed to obtain data from respondents.

The use of e-resources may also be influenced by the user characteristics. In Asia, Mishra et al.(2020) conducted a study in India to illustrate the effect of user characteristics on the utilization of e-resources. Three universities were purposely

sampled to take part in the study where a total of 180 respondents were selected purposefully. Focusing on the utilization pattern of e-resources by the users the findings indicated that age, technological skill, access to the internet, and education had a significant impact with utilization pattern of e-resources at 1 percent level of significance. The other variables such as use of computers and academic achievement, were correlated at the 5percent significance level. There was no correlation between the dependent variable and the remaining independent factors, such as gender and yearly income.

It was suggested that, in order to enhance the resource utilization by students, there was need for training, ICT and computer orientation and having librarians assisting learners when they get stuck. The study was however generally scoped to access the characteristics of users which influenced the use of e-resources irrespective of the specific level of study. This study specifically assessed the utilization of e-resources among postgraduate students.

The utilization of e-resources is directly associated with the perceived ease of use and perceived usefulness. These aspects were investigated in Malaysia and the key observed characteristics were: perceived usefulness, perceived ease of use and behavioral intention to use (Ogunbodede et al., 2021). As the current study, Ogunbodede et al. (2021) involved postgraduate students in their study who filled in the study questionnaires. The study found that perceived ease of use and perceived usefulness had a significant and positive effect on behavioral intention to use e-learning. The study also found that perceived ease of use had a stronger effect on behavioral intention to use e-learning than perceived usefulness. In the same connection, Ruzegwa and Msonde (2021b) also found out that when students perceive electronic resources as both easy to use and useful for their academic needs, they exhibit a higher frequency of

utilization. Conversely, if either perceived ease of use or perceived usefulness is lacking, the adoption and sustained use of these resources decrease. The currently study appreciates the knowledge exhibited by the preceded researchers who outlined the impact of perceived usefulness and ease of use on the utilization of e-resources. However, this study was more diverse in that, different parameters regarding the utilization of e-resources including desire, attention and interest were explored.

Notably, the underutilization of e-resources among postgraduate students has been linked to a number of parameters. A quantitative research illustrated this aspect in Philippines (Roman et al., 2020). This study only used an unstructured questionnaire to collect data from third and fourth year students in the college of Angele. The collected data was both checked for construct, convergent and discriminant validities. Collected data from the undergraduate students was encoded on Microsoft Excel, and analyzed using SmartPls. The results opined that, e-resources were heavily un-utilized by these category of learners as an effect of lack of understanding and technical skills. In support, Hatti et al. (2023) also carried out a study and obtained similar findings among undergraduate learners in the Khot College of Commerce. It was recommended that, librarians required to upgrade their way of conducting orientations, trainings and seminars so as to raise the level of awareness of the available e-resources. The study was very helpful in exposing the challenges hindering utilization. However, the outgone research was majorly based on third and fourth year students in the college. The current study was carried out among postgraduate students with two universities participating.

Regionally, the utilization of e-resources by postgraduate students is facing resource accessibility challenges such as limited infrastructure. Studies by Ternenge and Kashimana (2019) emphasized the importance of infrastructure development to bridge the digital divide. They investigated resource accessibility challenges in the African

region. Their findings highlighted infrastructure development as critical for improving access to electronic resources. Insufficient infrastructure, limited subscriptions, and low digital literacy were identified as barriers hindering access among postgraduate students. Another study by Ogunmodede et al.(2019) on the use of electronic resources by postgraduate students in Nigeria revealed that the availability of digital resources was a major factor in their utilization. The authors suggested that universities should provide adequate funding for the acquisition of electronic resources and ensure that they are easily accessible to students.

In Tanzania the significance of user awareness on the access to information materials was illustrated in a study by (Mungwabi, 2023). The study used a mixed methods style to clarify how teaching staff utilized e-resources to support education and research in higher education institutions in Tanzania. Among the six participating institutions, a sample of 119 academic staff, section librarians and university librarians participated in the study. The academic staff were issued with qualitative questionnaires; section librarians were interviewed while the librarians participated in a focused group discussion. The key findings recommended that the most of academic staff and researchers were aware and have access to and utilize e-resources to support teaching and research. However, faculty access to electronic resources was impeded by various factors, including slow internet speeds, difficulties in accessing full-text articles, inconsistent electricity supply, restrictions on accessing e-resources from outside the university due to IP address constraints, insufficient ICT infrastructure, and a lack of skills and knowledge in retrieving information. The study noted the need to enhance the accessibility to research in order to promote learning in the universities. The current study investigated the same subject among postgraduate student at selected universities in Meru County.

Also, the attitude of users towards the utilization of electronic resources matter. Anyim (2020) conducted a research to understand student perceptions regarding the effectiveness of electronic resources and strategies to improve distance learning programs in Nigeria. The study adopted a descriptive survey research design to accomplish its objective. 372 students were conveniently sampled from a population of 7125 and issued with structured questionnaires. The research revealed that students are cognizant of and content with the electronic resources accessible for distance learning. A similar one at the University of Africa Bayelsa State which assessed the perceptions of undergraduate students on the use of e-resources (Ogunbodede et al., 2022) noted favorable attitudes toward the utilization of electronic resources in education. Additionally, the investigation revealed that these resources offer users current information, unrestricted access to information from various sources, and quick and effortless retrieval of information. Both researchers recommended that the utilization of e-resources can be enhanced through providing effective Internet/server to enhance the accessibility of e-resources, online user guideline for accessing e-resources and designing of user-friendly interfaces for easy access to online contents. The current study differed in that a descriptive research design was adopted to guide the study. Moreover, simple random sampling and purpose sampling techniques were adopted to obtain targeted sample respondents.

The predicting factors for e-resources utilization were also featured in the research done by (Kwafoa et al., 2019; Ruzegea & Msonde, 2021a). Both studies adopted survey design and utilized questionnaires to solicit for data from postgraduate students while compared usage between undergraduate and post graduate students e-resources usage. A one-way ANOVA was utilized to predict the possible factors which influenced e-resources utilization. Obtained results clarified that, undergraduates demonstrated

higher usage levels of e-resources than postgraduates. Some of the noted factors which predicted high utilization were: education level, information literacy competencies and individual experience. In order to promote resource utilization, both studies suggested the integration of information literacy training in to the teaching curricula and if possible, be graded as other units in order to improve students' competencies for effective e-resource utilization.

To address the challenges faced by the African hemisphere in the utilization of electronic resources, studies have advocated for collaborative efforts among university lecturers, university students, administrators, policymakers, and educational stakeholders in Ghana to redesign holistic digital literacy approaches, emphasizing the pivotal role of academic libraries in driving digital inclusion and fostering user engagement hence utilization of e-resources (Nkansah & Oldac, 2024; Wang & Si, 2024). Additionally, creating user-friendly interfaces and providing guidance on accessing credible sources within electronic databases can significantly benefit postgraduate students.

Locally, in Kenya, e-resources utilization is recognized for its tremendous contribution in effective teaching, quality research and community development (Kanori, 2019; Memusi, 2022). Despite the great appreciation for e-resources, there is limited utilization of e-resources by postgraduate students (Memusi, 2022; Merande et al., 2021). The trend is attributed to lack of information literacy skills and inadequate access points (Memusi, 2022). Apparently, there is a significant shortage of literature which adopted a model to assess its influence in electronic resources utilization. The available previously done ones had focused on the influence of information literacy, and utilization of e-resources among undergraduate students (Kanori, 2019; Memusi, 2022; Merande et al., 2021; Namande et al., 2023a).

Kanori (2019) investigated the effect of information literacy on the use of e-resources among undergraduate education students in the University of Nairobi. To achieve the purpose of the studies, a descriptive survey research design was adopted. The education students were issued with questionnaires while the library service provider's interview and document analysis guides. The analyzed groups pointed out that, recognition of information needs, collaborative information literacy, and searching and information evaluation abilities increases utilization of e-resources. The studies suggested the addition of an information literacy clause in the University of Nairobi's mission statement so as to emphasize collaborative information literacy. The current study was interested on the utilization of e-resources among postgraduate students unlike Kanori and Njoroge who focused on information literacy.

A study which focused on the utilization of electronic resources was that done by (Memusi, 2022). Memusi investigated this aspect at Maasai Mara University among the undergraduate students. The major purpose of the research was to identify the available e-resources, assess their utilization, note the major hindrances that confront users so as to air out practical solutions for the identified challenges. Memusi's descriptive survey study was guided by the unified theory of acceptance and only included the third and fourth year students. It was uncovered that, the major e-resources available were e-journals and learners assessed them mainly at the school. Also, the study noted a very poor usage of the said resources pointing that, this was hindered by inadequate search skills, limited library user education and inadequate electronic gadgets. Awareness, sensitization and networking digital library computers were commended to be put in place.

Given the above discrepancy, Merande et al. (2021) also did a study and presented a no different situation just as noted by (Kanori, 2019; Memusi, 2022). Four universities

were selected by the researcher and they were evaluated and the results revealed that, e-resources were being highly utilized although the cost of subscription for university libraries was very high. Another research done by Namande et al. (2023) researched on the level of awareness and the use of e-resources among postgraduate student in Pan African University. Just as noted by Merande et al. (2021) and Namande et al. (2023) that, postgraduate students were aware and were using electronic resources. Some of the noted mechanisms for enhancing the awareness were on the provision of computers with internet. The current study examined the influence of AIDA model on the utilization of e-resources.

At universities in Meru County, efforts are ongoing to enhance the utilization of electronic resources. However, local disparities in infrastructure and digital literacy persist, impacting resource availability and accessibility among postgraduate students. In Meru County specifically, although initiatives exist, there remain challenges that hinder optimal resource accessibility and availability, affecting electronic resource utilization among postgraduate students. Given the above discrepancy, the current study analyzed how AIDA model can be used to enhance the utilization of electronic resources by postgraduate students at KeMU and MUST University libraries with a view to give short and long-term best-practice recommendations for improving e-resource utilization.

2.3 Attention and Utilization of Electronic Resources

Post graduate-attention refers to creating recognition or awareness about the existence of electronic resources for their academic and research use from the university libraries (Padma & Ramasamy, 2018). In the case of electronic resources utilization, attention of the customers (postgraduate students) may refer to the use of communication channels to create awareness on what the library offers in electronic means (Yebowaah

& Plockey, 2018). It may also pertain capturing the concentration of library patrons of library services using eye-catching user-friendly website with a clear layout, easy navigation and promoting featured resources prominently on the homepage. Proper marketing, sensitization, training, awareness and winning postgraduate student's attention to enable them undertake necessary action towards utilizing these resources is henceforth, needful.

In order to gain postgraduate students' attention to the e-resources in libraries, librarians are expected to create awareness, sensitize, communicate, educate and provide accessibility to the resources at their custody (Memusi, 2022; Ternenge & Kashimana, 2019). Specifically, the user services librarians are expected to train and create awareness to post graduate scholars on the value and implication of preferring electronic resources to the shelved information materials in the library (Burhansab et al., 2020; Namande et al., 2023a; Yi, 2018). Moreover, noting that the Attention stage in the AIDA model, represents the initial phase of capturing a person's interest. In the context of electronic resources, this stage signifies attracting the attention of postgraduate students towards these resources by drawing the students' focus towards the availability, relevance, and benefits of utilizing e-resources for their academic endeavors (Purbaningsih et al., 2022). When this is done, the customers perceptions will be generated hence, influence their utilization.

For effective postgraduate attention, several determinants need to be put in place. Some of them including having a system librarian who oversees the accessibility of subscribed information resources (Ternenge & Kashimana, 2019). Another parameter for increasing postgraduate attentiveness to the subscribed information resources is through communicating to them about their availability, usefulness, quality and

advantages over the print sources (Ankrah & Atuase, 2018b). Other requirements are infrastructure, ICT technologies and internet connectivity (Mashaba & Pretorius, 2023).

Other strategies to capture the attention of postgraduate students towards electronic resources include effective marketing of these resources through various channels such as orientation programs, library workshops, social media platforms, and course syllabus. Additionally, the presentation of compelling, easily accessible, and visually engaging content within electronic databases can significantly enhance the attention-grabbing aspect (Ankrah & Atuase, 2018a). The attention stage's effectiveness plays a crucial role in determining the subsequent interest, desire, and action towards utilizing electronic resources among postgraduate students. A study by Lodge and Harrison (2019) found that when students are effectively drawn towards electronic resources during the attention phase, they are more likely to explore further, develop an interest, and desire to engage with these resources to meet their academic needs.

Measuring attention as an aspect of the Attention Interest Desire Action (AIDA) model concerning the utilization of electronic resources among postgraduate students involves assessing various indicators and metrics to understand how students engage and interact with these resources. They include utilizing website analytics tools to track metrics such as page views, unique visitors, session durations, and bounce rates on the electronic resource platforms (Anunobi & Emezie, 2020). High page views and longer session durations indicate greater attention and engagement (Kumar et al., 2018). Surveys to gather direct feedback from postgraduate students regarding their awareness, perception, and interest in utilizing electronic resources can also be used (Vasilyeva & Vasilyeva, 2019a). Questions revolving around how they discovered the resources, what caught their attention, and what factors influence their engagement are important.

Postgraduate attention to electronic resources has a lot of benefits. One of the benefits is that, as the initial attention-grabbing phase, it influences the student's decision-making process, prompting them to take action by actively utilizing electronic resources for research, studying, and information retrieval (Abubakar, 2021). Moreover, attention to electronic library resources has been the reason for successful education through distance and electronic learning (Khan, 2020). Consequently, the most obvious one is that, attention to e-resources has promoted the advancement of AIDA model dimensions, leading to high access and utilization. Utilization of e-resources has also been reported by outgone able scholars to influence the quality of university research and scholarly work (Ruzegea & Msonde, 2021a).

Globally, few studies exist which elaborate the postgraduate students' attention towards utilization of electronic resources, at universities libraries. Despite this, great efforts have been channeled to create postgraduate student's attention to e-resources in libraries. Some outstanding measures put in place include strategic communication channels to increase awareness, such as email newsletters, social media, university websites, and posters in high-traffic areas visited by postgraduate students. Collaboration with faculty to integrate electronic resources into course materials, ensuring that students are exposed to these resources as part of their academic curriculum has also taken roots. Library workshops and orientations designed for postgraduate students about available electronic resources and their benefits for research and learning has been proven to be a working mechanism (Ankrah & Atuase, 2018b). Others are: promotional campaigns highlighting the unique features and benefits of e-resources through engaging and informative content to increase exposure and generate interest.

In the United States of America, Zuniga (2022) conducted a review analysis on the need for enhancing accessibility features to enhance the utilization of e-resources among students. Zuniga discussion was not based in any methodology nor specific sample of respondents. Some of the noted mechanisms enlisted for enhancing the accessibility of electronic resources subscribed to by the Colorado State University were: an access policy for e-resources, employing an e-resources access librarian, subscribing to open-source materials, having navigable websites and friendly e-resources user interfaces. The study revealed that platforms with enhanced accessibility features, such as clear navigation, responsive design, and compatibility with multiple devices, significantly influenced students' attention and subsequent utilization of resources. This review was however not based on any data gathered from library users. The current study is scientifically driven hence adopted a methodology to collect data from postgraduate learners and library staff to enrich the subject of attention on the utilization of e-resources.

Another facet for enriching the attention of students to available electronic resources is creating awareness about them. This was well illustrated by Wagay and Dutta (2023) at Kashmir University. Wagay and Dutta (2023) study was a survey research design that included 250 scholars who comprised of postgraduate students and faculty members who were selected through a basic random sampling method. The study achieved a questionnaire response rate of 80% for all the aimed at utilizing e-resources by research scholars and postgraduate students at Kashmir University. The research sought to assess the usage of electronic resources, the proficiency of users in managing these resources, and their reasons for using them. It was discovered that electronic resources are essential to fulfilling the information needs of research scholars and postgraduate students at Kashmir University. The study also highlighted that limited

awareness, insufficient bandwidth, challenges in accessing resources from home, inadequate search and retrieval abilities, and low proficiency levels were obstacles encountered by research scholars and postgraduate students in using electronic resources. The current study informs critical information of the need for awareness in deriving the attention of e-resources users. However, Wagay and Dutta only relied on questionnaires to solicit information from the sampled respondents which poses limitations on the adequacy and reliability of the data. The current study obtained information through questionnaires, and interviews schedules.

A focus on enriching user perceptions towards electronic resources improves the attention of scholars. Quantitative research based in Pakistan reviewed the needfulness of user perceptions towards e-resources use (Hussain et al., 20121). Both studies were surveys and mainly used questionnaires to gain insights about the perceptions of faculty users on e-resources. It was revealed that, that faculty members held a strong positive perception of electronic resources, viewing them as highly beneficial for supporting research, teaching, and learning. Moreover, the use of electronic resources was linked to enhanced productivity, increased exposure to peer-reviewed articles, improved research skills, facilitation of locating pertinent research materials, and heightened awareness of recent research. Considering the positive perceptions, it was recommended that, faculty members receive regular training to enrich their information search and retrieval skills. The current study assessed postgraduate students' attention towards utilization of electronic resources, at selected Universities in Meru County.

The dilemmas behind attention to e-resources and their utilization have also been researched. In the Asian countries especially India, volumes of exponentially subscribed e-resources have been available in the library although their utilization is low. This made Mushtaq and Riyaz (2020) conduct a research to identify the

perceptions of scholars on the utilization of e-resources. An interrogative analysis through issued questionnaires was issued to four staff from each department in Kashmir University to assess the challenges facing information seekers. It was revealed that, attention to e-resources was withdrawn from the scholar's due to delay in downloading, the resources were few, were getting irrelevant information from available local databases and poor research culture. It was suggested, that internet bandwidth be strengthened, subscription to international databases and training take place so as to arouse staff attention. The current study assessed the influence of attention on the utilization of e-resources among postgraduate students.

Regionally, few studies have been conducted that focus on postgraduate students' attention towards utilization electronic resources at universities libraries. Most of the existing ones concentrate on the utilization of e-resources by postgraduate students and faculty. One existing one was done by (Joshua & King, 2020). This one was a case study which majorly applied a mixed methods approach to validate its purpose. The objective of Joshua and King were underpinned by the technology acceptance model and the diffusion of innovation theories. It was found out that, e-resources were highly underutilized as a result of limited internet connectivity, limited user awareness and insufficient training on information literacy and retrieval skills. The research noticed that e-resources did not influence research and innovation in Modibbo Adama University of Technology. In Tanzania, Mungwabi (2023) also gave their say regarding the same objective of utilization. This one was a comparative study although the other methodology characterizes were alike to Joshua and King. One difference between these studies is that, Mungwabi (2023) noticed that in two universities in Tanzania, e-resources were highly utilized due to awareness creation to faculty. These results underscore the needfulness to train staff in information retrieval. The current study

differed in that, utilization of e-resources is assessed with regard to attention dimension of the AIDA model. The research was also student centered.

The role of librarian communication in promoting user attention has also been featured. This was well illustrated by Akuffo and Budu (2019); Mwantimwa et al. (2021) in Tanzania and Ghana respectively. Mwantimwa et al. (2021) did a cross-sectional survey while the other researcher a descriptive survey to address the role of communication in seeking patron attention towards the use of e-resources. Both studies collected data from faculty and the results implied that, the level of awareness of faculty members was okay and e-resources contributed immensely to the quality of research. Some of the noted challenges were: sluggish internet connections, trouble in retrieving full-text articles, inconsistent electricity, inaccessibility of e-resources off-campus due to IP restrictions, insufficient ICT infrastructure and inadequate retrieval skills and knowledge (Mwantimwa et al., 2021). The studies recommended introduction of communication sessions to train faculty on the availability, accessibility and usefulness of subscribed e-resources.

Another important dimensions which impacts the attention of library service users is the facilitating conditions. In South Africa, this was well explained by the article published by (Mashaba & Pretorius, 2023). Mashaba and Pretorius (2023) were guided by the UTAUT model to express the facilitating conditions to e-library user attention. This study, focused on postgraduate students just as the current study was premised. These respondents were issued with questionnaires to fill in order to provide data for fulfilling the mission of the descriptive survey research. Upon analysis, facilitating conditions were premised to directly influence the attention and intention to utilize e-library resources. Some of these facilitating conditions were social, behavioral intention, effort expectancy and performance anticipated. Use patterns were henceforth

affected by these facilitating conditions. It was recommended that, if postgraduate students are to use e-library resources, there was need to train them, see tangible usability of the resources and librarians showing effort of spreading the word of usefulness of e-resources. This research adds a strong foundation to the current research ongoing. However, the current study intended to determine the attention of postgraduate students on the utilization of e-resources, which the outgone research did not investigate.

Another parameter that drives attention is the accessibility to electronic information resources. Kalama (2020) illustrated these phenomena in Tanzania focusing on 122 postgraduate students. The descriptive survey study which used questionnaires to gather data from the respondents noticed that, utilization of e-resources was poor due to accessibility barriers. In support to the stated results was a study in Mwanza that was done by Mwamasso and Onyango (2020). It was therefore concluded that, utilization of resources was directly impacted by the access types offered by the university. Some of the accessibility shortfalls included: obsolete ICT infrastructures, insufficient bandwidth, lack of information literacy skills, unstable power supply, high subscription cost and instability of availability of online resources (Mwamasso & Onyango, 2020). The major potential recommendations suggested were: advertisement, promotion, marketing of e-resources. Other observed strategies were conducting information literacy training; revamping postgraduate curricula to include literacy units and set aside money to upgrade ICT infrastructures and buy IT equipment. These are very potential practices worth adopting at university libraries in Meru County. Apart from this, the ongoing research included interview guides on top of questionnaires to have comprehensive and deep picture of the attention level of postgraduate users.

Here in Kenya, libraries have invested in infrastructure, information access software, human resources, information literacy training, library services marketing, awareness and sensitization and ICT technologies to achieve effective utilization of information resources (Memusi, 2022; Merande et al., 2021; Ng'ang'a, 2020). However, there misses a study which investigates the premise of postgraduate to attention to electronic resources utilization. Existing studies feature: the use of e-resources, strategies for promoting the accessibility to e-resources and awareness on the availability of e-resources (Merande et al., 2021; Namande et al., 2023).

The research by Namande et al. (2023) highlighted the strategies that are needful for effective utilization of e-resources among postgraduate students at universities. A survey research design was implemented to get opinions from library patrons regarding the utility of e-resource subscribed to by the universities. Both interviews and questionnaire research tools were utilized to solicit data from both librarians and the students respectively. It was unveiled that, these libraries experienced very low-occupation of e-resources offered. This was attributed to lack awareness and training. It was noted that, awareness, access to computer devices, regular planned trainings, information literacy orientation and subscribing to high bandwidth internet when applied, the accessibility increased. However, it is important to note that the study was not conducted longitudinally, which limits our ability to assess the impact on e-resources consumption over an extended period. This study, although it was not longitudinal since it is carried under time frame to comply with university requirements for a master's program, however gathered descriptive data which gave a clearer picture on the attention of students towards e-resources consumption.

The role of technologies such as computers has also been featured as an enabler to drawing the attention of students to consume e-resources. This attention was brought

by Merande et al. (2021) in bid of understanding the utilization of e-resources by postgraduate students. A mixed methods research approach was adopted to understand this phenomenon among academic libraries. It was clarified that, adequate ICT technologies cleared the barriers of virtual accessibility. It came out very clearly that, apart from the computer infrastructure, proficiency in operating them were noted to be critical. Merande et al. (2021) deemed the possession of technology, skills and information retrieval skills as prerequisites for addressing resource underutilization issues. The current study picked critical lessons from the outgone scholars such as the need for technology and retrieval competencies in enriching the attentiveness of masters and PhD students to e-resources. However, the ongoing study still retains uniqueness such as linking the AIDA model attention variable to the utilization of e-resources.

The influence of awareness on the consumption of e-resources among library users also is an attribute of attracting attention. Namande et al. (2023) administered 65 questionnaires so as to establish this relationship among postgraduate library users. It was uncovered that, these category of users were aware, use and have access to e-resources at pan Africa University. However, the users experienced delays due to the limited number of computer gadgets available for use in the library premises. The need for ICT infrastructure was much insisted to rectify the noted challenge. These results were also mirrored in the research of Merande et al. (2021) that, computers with reliable network were a requirement for ensuring utility of library resources.

Customer care has also been predicted as a magnet for attracting postgraduate needs for library services. The previous satisfaction levels and perceptions of users was also termed a contributor towards e-resources utilization. Murithi et al. (2020) correlated satisfaction with relation to perceptions and the relationship was revealed to be significant. For the users to perceive libraries positively, there was need to meet their

user needs. Librarians were therefore charged with the responsibility to meet the user needs satisfactory in order to make libraries memorable and places for regular visits. To attain this, librarians at Daystar University were to: maintain friendliness, professionalism, communication, reliability, and timeliness, when serving patrons so as to make library experience memorable. The current study learned a lot on customer care practices meant to draw postgraduate attention. The study argued that, attention of postgraduate students improves the utilization of e-resources at selected universities in Meru County.

2.4 Interest of Post Graduate Students and Utilization of Electronic Resources

The second dimension of the AIDA model, deals with interest. Interest of postgraduate students to utilize electronic resources corresponds to developing the audience's curiosity by providing them with useful details or advantages of the e-resources subscribed to (Vasilyeva & Vasilyeva, 2019a). The interest stage of the AIDA model corresponds with initiatives aimed at igniting postgraduate students' curiosity about using electronic resources (Storozheva et al., 2021). It includes techniques designed to arouse students' interest and curiosity by presenting materials in an engaging and appealing way (Vasilyeva & Vasilyeva, 2019a). Examining this relationship means figuring out how the benefits, relevance, or value of a resource are presented in relation to the interest stage of the AIDA model and how this helps students become more engaged.

Interest to the use of electronic resources among postgraduate students can be stirred up by communicating the advantages of e-resources (Norch & Adzakpa, 2022). Interest for e-resources may also be created through student motivation, allocating adequate time for library orientations and regular refresher trainings (Norch & Adzakpa, 2022). Others are such as librarians marketing and promotional preparedness, information

repackaging, personalization of individual user preferences (Frimpong & Addo, 2020). It has also been reported that, adoption of advanced educational methods and training techniques can increase the interest for learners to engage with e-resources (Vasilyeva & Vasilyeva, 2019a).

Postgraduate students' use of electronic resources is heavily influenced by their interests. Reference to Johnston (2020) engaging attention requires having resources that are both up to date and diverse. Other critical drivers to improving postgraduate student's interests towards e-resources utilization is by providing different information formats like interactive platforms or multimedia e-resources (Anunobi & Emezie, 2020). Also, ensuring that, e-resources are downloadable full text basis in student's computers for their future use may also promote users interest.

Librarians can spur user interests by personalizing individual needs including, customizing experiences or resources to meet the needs or preferences (Anunobi & Emezie, 2020). User preferences refer to the particular decisions or tendencies people have when it comes to choosing and interacting with resources (Ankrah & Atuase, 2018b). When electronic resources are aligned with user preferences, such as content format (text, video, interactive), access methods, or subject relevance, it positively impacted students' utilization patterns. Resources tailored to match user preferences witnessed higher levels of engagement and utilization (Ankrah & Atuase, 2018b).

Students are more likely to be interested in and engaged with personalized resources that are in line with their interests. Examining this relationship entails examining how content, formats, or interfaces of resources that are tailored to the preferences of the user increase interest, which in turn encourages efficient use. Recognizing user preferences makes it easier to tailor the way resources are delivered, which in turn

encourages greater levels of interest and, ultimately, more meaningful and efficient use of electronic resources.

Globally, limited literature exist which explore the facet of postgraduate students' interest on the utilization of e-resources. However, its contribution to the utilization of e-resources by this category of learners is hold on high regard (Johnston, 2020; Sritharan, 2018). Noting its contribution, student interest for e-resources has been secured through understanding user preferences, communication tools and patrons' needs assessment (Afacan Adanır et al., 2020; Johnston, 2020). Other mechanisms considered to enrich the utilization is the assessment of frequency of utilization. Not counting the stated parameters for enhancing user interest, more dimensions include: investing in digital literacy and marketing of available resources and services (Atuase & Maluleka, 2022).

In Australia, Johnston (2020) did a research which clarified the needfulness of a digital literacy framework among library users. Being informed by data gathered by benchmarking several university libraries in Australia, it was noted that, having a digital literacy framework was helpful in determining the digital literacy programs, getting consistent feedback regarding what users want and informed training needs. The study concluded that identifying library users' needs and providing training on literacy skills resulted in an improvement in access to digital workspaces. Henceforth, noting this positive interaction led to suggesting a recommendation that, digital literacy be included in the teaching curriculum to ensure students have a good grasp of information retrieval skills using computers. The current study learned a lot from Johnson's findings including appreciating digital literacy as a strategy to stir up library user motivation. However, Johnston did not link digital literacy skills to postgraduate interest in utilizing e-resources. This study achieved this objective.

Understanding the user preferences and communication channels were also deemed critical in stirring up user interests towards e-resources at universities in Turkey and Kyrgyzstan. This was well articulated in the observations of Afacan Adanır et al. (2020) who did a comparative study between Turkey and Kyrgyzstan. Focusing on first-year undergraduate students, 185 Turkish learners were identified, issued with questionnaires and expected to give out quantitative data. The mixed methods research led to the observations that, preferences and communication strategies were critical in establishing which online resources and tools students used. When the countries were compared, the results implied common practices in place. Universities were therefore, proposed to take care of user preferences and communication tools since helped identify user characteristics. The study was however based on online education tools and resources. Despite this, the potency of preferences and communication tools towards interest for online learning add value to the current study. Moreover, the current study assessed the influence of perceptions and communication on interest of postgraduate students to use e-resources in university libraries.

Another aspect to get to know the user interest on utilization of e-resources is through doing user satisfaction surveys. At the University of Colombo in Sri Lanka, 100 postgraduate medical students were assessed in order to notice if they were satisfied with the subscribed e-resources (Sritharan, 2018). It was discovered that, satisfaction levels were interfered by limited time to access e-journals, lack of information search and retrieval skills and lack of remote access for subscribed resources. Despite these, satisfaction surveys were termed as very critical informing specific user needs, need for repackaged information and also current materials required. It was noted that, alert services be created to get customer feedback as well as awareness. Moreover, since utilization was influenced by lack of adequate skills, student orientation and refresher

trainings were commended. The current study assessed the interest of postgraduate students from diverse course other than on utilization of e-resources.

Knowledge management has been linked to library user acceptance to e-resources. The impact of knowledge management on the access and acceptance of e-resources was probed by Ahmad et al. (2023) at the universities in Punjab. Using a quantitative approach, surveys were conducted among postgraduate students to ascertain the validity of this practice. This research adopted the technology acceptance model (TAM). It was uncovered that, knowledge management practices such as acquisition, sharing, application and knowledge protection had a substantial impact on how useful and easy something was perceived to be, and that these factors are positively correlated with behavioral intentions and developed interest to use e-resources (Ahmad et al., 2023). The research provided action plans to librarians on introducing knowledge management to earn interest, attention and user perception towards utilization of e-resources.

User surveys is a key determinant factor for understanding the interest of the user. In Sweden, Carlsson and Tornngren (2020); Chow (2019) examined the library preparedness through the use of customer surveys in order to make important decisions. The papers presented by these researchers argued that, the user survey is a valuable tool for library supervisors concerned in evolving their libraries in response to ever-changing user needs and their resources and service usefulness. Apart from this, the surveys conducted found that, the effectiveness of user surveys was not realized due to lack of feedback platforms to users as a means of raising their concern and engagement in the library resources. In conclusions, user surveys were found to influence important aspects such as customer interest, decision-making, customer understanding and customer satisfaction.

Another outstanding feature for arousing postgraduate students' interest towards subscribed library e-resources is marketing and promotion. In Indonesia, this perspective was very well explored in a study done by (Endang, 2021; Fatmawati, 2021; Rosman et al., 2022). Both studies were quantitative and engaged general library patrons to establish the level of user satisfaction aftermath marketing and promotion strategies. Questionnaires were the main tools for data collection which was later coded into SPSS and analyzed respectively. The findings opined that, the quality of e-resources and online library affinity were found important and positively related with user's satisfaction. Concerning the subject of marketing, it was revealed that, strategic marketing of library products, resources and services influenced library patrons' sense, feelings, thinking, acting, and relations/linkages towards the marketed resources. In conclusion, experiential marketing strategies were significant in providing positive experiences for users which, consequently, improved their interest for electronic information resources. This studies add a lot of potential in informing the significance of marketing, providing quality resources on winning the interest of customers hence their satisfaction. The current study replicated this by assessing the interest of postgraduate students on the utilization of e-resources.

Regionally, the interest of postgraduate students in the utilization of e-resources stands out. One aspect which is really common is the needfulness of training in arousing student's utilization of e-resources. In Ghana for instance, Norch and Adzakpa (2022) ventured on this role so as to express its impact on the utilization of online resources. This study was mixed methods in approach and the population engaged were post graduate students. Using questionnaires for postgraduate students and interview guides for librarians, proficiency in retrieval skills was associated with less retrieval of irrelevant search results, easy identification of best resources and saving time of the

user. It was insisted that, training be offered regularly to help graduate students get exactly what they want and in a timely manner.

The interest of students to access e-resources is usually cultivated by the noted value they possess towards their research and engagement. The value of e-resources has also been found to be improved when targeted library users are incorporated in the collection development process. In Namibia, Ashilungu and Onyancha (2024) highlighted the importance of involving faculty members in the process of developing library collections. Their research utilized both quantitative and qualitative data collection procedures to express the influence of the stated parameter. The study obtained a response rate of 51.2% faculty members while 16 librarians were interviewed. It was found that, collaboration between these two groups was needful in order to ensure relevance, up-to-date, value and user centered information materials. However, librarians were always not available to cooperate with the university faculty members. The current research argued that relevance, user-preferred resources, and up-to-date resources were among the possible factors influencing postgraduate students towards accessing and using e-resources. In order to capture the interest of users, librarians need first to establish the user patterns and provide resources out of such informed decision. This was well informed in the results of Mashaba and Pretorius (2023) a study which was situated in South Africa. Focusing on the use patterns, the descriptive survey research was guided by information obtained from respondents' questionnaires. The UTAUT model guided the review and it was found that, facilitating conditions (FCs) directly impact postgraduate students' intent to use e-library resources, and age plays a moderating role in the effect of facilitating conditions on the use of e-library resources. This results were informative enough to the current research in terms of noting the relevance of use patterns so as to improve postgraduate interest with e-resources.

However, the current study was underpinned by the AIDA model, unlike Mashaba and Pretorius, who adopted the UTAUT model to access these phenomena.

Another outstanding facet of determining user interests is knowing their preferences. This was well articulated by Samzugi (2019) in Tanzania, who compared under and postgraduate learners' preferences between print and online resources. The study was descriptive and the 327 respondents were purposely selected. The results revealed that, student's preferred print to online resources in Tanzania. The three universities which were compared further implied there was congruence between undergraduate and post graduate information resources preferences. Although this was evident, it was also noted that, e-resources were gaining popularity and sooner they could replace print resources. Although the current study was not majoring at comparing the preferences for print and e-resources, the role of user preferences is educative enough in informing the need to seek user preferences so as to attract their interest towards e-resources. The current study also differed from the previous one in that it did not aim to compare parameters.

Despite these parameters in place, the utilization of e-resources among African nations is deterred by the existence of challenges. In Nigeria, Okogwu and Mole (2019) revealed the hindrances to e-resources accessibility. To understand the problems behind the curtain of underutilization of e-resources, a descriptive survey study was conducted. This study obtained views from respondents on the ground and they expressed their opinions by stating that, lack of perpetual access, slow internet connectivity, information overload, inconsistent power availability, subscription cancellations leading to content loss, limited availability of electronic resources, relevance to information needs and perceived complexity of utilizing e-resources were the major themes underlined (Okogwu & Mole, 2019). These challenges for sure were very

similar to those threat frustrated learners in the developed nations. The current study was not interested in the challenges of assessing the interest of postgraduate students in the utilization of electronic resources at selected universities in Meru County.

To overcome the many challenges on struggle with information overload and relevance of retrieved results to information needs, understanding the user information needs and information seeking behavior of postgraduate students has to be emphasized. Obande et al. (2020); Sharman and Qureshi (2020) did survey studies and selected students using simple random sampling techniques so they could participate in filling out the questionnaire tools. It was revealed that, the major information seeking need was academics. Moreover, the most looked for information resources were found in the internet and the library. However, users visiting the library prioritized their information needs and compared available information to help them decide whether to consume or look for information from other sources and sites. This acknowledged that noting the information seeking behavior and user information needs helped get the interest of the information seeker from the library. It was recommended that, librarians use these criteria when subscribing information materials for the universities. The studies were very potential in informing how users interest for resources was determined. The current study advanced the research among the postgraduate students.

Another response towards seeking postgraduate interest for e-resources is through adopting appropriate strategic marketing practices. In South Africa, Atuase and Maluleka (2022) assessed the influence of marketing on the attractiveness and usage of e-resources. The qualitative study was guided by a pragmatism philosophy and utilized multi-stage and purposive sampling techniques to obtain 12 students and 6 librarians. It was found that, encouraging students to use e-resources and marketing library services and resources raised awareness. Additionally, improved learning activities

were associated with more utilization of library resources. The study recommended strengthening of marketing and user service training. The current study was also marketing- oriented and was interested in understanding the concept of user interest although it adopted a mixed methods research approach unlike the previous research. Another differences was the number of participants, where the current study targeted a larger population as compared to (Atuase & Maluleka, 2022).

Locally, studies that are distantly related to the interest of postgraduate students exist. Most of them focus on the utilization of e-resources. For example, in Karatina University, Tarus et al. (2022) did a descriptive research design which was mixed methods in approach to understand the utilization of open access e-resources among postgraduate students. It was noted, access to open access materials in the institutional repository was minimal due to internet challenges, information overload and lack of awareness on how to go about retrieving the archived resources. In the same note, at Kenya Revenue Authority Library, Wanja et al. (2022) assessed the utilization of e-resources. It was noted that, use of e-resources from the library was limited due to lack of awareness among the library patrons. The study linked improved utilization to user education practices aimed at creating awareness. User education programs, library orientation, bibliographic instruction and timed user surveys were commended to take place in order to enhance awareness. The research was however, targeting the Kenya revenue authority workers who were selected using a census sampling. The current study assessed the interest of postgraduate students in academic libraries, e-resources access, and utilization.

Another existing study by Murithi et al. (2020) assessed the influence of customer satisfaction on the perceptions of library services received. 112 students were sampled from Daystar University in Kenya to ascertain their perceptions, level of satisfaction

with e-resources provided by the library. The study was majorly a descriptive survey research design. It was found that, postgraduate students' satisfaction with resources accounted to 42 variations on the service perceptions. It was found that, past experiences influenced user satisfaction, hence their perceptions which were contributory towards the utilization of e-resources. The university administration need to strengthen the satisfaction related elements such as friendliness, professionalism, communication, reliability and timeliness in service provision so as to drive postgraduate perceptions towards the library. This study however, did not link user satisfaction nor perceptions to the interest to use e-resources. The current study is determined to bridge this gap. Distinct differences existing in the current research is that, two universities were sampled to take part in the study.

Understanding the information seeking behavior and postgraduate information needs has also been clarified to be a driver for utilization of e-resources. A study based in the University of Nairobi, Mwangi (2018) adopted the Wilson Model of Information Seeking Behavior to underpin the study objectives which were: understanding postgraduate information needs, information seeking behavior of and the preferred types of information resources. A sample size of 318 was engaged through questionnaires and it was clarified that, students looked for information so they may pass examination and they searched through the open public access catalogue. Some of the challenges experienced when searching for information resources included inability to find resources due to poor search strategies, slow internet and poor librarian's service delivery. The study called upon library management to organize frequent trainings, embrace customer care in service delivery and funding for increasing internet strength. However, despite the informative findings, the interest of post graduate students to the utilization of e-resources was not established. The current study learned that,

understanding user information seeking behavior patterns and information needs is important towards improving utilization. The study linked user interest to using e-resources.

As noted from the past studies, interest of postgraduate students on the utilization of e-resources at university libraries in Kenya has proven not a done tough task, especially in Meru County. Notwithstanding, the studies available in Kenya have not shown interest parameters such as information repackaging and understanding user preferences and how they improve the utilization of e-resources. The objective that was proposed enabled the selected universities library managers to determine postgraduate students' interest in electronic resource utilization hence, to take the necessary steps and provide the needed direction.

2.5 Desire and Utilization of Electronic Resources

Postgraduate desire for e-resources is the feeling of wanting or needing electronic resources, driven by positive attitudes towards them (Sebastian & Muthumari, 2020). The desire for e-resources among library patrons is developed when postgraduate students possess positive attitudes, perceptions and projections towards effectively utilizing e-resources (Murithi et al., 2020). It includes techniques designed to help students develop a need for or value perception for these resources (Sebastian & Muthumari, 2020). Examining this relationship entails figuring out how tactics that correspond with the desire stage of the AIDA model for example, emphasizing the advantages of using resources help to pique students' desire in using electronic resources efficiently.

Postgraduate students' use of electronic resources is heavily influenced by their desires. There exist some of the characteristics which inform postgraduate desire for e-

resources. According to Ruzegea and Msonde (2021b), students want resources that are readily available and updated on a regular basis. The psychological elements of desire, such as perceived value, convenience, and the influence of motivating factors on resource utilization, also captivate patron's desire (Zhang et al., 2020). Another aspect that insinuate user desires is the level of quality of the information materials, authenticity as well as the satisfaction gained from past-experiences (Uwandu, 2020).

Strengthening postgraduate students' desire for e-resources has a lot of benefits both to individuals and the university libraries. Some of these benefits include shaping students' attitudes towards learning, enhancing academic achievement, improving communication, and fostering transformation (Jamuna, 2021). Other benefits encompass information empowerment, improved information literacy, and development of knowledge on information search and retrieval skills (Uwandu, 2020). This promotes utilization of library resources, collection development and quality of scholarly research.

Apart from the significant benefits associated with postgraduate desire for e-resources, potential risks that have derailed this, have emanated from the same basket. Critics of previous research point out that although some emphasize the desired qualities of resources, a thorough examination of the ways in which students' motivations and desires affect their use of electronic resources is lacking (Meşe & Sevilen, 2021). Moreover, the situation is preceded by lack of empirical literature which explore this subject except for closely related studies (Itsekor & Nwokeoma, 2017; Sebastian & Muthumari, 2020).

In the developed nations, developing the library users' desire for available resources is seen as a unifying factor which requires positive attitudes and suppositions. Hanz and

McKinnon (2018) argued that, the feeling of librarians towards the e-resources they subscribe to for students was important in gauging students desire to utilize them. Hanz and McKinnon (2018) therefore did a study in Canada to clear out the librarian's perspective that, they usually train and highly advocate for patrons to use e-resources due to their quality while themselves were not. The study was librarian based and 392 members participated in a survey. It was noted that, librarians searched for e-books differently, were qualified but did not obtain quality materials from the databases. It was reasoned that; librarians need to first assess the quality of resources before subscribing to ensure relevance hence motivate users to utilize them. This study had a lot of potency of relating librarian's attitudes towards influencing learners desire to use resources by ascertaining the acquisition of a relevant collection. However, the postgraduate desire towards the utilization of e-resources was not well determined. The current study included students' views in the ongoing research to ascertain this parameter.

Sebastian and Muthumari (2020) interrogated the impact of information resources usefulness on knowledge delivery in Kerala. Basing on undergraduate medical student's views, the survey design research interrogated the level of awareness, value of e-resources and its contribution to their education. Semi structured questionnaire were developed by the researchers and issued to the sampled medical students. It was unveiled that, students were aware of resources acquired by the library for their use. Moreover, despite their inadequacy due to purchasing a subscription costs, the available e-resources were deemed valuable, useful, impactful and helpful in education. This underscored the need to allocate funds to increase the subscriptions. These results linked well the perceive usefulness and contribution to education. The current study linked the usefulness of e-resources as a motivation for captivating desire to utilization.

The quality of resources and services also lure users to utilize them. In Indonesia, this was observed by Griadhi et al. (2018) who wanted to ascertain if, the quality of library services influenced students' motivation and learning achievement. To understand this phenomena, questionnaires were developed and issued to 350 randomly sampled students. It was uncovered that, the quality of services influenced learner motivation but not learning achievement. Motivation also mediated the quality of services and achievement. It was recommended that, quality library facilities, infrastructure and resources be offered to support the quality of service which in turn will influence motivation to visit the library to be served. These were informative findings, that quality of services results to student captivation to access the library. However, the current study focused its discussion on e-resources other than library services. Respectively, the current study aimed to explore the other strategies that captivated postgraduate students desire to utilize e-resources apart from quality.

The desire for students to utilize library resources has also been captivated through new approached to the presentation of information. In Rusia, Vasilyeva and Vasilyeva (2019) were librarians, and were deeply concerned by the absence of students' initial motivation to work with a complex information resources and products. Apart from this, Vasilyeva and Vasilyeva (2019) stated that, librarians had limited time to train and lacked preparedness. Therefore, a pilot study involving 940 first-year undergraduate students was undertaken to understand the best practices for promoting students desire and motivation for library resources. During their pilot, these librarians implemented engaging methods aligned with students' desire. They incorporated attention triggers for each electronic resource in lecture materials, and concentrated the seminar on various targeted searches to capture and maintain student desire. The findings suggested that the new educational methods and teaching skills raised students' levels of

involvement and desire in the use of subscribed e-resources. This was also assured by the noted number of visits and full-text requests increasing from 88 to 284 in the year range of 2017-2018 compared to previous academic years. Practical implications necessitated the application of new educational methods to training students who lack the inspiration to use high-quality e-resources. This research is very helpful in informing how demotivated students may be captivated to have the desire for library e-resources when the training librarians focuses on educational approaches which increase their engagement during trainings. Some notable differing aspects that were embraced in the current study included: postgraduate students as the sample population, engagement of two universities in the data collection, and the study was not longitudinal.

The role of motivating postgraduate students to create the desire for e-resources through information literacy has been interrogated. This was well articulated in the results of (Flierl and Maybee, 2020) in the United States of America. This paper utilized the self-determination theory to underscore the role of information literacy on motivating learners, henceforth develop an information literacy model. It was observed that, learning activities encouraging engagement with information to grasp subject content enhanced student motivation to learn. The current research was not determined to come up with an information literacy model. However, it picked critical lessons from (Flierl and Maybee, 2020) on how postgraduate student's motivation to access and utilize e-resources could be captivated through engagement learning.

In Africa, just as it is evident in the developed nations, there lack studies which specifically discuss the desire of postgraduate students to utilize e-resources among university libraries. The existing studies report about student motivation, strategies and

attitudes towards utilizing e-resources (Issa et al., 2020; Liman et al., 2021; Yebowaah & Plockey, 2018).

Student motivation is a valuable roadmap towards captivating the desire for e-resources. This was well reiterated by Azonobi et al. (2020); Liman et al. (2021) which based their research on the basics that, accessing information materials is one thing and utilizing them another. Azonobi et al., sampled 591 postgraduate library users while Liman et al. 346 undergraduate library users. Both studies were descriptive survey research and it was found out that, access and utilization of library resources was facilitated by features including, they are more informative, easy access and use, save time, are relevant, more useful, up-to-date and less expensive. The studies recommended motivation of students using the library resources by increasing networked computers fact internet connectivity and library user refresher trainings to eradicate experienced difficulties such as finding irrelevant information.

In Nigeria, the positivism of working on library user attitudes was emphasized. This was evident in the research carried out by Issa et al. (2020) and Jatto and Diyaolu (2021) who opined that, the availability of e-resources in the library does not necessarily mean their utilization hence the attitudes of patrons were critical to influence use. Both studies were descriptive survey researches and common to all questionnaires were utilized to solicit opinions from undergraduate students. It was revealed that, a mix up of attitudes among patrons was evident. To some extent, undergraduate students complained that were not oriented to the use of OPAC and retrieving e-resources. Other factors which made them develop negative attitudes towards library resources were: slow internet, limited staff support, lack of information retrieval knowhow and limited access to networked computer devices. Furthermore, the need for accessibility of information at anytime and anywhere also cropped as a critical aspect which influenced attitudes

towards e-resources. Also, attitudes possessed significant relationship with utilization. Therefore, the stated challenges upon address, would guarantee positive attitudes and high utility of e-resources.

Yebowaah and Plockey (2018) assessed how awareness creation impacted the utilization of electronic resources in Ghana. These research premised to obtain primary data from university faculty members. 80 lecturers were sampled and the results implied that, 65% of lecturers were aware of the e-resources library offered. Notably, despite high level of awareness, the utilization was found to be very low. The determinant for improved utilization were therefore discovered to include defined purpose of library visit, sources of awareness of the e-resources, library infrastructure, internet bandwidth and well trained library support staff. Despite the noted parameters for enriching utilization, libraries had not complied in response to these practices, which explained the noted poor utility of e-resources. It was suggested that, staff under professional development, library budget be increased to cater for infrastructure and changing the internet service provider. User awareness was also commended. The current study evaluated the desire of postgraduate students to utilize e-resources.

Consistently, the use of e-resources is low in African countries (Anyim, 2020; Issa et al., 2020; Jatto & Diyaolu, 2021; Yebowaah & Plockey, 2018). To address this shortfall, Anyim (2020) did a research to obtain applicable solutions for improving the situation. This research was descriptive just as most African studies were noted. Convenience sampling technique was adopted to obtain a sample population of undergraduate students. Some of the notable strategies for enhancing the utilization of electronic information resources highlighted were: retrieving up-to-date information, getting unlimited information from diverse sources, speedy access, easy access procedures, remote access to information, easy information sharing, and access to flexible

information in many multimedia and getting synthesized information. Students motivation and desire to access and utilize e-resources was also termed to be improved through: online user guides for information resources, user friendly interfaces, online information literacy platforms, multimedia information materials, online indexes and abstracts, notifications for newly arrived e-resources, strong internet bandwidth, technical support by information search librarians and student training and orientations.

In Kenya, the practice of postgraduate desire on the utilization of e-resources is extremely deplorable. A handful studies available underpin strategies for enhancing utilization of e-resources, challenges hindering utilization to e-resources, (Memusi, 2022; Merande et al., 2021). Namande et al. (2023) assessed how the utilization of e-resources could be enhanced. The results utilized common methodology on survey, quantitative research and adopted questionnaires comparably to the African studies. The minimal utilization of electronic resources was linked to insufficient awareness about available resources, inadequate training on access and utilization, limited access to computer facilities, poor internet connectivity, and a deficiency in information searching skills (Hatti et al., 2023; Memusi, 2022; Merande et al., 2021). The strategies for improving access and utilization were; regular subscribing or purchasing, professional development of staff and ensuring remote accessibility.

Memusi (2022) and Merande et al. (2021) focused on the subject of utilization of electronic information materials. It was revealed that, resources were being moderately utilized. Reason for low usage was insufficient search techniques, lack of suitable library user training on utilizing the resources, and outdated computers (Memusi, 2022; Merande et al., 2021). Notable recommendations included computer networking, educating students on the value of electronic resources, and carefully thought-out user awareness.

Therefore, the study has noted from the past studies that, the desire of postgraduate students on the utilization of e-resources at university libraries in Kenya has remains unknown. Notwithstanding, the studies available in Kenya have not shown the adoption of desire, AIDA model parameter to improve the utilization of e-resources at selected Universities in Meru County. This research examined postgraduate students' desire for electronic resource utilization at selected Universities in Meru County.

2.6 Postgraduate Students' Proactive Actions in Utilizing Electronic Resources

The AIDA model's last stage, action, focuses on getting the audience to do a particular action, like buying something or interacting with the product or service. The action stage of the AIDA model is concerned with putting policies into place that motivate graduate students to take proactive measures in making efficient use of electronic resources. It includes techniques like database subscriptions, online forum participation, and resource-specific tools that are meant to encourage students to actively interact with resources. Examining this relationship means figuring out tactics that fit into the action stage of the AIDA model affect students' behavior when it comes to using electronic resources actively.

This investigation offers valuable perspectives on successful execution tactics that stimulate response and boost postgraduate students' interaction with digital resources. By evaluating the efficacy of proactive tactics, students' incentives for proactive engagement will be attained, and then the perceived advantages of these activities such as e-resource utilization will be achieved (Ruzagea & Msonde, 2021b).

Some of the parameters which indicate postgraduate proactive actions on utilization of e-resources include self-regulated learning, information needs and collaborative learning. Furthermore, a more comprehensive proactive resource utilization among

postgraduate students can be achieved by training postgraduate students how to access the resources, utilizing engendering instructional methodologies, regular subscription to e-resources and getting customer feedback and acting upon it (Anyim, 2020; Mwanzu et al., 2022). Proactive actions can also be stirred up by marketing and acquired information retrieval skills (Anyim, 2020; Zibani & Kalusopa, 2019).

Globally, one of the best mechanism for promoting proactive action by postgraduate's students to access and utilize e-resources is development of self-initiated learning. Self-initiated learning behaviors are defined as self-directed actions or strategies that postgraduate students carry out because they are intrinsically motivated to learn new information or abilities (Mofana & Jacobs, 2018). Examining postgraduate students' proactive use of electronic resources is essential to understanding self-initiated learning behaviors. These behaviors include things like proactive participation in online learning forums, independent resource exploration, and self-directed information searches. Examining how students' proactive use of electronic resources reflects their independent attempts to improve their educational experiences is part of the investigation into this relationship. Comprehending these actions facilitates the development of tactics to motivate and assist learners in adopting more proactive attitudes toward the efficient use of electronic resources.

Hartley et al. (2020) study on smartphones in self-regulated learning and student success illuminated these connections. A two-phase observational and intervention study explored the smartphone's role in self-regulated learning (SRL) and student success, assessed through academic achievement. The study evaluated participants' self-regulated learning skills and smartphone usage at the commencement and conclusion of the initial semester for undergraduate students. Regression analysis indicated that, when accounting for prior achievement, overall SRL measures positively

influenced first-semester achievement. However, smartphone-related SRL did not directly affect achievement. Additionally, a study on undergraduates' out-of-class learning, explored students' independent learning behaviors and resource usage (Hsieh & Hsieh, 2019). 35 undergraduates' students with independent learning behaviors and their use of resources of the learning center were sampled to participate in the research. The participants' email interviews and an analysis of their resource-usage logs were used to collect data. Each participant's autonomy score was produced by content analysis of the interview data using six categories based on a learner-autonomy model. The study suggested promoting students' engagement with library resources by encouraging them to extend their learning beyond the classroom through pedagogical activities that connect classroom learning with resources available in learning centers (Hsieh & Hsieh, 2019). The current study adopted learner-centered approach as a strategy to awaken proactive actions towards the use of e-resources among postgraduate students.

Another practice which promotes proactive action among postgraduate students is collaborative learning. This one entails students working together to learn from one another (Azonobi et al., 2020). Analyzing postgraduate students' cooperative learning and resource sharing reveals how their cooperative actions support the proactive use of electronic resources. This covers things like peer-to-peer resource sharing, group discussions, and cooperative projects that make use of electronic resources (Azonobi et al., 2020). Examining this relationship requires figuring out how students' cooperative learning and resource-sharing behaviors affect their ability to use electronic resources more proactively. By being aware of these cooperative behaviors, educators can create settings that support resource sharing and peer learning, which in turn encourages students to use electronic resources more proactively for their academic work.

Enhancing information discovery systems in the library websites was also a great contributor towards the access to e-resources. Kay (2019) illustrated this aspect in the United Kingdom, through doing a research project. It was noted that services and interfaces that had unique features such as clear icons for liking through full-text articles, resources that universities have subscribed to, and links to information on the same subject were coded. It was found that, having such friendly interfaces improved proactive reactions by students to search, retrieve, access and utilize online resources. It was recommended that, continued enhancement of these features promoted the utilization of e-resources due to website redirections, suggestion, information filtering and navigation features. The current study unlike the outgone project by Kay (2019) was determined to carry out a social science scientific research to determine the proactive actions of postgraduate students on the utilization of e-resources.

Training in information literacy skills and user development is a key factor for enhancing postgraduate students' proactive action towards accessing and utilizing e-resources. This one was well articulated in United Kingdom in a research carried out by (Singh, 2019). Using documentary analysis, Singh analyzed the library records to ascertain the influence of information literacy programs on the agricultural students' education, it was clarified that, in India, information literacy had taken roots and it influenced the popularity, access and utilization of e-resources. Noting the necessity of information retrieval skills, the study suggested the need to incorporate literacy studies in the agricultural teaching curriculum. The current study appreciates that, students equipped with information search and retrieval skills are able to be proactive in taking information access actions.

Regular awareness has also been linked to students taking proactive actions towards accessing and utilizing e-resources. In India, this aspect was well investigated in the

research done by Velmurugan and Raghotham (2022) at a college of arts in Salem. The research was faculty based and 120 working women from various departments in the collected were issued with questionnaires to fill. It was noted that, faculty utilized e-resources for research purposes. Faculty utilization of resources was linked to regular trainings and awareness on e-resources availability and usability. It was suggested that, noting the impact of awareness in improving usability, more resources needed to be subscribed to widen more accessibility. Moreover, documented training programs were commended to be developed to ensure all faculty members are well equipped. The current study was student based and utilized post graduate students as respondents.

Additionally, it has also been noted that, when university libraries provide ICT infrastructure, they enhance the readiness for students to access e-resources. The validity of this statement was ascertained in Bangladesh by a research which was faculty oriented (Habiba & Ahmed, 2020). Two sets of questionnaires were developed, one set was issued to library staff while the other to faculty members among selected public and private universities in Bangladesh. The extent of IT facilities, access to digital resources and the difficulties faced while accessing resources were identified. Also, an ordinal regression model was calculated to assess how demographic variables and the level of computer experience influenced faculty satisfaction. This was attributed to the inability to access full texts and remote accessibility. Apart from this, faculty satisfaction was linked to competencies in operating computers and information searching skills. The study commented on the need to better ICT infrastructure and faculty information search and retrieval skills.

In Africa, investigating the impact of institutional support or interventions, such as creating e-resources awareness, mentorship programs and technological assistance on promoting proactive resource utilization behaviors among postgraduate students can

provide practical implications for educational institutions (Yebowaah & Plockey, 2018). Few studies just like in the developed nations exist which underpin the aspects related to postgraduate student's proactive actions towards the utilization of e-resources (Anyim, 2020 & Mwanzu et al., 2022).

In Ghana, the contribution of awareness in improving e-resources utilization was investigated. Yebowaah and Plockey (2018) did this research among the university faculty where 80 lecturers were sampled. The results analyzed reported that, the utilization of e-resources was very low. It was suggested that, librarians understand the defined purpose of faculty library visit, the sources of awareness which are influential to faculty, there is stable internet for faculty to access resources, there are networked computers and regular refresher training to keep faculty abreast with information retrieval skills. User awareness was also commended to ensure improved utilization of e-resources. The current study evaluates the proactive action of postgraduate students to utilizing e-resources other than Yebowaah and Plockey (2018) who assessed the role of awareness among university faculty members.

Proactive actions towards accessing and utilizing e-resources in Nigeria have been ensured through understanding user needs and meeting them accordingly. This was well articulated by Anyim (2020) who did a research to obtain applicable solutions for improving the utilization of e-resources. The descriptive survey research design which utilized convenience sampling techniques to get undergraduate students as respondents in the study. Some of the motivating factors for enhancing undergraduate proactive actions to access e-resources included: subscribing to up-to-date information, getting unlimited information from different sources, ensuring speedy access, easy access procedures, remote access to information and a variety of media suitable for a user and

desire to access and utilize e-resources. The current study discussed the proactive actions of postgraduate students in utilizing e-resources.

Another aspect which motivates library patron proactive actions towards accessing subscribed information resources is the availability of online user guides placed in the library websites. Anyim (2020) and Mwanzu et al. (2022) researchers based in Uganda and Nigeria best illustrated this dimension. Noting the embrace of web 2.0 in university libraries, librarians were reported to make more attractive and interactive online guides tailored for millennial patrons. Some technologies including wikis and FAQs enabled libraries to create impressive subject guides to provide guidance and access to electronic resources. Apart from serving as a guide, they spread awareness and act as reference tools. Mwanzu et al. (2022) did a benchmarking study at the Aga Khan University of Uganda and recommended that, Saharan Africans can learn and copy these aspects. The current research employed a descriptive research design to assess the proactive actions that enhance access and utilization of e-resources by postgraduate students.

E-resources marketing has also been influential in winning library users' interest in taking action to access and subscribe to purchase electronic resources. Zibani and Kalusopa (2019) did a chapter preview of the role of e-resource marketing to influence utilization, access, and delivery of e-resources. Zibani and Kalusopa (2019) highlighted the significance of assessing the overall marketing preparedness of academic libraries, encompassing elements like product orientation, promotion, pricing, delivery channels, skills, and atmospherics. According to Zibani and Kalusopa (2019), this approach is essential for fostering value exchange and ensuring customer satisfaction. The researcher also noted that the marketing of e-resources accentuates the survival, utility, and relevance of academic libraries in the digital age. It was suggested that, libraries

needed to be proactive, technologically driven, and competitive enough to ensure their patrons make visits, access resources, get services, and make inquiries. This chapter presented the influence of marketing on winning patrons ability to utilize what libraries offer. However, the paper was not based on findings obtained from respondents' opinions. The current study was interested to determine the proactive actions of postgraduate students in utilizing e-resources.

Learners have also been found to undertake proactive actions towards utilizing e-resources when taught cooperatively. Mofana and Jacobs (2018) noted the influence of cooperative learning techniques in fostering learners proactive actions on accessing library resources. A cross-sectional survey research design was employed to assess the effectiveness of a library literacy program that utilized cooperative learning produced better results. The findings showed that, well thought collaborative programmes designed by librarians promoted active collaborative learning, encouraged students to take ownership of their learning through various practical learning engagements, hence proactively engaged in resource accession. The study was however, general to all students who were users of university libraries in South Africa. The current study was scoped to determine the proactive actions of postgraduate students.

In Kenya, there lack studies which evaluate postgraduate students' proactive actions in utilizing electronic resources at selected Universities in Meru County. Existing research feature in aspects of awareness, challenges and actions for enhancing the utilization of e-resources. The study by Namande et al. (2023) established the relationship between awareness and utilization of electronic resources by the postgraduate students at PAC University Library. 65 questionnaires were distributed to the purposively selected postgraduate students and the findings revealed that these students were aware of, access and utilize e-resources. However, their proactive access to resources was

hampered by inadequacy of networked computers and the quality internet connectivity. The current study assessed the proactive actions of postgraduate students rather than, what the librarians do to achieve postgraduate actions towards utilizing e-resources.

Understanding the user information-seeking behavior and preferred format of information resources has also been discussed (Mwangi, 2018). Mwangi (2018) adopted the Wilson Model of Information Behavior to understand postgraduate information needs, information-seeking behavior, and the preferred types of information resources. A sample size of 318 was engaged through questionnaires and it was clarified that, students looked for information so they may pass examination and they searched through the open public access catalogue. Some of the challenges experienced when searching for information resources included inability to find resources due to poor search strategies, slow internet and poor librarian's service delivery. To encourage their proactive actions, they required to train on information literacy. However, the views for promoting utilization of e-resources were based on what libraries needed to do. The current study wanted to understand the proactive actions of postgraduate students in utilizing e-resources.

Other researchers existing such as Memusi (2022); Merande et al. (2021); Mwangi (2018); Wanja et al. (2022) assessed the utilization of e-resources. Limited utilization is blamed for poor user awareness, internet connectivity, and lack of adequate networked computers and poor understanding of user's information needs. In Meru County, no study exists which underpins the adoption of AIDA model in improving utilization of e-resources among academic libraries. Studies existing are also silent on the proactive actions of library users. This research aimed to fill this gap.

2.7 Research Gaps

While existing literature provided insights into the theoretical frameworks of Information Behavior Theories and empirical evidence supporting the effectiveness of the AIDA model in various contexts, there exists a notable research gap concerning the direct application of the AIDA model in educational settings, particularly in the domain of postgraduate students' electronic resource utilization in Meru County. Most studies have predominantly focused on the AIDA model's application in marketing and consumer behavior (Lee et al. (2018); Song et al., (2021); Wei et al. (2022)) neglecting its potential adaptability in guiding academic resource adoption among specific demographics such as postgraduate students.

The existing literature primarily emphasized the AIDA model in commercial contexts, overlooking its potential utility as a framework for educational resource engagement. Moreover, while empirical studies have explored factors influencing electronic resource usage among students (Fidelugwuowo (2022); Obande et al. (2020); Ruzegea and Msonde (2021b)) limited attention has been directed towards investigating how the sequential stages of the AIDA model align with postgraduate students' cognitive processes and decision-making in utilizing electronic resources for academic purposes in Meru County.

Hence, the identified research gap lies in the scarcity of studies explicitly investigating the applicability and effectiveness of the AIDA model as a guiding framework for enhancing electronic resource utilization among postgraduate students within an academic context in Meru County. Bridging this gap would contribute to understanding the adaptability of marketing-centric models like AIDA to educational settings but also offer a practical implication for educators, institutions, and policymakers in optimizing electronic resource utilization among postgraduate students.

2.8 Theoretical Framework

This study was guided by The AIDA Model to underpin the variables of the study.

2.8.1 The AIDA Model

AIDA model was developed by Elmo Lewis in 1898. It serves as a marketing and advertising framework assisting businesses in creating successful communication strategies for promoting their products or services (Montazeribarforoushi et al., 2017). AIDA stands for Attention, Interest, Desire, and Action representing the essential four stages in engaging potential customers and driving them towards action, typically ending in a purchase decision (Abdelkader & Rabie, 2019a). This model effectively assesses the impact of advertising by tracing the complete psychological journey from initial exposure to the eventual decision to purchase (Ambelu, 2020). It has frequently been employed as a theoretical foundation in behavioral research to explain how advertising and promotional approaches influence consumer behaviors (Ambelu, 2020).

The first dimension of the model is attention. Getting and holding the audience's attention is the goal of the attention stage in the AIDA model. The attention stage of the AIDA model is consistent with the idea of grabbing postgraduate students' attention to improve their use of electronic resources. The second dimension is interest. The goal is to pique the audience's curiosity by providing useful details or advantages of a good or service. The interest stage of the AIDA model corresponds with initiatives aimed at igniting postgraduate students' curiosity about using electronic resources.

Yet another dimension of this model is the development of the desire. Elmo Lewis explained the desire to generate a sense of need or want by eliciting positive attitudes or desires regarding a good or service. Encouraging postgraduate students' desire or positive attitudes toward efficiently using electronic resources corresponds to the desire

stage of the AIDA model. Lastly, action is the last dimension, it focuses on getting the audience to do a particular action, like buying something or interacting with the product or service more. The action stage of the AIDA model is concerned with putting practices into place that motivate graduate students to take proactive measures in making efficient use of electronic resources.

Apart from the strengths presented by the four dimensions wooing customers to take an action such as buying a product, the theory possess weakness in that, the dimensions are very appropriate when advertising sales, public relations, and direct marketing to new customers. Therefore, noting its limitation, the ability to retaining already existing ones is missing due to lack of actionable strategies (Purbaningsih et al., 2022). Moreover, it forgets the important influencer aspect of utilization which is customer satisfaction. Despite these limitations, the model was very much applicable in informing this study. The model is helpful in demonstrating how adopting AIDA model can enhance the utilization of electronic resources by postgraduate students at KeMU and MUST.

Application wise, AIDA model helps to demonstrate the methods or approaches meant to capture students' interest, desire and attention so as to increase the visibility and accessibility of electronic resources. Specifically, it guides librarians to figure out how attention-grabbing strategies like interesting content, easy-to-use interfaces or focused resource marketing help graduate students pay attention and then use electronic resources. In this case, the model representation denotes that when librarians communicate the value of a resources available, it interests postgraduate students, leading to development of desire to utilize them.

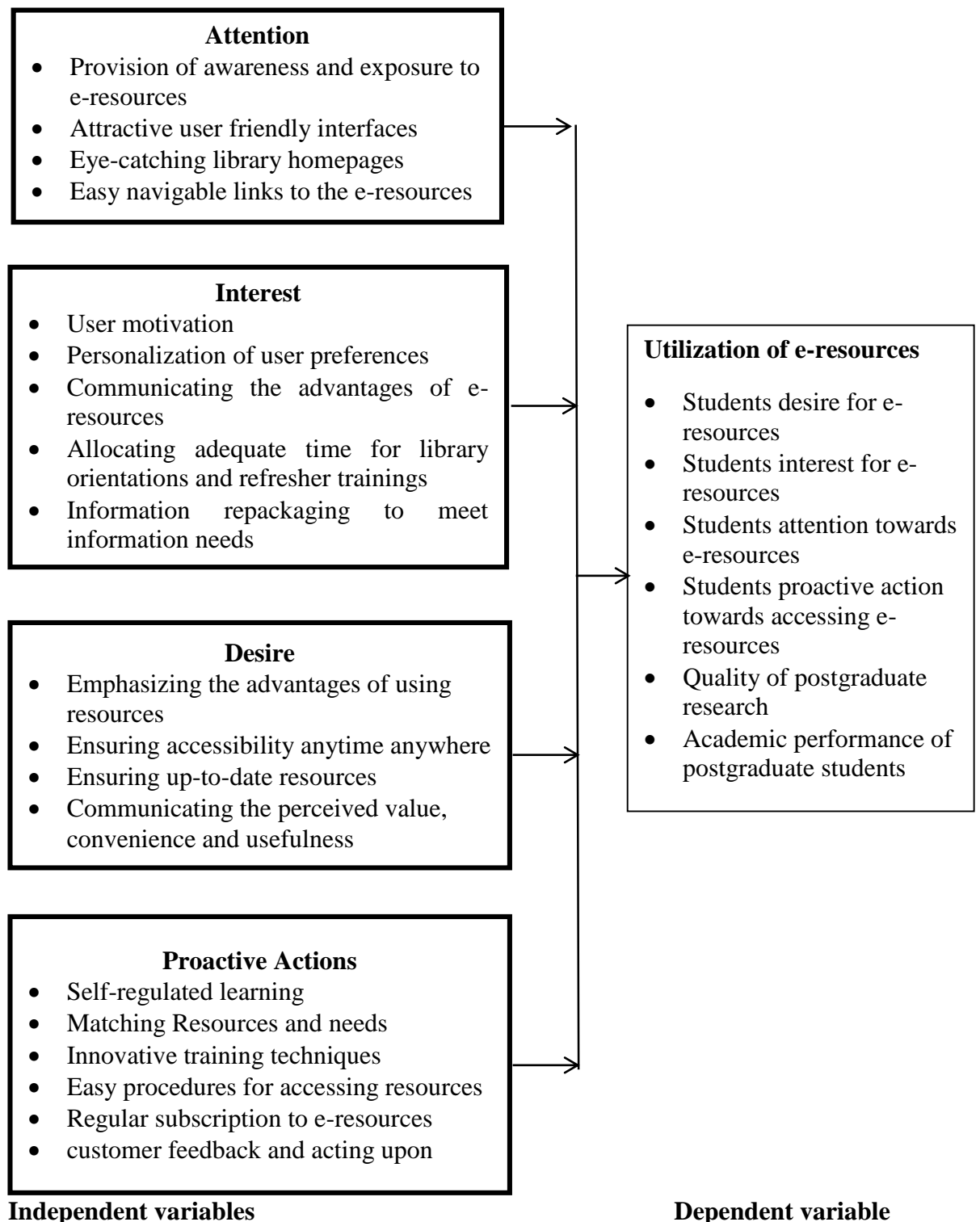
Consequently, the model illustrates how academic libraries can adapt techniques like database subscriptions, online forum participation, awareness, marketing, orientation, understanding information needs, understanding information seeking behavior, collaborative engagement teaching methods, feedback surveys, interactive library guides and ICT infrastructure to enable students actively interact, access and utilize subscribed or purchased e-resources. Therefore, this theory underpins utilization of e-resources, attention, interest, desire and proactive actions by postgraduate students.

2.9 Conceptual Framework

The conceptual framework depicts the interrelationship of utilization of e-resources by postgraduate students and AIDA model dimensions.

Figure 2. 1

Conceptual Framework



2.9.1 Description of Variables in the Conceptual Framework

Figure 2.1 displays the purported relationship between the independent and the dependent variables of the study. The AIDA model dimensions are the independent variables purported to influence the utilization of e-resources by postgraduate students at selected university libraries in Meru County.

The attention of postgraduate students will be indicated by the awareness and exposure given to them by librarians pertaining the availability of e-resources. Moreover, evidence of marketing, display and promotion of e-resources, developing attractive user friendly interfaces, eye-catching library homepages and easily navigable links to the e-resources, will imply that parents are catering children' basic needs.

The second objective of the study is interest in, another dimension of AIDA model. This will be evidenced by user motivation and resource engagement, personalization of user preferences, communicating the advantages of e-resources and allocating adequate time for library orientations and refresher trainings. Also, it will be indicated by information repackaging to meet information needs of postgraduate students. Further, customization options such as tailoring resources to individual preferences, will, increase the overall interest for e-resource utilization. This seamless transition from attention to interest lays-the foundation for the third independent variable: desire.

Postgraduate students' desire will be determined by the ability of librarians to emphasize the advantages of using resources. Moreover, ensuring the accessibility of e-resources anytime and anywhere and maintaining up-to-date e-resources were part and parcel of the parameters indicating this dimension. Further, communicating the value and relevance of resources to academic and research needs fosters a perception

of resources as valuable contributors to individual goals. This progression from attention to interest to desire sets the stage for the final independent variable: actions.

The last objective of the study is the postgraduate students' proactive actions, which was predicted to be modified favorably or adversely by self-regulated learning, resources aligned to information needs and innovative training techniques for librarians. Moreover, postgraduate student's actions can be promoted by easy procedures for accessing resources, regular subscription to e-resources, receiving notifications of newly published or subscribed e-resources and their feedback which have been acted upon.

The dependent variable in this study is the utilization of e-resources by postgraduate students. The utilization of e-resources was measured by resource accessibility and availability, quality of student's research work, academic performance of postgraduate students, student's desires, interests, attention to e-resources and proactive actions towards accessing e-resources. Others include usage statistics reports and trimester usage analysis. Therefore, observable patterns of resource use, reflecting attention, interest, and desire, showcase the extent to which postgraduate students engage with electronic resources.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research methodology undertaken to assess how adopting Attention, Interest, Desire, Action (AIDA) model enhances electronic resources utilization among postgraduate students in Meru County. It also covers the location of the study, research methodology, target population, sampling strategies, data collection procedures. The chapter concludes with a discussion of the techniques employed for data analysis and presentation, followed by ethical considerations.

3.2 Location of the study

The study was conducted in Meru County. Kenya Methodist University (KeMU) and Meru University of Science and Technology (MUST) are two universities in this county. The county is one of Kenya's 47 counties on the eastern side of Mt. Kenya. This county covers an area of 6,936 square kilometers (Meru County Website, 2022). While MUST is a public university, KeMU is a private institution and both are renowned for their outstanding academic programs and contributions to research. These universities have well-established libraries, namely the Reuben Marambii Library for MUST and KeMU Library, which provide extensive access to online resources.

The choice of this location was made since both universities have made significant investments in their libraries as well as research facilities which ensure that students have access to the most recent course materials. These libraries are outstanding centers of learning and research, offering faculty and students high-quality resources. As members of the Kenya Library and Information Services Consortium (KLISC), they

have access to a worldwide collection of information resources that help them stay up-to-date on the most recent advancements in a variety of sectors. This access is essential to creating a vibrant learning environment where professors and students are exposed to several viewpoints and state-of-the-art research.

Furthermore, this site was ideal for the study because KeMU and Meru Universities have solid relationships with other regional universities that facilitate the involvement of students in educational exchanges and international collaborations; this network helps in the development of the academic community from a global perspective. The ability of KeMU and Meru University libraries to adjust to technological developments, participate in productive partnerships, and carry out initiatives targeted at improving capacity-building and resource sharing because of the presence of an established university library system also played a role in the decision to choose this location. This creates the perfect environment for researching how university libraries can adopt the AIDA model to enhance the utilization of e-resources.

Despite the efforts of the two libraries to enhance the availability and accessibility of electronic resources for postgraduate students, their utilization remains low (KeMU and MUST Universities online e-resource usage reports, 2023; Kipkosgei, 2020.; Memusi, 2022). It is against this backdrop that the study found it necessary to conduct an investigation specifically on these two universities in Meru County.

3.3 Research Design

A research design is a strategy that outlines the ways a researcher will follow to gather, examine, analyze, and interpret data to complete specific research objectives (Asenahabi, 2019). The ongoing study employed a descriptive survey research design, which incorporates both quantitative and qualitative research methods, to

comprehensively explore how adopting the AIDA model can enhance electronic resource utilization among postgraduate students within the selected universities located in Meru County.

A descriptive survey research design was particularly suitable for this study as it enabled the researcher to effectively describe and analyze the specific phenomenon under investigation, which, in this case, was adopting the AIDA model to enhance electronic resource utilization among postgraduate students. By employing this design, the researcher was able to conduct an in-depth examination of the adoption of the AIDA model in enhancing electronic resource utilization among postgraduate students in KeMU and MUST libraries.

Numerous studies have utilized the descriptive survey design, demonstrating its effectiveness across various fields and contexts (Chelulei, 2020; Kinoti et al., 2023; Wanja et al., 2022). Given the significance of these studies in relation to the current study, it was deemed appropriate to employ a descriptive research design for this study.

3.4 Target Population

In research, the target population is the set of individuals the study seeks to learn more about (Stratton, 2021). The study assessed how the adoption of attention, interest, desire, and action (AIDA) model constructs enhances electronic resource utilization to postgraduate students in KeMU and MUST universities. There are 800 postgraduate students and 13 library heads of sections at KeMU and MUST respectively. Therefore, 13 library heads of sections and 800 postgraduate students made 813 which is the target population. Since the library department provides e-resource services, the library staff, specifically the heads of sections at the main campuses, were included as informants due to their extensive knowledge of the services provided. These respondents provided

detailed and clear insights on attention, desire, interest, and action. Furthermore, noting that the study focused on investigating e-resource utilization among postgraduate students in Meru County, they were considered potential respondents for the research. Their input was instrumental in revealing their perceptions, views, attitudes, and preferences regarding attention, interest, desire, and action, and how they influence them in the utilization of e-resources.

Additionally, the findings from this group provided important perceptions to the specific needs and preference of the target audience, hence providing a foundation for the development of effective and tailored recommendations for improvement. Incorporating library heads of sections was instrumental, it helped in gaining valuable insights for the study. Their expertise and experience provided crucial information about the usage patterns of diverse electronic resources within the library as advised by (Campbell et al., 2020). Moreover, their input also contributed to valuable details about the strategies put in place to improve the utilization of electronic resources among postgraduate students. Table 3.1 presents an overview of the target population.

Table 3. 1

Targeted population

Category	Postgraduate students	Library head of sections
1. MUST	368	8
2. KeMU	432	5
Total	800	13

3.5 Sampling Techniques

A sampling technique is a method or approach used to select a subset of individuals or elements from a larger population for a research study (Nanjundeswaraswamy &

Divakara, 2021). The choice of sampling methodology by a researcher is influenced by the types of analyses employed in the research (Mthuli et al., 2021). The study used stratified random sampling and simple random sampling to select postgraduate students. Postgraduate students were categorized into different strata based on their level of education, such as those pursuing postgraduate diplomas, master's degrees, and PhDs. Within each stratum, participants were selected using a simple random sampling method at their institutional level. This sampling strategy was suitable because the research investigated a heterogeneous population and it also ensured that each educational level is proportionally represented, improving the precision and reliability of the findings. It also facilitates detailed analysis within each stratum, enabling meaningful comparisons. A purposive sampling technique was used to select library heads of sections in the libraries. This technique was appropriate because library heads possess the necessary expertise, experience, and insight required for the study, making them valuable sources of information for assessing the utilization of e-resources and the effectiveness of library services (Kumar, 2019).

3.6 Sample size

A sample size refers to a representative of the population under study from which data is collected (Lakens, 2022). Finding the ideal sample size and choosing a suitable sampling technique are crucial components of research (Ghr & Aithal, 2022). These have a major impact on how accurate and reliable the study's conclusions are. The sample size for this study was determined using the Krejcie and Morgan (1970) original table for cross-validation (See Appendix Vii). As a widely recognized and accepted tool, the Krejcie and Morgan (1970) table provided a straightforward method for calculating sample sizes that are statistically appropriate for large populations. As detailed in Table 3.2, the overall population of 800 is distributed across the two

institutions, with 368 postgraduate students from Meru University and 432 from Kenya Methodist University. The sample size of 260 respondents further went through proportional stratified sampling to get respondents from each institution, with 120 postgraduate students from Meru University and 140 from Kenya Methodist University selected for inclusion (See Appendix Vii). This comprehensive approach ensured a representative and balanced sampling strategy. Table 3.2 provides a clear breakdown of the target population and the derived sample size for each category.

Table 3. 2

Sample size

Category	Targeted P- students	Sample size P-students	Target head of sections	Sample head of section
1. MUST	368	120	8	8
2. KeMU	432	140	5	5
Total	800	260	13	13

To strategically investigate the implementation of the AIDA model in improving resource utilization in libraries among graduate students, a purposive sampling technique was employed. This method involved purposefully choosing specific sections within the libraries to ensure a targeted and comprehensive exploration of the subject matter. The decision to opt for purposive sampling was grounded in its ability to facilitate a focused examination of the 13 identified library heads of sections in the libraries.

The selected heads of sections helped in providing important information because of their expertise in managing library operations. Moreover, they play a crucial role in shaping policies and strategies related to the library (Campbell et al., 2020). Their

perspectives offered valuable insights into the potential challenges, opportunities, and recommendations for implementing the AIDA model in the context of resource utilization by postgraduate students.

3.7 Research Instruments

The study used questionnaires and interviews to collect data to assess how adopting attention, interest, desire and action (AIDA) model to enhance electronic resource utilization among postgraduate students at selected universities in Meru County.

3.7.1 Questionnaires

Postgraduate students were issued with questionnaires to give their views and reactions regarding the adoption of the AIDA model for enhancing the utilization of electronic resources at their respective universities. The decision to employ questionnaires was motivated by a number of compelling factors, including their ease of administration, the elimination of biased perspectives, and the collection of vital primary data. This tool is also popular because it is more efficient in terms of time, money, and economy than conducting interviews with all respondents. Furthermore, questionnaires provide ease in the analysis, quantification, comparison, and contrasting of completed responses while safeguarding informant privacy, maintaining anonymity, and avoiding the recognition of individual identities (Bartram, 2019).

The questionnaire was structured into sections aligning with the primary constructs of the study. The insights derived from the reviewed literature, conceptual framework, and tools employed by previous researchers helped in guiding the formulation of the questions. Each section was sequentially labeled alphabetically and chronologically. For instance, section A covered respondents' biographical details, while sections B, C, D, and E outlined the independent or model constructs; attention, interest, desire and

action in their respective order. The last section was F and it had sentiments on utilization of e-resources which was the dependent variable. The questions comprised of closed-ended questionnaires questions with a limited number of open-ended. Using open-ended questions in questionnaires was intended to gather more detailed information from the respondents (Bartram, 2019). The questionnaire employed a Likert scale, in which participants selected a response on a scale of 1 to 5 that best represents their perspective on a given subject. See appendix II for questionnaire guide.

3.7.2 Interview

Library heads of sections were interviewed. A structured interview guide was used by the researcher as a template for one-on-one interview sessions. This approach to gathering data was suitable as there were thirteen (13) library heads of sections, and it was possible to schedule a face-to-face interview with them. Interviews are valuable for gathering information on behavior, attributes, attitudes, knowledge, opinions, preferences, and feelings (Johnson et al., 2020). This method helped the researcher in understanding and studying the thoughts, experiences, and actions of a population (Husband, 2020). Interviews further offered an opportunity to address any uncertainties occurred during the research process.

The interview questions were guided by research variables such as attention, interest, desire, and action, with each variable forming a section in the interview guide. The questions were open –ended and focused on how the AIDA model can improve the utilization of electronic resources. These questions were structured into five sections: section A outlined the demographic details of the heads of sections librarians in MUST and Kenya Methodist Universities, sections B, C, D and E covered the studies variables which were: attention, interest, desire and action. The last section was on utilization of electronic resources. The development of these questions was drawn from the literature

reviewed in the previous chapter, including the conceptual framework. The tool can be found in appendix III.

3.8 Pre-testing of Research Instruments

The researcher took pre-testing into account to address any issues with the questionnaire instruments. Pre-testing helped to ensure the reliability and accuracy of the data collection tools. It allowed the researcher to identify any problems with the tool such as unclear questions or slanted phrases and address them prior to a large scale rollout.

The pre-testing sample size was determined according to Prasad and Garcia's (2017) recommendation, which suggests that a pretest sample of 1% to 10% is sufficient to ensure validity and reliability. To maximize these factors, this study employed the upper limit of 10%. A simple random sampling technique was then used to select 54 participants, representing 10% of the 540 postgraduate students at Embu University. Additionally, all the 12 library section heads were selected for interviews using purposive sampling to ensure their specialized insights contributed to the study's findings.

The selection of Embu University in Embu County was based on its close proximity and resemblance in numerous characteristics. As a nearby university, Embu University offers postgraduate courses and shares common features with KeMU and MUST. The university has made investments in acquiring electronic resources via the Kenya Library and Information Services Consortium (KLISC) and the My Library on the fingertips (MyLOFT) application. This app enables postgraduate students to conveniently access a wide range of electronic resources from various databases (Njiru, 2022). The insights obtained from the pre-test helped the researcher in adjusting,

reorganizing, and refining the questions in a suitable manner in order to ensure there's optimal extraction of the required data during the main data collection process.

3.9 Validity of Research Instruments

For a research instrument to be valid, it must exhibit reliability, meaning it should consistently yield similar results when employed with different individuals or on various occasions (Sürücü & Maslakçı, 2020). To ensure the validity of the study, various measures were implemented, including content validity, construct validity, and face validity. The drafted questions were subjected to scrutiny by the supervisors, who holds expertise in the field. The supervisor's insights, comments, and corrections on the questionnaires served as a valuable means of establishing content validity and ensuring that the instruments effectively capture the intended aspects of the study. The researcher conducted a pre-test to assess the face validity of the instruments. By comparing the results of the pre-test with the actual study outcomes, the researcher was able to gauge the clarity, relevance, and appropriateness of the questions, thereby enhancing the face validity of the instruments.

Regarding construct validity, the information presented in chapter two about the current condition of the variables were crucial in giving respondents a thorough comprehension of the exact factual opinion that they were supposed to act upon. This alignment with the theoretical framework contributed to the construct validity of the study. Overall, these validation strategies collectively strengthened the research validity of the study thus ensuring credible findings.

3.10 Reliability of Research Instruments

Reliability refers to how consistently a research instrument yields similar results through multiple attempts (Sürücü & Maslakçı, 2020).

During the pre-test stage, both the questionnaire and interview responses were rigorously scrutinized by entering them into the SPSS software to calculate the Cronbach's alpha value. The Cronbach alpha coefficient is a widely recognized measure of internal consistency in assessing the extent to which items within the instruments correlate with each other. A Cronbach alpha value exceeding 0.7 is deemed acceptable and indicative of a reliable instrument. A coefficient alpha value, >0.7 , obtained was sufficient

3.11 Data Collection Procedures

The current study employed procedures for distributing questionnaires to postgraduate students and conducting interviews with the heads of section librarians. Detailed procedures for each process is outlined in the following sections.

3.11.1 Procedure for Administering the Questionnaire

Questionnaires were issued to the post graduate students through the help of research assistants. Prior arrangements were made in advance, beginning with collecting a clearance letter from Kenya Methodist University Department of Postgraduate Studies. This letter made it easier for researcher to obtain national research permission from NACOSTI. With these two crucial documents in hand, the researcher then sought permission from the university's top management to conduct data collection on the campuses. Once consent was secured, research assistants were briefed on the study's objectives, the significance of the findings, and effective communication strategies with respondents.

The researcher collaborated with a selected group of postgraduate students to identify the best location, time, and venue for data collection.

During the data collection, respondents were provided with detailed information about the exercise, including its rationale, objectives, the importance of their opinions, and

assurances concerning privacy and confidentiality. Participation was on voluntary basis. When everything was made clear, the research assistant went ahead and distributed the questionnaires. After completion, the filled up questionnaires were collected and participants expressing commitment on the data collection day were given time to fulfill the researchers' requests on agreed-upon dates. The collected tools went through a thorough check for completeness and were systematically enumerated for further analysis. This structured and ethical approach ensured a meticulous process in gathering and managing research data.

3.11.2 Procedure for Conducting an Interview

The researcher initiated the process by seeking permission from the university librarian to conduct interviews. Upon obtaining permission, the researcher scheduled a meeting with the library heads of the sections. During this meeting, the heads of the sections were briefed on the expectations for the upcoming interviews. Notifying the heads of the section in advance helped the researcher make appropriate arrangements, including selecting the venue and time for the interview. The researcher also reminded the heads of section about the scheduled interview through a phone call.

Subsequently, a face-to-face interview with the library heads of sections was conducted in a conducive environment, with only the researcher and the interviewee present. This setup ensured confidentiality of the information shared by the library heads of the section. The interview guide served as a reference for conducting the interviews. Having obtained prior consent from the interviewee to record the session and take notes, the researcher proceeded to record the interviews using her phone to facilitate effective reporting. The researcher allowed time for any questions, clarifications, or explanations at the end of each interview session and expressed gratitude to the library heads of sections for their participation in the interview.

3.12 Measurement of Variables

Table 3.3 gives an outline of how the variables were operationalized and measured

Table 3. 3

Measurement of variables

Research objective	Operational variable	Measurement
i. Assess postgraduate students' attention towards utilization of electronic resources	-Time spent on various e-resources (e-books, e-journals, databases, etc.) - Frequency of e-resource access	-Usage data logs and statistics from library databases/e-resource portals
ii. Determine postgraduate students' interest in electronic resource utilization	- Preferences for different types of e-resources - Perceived usefulness of e-resources - Motivation for using e-resources	-Surveys with Likert scale questions on preferences, perceived usefulness, and motivations
iii. Examine postgraduate students' desire for electronic resource utilization	-Expressed needs for specific e-resources not currently used or available - Willingness to learn new e-resource platforms or tools	-Surveys with questions on unmet needs and willingness to engage with new e-resources - Interviews to explore depth of desire for broader or specific e-resources
iv. Evaluate postgraduate students' proactive actions in utilizing electronic resources	- Engagement in training sessions for e-resource use - Sharing of e-resources among peers - Seeking out new e-resources beyond those introduced by faculty	- Log analysis for accessing new or less commonly used e-resources - Tracking the library training requests/booking pattern - Tracking the users' feedbacks on the utilization of e-resources.

3.13 Data Analysis Procedures

Data analysis methods are procedures that are used to manipulate data that allows the researcher to answer research questions.

3.13.1 Procedure for Analyzing Quantitative Data

The quantitative data collected was encoded into SPSS software version 26 for comprehensive analysis. Both descriptive and inferential analyses were carried out. Descriptive analysis was used to compute and present quantitative insights such as mean, percentages, standard deviation and frequencies in form of tables, and graphs (Siedlecki, 2020). Correlation and regression analyses were performed on the gathered data to examine the relationship between the variables. This was necessary in order to clarify key points regarding the current state and relevance of the AIDA Model's components. This was important to elucidate important aspects on the status and applicability of AIDA Model constructs (Attention, interest, desire, proactive action) on e-resource utilization.

Inferential statistics were examined to assess diagnostic conditions such as normality, heteroscedasticity, and multicollinearity tests to determine the utilizing of multiple regression analysis. This model was adopted;

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

Where;

Y = Utilization of electronic resources

β_0 = Constant

X1 = Attention

X2 = Interest

X3 = Desire

X4 = Proactive action

ε = Error term

One-way ANOVA was computed to compare attention, interest, desire and proactive action and utilization of e-resources insights from the postgraduate students.

3.13.2 Procedure for Analyzing Qualitative Data

According to Lester et al. (2020), qualitative data analysis involves coding, classifying themes, interpreting the data, and presenting the findings. The qualitative data gathered from the open-ended questions and interviews data obtained from each construct were classified, organized and analyzed thematically as per the study's objectives.

3.14 Ethical Considerations

Ethical consideration are principles that guide the study's design and practices. According to Hasan et al. (2021), ethical consideration to be observed in research includes anonymity, confidentiality, informed consent, voluntary participation and potential for harm. In alignment with these principles, prior to commencing data collection, the researcher secured an introductory letter from Kenya Methodist University as evidence of the university's authorization for the research being conducted. Additionally, adherence to required research standards involved seeking a permit from NACOSTI before beginning the research. Authorization for data collection was secured through consent from the top management at Kenya Methodist University and Meru University of Science and Technology.

To ensure privacy and confidentiality, questionnaire instruments explicitly instructed respondents not to disclose their identity through biographical details. Additionally, the security of respondents' opinions was maintained by securely storing filled questionnaires and limiting access to authorized individuals only. The researcher ensured all literature references were properly acknowledged using APA 7th edition

guidelines. A plagiarism check was also conducted on the research findings to ensure the work passed the originality test.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

The chapter presents the results of the analyses carried out on the data gathered to evaluate how postgraduate students at MUST University and KeMU use e-resources when the AIDA model is adapted. Results from the reliability test, response rate, demographic data, and diagnostic tests are presented first. What follows are the findings regarding each variable of the study. The results of descriptive statistics are prominent in this study, while the qualitative findings from the interviews were incorporated to support the interpretation.

4.2 Reliability Test Results

Prior to analyzing data, their reliability was established. This was accomplished by calculating the Cronbach's Alpha coefficients for each of the study's important variables. Table 4.1 presents the findings from the reliability test.

Table 4. 1

Reliability result based on AIDA constructs

Main constructs of the study	Cronbach's Alpha
- Attention (X ₁)	0.890
- Interest (X ₂)	0.900
- Desire (X ₃)	0.702
- Proactive Actions (X ₄)	0.785
- Utilization of e-resources (Y)	0.796

Table 4.1 presents the results showing that all of the study's major variables had Cronbach's coefficients greater than 0.7 ($\alpha < 0.700$). Reliability coefficients greater than

0.7 are considered as indicators of data reliability as noted by Yin and Du (2021); hence, the data were reliable to be used in the intended analysis.

4.3 Response Rate

A total of 223 questionnaires were returned from the 260 that were administered to the postgraduate students at Meru and Kenya Methodist University. Five of the 223 completed questionnaires were not included in the study because incomplete replies were discovered during the data cleanup process. As a result, 218 (83%) of the submitted questionnaires were deemed valid and considered in the analysis. Table 4.2 shows how the 218 were spread among the two universities.

Table 4. 2

Response rate of postgraduate students

Category	Sample size	Respondents	Percentage
	Postgraduates		response rate
1. MUST	120	104	86.6%
2. KeMU	140	114	81.4%
Total	260	218	83.8%

The results demonstrate a favorable response from postgraduate students which was attributed to flexibility in combining hard and online questionnaires. This response rate was considered good in social science. These results agree with the recommendation of Mugenda and Mugenda (2019) that a response rate of 70% and above is adequate representation of study respondents.

The other category of respondents in this study was the library staff (library head of sections). Twelve out of the thirteen library head of sections were interviewed

representing 92.3%. This response rate was good and was attributed to good prior planning and cooperation from KeMU and Meru universities.

4.4 Demographic Information of Respondents

The respondents of this study were postgraduate students and library heads of sections. Their relevant demographic information is covered below.

4.4.1 Background information of postgraduate students

On background information, the study inquired about gender and education level of postgraduate students. This study believed that by understanding the educational background of the students, universities can design targeted strategies that effectively capture attention, generate interest, create desire, and prompt action towards the optimal use of electronic resources, ultimately enhancing the overall academic experience and research output of postgraduate students. The background information of postgraduate students is shown in Table 4.3.

Table 4. 3

Gender and Highest level of education qualification of postgraduate students

Aspect of background	Frequency	Percentage
Gender		
Female	110	50.5
Male	108	49.5
Total	218	100.0
Education level		
Bachelor degree	157	72.0
Master's degree	33	15.1
Postgraduate Diploma	28	12.8
Total	218	100.0

According to Table 4.3, 108 (49.5%) of the postgraduate students were male, and 110 (50.5%) were female. This indicates that in the two universities, somewhat, there were more female students than male students who were pursuing postgraduate programs at

universities in Meru county. The demographic findings supports observation made by Nausheen and Richardson (2018) that in Pakistan postgraduate students population was dominated by the female gender.

To better understand the dynamics of postgraduate students, a question on the highest level of education was asked. The results which are displayed in Table 4.3 shows that 157 (72%) postgraduate studies in KeMU and Meru University had a bachelor degree. Twenty-eight (12.8%) had postgraduate diploma qualification, while thirty-three (15.1%) had Master's degree. The findings show entry behavior of postgraduate studies at the two universities. The high percentage of postgraduate students entering with a bachelor's degree indicates that these students are likely transitioning directly from undergraduate studies. This could mean that their familiarity with electronic resources might be limited to what they were exposed to during their bachelor's programs. Hence, strategies to capture their attention need to highlight the advanced and specialized nature of electronic resources available at the postgraduate level. To generate interest among these students, demonstrations and workshops conducted by library staff can be tailored to align with their recent undergraduate experience, making the transition smoother and the resources more appealing.

The postgraduate diploma holders have already engaged in some form of postgraduate education, which suggests they had a preliminary understanding of the value of advanced resources. Creating a desire among them could involve emphasizing the advanced features of electronic resources that can aid in furthering their research capabilities and academic excellence. This can be realized through specialized training sessions that build on their existing knowledge, demonstrating how these resources can be integrated into their ongoing research projects or coursework. Testimonials from

peers or case studies showing successful utilization of these resources can also be effective.

The master's degree holders (15.1%), are already at a more advanced academic level and likely has experience with utilizing electronic resources. The action stage for them involves providing opportunities for deeper engagement, through advanced workshops, providing access to specialized research databases, and offering personalized support for their research needs. This will also help to sustain their interest and desire for electronic resources.

4.4.2 Background information of library staff

The researcher gathered background information from library staff respondents regarding their highest academic qualification. Out of the 12 heads of library sections, seven had a bachelor degree in library and information, 4 had masters while one had a diploma in information studies. The study further established the working experience of the 12 library head of sections. Six library head of sections had served for four years, two had had five years while another two had seven years. Only one had served for two years as a head of section. These results show that the participants were well experienced to handle all the interview questions regarding the components of AIDA model and utilization of e-resources. These findings agree to Haylenchale (2020) who found that the majority of academic employees staff, including librarians, had between 4-7 years of experience in their present positions. According to Haylenchale (2020) three years of working experience was deemed suitable amount of time for respondents to become acquitted with the practices, issues, and effective strategies within the organization.

4.5 Results on Utilization of E-resources by Postgraduate Students

To gain better understanding of the utilization of E-resources, the postgraduate students were initially asked to tick all the e-resources one had utilized. Their responses were summarized in Table 4.4.

Table 4. 4

The type of e-resources utilized by Postgraduate Students at KeMU and Meru universities

E-books	212 (97.2%)
Online past examination papers	201 (92.2%)
E-journals	198 (90.8%)
E-thesis/ dissertations	134 (61.5%)
Digital Newspapers	121 (55.5%)
Multimedia Resources	111 (50.9%)
E-magazines	98 (45%)

The data in Table 4.4 shows that almost all postgraduate students had utilized e-books, indicating that this resource is highly valued and widely used among students in universities in Meru County. Notably, e-books are a primary source of academic content and supplementary reading material for students. Their popularity can be attributed to their convenience, the ability to quickly search for specific information, and the breadth of topics they cover. These features support the diverse research needs of students, making e-books an invaluable resource in their academic pursuits. These findings concur with observation made by Ngema and Masenya (2020) at the University of Zululand, South Africa, where postgraduate students also exhibited a positive attitude towards e-books. Both studies highlight the critical role of e-books in

providing accessible and diverse academic content. This implies that universities should continue investing in and expanding their digital libraries to ensure students have seamless access to these resources.

The utilization of online past examination papers is also very high, at 92.2%. This suggests that students frequently use these papers to prepare for exams, understand the format and type of questions asked, and assess their knowledge. This indicates their relevance to postgraduate course work. This result agrees with a study conducted by Chelulei et al. (2020) at Jomo Kenyatta University of Agriculture and Technology (JKUAT). He noted that having access to a wide variety of past exam papers greatly improves students' research abilities and academic performance. This suggests that universities should continue to provide and expand these resources to support student success. The study shows that e-journals are used by 90.8% of postgraduate students. This high usage rate highlights the importance of up-to-date, peer-reviewed articles for research and staying informed about the latest developments in their fields. These findings align with Singh (2020) who observed that several students rely on e-journals for their daily assignments and research, highlighting that e-journals are crucial resources for academically empowering postgraduate students at Punjabi University Patiala. E-theses and dissertations are utilized by 61.5% of the students. This indicates a significant reliance on previous academic work to guide and support students' research projects. On a similar observation, Akuffo and Budu (2019) noted that postgraduate students heavily depend on electronic resources for their research, coursework, thesis writing, and other academic pursuits. These findings indicate a need for universities to prioritize easy access to e-theses and dissertations to effectively support students' research activities, as their significant role in providing guidance for research projects is crucial.

The results show a moderate utilization of digital newspapers and multimedia resources. For digital newspapers the results indicate an interest in staying informed about current events and developments, which might be relevant for contextual understanding in certain fields of study. It was also noted that half of the students had accessed multimedia resources, suggesting that these materials, such as videos and audio content, are beneficial for learning and comprehension but might not be essential for all academic disciplines. This is in line with the study conducted by Borteye et al. (2022) which observed that postgraduate students at a Ghanaian university accessed multimedia resources mainly to enrich their learning experiences, though these resources were not essential for all academic purposes. These findings suggest that, while digital newspaper and multimedia resources provide valuable support for learning and comprehension, they are supplementary rather than essential for all disciplines. Therefore, universities should continue to make these resources accessible to enhance the overall learning experience, but also focus on improving digital literacy and resource training to maximize their benefits. A low utilization of e-magazines was noted where, less than half of the students have utilized e-magazines. This lower utilization rate might be due to e-magazines being less critical for academic purposes compared to other resources, or they may be more relevant to specific fields of interest. This aligns with the findings from Eireyi-Fidelis and Ivwighreghweta (2022) that, certain electronic resources, such as e-magazines, are used less frequently in academic settings compared to core resources like e-journals and e-books.

The above findings suggest that universities should continue to invest in and promote the most utilized resources while also finding ways to increase awareness and engagement with other valuable e-resources that are underutilized. Memusi (2022); Ternenge and Kashimana (2019) reported that to promote the utilization of e-resources

in libraries, librarians are expected to create awareness, sensitize users, communicate effectively, educate patrons, and provide access to the resources in their collection. On similar observation, Mungwabi (2023) noted that, in two universities in Tanzania, e-resources were highly utilized due to awareness creation to library users. The high utilization rates also indicate a strong foundation for implementing the AIDA model to further enhance the engagement and effective use of these resources.

The utilization of e-resources by postgraduate students was the dependent variable in this study. The indicators largely focused on awareness and promotion of e-resources; engagement and appeal of e-resources; motivation and demand for e-resources; behavioural strategies and utilization practices; technological and logistical support; accessibility and convenience of e-resources; relevance and currency of e-resources. The postgraduates' questionnaire contained closed-ended questions which comprised various statements on a Likert scale, where: 1 = strongly disagree, 2 = Disagree, 3= neutral, 4= agree and 5 = strongly agree as indicated by Table 4.5.

Table 4. 5*Descriptive findings on Utilization of E-resources by postgraduate students at KeMU and Meru Universities*

Sentiments on Utilization of e-resources	SD(1)	D(2)	N(3)	A(4)	SA(5)	Mean	STD
• Attention to e-resources enhances their utilization in university libraries	4(1.8%)	2(0.9%)	9(4.1%)	109(50%)	94(43.1%)	4.32	.759
• Having interest in e-resources enhances their utilization in university libraries.	0	4(1.8%)	19(8.7%)	98(45%)	97(44.5%)	4.30	.780
• Cultivating students desire for e-resources enhances their utilization in university libraries.	2(0.9%)	2(0.9%)	17(7.8%)	92(42.2%)	105(48.2%)	4.36	.744
• Taking proactive steps to utilize e-resources improves their utilization in university libraries.	0	4(1.8%)	7(3.2%)	100(45.9%)	107(49.1%)	4.40	.726
• There is adequate infrastructure to enable postgraduates utilize e-resources	8(3.7%)	16(7.3%)	19(8.7%)	81(37.2%)	94(43.1%)	4.09	1.068
• The 24/7 availability of e-resources interest me to utilize them.	4(1.8%)	3(1.4%)	26(11.9%)	83(38.1%)	102(46.8%)	4.27	.860
• The up-to-date status of e-resources interest me to utilize them	2(0.9%)	4(1.8%)	22(10.1%)	81(37.2%)	109(50%)	4.33	.805

The findings shown in Table 4.5 on utilization of e-resources by postgraduate students showed a high mean values and a standard deviation that was around 1. This indicated a high level of utilization; hence the results of this study were critical in informing strategies for sustaining utilization of the same. These findings concur with Hashim et al. (2022) that, during the COVID-19 pandemic, postgraduate students in Malaysian universities relied heavily on electronic resources highlighting their critical role in supporting academic activities. This suggests that universities should continue to invest and promote e-resources, ensuring adequate infrastructure and accessibility. Notably, a significant majority 203 (93.1%) of postgraduate students agreed or strongly agreed that attention to e-resources enhances their utilization in university libraries; 6 (2.7%) disagreed or strongly disagreed. This result suggests that efforts to capture and maintain students' attention on e-resources are crucial. According to Ankrah and Atuase (2018b), successful promotion of resources through social media channels, library training sessions, and orientation programs are some of the approaches used to capture the attention of postgraduate students. Similarly Lodge and Harrison (2019) noted that when students are successfully drawn towards electronic resources at the attention stage, they are more likely to explore further, develop an interest, and desire to engage with these resources to meet their academic needs. This suggests that universities should implement and expand initiatives that highlight the importance and availability of e-resources, supporting the argument that visibility and awareness directly impact utilization (Ankrah & Atuase, 2018b).

Most students 195 (89.5%) generally agreed that having interest in e-resources enhances their utilization; 4 (1.8%) disagreed or strongly disagreed; hence, cultivating interest in e-resources is essential for their utilization. Universities should focus on creating engaging content and showcasing the benefits of e-resources to spark and

sustain student interest (Norch & Adzakpa, 2022). On a similar observation, Frimpong and Addo (2020) pointed out that students' interest in using e-resources can be sparked by marketing, motivation, scheduling adequate time for library orientations and regular refresher trainings. On the same Mashaba and Pretorius (2023) noted that raising awareness and providing relevant content significantly increased e-resource use among postgraduate students in South African universities. These findings underscore the critical role of targeted strategies to foster student interest and engagement in e-resources, thereby enhancing their utilization.

A large proportion 197 (90.4%) of students agreed that cultivating students' desire for e-resources enhances their utilization; 4 (1.8%) disagreed or strongly disagreed. The findings indicate strategies to increase students' desire for e-resources, such as personalized approaches and demonstrating the relevance of e-resources to their academic work, can significantly boost utilization. Zhang et al. (2020) support these findings by highlighting the significance of psychological aspects of desire, such as perceived value, convenience, and motivating factors, in captivating patrons' desire for e-resources. Uwandu (2020) made a similar observation, emphasizing that the quality of information materials, their authenticity, and the satisfaction gained from past experiences play a crucial role in enhancing students' desire to utilize e-resources. Strategies like personalized approaches and demonstrating relevance to academic work align with the AIDA model, helping institutions attract attention, generate interest, and convert desire into action among students, thereby boosting e-resource utilization effectively.

An overwhelming majority 207 (95%) of students agreed that taking proactive steps to utilize e-resources improves their utilization, 4 (1.8%) disagreed or strongly disagreed,

0.73. Encouraging proactive behavior, such as regular library visits and active participation in training sessions, can lead to higher utilization rates of e-resources. Universities should promote a proactive culture regarding e-resource usage. A majority 190 (87.2%) of students were interested in utilizing e-resources because they are up-to-date. However, 6 (2.7%) disagreed or strongly disagree. This suggests that keeping e-resources current and relevant is crucial for maintaining student interest and utilization. Regular updates and expansions of the e-resource collection should be prioritized. In agreement, Eireyi-Fidelis and Ivwighreghweta (2022) also stressed on the importance of expanding e-resources and making sure they are current and relevant.

Most students 185 (84.9%) were interested in utilizing e-resources due to their 24/7 availability; 7 (3.2%) disagreed or strongly disagreed, $M=4.27$, $SD=0.86$. The round-the-clock availability of e-resources is a strong motivator for their utilization. Ensuring consistent access and minimizing downtime will support continued high levels of usage. In agreement, Borteye et al. (2022) noted that having access to e-resources anytime significantly increases their usage. This indicates that ensuring that e-resources are always available supports students in managing their time effectively and accessing the necessary information whenever needed, thereby enhancing their overall learning experience.

A majority 175 (80.3%) of students believe there is adequate infrastructure to enable the utilization of e-resources, 24 (11%) disagreed. The results imply that adequate infrastructure is fundamental for the effective utilization of e-resources. In agreement, Mwantimwa et al. (2021) emphasized on the importance of adequate ICT infrastructure, including reliable internet connectivity and power supply, significantly impacts the effective utilization of e-resources.

Although the utilization of e-resources by postgraduate students was good, library staff were asked to identify challenges which these students face when utilizing them in the university library. The 16 challenges noted in their responses were categorized into six themes reflecting major barriers such as technical and infrastructure issues, training and literacy, resource relevance and availability, content quality and engagement, time and workload constraints, and financial barriers. These themes provide a comprehensive understanding of the main drawbacks to the utilization of e-resources by postgraduate students in the university library, highlighting areas that need to be addressed to improve their experience and access to these valuable academic tools.

The responses from postgraduate students highlighted several technical and infrastructure challenges that hinder their effective utilization of e-resources. For example, old and inadequate computers, poor internet connection, technology access limitations, and sometimes information overload were commonly mentioned. Mwantimwa et al. (2018) noted that, Tanzanian universities encounter infrastructure difficulties such as slow internet, inconsistent power, and insufficient ICT setup. Humbhi et al. (2023) also reported issues related to information overload, limited ICT infrastructure and inadequate information literacy skills as limitations to e-resource use. These limitations significantly hinder the optimal use of e-resources. These findings indicate a need for universities to substantially investment in infrastructure to overcome barriers faced by students in accessing and using e-resources effectively. Without significant improvements in technological infrastructure and better information literacy training, students will continue to struggle with accessing and effectively utilizing e-resources. Comparing these findings with the AIDA model, which emphasizes on Attention, Interest, Desire, and Action, reveals that the infrastructural deficiencies negatively impact each stage. For instance, poor internet connectivity and old

computers diminish students' attention and interest in using e-resources. Information overload hampers their desire and ability to effectively engage with available materials. Therefore, addressing these issues could enhance students' overall engagement with e-resources, thereby supporting their academic success.

Additionally, licensing restrictions and the unavailability of full-text articles in some instances further limit access to necessary materials. Another significant barrier mentioned is the lack of IT knowledge among students and their challenges in navigating complex electronic resource platforms. Despite scheduled trainings, student illiteracy and limited attendance at these sessions usually impede their ability to utilize e-resources effectively. Roman et al. (2020) observed that, e-resources were heavily un-utilized by students as an effect of lack of understanding, limited access to full-text articles and technical skills. These findings indicate a need for universities to focus on improving IT literacy through regular, mandatory training sessions and continuous technical support. Additionally, universities should negotiate better licensing agreements to reduce restrictions and provide more comprehensive access to full-text articles hence greatly enhancing the utility of e-resources for students.

Similarly, financial constraints were also noted as a significant barrier, limiting students' ability to access paid electronic resources or invest in personal technology devices required for utilization. This concur with Ogunbodede et al. (2021) that high cost associated with data subscriptions impede the efficient use of electronic information. These findings imply that certain barriers hinder postgraduate students from using e-resources effectively in universities in Meru County. Universities should address these challenges in order to enhance e-resource utilization.

Students further expressed frustration over the subscription to irrelevant databases and the lack of relevant electronic resources in some disciplines. Mashaba and Pretorius (2023) noted similar challenges in South African universities, where the selection of databases did not match the specific needs of all academic disciplines. Licensing and subscription limitations also restrict access to some specific materials, making it difficult for students to find the resources they need. According to Dhiman (2021) and Partap et al. (2021), users' access to crucial resources is hampered by limited institutional subscriptions, paywalls, and subscription charges. The quality and engagement of the content available through e-resources were also cited as drawbacks. The lack of interactive features and unengaging content make it challenging for students to actively engage with the material or collaborate with their peers. Moreover, the substantial time required to search, evaluate, and synthesize information from electronic resources adds to the workload of postgraduate students. On similar observation Uwandu (2020) highlighted that time-consuming process of navigating e-resources can be a burden on students, particularly those managing multiple responsibilities. Student number 168 wrote, *“Balancing multiple responsibilities, such as coursework, research, and teaching assistantships, makes it difficult for me to dedicate sufficient time to utilizing e-resources effectively.”* These findings indicate a need for universities to improve on resource selection, enhance content quality and engagement, and reduce access barriers to support more effective and equitable academic resource utilization. Comparing these findings with the AIDA model reveals that effective utilization of electronic resources in academia can be enhanced by addressing each stage. This involves ensuring attention through relevant subscriptions, fostering interest with engaging content, cultivating desire by demonstrating resource value, and encouraging proactive actions through training in search and evaluation.

The researcher asked the postgraduate students in an open-ended question and library staff during interview to suggest ways in which the library can enhance the utilization of electronic resources among postgraduate students at their universities. A total of 83 suggestions were received. These statements were analyzed with a view to identifying main themes results to ten themes categories:

- Training and awareness
- Technical infrastructure
- Resource management
- User support and engagement
- Marketing and promotion
- Enhancing user experience
- Policy and collaboration
- Incentives and motivation
- Access and availability
- Feedback and improvement.

To maximize e-resource utilization among postgraduate students, universities were urged to prioritize training, awareness, and technical infrastructure. Regular online and in-person sessions, tailored workshops, and literacy programs educate students on effective e-resource navigation and importance. Simultaneously, robust technical support, including increased internet bandwidth, more computers, and reliable connectivity both on-campus and remotely, to ensures seamless access to these resources. These initiatives foster a culture of continuous learning and uninterrupted research activities. These was also acknowledged by Akuffo and Budu (2019) who highlighted the need of regular information literacy training and personalized search support to mitigate access and retrieval issues in a Ghanaian theological university. In

agreement Mashaba and Pretorius (2023) emphasized on the need for training programs to increase awareness, marketing on the availability of e- resources and their benefits to students and effective use of remote access to e-resources. Additionally, they highlighted the importance of improving technical infrastructure to ensure reliable and efficient access to these resources. These findings imply that by investing in training, awareness, and technical infrastructure, universities can significantly enhance the utilization of e-resources among postgraduate students. This investment leads to improved academic performance and research outcomes, as students become more competent in navigating and using e-resources effectively. Aligning with the AIDA model, universities can capture attention through regular workshops and literacy programs, sustain interest via engaging technologies, foster desire through personalized support, and prompt action by providing robust technical infrastructure.

4.6 Results on Assessment of Postgraduate Students' Attention towards

Utilization of Electronic Resources at KeMU and Meru Universities

The first research question in this study aimed to assess the postgraduate students' attention towards electronic resource utilization KeMU and Meru universities. The statements collectively address aspects focusing on knowledge and awareness; access and guidance; marketing and engagement strategies; usability and design, accessibility and technical functionality, communication and updates, training and development, effectiveness of awareness initiatives. The responses were measured in a Likert scale, where: 1 = strongly disagree, 2 = Disagree, 3= neutral, 4= agree and 5 = strongly agree as indicated by Table 4.6.

Table 4. 6*The postgraduate students' attention towards utilization of electronic resources, at KeMU and Meru University*

Statements on attention	SD(1)	D(2)	N(3)	A(4)	SA(5)	mean	STD
• I am aware of the electronic resources available for my academic needs at the university library.	15(6.9%)	8(3.7%)	15(6.9%)	78(35.8%)	102(46.8%)	4.12	1.138
• The library's homepage often provides guidelines on how to access the e-resources I need for my research.	14(6.4%)	8(3.7%)	15(6.9%)	97(44.5%)	84(38.5%)	4.05	1.087
• My university has put measures in place that help capture postgraduate students' attention to electronic resources.	16(7.3%)	10(4.6%)	25(11.5%)	82(37.6%)	85(39%)	3.96	1.163
• The e-resource portal is user-friendly with a simple design to navigate through the e-resources.	10(4.6%)	12(5.5%)	23(10.6%)	120(55%)	53(24.3%)	3.89	.987
• The link provided for accessing the electronic resources database is visible and working.	9(4.1%)	16(7.3%)	29(13.3%)	86(39.4%)	78(35.8%)	3.95	1.077
• The eye-catching announcements on the library website consistently update me on the newest e-resources.	14(6.4%)	24(11%)	47(21.6%)	89(40.8%)	44(20.2%)	3.57	1.122
• The university library frequently organizes workshops and training sessions to enhance awareness of available electronic resources among postgraduate students.	11(5%)	15(6.9%)	47(21.6%)	92(42.2%)	53(24.3%)	3.74	1.061
• The awareness programs conducted by the university library have significantly improved my understanding and utilization of electronic resources for academic purposes.	16(7.3%)	12(5.5%)	43(19.7%)	81(37.2%)	66(30.3%)	3.78	1.156

Table 4.6 shows that a significant majority, 180 (82.6%) of postgraduate students were aware of the electronic resources available for their academic needs, indicating high awareness levels. However, 23 (10.6%) disagreed or strongly disagreed. On similar observation Dutta (2023) reported high awareness and usage of e-resources, primarily for academic tasks at Kashmir University. Both studies underscore the importance of awareness in driving the utilization of electronic resources among postgraduate students. Most students 181 (83%) agreed that the library's homepage provides useful guidelines for accessing e-resources, suggesting effective guidance is available; 22 (10.1%) disagreed or strongly disagreed. This is consistent with Borteye et al. (2022) who underscored the significance of clear and accessible guidance in facilitating remote access to electronic resources for postgraduate students. This indicates that universities that invest in providing clear and accessible instructions are more likely to see increased student engagement and benefits from the electronic resources they offer. Moreover, a large proportion 167 (76.6%) of students believe the university has effective measures to capture their attention towards e-resources, indicating successful engagement strategies, but 26 (11.9%) disagreed. This is in agreement with findings by Borteye et al. (2022) who stressed the significance of marketing and engagement strategies to promote the use of electronic resources among postgraduate students.

The majority, 173 (79.3%) of students find the e-resource portal user-friendly, suggesting the portal's design is effective and easy to navigate; 22 (10.1%) disagreed or strongly disagreed. This is consistent with findings by Borteye et al. (2022), emphasized the importance of clear and accessible guidance for the effective utilization of remote access to electronic resources. Similarly, most students 164 (75.2%) agreed that the links for accessing e-resources were visible and functional, indicating good technical support; 25 (11.4%) disagreed. A majority 133 (61%) of students find the

announcements on the library website moderately helpful, though there is a notable proportion, 47 (21.6%) who were neutral, while 38 (17.4%) disagreed, indicating room for improvement in communication. On the same note, 145 (66.5%) of students appreciated the workshops and training sessions, suggesting these initiatives are beneficial for increasing awareness of e-resources. This supports the conclusions of Mashaba and Pretorius (2023) that underscored the critical role of continuous training and development in promoting the effective use of electronic library resources.

These results demonstrate a generally high level of agreement among postgraduate students regarding their attention to and awareness of electronic resources at KeMU and Meru University. This is also confirmed by a high mean values mean above 3.4, and a standard deviation that was around one in each case. This meant that, there were few variations in the responses. These results indicate a generally positive perception of and engagement with electronic resources among postgraduate students, with a few areas identified for potential improvement and continued development. Similar findings were noted in studies by Cheng and Zhang (2019) who emphasized that higher mean scores and low standard deviations reflect stable and consistent attitudes towards digital resources. These results indicate that while the majority of students perceive electronic resources positively, there are still areas identified for potential improvement and ongoing development to further enhance accessibility, usability, and the overall effectiveness of these resources within the universities.

The postgraduate students were asked in an open-ended question to explain how attention affects the utilization of electronic resources at their university. Their responses culminated to five themes that comprised of awareness and discovery, resource utilization and accessibility, research and academic performance, intentions and interest, and resource selection. They noted that the attention component of the

AIDA model effectively creates awareness among postgraduate students about new electronic resources available. One student wrote, *“The initial awareness is crucial as it informs students of the existence of valuable resources they might not have otherwise known about.”* It also aids in resource discovery and exploration by guiding students toward exploring the library's electronic offerings. This finding strengthens why highlighting resources can significantly benefit students' research and academic work hence quality output. Notably, the attention to electronic resources enables students to conduct research more efficiently and accurately leading to better scholarly output. It also enables students to engage in the cognitive process of selectively concentrating on specific aspects of information. This is because exploration leads to better utilization of the library's electronic resources. Lodge and Harrison (2019) highlighted that attracting students' attention increases their liking to explore and engage more deeply with electronic resources, thereby enhancing their academic experience. Similarly, Abubakar (2021) highlighted the importance of attention in influencing students' decisions to actively utilize electronic resources for research and study purposes. In similar observation Ruzegwa and Msonde (2021b) emphasized the importance of paying attention to the utilization of electronic resources and its significant impact on the quality of university research and scholarly work. These findings indicate the critical role of attention in enhancing the utilization of electronic resources, which has significant implications for academic performance, research quality, and overall educational outcomes. By capturing students' attention through effective marketing and outreach strategies, universities can significantly improve awareness and discovery of electronic resources, leading to better academic performance and higher-quality scholarly output.

The responses from postgraduates further indicated that attention component of the AIDA model shapes students' intentions to use electronic resources. The postgraduate student 023 wrote, *“When students' attention is captured, they are more likely to develop a strong intention to use these resources in their academic work.”* This is correct because when students are made aware of the variety and relevance of available electronic resources, they can make more informed choices about which ones to use for their specific academic needs. This confirms the observation made by Abubakar (2021) that paying attention to electronic resources influences students' decision-making processes, motivating them to actively utilize these resources for research, studying, and information retrieval purposes. Similar findings were reported by Ruzegwa and Msonde (2021b) acknowledging that attention plays a crucial role in shaping subsequent interest, desire, and action toward utilizing electronic resources among postgraduate students. These findings provide empirical support for the principles outlined in the AIDA model, specifically how attention component plays a pivotal role in shaping students' intentions and actions regarding the use of electronic resources in academic contexts.

The interview responses from library staff largely concurred with those views gathered from postgraduate students. The library staff argued that by focusing and maintaining students' attention, libraries effectively create awareness about the wealth of electronic resources that are available. This heightened awareness leads to increased curiosity and engagement, prompting students to seek clarification on access methods and usage techniques. As a result, more postgraduate students begin to explore and use these e-resources, gaining access to a wider range of materials including online journals, databases, and e-books. This expanded utilization not only enhances their research capabilities but also contributes to the development of vital information literacy skills.

Wagay and Dutta (2023) from Kashmir University observed that enriching students' attention to available electronic resources creates awareness about them. This emphasis on awareness is crucial as it enhances students' engagement with these resources, fostering a deeper understanding and utilization. Similarly, Namande et al. (2023b) highlights the influence of awareness on the consumption of e-resources among library users. Their study underscores how increasing awareness directly contributes to higher usage rates of electronic resources. This indicates that drawing attention to available resources not only informs users but also prompts active exploration and utilization.

The interview session with library staff sought to know how postgraduate students manifest their attention to e-resources when they visit the library. Prominent themes noted in their responses ranged from training requests, account registration, resource suggestions, resource inquiries, seeking assistance to users' feedback. The interviewees indicated that postgraduate students often request training sessions on how to effectively access and utilize electronic resources available in the library. This proactive behavior indicates their attention and interest in enhancing their research capabilities. Mishra et al. (2020) note that regular training and librarian support to learners when they encounter difficulties enhance resource utilization by students. Similarly, Hatti et al. (2023) Hatti et al. reported that, librarians need to upgrade their way of conducting trainings so as to raise the level of awareness of the available e-resources. These findings underscore the importance of librarian-led training and support in maximizing the use of electronic resources by postgraduate students.

A common manifestation of attention is students asking to be registered on platforms like MyLOFT and other remote authentication applications, which facilitate easier access to e-resources seamlessly. Library staff 09 remarked, "*Students provide*

suggestions on databases and other electronic resources they feel should be included in the library's subscriptions.” This feedback reflects their engagement and attention to the quality and relevance of available resources. This observation correlates with Borteye et al. (2022) which discussed how postgraduate students actively engage with library resources and provide feedback to improve resource offerings. Another common observation was that postgraduate students frequently inquire about available electronic resources, demonstrating their interest and proactive approach to finding relevant materials for their studies. This behavior is supported by findings of Nzewi and Kakulu (2022) which highlight students' proactive use and navigation of electronic resources to support their academic pursuits.

Library staff 03 said, *“When students encounter difficulties, they seek assistance from library staff to resolve issues related to accessing and using e-resources.”* This shows their determination to fully utilize the e-resources. Additionally, the study noted that postgraduate students give feedback on the electronic resources they access, which helps the library improve its offerings. This feedback loop is a clear indication of their active engagement and attention to the resources provided. This engagement shows their commitment to understanding and using e-resources. This finding resonates with research by Mashaba and Pretorius (2023) which discussed the role of library support services in addressing students' technical and access challenges, fostering a supportive environment for resource utilization.

The study noted a convergence in the themes on the question posed to postgraduate asking them to state what needs to be done to enhance attention among postgraduate students in utilizing electronic resources, and the question posed to library staff asking them to describe the measures they had taken to improve postgraduate student's attention towards electronic resources at their university. A total of 67 statements were

received as responses, which upon further scrutiny, were narrowed down to six main themes. These were training and orientation, marketing and awareness, personalized support, resource accessibility, engagement strategies, and feedback. Library staff responses indicated existence of regular training workshops and orientation sessions specifically tailored for postgraduate students. These sessions are aimed at familiarizing students with the available electronic resources and enhancing their digital literacy skills. The postgraduate students stressed on need for frequent and periodical workshops to ensure students are well-informed and capable of utilizing e-resources effectively. These findings relates to Mwamasso and Onyango (2020) who noted that information literacy training, updating postgraduate curricula to include literacy units and promotion and marketing of electronic resources enhances their visibility and use among students. Similarly Ankrah and Atuase (2018b) noted that, effective marketing through various channels such as orientation programs, library workshops, social media platforms, and course syllabus serves as effective strategies to capture attention. Another way to increase students' attention to electronic resources is by promoting and informing them about these resources (Wagay & Dutta, 2023). These study findings and the AIDA model both emphasize the importance of attention-grabbing strategies, generating interest, cultivating desire, and prompting action among postgraduate students. The study underscores the importance of targeted strategies to enhance postgraduate students' engagement with electronic resources, aligning closely with the principles of the AIDA model. These findings suggest that effective marketing and communication strategies are crucial for increasing postgraduate students' utilization of electronic resources in libraries.

The responses gathered emphasized on awareness campaigns and marketing efforts saying that they play a crucial role in increasing the visibility and usage of e-resources.

These campaigns include creating eye-catching posts, conducting sensitization sessions, and promoting e-resources through various mobilization channels. Library staff further noted that regular updates and announcements about new resources are shared via emails and the university's platforms to keep students informed. This help to foster accessibility. Enhancing the accessibility of e-resources involves ensuring a user-friendly interface, providing adequate computers and laptops, and offering remote access options. Technological enhancements, such as the introduction of productivity apps and noise-canceling headphones, are also considered beneficial in improving the overall user experience. In agreement, Yebowaah and Plockey (2018) acknowledged that attracting library patrons' attention to library services involves creating an attractive, easy-to-navigate website that prominently showcases electronic resources on the homepage. Namande et al. (2023b) emphasized that effective marketing, sensitization, training, and awareness campaigns are crucial for engaging postgraduate students and encouraging their utilization of these resources. Additionally, Mashaba & Pretorius (2023) noted that infrastructure, ICT technologies, and internet connectivity are essential prerequisites for effectively utilization of e-resources.

Another prominent feature was personalized research support and one-on-one talks with librarians which helps to address specific needs and challenges faced by postgraduate students. Notably, mentorship programs and personalized learning approaches are designed to keep students engaged and motivated in their research activities. Feedback mechanisms, such as surveys, were also reported to be on use. They gather insights from students about their experiences with e-resources. This feedback is crucial for repackaging and continuously improving the presentation and accessibility of e-resources to better meet the needs of postgraduate students. This findings resonates with Johnston (2020) that getting consistent feedback regarding what users want can

inform training needs and revamp services to meet their needs. Students are more likely to be interested in and engaged with personalized resources that are in line with their interests (Ankrah & Atuase, 2018a).

To capture and maintain students' attention, the participating libraries employ various engagement strategies, including the use of visually appealing designs, engaging tutorials, and community-building initiatives. These efforts aim to create a more interactive and engaging environment for students to explore and utilize e-resources. This strategy is supported by Yebowaah and Plockey (2018) which discussed the importance of user-friendly designs in promoting student interaction with electronic resources. On similar observation Borteye et al. (2022) enhanced on the importance of community engagement initiatives in enhancing students' understanding of and access to electronic resources, thereby fostering their effective utilization in academic pursuits.

4.7 Results of Postgraduate Students' Interest in Electronic Resource Utilization at Selected Universities in Meru County

The second research question in this study stated, what drives postgraduate students' interest in using electronic resources at selected Universities in Meru County? In responding to this question, several statements were presented to postgraduate students. The statements collectively address aspects focusing on interest in incorporating electronic resources, library communication on relevance and importance, measures to cultivate interest in e-resources, guidelines and training for accessing e-resources, adequate e-resources for academic purposes, repackaging of e-resources, and convenience of e-resources. The responses were measured in a Likert scale, where: 1 = strongly disagree, 2 = Disagree, 3= neutral, 4= agree and 5 = strongly agree as indicated by Table 4.7.

Table 4. 7*Postgraduate students' interest in electronic resource utilization*

Sentiments on Interest	SD(1)	D(2)	N(3)	A(4)	SA(5)	Mean	STD
• I am interested in incorporating electronic resources into my academic journey.	0	9(4.1%)	16(7.3%)	60(27.5%)	133(61%)	4.41	.943
• My library communicates about the relevance and importance of the electronic resources available on the library's websites.	6(2.8%)	9(4.1%)	18(8.3%)	117(53.7%)	68(31.2%)	4.06	.898
• The library has implemented measures that effectively cultivate my interest in utilizing electronic resources.	14(6.4%)	8(3.7%)	49(22.5%)	114(52.3%)	33(15.1%)	3.66	.995
• The library provides guidelines on how to access electronic resources through adequate training.	17(7.8%)	15(6.9%)	26(11.9%)	95(43.6%)	65(29.8%)	3.81	1.168
• There are adequate e-resources for academic purposes in the library.	5(2.3%)	18(8.3%)	37(17%)	99(45.4%)	59(27.1%)	3.87	.982
• The library's efforts to repackaging e-resources to meet my needs make academic research less overwhelming.	11(5%)	13(6.0%)	47(21.6%)	81(37.2%)	66(48.6%)	3.82	1.088
• I use e-resources more because they are convenient.	4(1.8%)	8(3.7%)	31(14.2%)	69(31.7%)	106(24.3%)	4.22	.948

The results in Table 4.7 shows that a large majority 193 (88.5%) of postgraduate students are interested in incorporating electronic resources into their academic journey, 9 (4.1%) disagreed or strongly disagreed. This high level of interest indicates that universities should continue to promote and facilitate the integration of electronic resources into academic activities, as students are highly receptive to their use. This high level of interest is consistent with previous studies that emphasize the growing dependence on digital resources in higher education (Zhao et al., 2021). Such studies have shown that effective communication and accessibility significantly impact the adoption of e-resources (Anafo et al., 2020). The implication here underscores the importance for universities to not only maintain but also enhance their promotional efforts and support systems for e-resources, ensuring they adequately meet the diverse needs of their students.

A significant majority 185 (84.9%) of students agreed that the library effectively communicates the relevance and importance of e-resources, 15 (6.9%) disagreed or strongly disagreed. Effective communication from the library about e-resources enhances their utilization. Libraries should maintain and possibly increase efforts in communicating the benefits and relevance of their e-resources. This aligns with research by Singh (2020) which found that clear communication channels between libraries and students significantly boost resource utilization. This indicates that libraries should continually refine their communication strategies to keep pace with technological advancements and changing student preferences. In relation to the AIDA model, the findings demonstrate that libraries have successfully captured the students' attention and interest, but there is room to foster deeper desire and action through more engaging and tailored strategies.

A majority 147 (67.4%) of students believe that the library has implemented measures that effectively cultivate their interest in utilizing e-resources. Libraries should continue to develop and implement strategies that cultivate student interest in e-resources, such as interactive workshops and personalized resource recommendations. In agreement, Alamri et al. (2020) highlighted the effectiveness of personalized learning experiences in higher education.

A majority 160 (73.4%) of students agree that the library provides adequate guidelines and training for accessing e-resources, 32 (14.7%) disagree or strongly disagree. Providing clear guidelines and training is crucial for the effective utilization of e-resources. Libraries should ensure continuous and accessible training programs for students. This aligns to the findings of Wang et al.(2020) which stressed the importance of continuous training programs. Libraries need to ensure that these training programs are easily accessible and regularly updated to keep students adept at using new and existing resources.

A significant proportion 158 (72.5%) of students agreed that there are adequate e-resources available for academic purposes 23 (10.6%) disagreed or strongly disagreed. Adequacy of e-resources is fundamental for academic success. Libraries should regularly assess and update their e-resource collections to meet the evolving needs of students (Chelulei Kipkosgei et al., 2020). Libraries must continuously evaluate and expand their e-resource collections to cater to the evolving academic demands.

A majority 147 (67.4%) of students agree that the library's efforts to repackage e-resources make academic research less overwhelming, 24 (11%) disagree or strongly disagree. Repackaging e-resources to better meet student needs can significantly reduce the overwhelming associated with academic research. This is supported by Zhuang

(2021) who found that customized resources significantly alleviate the complexity of academic research. Libraries should continue to tailor e-resources to student requirements. A substantial majority 175 (79.1%) of students agreed that they use e-resources more because they are convenient, 12 (5.5%) disagreed or strongly disagreed. The convenience of e-resources is a key factor driving their utilization. This is consistent with the findings of (Martin et al., 2020) who observed that accessibility and usability are key motivators for student engagement with digital resources. Libraries should focus on enhancing the accessibility and ease of use of their e-resources to further encourage usage.

The postgraduate students were asked to rate the library training towards cultivating your interest to utilize electronic resources. The responses are shown in Table 4.8.

Table 4. 8

Postgraduates rating on library training provided towards cultivating your interest to utilize electronic resources

Postgraduates rating on library training provided towards cultivating their interest to utilize electronic resources	Frequency	Percent
Poor	6	2.8
Fair	26	11.9
Good	50	22.9
Very good	114	52.3
Excellent	22	10.1
Total	218	100.0

Table 4.8 shows that more than half of postgraduate respondents rated library training provided towards cultivating your interest to utilize electronic resources as very good.

The above results demonstrate a generally high level of agreement among postgraduate students regarding their interest in electronic resources at KeMU and Meru University.

This is also confirmed by a high mean value where the lowest statement recorded a mean of 3.66, and a standard deviation that was around one in each case. This meant that, there were a few variations in the responses provided by postgraduates' students from KeMU and Meru Universities. These results indicate a generally positive perception of and engagement with electronic resources among postgraduate students, with a few areas identified for potential improvement and continued development.

The findings on postgraduate interest with e-resources concurred with views gathered from library staff during interview. The researcher required library staff to describe how postgraduate students manifest their interest for e-resources when in the library.

Responses narrowed down on five different ways:

- i. Seeking assistance
- ii. Active participation
- iii. Utilizing resources
- iv. Online engagement
- v. Demonstrating curiosity

Library staff argued that the postgraduate students manifest their interest in e-resources by seeking assistance from librarians. Library staff 01 said, "*Postgraduate students request help with accessing specific e-resources and conducting database searches.*"

This indicates their proactive approach in utilizing the resources available and their eagerness to enhance their research capabilities.

They also demonstrate their interest by actively participating in workshops and training sessions focused on electronic resources. This finding corroborates with the findings presented in Table 4.8 regarding postgraduates' rating on library training provided

towards cultivating your interest to utilize electronic resources. Such training sessions are designed to provide in-depth knowledge and skills needed to effectively utilize e-resources, and the high participation rate reflects the students' commitment to leveraging these opportunities.

The responses from staff also indicated that the frequent use of library computers to access electronic databases, journals, and e-books was a clear indicator of students' interest in digital content. Library staff 06 said, "*Students regularly log into online databases and journals, and frequently search for electronic versions of books, articles, and other academic materials.*" This utilization of resources shows that students recognize the value of e-resources. It also highlights their reliance on digital resources for their research and study needs. These results support the claims made by Akuffo and Budu (2019) that postgraduate students rely heavily on electronic resources for research, coursework, thesis writing, and academic work. Similarly, Merande et al. (2021) noted that electronic resources offer diverse, current information, enabling in-depth exploration, critical analysis, and knowledge synthesis for advanced studies indicate a significant reliance on electronic resources by students for academic activities. This indicates the importance of digital content in supporting students' research. It implies that libraries need to continue investing in and expanding access to electronic databases, journals, and e-books to meet the evolving needs of students, ensuring they have the necessary tools for in-depth exploration and critical analysis in their advanced studies.

The other aspects that was heightened by library staff was that students show curiosity and interest in e-resources after librarians provide them with useful details and advantages of the subscriptions available through the university. This curiosity drives them to explore and utilize the resources more effectively, indicating their willingness

to learn and engage with the available digital tools. This findings align with observations of Vasilyeva and Vasilyeva (2019b) who observed that postgraduate students' interest in utilizing electronic resources is closely tied to generating curiosity through the provision of valuable information and emphasizing the benefits of subscribed e-resources. Similarly, Norch and Adzakpa (2022) noted that effectively communicating the advantages of electronic resources can increase postgraduate students' interest in utilizing them. The findings indicate that librarians play a crucial role in stimulating students' curiosity and interest in e-resources by effectively communicating their benefits and features. This implies that librarians should focus on disseminating valuable information about e-resources to enhance student engagement and utilization.

Considering the value of interest component in the model, the researcher asked library staff respondents to describe the measures put in place to cultivate interest among postgraduate students in utilizing electronic resources at their universities. Six themes stood out from twenty-one statements transcribed from interview. These were orientation and training, communication and promotion, personalized support, access and usability, integration and collaboration, and quality of resource.

To cultivate interest in e-resources, library staff 03 said, "*The University allocates adequate time for library orientations and conducts regular refresher training sessions.*" These sessions aim to familiarize new postgraduate students with the electronic resources available and enhance their digital literacy through detailed training workshops.

The library staff also focuses on communicating the advantages of e-resources over print resources. The responses received indicated that libraries employ various

marketing and promotional strategies, including information repackaging, to make the benefits of e-resources clear to students. This initiative helps in raising awareness and generating interest in postgraduates utilizing these digital tools. The finding indicates that libraries are using marketing and promotional strategies, including information repackaging, to effectively communicate the advantages of e-resources over print resources. These relates to Ankrah and Atuase (2018a) that communicating usefulness, quality and advantages of e-resources over the print sources help cultivate interest among students. This study highlights that effectively communicating the benefits of e-resources and using marketing strategies like information repackaging are key to raising awareness and generating interest among postgraduate students.

Another key measure in cultivating interest was personalized support. Library staff 01 said, *“Librarians provide one-on-one research consultations to help students navigate electronic resources relevant to their specific research projects.”* Additionally, personalization of individual user preferences ensures that students receive tailored assistance, enhancing their experience and engagement with e-resources. Customizing individual user preferences and aligning electronic resources with these preferences positively impacts utilization patterns, leading to increased engagement levels (Ankrah & Atuase, 2018b; Frimpong & Addo, 2020). These findings indicate that recognizing and attending to user preferences not only facilitates tailored resource delivery but also encourages greater interest and more efficient use of electronic resources.

Another prominent measure mentioned was ensuring that the electronic resources platform is user-friendly and easily accessible by students. In this one, the researcher learnt that the library provides 24/7 availability to online tutorials, video guides, and FAQ sections on its website to facilitate smooth access to e-resources, thereby encouraging students to utilize them more frequently. This confirms the assertion made

by Ogunbodede et al. (2022) that online user guidelines and user-friendly interfaces improves access to online content among postgraduate students. These findings underscore the critical role of accessible platforms and clear guidance in enhancing student engagement with electronic resources.

Moreover, library staff 010 stressed how the library has been collaborating with faculty to integrate electronic resources into the curriculum. This staff went on and said, *“The library ensures that these resources are directly linked to course assignments and projects.”* This integration makes e-resources an essential part of the students' academic activities, fostering their interest and utilization. These findings underscore the strategic benefits of integrating electronic resources into the academic curriculum through collaboration between library staff and faculty. Consequently, the argument made by Ankrah and Atuase, (2018a) emphasized on integrating electronic resources into course materials through collaboration with faculty ensures that students encounter these resources as fundamental components of their academic curriculum.

Maintaining the quality of resources was also noted as vital in sustaining interest of postgraduate students for e-resources. Library staff 05 said, *“The library ensures that the databases acquired are current and contain up-to-date information”*. This commitment to quality assures students that they have access to reliable and relevant information, motivating them to use e-resources regularly. This implies that ensuring the quality and currency of databases is crucial in sustaining postgraduate students' interest in e-resources. In agreement, Fatmawati (2021) and Rosman et al. (2022) highlighted that the quality of e-resources is critical and correlates positively with sustaining postgraduate students' interest. This study suggests that universities should prioritize maintaining the quality of electronic resources by ensuring databases are updated and contain reliable information.

The study was finally interested to understand on what needed to be done to enhance interest among postgraduate students in utilizing electronic resources. A total of 64 suggestions were received which further analyzed to identify key themes. The exercise resulted to seven broad themes as noted below.

- i. Training and awareness
- ii. Access and usability
- iii. Resource quality and availability
- iv. Communication and promotion
- v. Integration and support
- vi. Guidelines and objectives
- vii. Incentives

From the above themes, it is clear that the postgraduate students emphasized the need for customized training and tailored workshops to better understand and utilize electronic resources. Frequent training sessions and peer-to-peer discussions were suggested as effective ways to enhance awareness and interest. This indicates that postgraduate students prioritize customized training and tailored workshops to improve their understanding and utilization of electronic resources. This confirmed Ruzegea and Msonde (2021b) suggestion that targeted workshops, seminars, and training sessions specifically designed for accessing and utilizing e-information resources effectively contribute significantly to enhancing user engagement and interest.

Improving internet connectivity and creating user-friendly interfaces were highlighted as essential measures. Mashaba and Pretorius (2023) observed that a stable internet connection and a user-friendly interface enhance attention towards utilizing e-

resources. Students also recommended developing online user guidelines and ensuring easy access through the student portal. Creating engaging and interactive online guides customized to meet user needs can boost resource utilization among postgraduate students (Anyim, 2020). Another suggestion was on adequate internet provision, especially in private study rooms, was noted as necessary to facilitate seamless access to e-resources. Ruzagea and Msonde (2021b) noted that many libraries develop digital collections, and implement robust systems and platforms to ensure seamless access to electronic resources. Ensuring that the electronic resources are up-to-date and increasing the availability of e-books was also suggested. Students further stressed the importance of regularly updating e-journals and research materials to maintain quality and relevance. Rosman et al. (2022) emphasized the importance of maintaining up-to-date and diverse resources to attract interest. Providing open access resources and continually updating the library collection were also mentioned. This implies a need for continuous investment in digital infrastructure, user-friendly interfaces, and updated content to maximize the effectiveness of electronic resources in supporting postgraduate education and research.

Effective communication and regular marketing of e-resources were also deemed important. This supports findings by Frimpong and Addo (2020) that marketing of available resources and services can spur interest in e-resource utilization. Postgraduate students further suggested need for setting up alerts for new resources and utilizing social media platforms for wider reach. Integrating e-resources into the curriculum and having lecturers insist on using e-books for assignments were seen as ways to increase usage. This aligns with Ankrah and Atuase (2018a) emphasis on collaborative efforts to integrate electronic resources into course materials, ensuring that students are consistently exposed to these resources as integral components of their academic

curriculum. In addition, continuous support, both regular and personalized, along with good customer service, were identified as key factors in sustaining interest and ensuring effective utilization. Similarly, Murithi et al. (2020) observed that customer care is also predicted to act as a magnet for attracting postgraduate students' needs for library services. These findings suggest that enhancing postgraduate students' engagement with electronic resources requires a multifaceted approach. These strategies underscore the importance of proactive measures in fostering a conducive environment where electronic resources effectively support and enhance postgraduate education.

Proper user guidelines were and well-defined objectives seen as essential in setting direction and structure helping students navigate and make the most of the available resources. Ogunbodede et al. (2022) highlighted that well-designed online user guidelines for accessing e-resources enable users to navigate easily and make effective use of available resources. Postgraduate students also pointed out the idea of introducing incentives such as certificates of recognition for active users of e-resources as a motivational strategy to encourage more students to engage with digital content. Ruzegwa and Msonde (2021b) noted that inciting students' incentives for proactive engagement in e-resource motivate them to engage with this resources. The findings highlight the vital role of clear user guidelines and incentives in enhancing postgraduate students' engagement with electronic resources. Effective online guidelines facilitate easier navigation and utilization of digital resources, while incentives such as recognition certificates motivate students to actively participate in utilizing these resources.

4.8 Results on Postgraduate Students' Desire for Electronic Resource Utilization

KeMU and Meru University

The third research question in this study stated, how is postgraduate students' desire for electronic resource utilization at selected Universities in Meru County? In responding to this question, several statements were presented to postgraduate students. The statements were about desire to incorporate electronic resources, library focus on e-resource benefits, enjoyment of convenience, perceived value and convenience, relevance and up-to-date resources, library's dedication to accessibility, user-friendly library website, accessibility anytime, anywhere; real-time updates and latest research, and interactive features and multimedia content. The responses were measured in a Likert scale, where: 1 = strongly disagree, 2 = Disagree, 3= neutral, 4= agree and 5 = strongly agree as indicated by Table 4.9.

Table 4. 9***Postgraduate students' desire for electronic resource utilization at selected Universities in Meru County***

Sentiments on Desire	SD(1)	D(2)	N(3)	A(4)	SA(5)	Mean	STD
• I express a strong desire to incorporate electronic resources into my academic research and studies	7(3.2%)	2(0.9%)	9(4.1%)	83(38.1%)	117(53.7%)	4.38	.873
• My library focuses on the benefits of e-resources during orientations and training sessions.	9(4.1%)	4(1.8%)	28(12.8%)	99(45.4%)	78(35.8%)	4.07	.965
• I enjoy the convenience of accessing e-resources anytime, anywhere.	2(0.9%)	7(3.2%)	16(7.3%)	105(48.2%)	85(39%)	4.62	1.452
• The perceived value and convenience of e-resources strongly shape my preference for utilizing them.	5(2.3%)	4(1.8%)	31(14.2%)	104(47.7%)	74(33.9%)	4.09	.870
• The e-resources available at the library are relevant and up-to-date.	4(1.8%)	15(6.9%)	29(13.3%)	104(47.7%)	66(30.3%)	3.98	.938
• The library's dedication to ensure e-resource accessibility greatly improves my desire in using them.	2(0.9%)	16(7.3%)	29(13.3%)	108(49.5%)	63(28.9%)	3.98	.895
• The library website is user friendly	7(3.2%)	12(5.5%)	41(18.8%)	85(39%)	73(33.5%)	3.94	1.017
• Electronic resources are accessible whenever I want, no matter where I am or what time it is unlike print resources	7(3.2%)	25(11.5%)	26(11.9%)	96(44%)	64(29.4%)	3.85	1.069
• Electronic resources provide real-time updates and access to the latest research findings, hence their relevance	5(2.3%)	12(5.5%)	29(13.3%)	84(38.5%)	88(40.4%)	4.09	.979
• Electronic resources offer interactive features and multimedia content that enhance engagement and diverse learning styles compared to print materials.	2(0.9%)	8(3.7%)	25(11.5%)	108(49.5%)	75(34.4%)	4.13	.821

A very high majority 200 (91.8%) of postgraduate students expressed a strong desire to incorporate electronic resources into their academic research and studies while 9 (4.1%) disagreed. The strong desire suggests that students are eager to use electronic resources, and universities should ensure easy access and integration into academic programs to satisfy this demand. Ruzegea and Msonde (2021b) observed that students tend to use electronic resources more frequently when they perceive these resources as both user-friendly and beneficial for their academic requirements. A significant majority 177 (81.2%) of students agree that their library focuses on the benefits of e-resources during orientations and training sessions, 13 (5.9%) disagreed. Highlighting the benefits of e-resources during orientations and training sessions is effective and should be continued to further encourage usage. A vast majority 190 (87.2%) enjoy the convenience of accessing e-resources anytime, anywhere while 9 (4.1%) disagreed. Convenience is a major factor for students, and libraries should maintain and improve the availability and accessibility of e-resources. Electronic resources facilitate convenient access, search, retrieval, and utilization of information in digital formats, enhancing user efficiency and accessibility (Akuffo & Budu, 2019). Ensuring continuous availability and accessibility of electronic resources is crucial for supporting student engagement and academic success.

A significant majority 178 (81.6%) of students believed the perceived value and convenience of e-resources shape their preference for utilizing them, while 9 (4.1%) had contrary opinion. Libraries should emphasize the value and convenience of e-resources to maintain and increase their utilization. These findings concur with Azonobi et al. (2020) that, perceived usefulness and convenience as key drivers to electronic resource utilization. A majority 170 (78%) agreed that the e-resources available at the library are relevant and up-to-date, while 19 (8.7%) disagreed. Keeping e-resources

relevant and up-to-date is crucial for their continued use. Libraries should regularly update their collections to meet the current academic needs of students. This aligns with the assertion made by Ruzegea and Msonde (2021b) that students strongly desire resources that are easily accessible and regularly updated. The findings indicate that students prioritize perceived value and convenience when using electronic resources in academic libraries. By strategically focusing on these aspects, libraries can effectively enhance student satisfaction and utilization of their electronic resources.

A majority 171 (78.4%) agreed that the library's dedication to ensuring e-resource accessibility improves their desire to use them, 18 (8.2%) disagreed. Libraries should maintain and enhance their efforts to ensure that e-resources are easily accessible to all students. A majority 158 (72.5%) agreed that the library website is user-friendly, 19 (8.7%) disagreed. A user-friendly website is important for resource access. Libraries should focus on improving website usability to enhance student experiences. Yebowaah and Plockey, (2018) recommended that libraries should adopt visually appealing and user-friendly websites with clear layouts and easy navigation to facilitate effortless access to resources. A significant proportion 160 (73.4%) agreed that e-resources are accessible whenever and wherever needed, unlike print resources, 32 (14.7%) disagreed. Highlighting the anytime, anywhere accessibility of e-resources can further promote their use. In agreement, Issa et al. (2020) emphasized that the accessibility of information anytime and anywhere is a critical factor in influencing attitudes towards e-resources. Libraries should emphasize this advantage in their communication strategies.

A majority 172 (78.9%) agreed that e-resources provide real-time updates and access to the latest research findings, while 17 (7.8%) disagreed. The ability to access the latest research in real-time is a significant benefit of e-resources. Electronic resources offer

diverse and up-to-date information, facilitating in-depth exploration, critical analysis and synthesis of knowledge required for advanced research Merande et al. (2021). Libraries should continue to offer resources that provide current information. A significant majority 183 (83.9%) agreed that e-resources offer interactive features and multimedia content that enhance engagement and cater to diverse learning styles, while low majority 10 (4.6%) disagreed. Interactive features and multimedia content are highly valued by students. Libraries should continue to provide and expand these types of resources to meet diverse learning preferences. Anunobi and Emezie (2020) noted that offering information resources in diverse formats, including interactive platforms and multimedia, is essential for increasing postgraduate students' interest in e-resources. These results demonstrate a high mean value where the lowest was 3.85 and a mean standard deviation that was around 1 in each case. This indicated high level of agreement to the statements provided with minimal variations in the responses. These findings indicate the importance for libraries to maintain and expand resources that offer current information and interactive learning opportunities to effectively support student needs and preferences.

The postgraduate students were asked to rate the library training offered towards cultivating the desire to utilize electronic resources. The responses are shown in Table 4.10.

Table 4. 10

Postgraduates rating on library training offered towards cultivating the desire to utilize electronic resources

Postgraduates rating on library training offered towards cultivating the desire to utilize electronic resources	Frequency	Percent
Poor	5	2.3
Fair	16	7.3
Good	70	32.1
Very good	101	46.3
Excellent	26	11.9
Total	218	100.0

Table 4.8 shows that 101(46.3%) postgraduate respondents rated library training offered towards cultivating the desire to utilize electronic resources as very good. The foregoing results shows an overwhelming positive response to e-resources among postgraduate students. This indicates a clear need for university libraries to prioritize, enhance, and expand their e-resource offerings and related services. This includes improving accessibility, maintaining up-to-date and relevant collections, ensuring user-friendly interfaces, and emphasizing the unique benefits of e-resources such as convenience, real-time updates, and interactive features. Libraries should align their strategies with these student preferences to maximize resource utilization, support diverse learning styles, and ultimately contribute to improved academic outcomes and research capabilities among postgraduate students. In agreement, Ruzegwa and Msonde (2021b) highlighted that students prefer resources that are easily accessible and frequently updated. On a similar observation Zhang et al.(2020) noted that psychological elements like perceived value, convenience, and motivational influences

significantly contribute to drawing users to these resources. Moreover, user preferences are shaped by the quality and authenticity of the information, as well as satisfaction from previous experiences (Uwandu, 2020).

The interview with library staff sought to establish how postgraduate students manifest their desire for e-resources when they go to the library. The manifestation was summarized into six ways that included positive attitudes and perceptions, active engagement, direct utilization, resource requests, commitment to research, and academic application. Results indicated that postgraduate students demonstrate a positive attitude and a proactive outlook towards the e-resources once they become aware of them. They perceive these resources as valuable and essential for their academic success, and the same is reflected in their engagement and utilization patterns. Zhang et al. (2020) noted that psychological factors such as perceived value, convenience, and motivating influences drive patrons' desire to utilize resources. Similarly, Uwandu (2020) discovered that users' desires are greatly influenced by the quality and authenticity of information materials, as well as their satisfaction with previous experiences. This perspective highlights the influential role librarians play in shaping students' desire and behaviors towards electronic resources within academic libraries.

Some postgraduate students book training sessions and showing strong participation during electronic resources workshops implying students' active engagement. Library staff 07 said, *“Postgraduate students frequently ask librarians for information on specific electronic resources and databases, indicating their proactive approach to learning and utilizing these tools.”* Some responses also indicated many postgraduate students also schedule personalized consultations with librarians, seeking tailored advice for their research projects. Library 06 explained how postgraduate students often

go straight to sections of the library that are equipped with computer labs or designated e-resource terminals, showcasing their intent to use these resources. Among many other things the students download significant amounts of digital content, organize it systematically, and incorporate it into their academic work, reflecting a deep engagement with the e-resources. This studies reveal a consistent trend of postgraduate students actively engaging with electronic resources to enhance their academic endeavors. Akuffo and Budu (2019) investigated e-resource usage among postgraduate students at a theological university in Ghana, highlighting both high awareness and significant academic benefits from using e-resources. Similarly, Eireyi-Fidelis and Ivwighreghweta (2022) examined the use of electronic academic databases at Western Delta University, Nigeria, and found high awareness and frequent usage for research purposes. This indicates that students recognize the significant benefits of e-resources for their academic work, suggesting that awareness campaigns and training programs have been effective. The findings also highlight the importance of continued support and development of e-resources to meet the research needs of postgraduate students, ensuring they can access and utilize these resources to enhance their academic endeavors.

Library staff 02 remarked, *“Postgraduate students often express their desire for specific e-resources by requesting the library to subscribe to particular journals, databases, or e-books that are relevant to their research needs.”* This proactive behavior highlights their keen desire in accessing comprehensive and specific academic materials. Some postgraduate students are noticed spending extended hours in the library, especially in areas equipped with high-speed internet and e-resource access, which underscores the students' commitment to using these resources for extensive research. This behavior demonstrates their dedication to leveraging e-resources to

enhance their academic work. Moreover, the use of e-resources in their academic work, such as citing them in research papers and projects, also illustrates the students' desire to utilize these tools. This practical application of e-resources in their academic endeavors highlights their recognition of the value and importance of these resources in their scholarly activities. Mashaba & Pretorius (2023) noted that postgraduate students at a South African university use e-library resources heavily revealing a high awareness and proactive use, similar to the behavior described by Library staff 02. Similarly, Ankrah and Atuase (2018a) noted that postgraduate students at the University of Cape Coast are highly aware of e-resources and prefer using web-based databases over library databases, underscoring the need for improved internet connectivity and library resources. The proactive behavior of postgraduate students in leveraging e-resources and investing time in library research not only enhances their individual academic journeys but also contributes to the overall scholarly environment by promoting rigorous research practices and knowledge advancement.

The study further asked the library staff to explain how the desire of postgraduate students towards electronic resources contributes to their utilization in university libraries. Their explanation was analysed to infer common themes, resulting to five of them; information empowerment, high demand and usage, active engagement, full utilization of features, and consistent use.

According to library staff, the desire for electronic resources empowers postgraduate students by enhancing their information literacy and improving their search and retrieval skills. Library staff 03 *“explained that through one-on-one training sessions, students gain the necessary skills to access and utilize e-resources effectively, leading to improved academic outcomes.”* The same librarian explained that high demand and frequent usage of e-resources by postgraduate students provide valuable insights for

libraries. This demand helps libraries make informed decisions about which resources to maintain and prioritize, ensuring that the most relevant and useful resources are available to students. Similarly, Zhao et al. (2021) noted that information literacy training significantly improves graduate students' objective information literacy skills. Both studies underscore the importance of training in equipping students with the skills needed to effectively access and utilize e-resources, leading to better academic outcomes.

Another explanation gotten was that postgraduate students with a strong desire for electronic resources are more likely to actively seek out and engage with these tools. This proactive behavior indicates a deeper level of engagement with e-resources, which in turn enhances their academic research and learning experiences. The library staff respondents further agreed that postgraduate students who desire electronic resources tend to explore and utilize the full range of available features. This includes advanced search functions, citation tools, and personalized alerts, all of which contribute to a more effective and efficient research process. It is being also clear that a strong desire for electronic resources leads to regular and consistent use. This consistent engagement with e-resources ensures that students are continually benefiting from the wealth of information and tools available, which supports their ongoing academic success. Recent studies highlight the significant impact of electronic resources on the academic engagement and success of postgraduate students. This findings concur with Mashaba and Pretorius (2023) found that postgraduate students who actively use electronic library resources benefit significantly from these tools, supporting the idea that a strong desire for such resources leads to higher academic performance. Similarly, Eireyi-Fidelis and Ivwighrehweta (2022) observed high usage of databases like JSTOR and

ProQuest among postgraduate students at Western Delta University, Nigeria. This usage was found to enhance the students' research activities.

The study was also interested in establishing measures put in place by libraries to ensure postgraduate students have a strong desire to use electronic resources for their academic pursuits. Key measures noted evolved around quality information, positive experiences, orientation and training, remote access, curriculum integration, personalized support, online guides, accessibility, availability, and regular updates.

Library staff 08 stressed, *“The University subscribes to high-quality information materials, ensuring students have access to authentic and peer-reviewed e-resources.”*

This commitment to quality resources fosters trust and reliability, enhancing the desire to utilize these e-resources for academic work. Other measures were characterized by effort to create positive experiences by satisfying customers helps build good memories about the library from past interactions. This positive reinforcement encourages students to return and continue utilizing the library's e-resources. The libraries also indicated that they organize detailed orientation sessions and provide regular workshops and specialized training sessions on electronic resource utilization ensure that students are well-informed and comfortable using these resources. This ongoing education cultivates a desire to engage with e-resources. These findings reveal that promoting the effective utilization of electronic resources among postgraduate students requires a multifaceted approach. This approach should include quality assurance, user satisfaction, and continuous education. This findings align to Mashaba and Pretorius (2023) who noted that access to authentic, peer-reviewed e-resources at South African universities significantly enhanced postgraduate students' research capabilities. Similarly, Eireyi-Fidelis and Ivwighreghweta (2022) highlighted that at Western Delta

University, Nigeria, the provision of electronic academic databases and regular training sessions contribute to improved research outcomes.

Responses gotten pointed out the remote access provision to electronic resources through VPN or proxy services which ensures that students can access materials from anywhere at any time. This flexibility supports students' varied schedules and needs, increasing their desire to use e-resources. In addition, the aspect of integrating electronic resources into the curriculum was noted. This direct connection to coursework makes e-resources indispensable for academic success, fostering a strong desire to utilize them. These findings reveal that the provision of remote access and the integration of e-resources into the curriculum are critical strategies for enhancing the utilization and effectiveness of electronic resources. These measures support students' academic needs and foster a greater desire to engage with e-resources, ultimately contributing to their academic success. Singh (2020) noted that during the COVID-19 pandemic, tools like VPN and proxy services were crucial for students to access library resources from home. Singh found out that postgraduate students used these tools the most, showing the need for flexible access to suit different study schedules and needs. Similarly, Borteye et al. (2022) found that postgraduate students frequently used remote access facilities from home and office, demonstrating the importance of seamless off-campus access for academic work. Ankrah and Atuase (2018a) noted that collaborating with faculty to integrate electronic resources into course materials ensures that students are exposed to these resources as part of their academic curriculum.

Other aspects of measures entailed offering one-on-one research consultations with librarians, paving way for personalized support. Other support noted included online tutorials, resource guides, and video guides on the library's website. They have in addition ensured that electronic resources are easily accessible through user-friendly

interfaces reduces barriers to utilization. Making e-resources easy to access, both on-campus and remotely, encourages students to use them more frequently. The other thing noted is the 24/7 availability and accessibility to electronic resources and ensuring that support is available around the clock helps students who may be working on their research at unconventional hours. They further ensure regular updating of the electronic resource collection and staying current with the latest academic databases and e-journals to ensure that students have access to the most recent and relevant information. This constant availability and continuous improvement fosters a reliable and consistent use of e-resources. A study by Ankrah and Atuase (2018a) revealed that strategies like personalized support and user-friendly interfaces significantly enhance the usage of e-resources among postgraduate students. Similarly, library workshops, user-friendly interfaces, and tutorials tailored for postgraduate students to explore available electronic resources and understand their benefits for research and learning have been demonstrated to be effective (Ankrah & Atuase, 2018a).

The areas of improvement were sought by asking the postgraduate respondents to state what needed to be done to cultivate desire among postgraduate students in utilizing electronic resources at their university libraries. More than thirty suggestions were received and grouped into increase internet bandwidth and make internet reliable, more electronic materials, training and support, awareness and communication, relevance, policies and procedures, user engagement, integrate resources into curriculum, and support and environment.

Enhancing internet bandwidth and ensuring reliable internet access is crucial. Similarly, opening the library on Sundays and maintaining a user-friendly website is believed to facilitate better access to electronic resources, making them more attractive to students. Postgraduate students also said that providing frequent and tailored training sessions,

along with adequate support, will help them to understand the importance of e-resources and how to use them effectively. Training should be incentivized to encourage participation. Integrating electronic resources into the curriculum and providing continuous support, both technical and academic, within a supportive environment will help students feel more confident in using e-resources. These indicate the importance of reliable internet access and tailored support in enhancing the utilization of electronic resources by postgraduate students. Kay (2019) observed that, friendly- user interfaces improved proactive reactions by students to search, retrieve, access and utilize online resources. He recommended that, continued enhancement of these features promotes the utilization of e-resources due to website redirections, suggestion information filtering and navigation features.

Another key suggestion was about tailoring resources to align with students' specific research interests and ensuring that every program has relevant resources will increase their value and usability. It can organize peer-to-peer discussions and interactive sessions, along with providing feedback mechanisms and recognition for users. This will foster a more engaged and supportive user community. The library was also urged to consider developing policies that promote equitable access and implementing a platform for password management will streamline resource utilization and ensure fair access for all students. These indicate the importance of tailoring electronic resources to meet the specific research needs of postgraduate students. These results support claims made by Ankrah and Atuase (2018a) that tailoring relevant electronic resources with user preferences, such as content format, positively impacts and students' utilization patterns. Similarly Griadhi et al.(2018) observed that the quality of resources and services plays a significant role in attracting users to utilize them.

4.9 Results on Postgraduate Students' Proactive Actions in Utilizing Electronic Resources

The fourth research question in this study stated, ‘what proactive actions are noticed among postgraduate students when utilizing electronic resources at selected Universities in Meru County’? In responding to this question, several statements were presented to postgraduate students. The statements were about regularly searching the library's digital database, seeking out relevant e-resources, motivation due to user-friendly procedures, checking the library’s e-resource portal, collaboration with peers, advanced search techniques, and incorporating citations from e-resources. The responses were measured in a Likert scale, where: 1 = strongly disagree, 2 = Disagree, 3= neutral, 4= agree and 5 = strongly agree as indicated by Table 4.11.

Table 4. 11*Postgraduate students' proactive actions in utilizing electronic resources at selected Universities in Meru County*

Sentiments on Action	SD(1)	D(2)	N(3)	A(4)	SA(5)	Mean	STD
• I regularly search the library's digital database for e-resources.	8(3.7%)	33(15.1%)	49(22.5%)	87(39.9%)	41(18.8%)	3.55	1.073
• I actively seek out e-resources in the library that align with my research needs, ensuring I have access to relevant materials.	2(0.9%)	17(7.8%)	37(17.0%)	108(49.5%)	54(24.8%)	3.89	.897
• I am motivated to utilize e-resources more frequently in my academic work due to the user-friendly procedures provided for accessing them.	3(1.4%)	8(3.7%)	44(20.2%)	103(47.2%)	58(26.6%)	4.40	0.766
• I regularly check the library's e-resource portal on my own initiative, seeking out new additions to the collection that can benefit my research.	15(6.9%)	17(7.8%)	51(23.4%)	93(42.7%)	42(19.3%)	3.60	1.096
• I collaborate with my peers to share knowledge and resources, hence expanding my access to electronic materials beyond what I can find individually.	21(9.6%)	18(8.3%)	36(16.5%)	91(41.7%)	52(23.9%)	3.62	1.209
• I make use of advanced search techniques to locate specific e-resources relevant to my research topics.	9(4.1%)	23(10.6%)	24(11%)	99(45.4%)	63(28.9%)	3.84	1.083
• I incorporate citations from electronic resources into my academic work, acknowledging their importance in enriching my research.	6(2.8%)	8(3.7%)	15(6.9%)	96(44%)	93(42.7%)	4.20	.924

The findings in Table 4.11 show that postgraduate students undertook several proactive actions in utilizing e-resources as indicated by a high mean value, the lowest being 3.55 and the highest was 4.40. The standard deviation was also around 1 in most cases indicating less variation on the responses provided by respondents across various statements. The results specifically show that an overwhelming majority, 189 (86.7%) incorporate citations from electronic resources into their academic work, acknowledging their importance, while, 14 (6.5%) disagreed. Merande et al. (2021) noted that postgraduates students utilize electronic resources because they provide diverse and up-to-date information, facilitating comprehensive exploration of knowledge necessary for advanced research. The results emphasize the importance of citing e-resources can promote their use and recognition in academic work. Libraries should provide proper citation guides and tools to support this practice.

It was further noted that 162 (74.3%) actively seek out e-resources that align with their research needs, but 19 (8.7%) indicated a contrary opinion. This indicates that a substantial majority of postgraduate students prioritize and actively engage in seeking out electronic resources that are relevant to their research needs. This relates to observation made by Anyim (2020) that proactive actions towards accessing and utilizing e-resources in Nigeria have been facilitated by understanding user needs and effectively meeting them. The results emphasize the need for libraries to ensure easy access to relevant materials and provide guidance on how to find them effectively.

It is also clear that a significant majority, 162 (74.3%) make use of advanced search techniques to locate specific e-resources relevant to their research topics; although 32 (14.7%) disagreed with the statement. This implies that libraries should provide training and support on advanced search techniques to help students find specific and relevant e-resources. Hussain et al. (2021) emphasized on regular training of faculty members

in Pakistan to enhance their information search and retrieval skills. Results also show that 161 (73.8%) are motivated to use e-resources more frequently due to user-friendly procedures for accessing them, while 11 (5.1%) are not. The findings mean that maintaining and improving user-friendly access procedures can significantly enhance the utilization of e-resources. This aligns with Anyim (2020) that user friendly guidelines provided on library website motivate students to access and utilize e-resources.

The statements regarding postgraduate students regularly searching the library's digital database, checking the library's e-resource portal, and collaborating with peers had the lowest rating although the mean values were still high, that is, above medium of 3.4. According to the findings in Table 4.11, 128 (58.7%) of postgraduate students regularly search the library's digital database for e-resources, but, 41 (18.8%) disagreed with the statement. Libraries should continue to improve and promote their digital databases to support frequent use by students. Parmar et al. (2021) observed that postgraduates utilize digital databases due to their extensive scholarly content, offering convenience, accessibility, and immediacy compared to traditional print resources. Also, 143 (65.6%) collaborate with peers to share knowledge and resources, expanding their access to electronic materials. However, 39 (17.9%) disagreed, hence the need to encourage collaborative efforts and resource sharing among students can enhance the utilization of e-resources. This relates to Azonobi et al. (2020) found that postgraduate students' cooperative learning and resource sharing contribute to the proactive use of electronic resources. Similarly, 135 (62.0%) regularly check the library's e-resource portal on their own initiative, while 32 (14.7%) said they do not. Libraries should continue to update their e-resource portals and communicate these updates effectively to encourage regular checking by students.

The study was interested in establishing some of proactive actions taken by postgraduate students when using e-resources in the library. Nineteen statements were provided by library staff during interview, which were narrowed down to ten distinct ways. These were: feedback and communication, attending webinars and regular training sessions, consultation and guidance, advanced search techniques, downloading information materials, collaboration, social media and online platforms, proactive use and requests, user experience and satisfaction, and resource utilization.

The library staff argued that postgraduate students actively provide feedback on their experiences with e-resources and library services. This feedback helps the library improve its offerings and better meet the students' needs. Additionally, students request new subscriptions to electronic journals and resources that they find valuable for their research. This aligns with Bradley et al. (2020) that feedback from students is crucial for libraries to adjust their services and resources, ensuring they align with the academic requirements of postgraduate students. Sikora et al. (2019) noted how student requests for specific resources lead to the acquisition of new electronic journals and databases, enhancing the overall resource pool available to them. These findings underscore the significance of student feedback in driving improvements within libraries. By addressing specific needs and preferences of students, libraries can enhance satisfaction levels and optimize resource utilization more effectively.

Another observation submitted by library staff was online webinars, workshops, and training sessions where the postgraduates join/attend to stay updated on new e-resources and improve their skills in using existing ones. Participating in these events helps them learn advanced search techniques, citation management, and other valuable skills.

Another manifestation noted was increased postgraduate consultation with librarians for personalized guidance on using specific e-resources for their research topics. Library staff 07 said, “*The postgraduate students usually schedule one-on-one research consultations to get tailored assistance in navigating and utilizing electronic resources.*” Postgraduate students also use advanced search techniques, such as Boolean search terms and filters, to refine their search results in databases and digital libraries. This proactive approach helps them find the most relevant materials for their research. Consequently, they are able to download e-books, articles, and other materials for offline access, ensuring they have the necessary resources at hand when needed. They also set up search alerts in various databases to receive notifications about new publications relevant to their research topics. Bradley et al. (2020) found that research consultations effectively meet student learning expectations, improving skills in finding sources, developing search strategies, and using specific tools. Similarly, Sikora et al. (2019) noted that individualized research consultations at the University of Ottawa significantly improved students' search techniques and confidence levels. These studies collectively show that tailored assistance from librarians enhances postgraduate students' ability to navigate and utilize electronic resources effectively.

In addition, postgraduate students collaborate with peers and colleagues on research projects, sharing electronic resources and insights through collaborative tools and platforms. Students' collaboration is also noticed through forming of study groups when doing course works and in the sharing of knowledge, which collectively leads to better utilization of e-resources. Postgraduate students actively engage with library e-resources by following social media, participating in online discussions, requesting new subscriptions, and providing feedback on access issues (Mofana & Jacobs, 2018). Their proactive behavior improves resource availability, enhances user experience, and

generates usage data that supports library decision-making. This engagement contributes to the effective utilization and continuous improvement of library services for postgraduate students. This correlates with Anyim (2020) and Mwanzu et al. (2022) that indicators of postgraduate proactive engagement with e-resources include self-regulated learning, information needs assessment, and collaborative learning approaches.

The library staff who were interviewed submitted several measures that had been put in place to ensure postgraduate students at their university take proactive action in utilizing electronic resources. Outstanding measures noted included guidance and support, training and orientation, information services, online resources, promotion and awareness, accessibility and user-friendliness. The study noted that, the library supports postgraduate students' use of electronic resources through various means, including tutorials, an "Ask a Librarian" service, and one-on-one consultations. Regular trainings, orientations, and workshops enhance digital literacy skills. Additionally, the library offers information search and retrieval services, along with personalized research consultations, to help students effectively navigate and utilize e-resources for their specific academic needs. Borteye et al. (2022) explored the awareness and utilization of remote access to electronic resources, highlighting the significance of information literacy training sessions in enhancing postgraduate students' engagement with e-resources. Additionally, encouraging the use of remote access facilities through training and awareness campaigns can significantly increase utilization. Similarly, Norch and Adzakpa (2022) stressed the importance of enhanced information literacy training for users. These comprehensive measures aim to equip and support students in maximizing the value of academic tools provided by libraries. By focusing on user interface,

accessibility, support, and resource availability, libraries can significantly enhance their effectiveness and value to students.

It was also clear that the library facilitates proactive use of electronic resources by postgraduate students through multiple strategies. These include providing online tutorials and guides, promoting resources via various channels, and ensuring user-friendly access both on-campus and remotely. Technical support is available to address any access issues. This comprehensive approach empowers students to independently navigate e-resources, raises awareness of available materials, and contributes to their effective utilization and academic success. These findings align with Mwamaaso and Onyango (2020) who highlighted the effectiveness of online tutorials and guides to educate postgraduate students to proactively engage with e-resources. Additionally, Mwamaaso and Onyango emphasized on role of enhanced ICT infrastructure and strong technical support in university libraries to improve students' readiness to access e-resources. These findings highlight libraries' crucial role in empowering postgraduate students through proactive strategies. This proactive approach not only enriches students' experience but also strengthens the academic foundation necessary for their scholarly endeavors.

The researcher finally asked the postgraduate students to suggest in an open-ended question what the library should do to promote proactive action among postgraduate students in utilizing electronic resources. A total of 53 suggestions were provided which were scrutinized with a view to identifying main themes. This resulted to six themes that included; training workshops, curriculum integration, awareness and promotion, user interface and accessibility, support and feedback and resource availability.

To promote proactive use of electronic resources among postgraduate students, libraries were urged to implement three key strategies: comprehensive training and workshops,

curriculum integration, and awareness campaigns. Other suggestions included regular sessions and mentorship programs enhance students' skills, while collaboration with faculty embeds e-resources into course requirements. In addition, marketing efforts and seminars increase awareness of available resources, emphasizing their importance for academic success. These combined approaches aim to make e-resources indispensable tools for postgraduate studies. This confirms Azonobi et al. (2020) findings that collaborative learning promotes proactive action among postgraduate students. Training on information literacy skills and user development is crucial for enhancing proactive engagement among postgraduate students in accessing and utilizing e-resources (Singh, 2019). Regular awareness campaigns have also been shown to motivate students to proactively access and utilize e-resources (Velmurugan & Raghotham, 2022). These findings suggest that university libraries should prioritize comprehensive training, curriculum integration, effective awareness campaigns, mentorship programs, collaboration with faculty, and robust marketing efforts and seminars. These strategies are crucial for making electronic resources indispensable tools for postgraduate academic success by enhancing skills, embedding resources into coursework, and maintaining high levels of student engagement and awareness.

Libraries were also urged to focus on: user interface and accessibility, support and feedback, and resource availability. A user-friendly website and easy navigation reduce barriers to utilization. Active engagement, prompt feedback, and a robust support system address user issues and facilitate continuous improvement. They should also ensure access to relevant, up-to-date resources, sufficient computer facilities, and extended library hours enhances students' ability to effectively utilize e-resources. These comprehensive measures aim to equip and support students in maximizing the value of these academic tools. Kay (2019) emphasized on the significance of user-

friendly library websites that continually evolve based on user feedback, underscoring the necessity for frequent updates to align with user expectations. On similar observation, Frank (2023) further emphasized the role of continuous feedback, particularly secondary feedback, in improving the accessibility of web pages before directly asking user input. Obande et al. (2020) noted the importance of deploying infrastructure and technology such as WiFi and internet access, alongside providing customized information search guides, to ensure resources are always available and accessible. These findings suggest improvements not only to increase user satisfaction but also ensure that library resources are used maximally. These findings align well with the AIDA model: they attract attention by addressing significant accessibility and usability issues, generate interest through active user involvement and feedback mechanisms, create a desire for improved digital experiences, and prompt actions such as regular updates.

4.10 Inferential Analysis Results of the Study

The overall aim of this study was to assess how adaption of AIDA model enhance the utilization of e-resources by postgraduate students at KeMU and MUST University. This overall aim necessitated the application of inferential analysis to determine how the components of AIDA model related with the utilization of e-resources by postgraduate students at KeMU and MUST University.

4.10.1 Diagnostic tests

The study had intended to use multiple regression analysis in assessing this relationship. Consequently, there was a great need to perform diagnostic tests prior to employing multiple regression analysis. The tests carried out included normality, linearity, autocorrelation, multicollinearity, and heteroscedasticity. The findings of these tests provided below.

4.10.1.1 Normality test results

In this study, the Kolmogorov-Smirnov (K-S) and Shapiro-Wilk (S-W) tests were used to assess the normality of the distribution of a dataset. This helped the researcher to determine whether to apply parametric or nonparametric tests in quest to understand how the adoption of the AIDA (Attention, Interest, Desire, Action) model enhances the utilization of e-resources by postgraduate students at KeMU and MUST University. The results of the Kolmogorov-Smirnov (K-S) and Shapiro-Wilk (S-W) tests are presented in Table 4.12.

Table 4. 12

Normality test results

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
X1	.058	218	.072	.991	218	.215
X2	.058	218	.070	.990	218	.156
X3	.051	218	.200*	.994	218	.574
X4	.056	218	.094	.994	218	.499
Y	.036	218	.200*	.994	218	.567

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

For each variable shown in Table 4.12 (X1, X2, X3, X4, Y), the significance values (Sig.) are greater than 0.05, indicating that the null hypothesis of normality cannot be rejected at the 5% significance level. The same applies to the Shapiro-Wilk (S-W) Test, where the level of p-value values are greater than 0.05 for all variables (X1, X2, X3, X4, Y). This suggests that the study could not reject the null hypothesis of normality for any of the variables, hence there was normality of the distribution of a dataset. The results of the Kolmogorov-Smirnov and Shapiro-Wilk tests indicate that the data for variables X1, X2, X3, X4, and Y are normally distributed. This observation was further counter-checked by generating a histogram with the superimposed normal curve

(histogram shown in Figure 4.1), which shows the distribution of regression standardized residuals for the dependent variable Y, representing the utilization of e-resources by postgraduate students at KeMU and MUST University.

Figure 4. 1

Histogram showing normality of the data

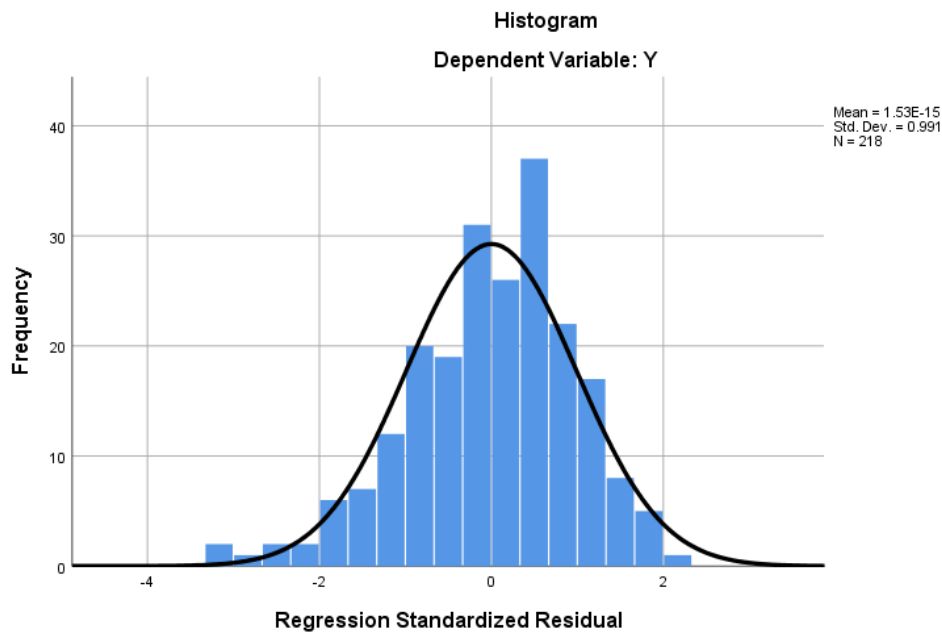


Figure 4.1 shows the normal distribution of the data which suggests a balanced and typical response pattern among postgraduate students regarding the adoption of the AIDA model for enhancing e-resource utilization. It indicates that extreme values (outliers) are unlikely, and this enhances the reliability of the conclusions regarding the effectiveness of the AIDA model. The finding supports the use of parametric statistical methods for further analysis and enhances the generalizability and reliability of the study's findings regarding the effectiveness of the AIDA model in promoting the utilization of e-resources among postgraduate students at KeMU and MUST University.

4.10.1.2 Linearity test result

The next diagnostic test was linearity which was carried out to establish whether a strong linear relationship existed between the components of the AIDA model and the utilization of e-resources by postgraduate students. ANOVA was used to compute the p-values which enabled the researcher to determine the linearity of data. The results of linearity test are shown in Table 4.13.

Table 4. 13

ANOVA table demonstrating linearity

			Sum of		Mean		
			Squares	df	Square	F	Sig.
Y *	Between	(Combined)	65.514	89	.736	68.095	.003
AIDA	Groups	Linearity	26.030	1	26.030	2407.977	.000
		Deviation from Linearity	39.484	88	.749	41.506	.112
	Within Groups		1.384	128	.011		
Total			66.897	217			

According to the results in Table 4.13, the F-Statistic for the deviation from linearity is 41.506 with a p-value of 0.112. Since this p-value is greater than 0.05, it suggests that the deviation from linearity is not statistically significant. This means that the relationship between Y and the AIDA model is adequately described by a linear model. Specifically, the significant linearity and non-significant deviation from linearity imply that a linear regression model is appropriate for explaining the relationship between the utilization of e-resources and the AIDA model. This suggests that the AIDA model components (Attention, Interest, Desire, Action) are effective predictors of e-resource utilization.

4.10.1.3 Multicollinearity and autocorrelation tests

The study also checked multicollinearity and autocorrelation condition of the data. The multicollinearity test helped the researcher to determine the extent to which predictor variables in a regression model were correlated. Shrestha (2020) noted that high multicollinearity can inflate the variances of the parameter estimates, making it difficult to assess the effect of each predictor. At the same time, it was important for the researcher to check for autocorrelation of data especially for independent variables, to ensure non-violation of the assumption of independence of errors during the regression analysis. The multicollinearity and autocorrelation test results are shown in Table 4.14.

Table 4. 14

Multicollinearity and autocorrelation tests results

Variables	VIF	Autocorrelation
X1	1.137	
X2	1.113	1.892
X3	1.246	
X4	1.046	

The results show that all VIF values are below 10 (and even well below 5), indicating that multicollinearity is not an issue among the independent variables (X1, X2, X3, and X4). Raheem et al.(2019) notes that a VIF value greater than 10 typically indicates high multicollinearity, while a VIF value less than 10 suggests that multicollinearity is not violated. This means that the predictors (X1, X2, X3, and X4) are not highly correlated, ensuring stable and reliable coefficient estimates in the regression model. It implies that each predictor independently contributed to explaining the variance in the dependent variable, and the estimates of their effects were accurate and interpretable.

According to Field (2018) an autocorrelation value close to 2 suggests no autocorrelation. Results in Table 4.14 shows the autocorrelation value of 1.892 for X1,

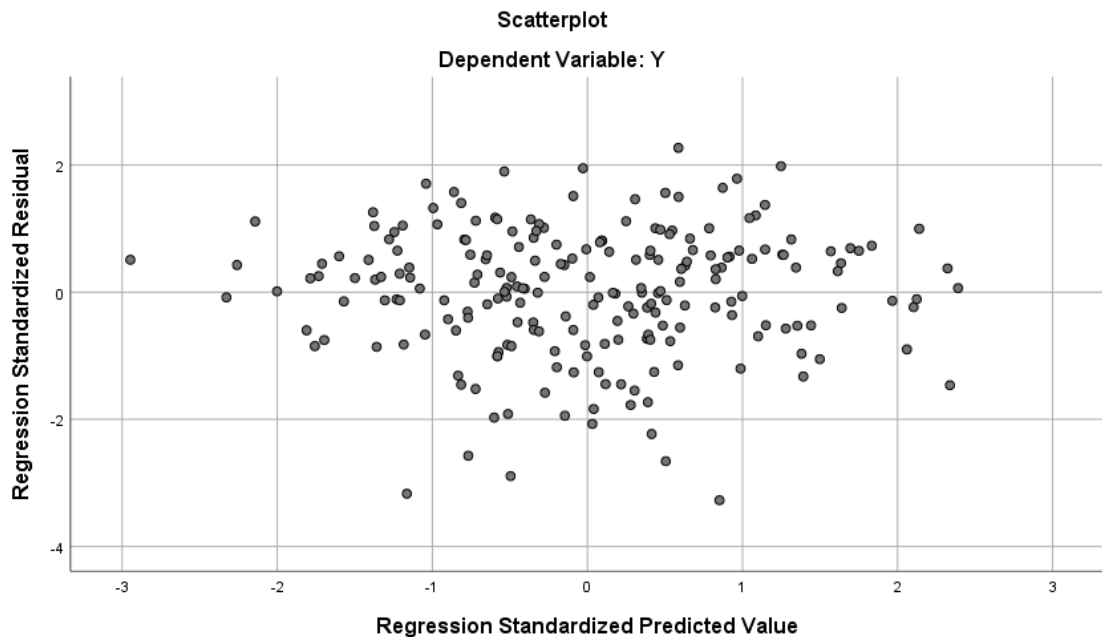
X2, X3, and X4 are close to 2, indicating no significant autocorrelation in the residuals. The results indicate that the model provided unbiased and efficient estimates, leading to valid inferences and predictions. The foregoing results indicate that the regression model is well-specified with no issues of multicollinearity and autocorrelation, making the model's estimates reliable and the inferences valid.

4.10.1.4 Heteroscedasticity test results

The last condition checked was heteroscedasticity assumption. A scatter plot was generated to ascertain heteroscedasticity status of the data regarding the components of AIDA model and the utilization of e-resources as shown in Figure 4.2.

Figure 4. 2

Scatterplot showing heteroscedasticity of the data



The residuals appear to be randomly scattered around the horizontal axis (regression standardized predicted value = 0). As for the spread of residuals exhibited in Figure 4.2, there does not appear to be a clear pattern in the spread of the residuals as the predicted values increase or decrease. The spread remains relatively constant across the

range of predicted values. Since the residuals are randomly scattered without forming any distinct pattern and the spread of residuals appears consistent, it suggests that the assumption of homoscedasticity is likely met. This means that the variance of the errors is constant across all levels of the independent variables implying that the statistical tests and diagnostic properties in the model are valid, hence indicating absence of heteroscedasticity problem. The absence of heteroscedasticity supports the use of linear regression model. This contributes to the overall reliability and validity of multiple regression model used in this study.

Subsequently, the use of correlations and multiple regression analysis was justified to explore the relationships between the AIDA model components (X1, X2, X3, X4) and the utilization of e-resources (Y) in this study. The non-violation of the mentioned conditions, provided deeper insights into how each component of the AIDA model contributes to the effective utilization of e-resources. Specifically, the outcome of diagnostic tests enhanced the confidence in using the AIDA model in informing interventions aimed at increasing e-resource utilization.

4.10.2 The overall purpose of the study

In assessing how the adaption of AIDA model enhances the utilization of e-resources by postgraduate students at KeMU and MUST University, a multiple linear regression analysis was conducted. The predictors included in the regression model were Attention (X1), Interest (X2), Desire (X3), and Action (X4). The dependent variable was the utilization of e-resources (Y). The regression analysis results are presented in Tables 4.16, 4.17, and 4.18.

Table 4. 15***Model Summary regarding AIDA model and utilization of e-resources***

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.593 ^a	.352	.339	.46100	1.892

a. Predictors: (Constant), X4, X1, X2, X3

b. Dependent Variable: Y

The results summarized in Table 4.16 indicate a correlation coefficient of 0.593, indicating a moderate positive relationship between the predictors (X1, X2, X3, X4) and the dependent variable (Y). The coefficient of determination is 0.352, suggesting that approximately 35.2% of the variance in the utilization of e-resources (Y) can be explained by the independent variables (X1, X2, X3, X4). The Durbin-Watson statistic was 1.892, indicates no significant autocorrelation in the residuals. The ANOVA findings in Table 4.17 helped to assess the validity of the model.

Table 4. 16***ANOVA results regarding AIDA model and utilization of e-resources***

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.538	4	6.134	28.866	.000 ^b
	Residual	45.266	213	.213		
	Total	69.804	217			

a. Dependent Variable: Y

b. Predictors: (Constant), X4, X1, X2, X3

The ANOVA results shows regression sum of squares is equals to 24.538, indicating the variation explained by the model, and residual sum of squares is 45.266, indicating the variation not explained by the model. The F-statistic is 28.866, with a p-value of .000, indicating that the model is statistically significant. In this case therefore, the p-value being less than 0.05 suggests that the regression model significantly predicts the outcome variable.

To ascertain the relative contribution of each component of AIDA model to the utilization of e-resources, the regression coefficients were computed accordingly. Table 4.18 displays the regression weights for each predictor variable in the combined model.

Table 4. 17

Regression coefficients results regarding AIDA model and utilization of e-resources

Model	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	.265	.301		.882	.039		
X1	.074	.053	.082	1.399	.163	.880	1.137
X2	.292	.055	.308	5.290	.000	.898	1.113
X3	.321	.062	.316	5.135	.000	.802	1.246
X4	.235	.068	.196	3.480	.001	.956	1.046

a. Dependent Variable: Y

The coefficients (Table 4.17) reveal that Interest (X2), Desire (X3), and Action (X4) are significant predictors of e-resource utilization, with $p < .001$, $p < .001$, and $p < .01$ respectively. However, Attention (X1) was not a significant predictor, $p = .163$. Additionally, the findings in Table 4.17 show that constant term (intercept) is 0.039, which is the expected mean value of Y, where all predictors are zero.

The findings further indicate unstandardized coefficient for each independent variable where X1 (Attention) is 0.074 with a p-value of 0.163, indicating that X1 is not a significant predictor. The unstandardized coefficients for the other predictors, that is, X2 (Interest) = 0.292, X3 (Desire) = 0.321, and X4 (Action) = 0.235 with corresponding p-value of 0.000, 0.000, 0.001 respectively, indicating that X2 X3 and X4 each had a significant predictor. The findings show that variance inflation factor (VIF) for each predictors was close to 1, indicating no multicollinearity issues.

These provided a compelling evidence that adaptation of the AIDA model enhances the utilization of e-resources among postgraduate students at KeMU and MUST University. The results show specifically that, Interest (X2), Desire (X3), and Action (X4) were significant predictors of e-resource utilization, indicating that these elements of the AIDA model are crucial for increasing the use of e-resources. The results also indicate that Attention (X1) was not a significant predictor, suggesting that merely capturing students' attention may not be sufficient to influence e-resource utilization. The findings indicate that the resulting model is robust with no issues of multicollinearity and autocorrelation. Studies by Abdelkader and Rabie (2019b); Montazeribarforoushi et al. (2017); Wei et al., (2022) adopted AIDA model to underpin its applicability in various sector and the model was found to be influence service provision in this sectors.

These findings can inform university libraries on which aspects of the AIDA model to emphasize to enhance e-resource utilization among students. Although all components of AIDA model are important predictors of utilization of e-resources, it is the interest, desire, and action that matters most. This suggest that university libraries should focus on enhancing students' interest and desire for e-resources, as well as encouraging proactive actions to increase their utilization.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides an overview of findings, conclusions and recommendations derived from analyzed data presented in Chapter four. In addition, it makes recommendations for future studies based on research gaps found in the current study. The presentation of information at each section is according to variables of the study. In the first instance, the study provides a summary of the response rate, which displays the proportion of participants in the research. In the second instance, there is background information about the respondents, including demographics and other pertinent characteristics; and, thirdly is summary on reliability.

This research aimed to investigate electronic resource utilization among postgraduate students at KeMU and MUST Universities by adopting the Attention Interest Desire Action (AIDA) model. The study used a mixed-methods approach with a descriptive survey research design, involving 800 postgraduate students and 13 university library heads of sections. Data was collected using questionnaires and interview guides, whose reliability was measured using Cronbach alpha, while construct and content validity of the tools was checked before they were administered. Thematic analysis was applied to open-ended questions and interview data, while descriptive and inferential analysis was applied on quantitative data. The integration of the AIDA model into library services provides valuable insights and recommendations for enhancing electronic resource utilization in Meru County universities.

5.2 Summary of Study Findings

The study used 223 questionnaires administered to postgraduate students at KeMU and Meru University, with 83% of them being valid. The results showed a favorable response rate, attributed to flexibility in combining hard and online questionnaires. Additionally, library head sections (92.3% response rate) were interviewed, indicating good prior planning and cooperation from KeMU and Meru universities. Reliability coefficients for each key variable were greater than 0.7 indicating data reliability.

This study surveyed postgraduate students and library staff at KeMU and Meru University. The majority of postgraduate students (49.5%) were male, with 50.5% being female. The highest level of education held by postgraduate students was found to be a bachelor's degree, with 72.2% having a bachelor's degree. The majority of postgraduate students are transitioning directly from undergraduate studies, suggesting good familiarity with electronic resources. Postgraduate diploma holders (12.8%) have already engaged in postgraduate education, suggesting a preliminary understanding of the value of e-resources. Master's degree holders (15.1%) have experience with electronic resources, suggesting opportunities for deeper engagement through advanced workshops and personalized information service support. Library staff respondents had varying academic qualifications, with (58.3%) having bachelor's degrees, (33.3%) master's degrees, and (8.3%) diplomas in information studies. The study analyzed 12 library section heads' working experience, which revealed that most had four-year experience, while only one had two years. In nutshell, library section heads were well-versed in AIDA model components and e-resource utilization.

5.2.1 Utilization of E-resources by Postgraduate Students

The utilization of e-resources by postgraduate students at KeMU and Meru University demonstrates a high level of engagement with various digital materials, with e-books

being the most utilized resource at 97.2%. Other highly used resources include online past examination papers (92.2%) and e-journals (90.8%), indicating their critical role in academic preparation and research.

A vast majority of students (93.1%) believe that attention to e-resources improves their utilization, while 89.5% think that cultivating interest is crucial. The findings also highlight the importance of infrastructure, with 80.3% agreeing that adequate infrastructure supports effective utilization. Furthermore, the 24/7 availability and the up-to-date nature of e-resources are strong motivators for usage, as indicated by 84.9% and 87.2% of postgraduate students, respectively. Despite the positive findings, effective utilization of e-resources is curtailed by technical issues such as outdated computers and poor internet connectivity, along with limited IT illiteracy in some postgraduate students. Another significant barrier is financial constraints which ultimately limit access to paid resources.

To enhance the utilization of e-resources among postgraduate students at KeMU and Meru University, emphasis and improvement are needed on training, technical infrastructure, and resource management. At the same time, both online and in-person training, and tailored literacy programs were described as critical in encouraging utilization of e-resources. Postgraduates further noted need for robust technical support, including increased internet bandwidth, more computers, and reliable connectivity to ensure access to e-resources seamlessly. Alignment approaches with students' research needs and updating of e-resource collections further aid postgraduate students in navigating complex platforms. Additionally, consistent marketing programs and campaigns and user-friendly platforms boost e-resource visibility and usage. It was also clear that implementing effective policies, offering incentives, and continuously improving services based on student feedback drive higher e-resource utilization.

5.2.2 Postgraduate Students' Attention towards Utilization of Electronic Resources

The study's findings indicate good attention as characterized by high level of awareness of electronic resources among postgraduate students at KeMU and Meru universities. Specifically, 82.6% of students were aware of the e-resources available, while 83% agreed that the library's homepage provides useful guidelines for accessing these resources. The user-friendliness of the e-resource portal and the visibility of links received positive feedback, with 79.3% and 75.2% of students agreeing respectively. Workshops and training sessions were appreciated by 66.5% of students, underscoring their value in enhancing awareness and utilization of e-resources. This indicate several actions taken by universities in enhancing attention of e-resources by postgraduate students. However, there is room for improvement in communication, as 21.6% of students were neutral about the announcements on the library website, and 17.4% disagreed about their helpfulness.

Qualitative findings corroborated quantitative results, emphasizing that maintaining students' attention leads to increased curiosity and engagement. This heightened interest prompts students to seek training, register for resource access, and provide feedback on the resources, reflecting their active engagement and commitment. Key themes were identified for enhancing interest and utilization. They include regular training workshops, awareness campaigns, personalized support, and improved accessibility. These strategies, coupled with engaging initiatives and feedback mechanisms are crucial for fostering a supportive environment that maximizes the benefits of electronic resources for postgraduate students.

5.2.3 Postgraduate Students' Interest in Electronic Resource Utilization

The study results reveal a significant interest among postgraduate students in utilizing electronic resources at KeMU and Meru Universities, with 193 (88.5%) expressing a positive inclination towards their integration into academic pursuits. Furthermore, a substantial majority, 185 (84.9%), affirmed that the libraries effectively communicate the relevance and importance of electronic resources, while 15 (6.9%) disagreed. Additionally, 147 (67.4%) of students recognized the library's efforts in cultivating interest in e-resources through various measures. Training and accessibility also play pivotal roles in e-resource utilization. A significant proportion, 160 (73.4%), agreed that adequate guidelines and training are provided by the library, though 32 (14.7%) disagreed, highlighting an area for improvement. Similarly, 158 (72.5%) of students acknowledged the sufficiency of available e-resources, emphasizing the need for libraries to continually update their collections. Additionally, 147 (67.4%) appreciated the library's efforts to repackage e-resources, making research less daunting. Moreover, the library training was rated "very good" by 114 (52.3%) of postgraduate students, reflecting positively on the library's efforts to cultivate interest in e-resources.

The study reports noticeable interest among postgraduate students at KeMU and Meru Universities in electronic resources, with high agreement rates indicating positive perceptions and engagement. The postgraduate students actively seek assistance for specific e-resources and participate enthusiastically in training workshops, underscoring their proactive approach to utilizing digital tools. The availability of online tutorials and user-friendly interfaces further supports frequent use of e-resources, demonstrating students' reliance on and appreciation of digital content for their academic pursuits.

5.2.4 Postgraduate Students' Desire to Utilize Electronic Resources

The results reveal a strong inclination among postgraduate students at KeMU and Meru Universities to incorporate electronic resources into their academic endeavors, with 91.8% expressing a keen desire. This indicates a significant demand for e-resources, underscoring the necessity for universities to facilitate easy access and seamless integration of e-resources into academic programs. The majority of students, 81.2%, appreciate the emphasis on the benefits of e-resources during library orientations and training sessions, suggesting these initiatives are effective and should be continued to promote further utilization.

Moreover, convenience stood out as a significant factor, with 87.2% of students valuing the ability to access e-resources anytime and anywhere. The perceived value and convenience of these resources shape their preference for use, supported by 81.6% of the students. Maintaining relevance and up-to-date content is crucial, as evidenced by 78% of students who acknowledged this importance. Additionally, 78.9% appreciate the real-time updates and access to the latest research, while 83.9% value the interactive features and multimedia content that cater to diverse learning styles. The user-friendliness of the library website is also crucial, with 72.5% affirming its importance. The overall high mean value and minimal variations in responses indicated a general consensus among students on these points. Overall, 46.3% rated the library training as very good, highlighting the effectiveness of these programs in fostering a desire to utilize e-resources.

The qualitative findings also indicated that postgraduate students at KeMU and Meru Universities exhibited a strong desire to utilize electronic resources through various proactive behaviors. They demonstrated positive attitudes and perceptions, recognizing the value and necessity of e-resources for their academic success. This was reflected in

their active engagement, as they frequently book training sessions, participate in workshops, and request specific electronic resources. Many postgraduate students also schedule personalized consultations with librarians and head straight to e-resource terminals, showcasing their intent and desire to use these tools.

Library staff observations highlight that postgraduate students' proactive behavior significantly contributes to their academic activities. Their frequent requests for specific e-resources and extended hours spent in areas with high-speed internet access underscore their dedication and desire to utilizing these tools for comprehensive research. This behavior further demonstrates their commitment to leveraging e-resources to enhance their academic work, with many citing e-resources in research papers and projects. Libraries support this engagement and growing desire through various measures, including providing high-quality information materials, organizing detailed orientation sessions, offering remote access, and integrating e-resources into the curriculum. They also ensure personalized support, user-friendly interfaces, 24/7 availability, and regular updates to ensure students can effectively and consistently use e-resources. The enhancements such as increasing internet bandwidth, offering more electronic materials, and providing frequent tailored training sessions were suggested to further cultivate students' desire to utilize electronic resources.

5.2.5 Postgraduate Students' Proactive Actions in Utilizing Electronic Resources

Based on the study findings, it is evident that postgraduate students at KeMU and Meru Universities exhibit a proactive approach towards utilizing electronic resources. The mean values ranging from 3.55 to 4.40 indicate a generally high level of engagement across various aspects of e-resource utilization. Notably, a significant majority, 86.7%, incorporate citations from electronic resources into their academic work, underscoring the recognition of these resources' importance in scholarly endeavors. Moreover, a

substantial portion, 74.3%, actively seek out e-resources aligned with their research needs and utilize advanced search techniques (73.8%) to locate specific materials, indicating a strong desire for relevant and targeted information. This highlights the critical role of libraries in facilitating easier access and in providing citation guides and tools to support effective academic practice.

Despite a majority checking the library's digital database (58.7%) and the e-resource portal (62.0%), these figures suggest that a notable proportion of students do not engage regularly in these practices. Efforts to promote these resources more effectively and ensure their continuous improvement could further encourage regular use. Similarly, while collaboration among peers to share knowledge and resources is practiced by 65.6% of students, there remains an opportunity to foster a more collaborative environment to expand access to electronic materials.

Qualitative findings indicated that postgraduate students actively engage with library services by providing feedback, requesting new subscriptions, participating in webinars and training sessions, and utilizing consultation services with librarians. They employ advanced search techniques, collaborate with peers, and continuously develop their skills in e-resource utilization. The library staff supports these behaviors through comprehensive training programs, personalized consultations, and user-friendly access. This holistic approach, driven by student feedback and strategic enhancements, fosters a culture of proactive engagement with e-resources among postgraduate students, ultimately enhancing their research capabilities and academic pursuits.

5.3 Conclusions

The study's findings informed the conclusions that are covered in this section. The presentations of the conclusions are given in accordance with the study's variables.

5.3.1 Utilization of E-resources by Postgraduate Students

The key conclusions from the results indicate that the utilization of e-resources by postgraduate students at KeMU and Meru University narrows significantly on training, awareness, and technical infrastructure. Regular training sessions, both online and in-person, tailored workshops, and literacy programs are essential in educating postgraduate students on effective navigation of e-resource. Equally important is robust technical support, which includes seamless access to e-resources, both on and off-campus, increased internet bandwidth, and computers. The education and technical infrastructure aspects foster a culture of continuous learning and uninterrupted research activities among postgraduate students.

Measures for ensuring continuous e-resources utilization include, effective resource management and comprehensive user support, regular updating of e-resource collections to align with students' research needs. Others include personalized consultations, one-on-one training, and 24/7 support services. Furthermore, consistent marketing campaigns, user-friendly platforms, and interactive content reduce access barriers and encourage frequent use. The study also noted that implementing policies that integrate e-resources into the curriculum, offering incentives for high usage, and continuously improving services based on postgraduate student feedback, incrementally drive higher e-resource utilization at university libraries.

5.3.2 Postgraduate Students' Attention towards Utilization of Electronic Resources

The study reveals that the attention component of the AIDA model significantly influences postgraduate students' utilization of electronic resources at KeMU and Meru Universities. Respondents highlighted how initial awareness created through effective

attention strategies leads to the discovery and exploration of available resources. This awareness is essential for informing students about valuable resources, which ultimately improves their research efficiency and academic performance. Moreover, the focused attention helps students engage in the cognitive process of concentrating on specific aspects of information, thereby enhancing the overall utilization of the library's electronic resources.

The study highlighted several key elements that promote engagement and utilization, such as regular training sessions, awareness campaigns, individualized support, and enhanced accessibility. Proactive student actions like asking for help and recommending resources, as well as feedback systems, highlight the beneficial effects of concentrated attention on e-resource use, hence very significant.

5.3.3 Postgraduate Students' Interest in Electronic Resource Utilization

The findings revealed a strong interest among postgraduate students at KeMU and Meru Universities towards utilizing electronic resources. The results confirmed that interest covered in the AIDA model plays a crucial role in improving postgraduate students' utilization of e-resources at university libraries. A significant majority of students expressed a strong interest to incorporate electronic resources into their academic journey, indicating a high level of interest that universities can leverage to enhance resource integration and usage. This interest is further cultivated by effective library communication strategies that clearly convey the relevance and importance of e-resources to students' academic pursuits.

Libraries' efforts to implement measures that spark and maintain student interest in e-resources have shown positive results. These include providing adequate guidelines and training for accessing resources, which proves crucial for effective utilization. By ensuring that there are sufficient e-resources available for academic purposes and

continually updating these collections, libraries meet the evolving needs of postgraduate students, further stoking their interest.

Moreover, libraries' initiatives to repackage e-resources in more user-friendly formats have made academic research less daunting for many students. This tailored approach, combined with the inherent convenience of e-resources, significantly elicit utilization. Students reported using e-resources more frequently due to their accessibility and ease of use, underscoring the importance of convenience in maintaining interest and encouraging regular engagement with e-resources. The study noted that interest-driven approach not only improves the integration of e-resources into academic activities but also enriches students' research experiences, ultimately supporting their academic journey and bolstering their research capabilities. Areas of improvement were however noted to include enhanced training, improved internet connectivity, and incentives to further encourage e-resource utilization, highlighting opportunities for continued development in digital resource management and support.

5.3.4 Postgraduate Students' Desire to Utilize Electronic Resources

Postgraduate students exhibited a strong demand for electronic resources, viewing them as essential for academic success. This was manifested through proactive behaviors such as booking training sessions, participating in workshops, requesting specific resources, and scheduling personalized consultations with librarians which demonstrated a strong desire to utilize electronic resources.

Libraries play a crucial role by providing high-quality materials, training, detailed orientation, peer-reviewed information sources and remote access. The accessibility and usability of these resources, including 24/7 availability and user-friendly interfaces, making them particularly attractive to postgraduate students. While the uptake of e-resources by postgraduate students is positive, there's room for improvement in areas

such as internet bandwidth, resource expansion, and curriculum integration. The ongoing engagement of postgraduate students with e-resources highlights the importance in their studies and the need for libraries to continually update and expand their electronic collections to meet evolving academic needs.

5.3.5 Postgraduate Students' Proactive Actions in Utilizing Electronic Resources

The findings show that postgraduate students actively engage in providing feedback and requesting new subscriptions, indicating a collaborative effort in shaping library offerings on e-resources. The postgraduate students' participation in training sessions and webinars enhances their digital literacy skills, particularly in advanced search techniques and resource management. Personalized consultations with librarians are sought-after for navigating specific e-resources, while collaborative efforts with peers expand access to materials and knowledge sharing. The findings pointed out that the library's multifaceted support, including user-friendly access and comprehensive training, fosters a culture of proactive engagement among postgraduates, contributing to effective e-resource utilization.

5.3.6 Conclusion on the overall purpose of the study

The study assessed the adaptation of the AIDA model in enhancing e-resource utilization among postgraduate students at KeMU and MUST Universities through multiple linear regression analysis. The results indicated a moderate positive relationship ($R = 0.593$) between the AIDA model components (Attention, Interest, Desire, and Action) and e-resource utilization, with 35.2% of the variance explained by these predictors. ANOVA results confirmed the model's statistical significance ($F = 28.866$, $p < .001$), suggesting that the AIDA model effectively predicts e-resource utilization. Specifically, Interest, Desire, and Action significantly predict e-resources utilization ($p < .001$), whereas Attention does not ($p = .163$). The absence of

multicollinearity and autocorrelation in the model supports its robustness. These findings highlight the importance of fostering Interest, Desire, and prompting Action to maximize e-resource utilization among postgraduate students, informing strategies for university libraries to enhance e-resources engagement effectively.

5.4 Recommendations

The findings and conclusions of the study were critical in coming up with appropriate recommendations. The recommendations herein, are therefore presented in accordance with the study's variables.

5.4.1 Utilization of E-resources by Postgraduate Students

To enhance the utilization of e-resources among postgraduate students at KeMU and Meru University, it is recommended that universities prioritize comprehensive training programs and institute robust technical infrastructure improvement, including increasing internet bandwidth, expanding the availability of computers, and ensuring reliable internet connectivity, both on-campus and remotely. The librarians should ensure that the regular training sessions are both online and in-person to improve students' literacy and navigation skills concerning e-resources. These measures will provide seamless access to e-resources, and foster a conducive learning and research environment in university libraries.

Additionally, university libraries should focus on effective user engagement strategies, regular updating of e-resource collections to meet current research needs. The library staff should embark on comprehensive user support, including personalized consultations, one-on-one training, and ensure 24/7 assistance to postgraduate students. Moreover, consistent marketing campaigns and enhancements to user experience, such as easy-to-navigate platforms and interactive e-content, will increase visibility and

usage of the same. Universities should also integrate e-resources into the curriculum, and institute mechanisms for receiving students' feedback.

5.4.2 Postgraduate Students' Attention towards Utilization of Electronic Resources

Based on the findings, the study recommended that University libraries continue and expand their awareness initiatives to further enhance postgraduate students' utilization of electronic resources. Librarians should schedule training workshops regularly and orientation sessions tailored specifically for postgraduate students to improve their digital literacy and resource navigation skills. They should increase the frequency and variety of marketing campaigns, including eye-catching posts and sensitization sessions to further promote resource visibility. Additionally, personalized research support should be emphasized in university libraries, with one-on-one sessions with postgraduate students to address specific student needs and challenges. They should also establish robust feedback mechanisms, such as regular surveys to gather valuable insights from postgraduate students.

5.4.3 Postgraduate Students' Interest in Electronic Resource Utilization

The university libraries should enhance their communication strategies about e-resources, including digital platforms and orientation sessions, to ensure students are well-informed and motivated to use them effectively. Librarians should ensure that training programs prioritized and enhanced to cover basic database navigation and advanced search techniques. Moreover, internet connectivity in university libraries should be optimized and develop user-friendly interfaces.

5.4.4 Postgraduate Students' Desire to Utilize Electronic Resources

University libraries should continue to prioritize high-quality, peer-reviewed e-resources, ensuring they remain current and relevant to students' academic needs. They should also increase internet bandwidth, ensure reliable access is crucial, maintain user-friendly interfaces for seamless navigation, and establish systems for receiving feedback from students. Libraries should incentivize postgraduate participation in trainings to ensure students are well-versed in utilizing e-resources effectively. Library staff should liaise and collaborate with faculty in integrating e-resources more deeply into the curriculum to encourage consistent use. Additionally, university libraries should enhance remote access options through VPN or proxy services to accommodate postgraduate students' varied schedules and information needs. They should also develop policies that promote equitable access and implement streamlined password management systems to further facilitate resource utilization.

5.4.5 Postgraduate Students' Proactive Actions in Utilizing Electronic Resources

In order to uphold the proactive actions in utilizing electronic resources by postgraduate students, university libraries should improve digital platforms, provide personalized support, and integrate comprehensive training programs. These should be incorporated into the academic curriculum and targeted awareness campaigns. Additionally, university libraries should foster a collaborative environment with teaching staff in embedding e-resources into course requirements. This initiative will further enhance students' engagement with electronic resources, and help postgraduate students maximize the benefits of electronic resources for their research and scholarly endeavors.

Based on the overall purpose of the study, it is recommended that university libraries focus on enhancing postgraduate students' Interest, Desire, and prompt Action towards

e-resources. Strategies should include targeted efforts to stimulate curiosity and relevance (Interest), cultivate strong motivations (Desire), and facilitate proactive engagement (Action). Since Attention was not found to significantly impact e-resource utilization in the combined, efforts should prioritize strategies that go beyond mere awareness to actively fostering sustained interest and actionable behaviors among students.

5.4.6 Implications of the results on the AIDA model

The AIDA model outlines the importance of e-resources in universities. It emphasizes attention, interest, desire, and action. The utilization of e-resources in universities have sparked interest in e-resources, with students booking personalized consultations and frequently asking about specific resources. The outright implications of the findings in the light of the AIDA model is that, University libraries have implemented training sessions and marketing campaigns to capture postgraduate students' attention. Other central areas of focus include user-friendly platforms, updated resources, orientation sessions, and tailored workshops. The postgraduate students' interest and desire to engage deeply with electronic resources is driven by convenience, availability, and personalized support, hence the relevance of the AIDA model. The desire phase involves fostering a strong desire for e-resource utilization through personalized training, regular updates, visually appealing campaigns, and 24/7 assistance to postgraduate students. The desire is also manifested by postgraduate students attend training sessions, requesting e-journals, databases, and e-books, and spending extended hours in library sections downloading, organizing, and incorporating digital content into their academic and research works. The action phase is characterized by postgraduate students attending specialized training sessions and webinars; collaborating with peers, using advanced search techniques seeking assistance, and in

providing feedback; while, the library staff are expected to ensure seamless access, provide incentives for high utilization, and continuously improve services based on feedback, hence, transforming their interest and desire into tangible actions contributing to their academic success.

5.4.7 Implications of the results on policies

The study emphasizes the importance of training and development of policies in universities for effective e-resource utilization. These policies should include online and in-person training, user-tailored workshops, and literacy programs. Resource management policies should ensure continuous updates and expansion of e-resource collections. User support policies should be strengthened to include personalized consultations, one-on-one training sessions, and 24/7 research support services. Marketing and promotion policies should be improved to ensure consistent promotion of e-resources to keep students informed about e-resources. It is also evident that effective communication from the library regarding the relevance and benefits of electronic resources plays a crucial role in fostering student engagement. Therefore, policies should be established to ensure consistent and comprehensive communication strategies. The policy may include communication plans that utilize multiple channels (such as emails, social media, and workshops) to inform students about new resources, updates, and training opportunities.

The study findings from KeMU and Meru Universities suggest that library and academic policies need to be updated to ensure high-speed internet access, responsiveness to student needs, and effective use of e-resources. Access and Remote Learning Policies should be revised to accommodate students' schedules. Given the impact of integrating electronic resources into the curriculum on postgraduate student engagement, policies should be developed to encourage and support faculty to embed

e-resources into course materials and assignments. This may involve developing guidelines or incentives for faculty members to incorporate e-books, online journals, and databases into their teaching practices.

Collaboration is another area of policy implication. The policy implied here should encourage peer-to-peer knowledge sharing and resource utilization, fostering a collaborative academic environment conducive to research and learning. The development of these above policies should be based on student feedback and usage trends to ensure the relevance and relevance of electronic resources.

5.4.8 Implications of the results on practices

University libraries should enhance their e-resources proficiency by implementing frequent training sessions focusing on hands-on sessions on navigating electronic resources; upgrading their IT infrastructure, and offering personalized user support. They should regularly update databases, e-journals, and other digital materials, and secure favorable agreements with publishers. Personalized user support services should be available, and a 24/7 helpline or real-time chat support service should be implemented. University libraries should endeavor to strengthen their marketing and promotion programs and include regular updates and announcements about available e-resources, and integrate e-resource information into course outlines.

University libraries should also introduce incentive programs to reward high utilization of e-resources, and establish continuous feedback mechanisms such as surveys, focus groups, and suggestion boxes to tailor resources and services to better meet postgraduate student's needs. University libraries should adopt a multi-faceted approach to communicate the benefits and updates of electronic resources, including regular email newsletters, social media announcements, and in-person workshops.

Quality assurance and agile practices in collection management should be prioritized in university libraries, with collaboration between faculty and students to identify emerging research needs.

Postgraduate students' proactive use of electronic resources suggests need for university libraries to prioritize regular feedback mechanisms to address issues and optimize resource offerings. They should also establish personalized consultations and training sessions to help students navigate complex databases and use citation management tools. Libraries should enhance training and workshop offerings to cover digital literacy skills, promote self-sufficiency, and facilitate a collaborative environment. The findings also implicate on need for formalized peer-sharing platforms and tools to enhance access to resources.

5.5 Recommendations for Further Studies

Another study can be carried out to explore the relationship between technological infrastructure and the accessibility of e-resources. This can assess the adequacy of current IT resources, identify specific technical barriers faced by students, and evaluate the impact of infrastructure improvements on the usage rates and overall satisfaction with e-resources.

A further study can examine the behavioral patterns and preferences of postgraduate students when using e-resources. This research could focus on factors influencing students' choices, such as user interface design, ease of access, and content relevance. Understanding these preferences can inform the development of more tailored and user-friendly e-resource platforms, ultimately enhancing user experience and engagement.

Further research could focus on longitudinal investigation on the impact of integrating electronic resources into course curricula on student learning outcomes and academic

success. This could involve qualitative and quantitative assessments of how incorporating digital resources influences student engagement, information literacy, critical thinking skills, and overall academic performance. The study can also focus on exploring how sustained exposure to and utilization of these resources throughout a postgraduate program influence students' research outcomes, academic performance, and career trajectories. In such case, the research could track cohorts of students over several years to assess changes in information literacy, research skills, and professional achievements attributable to ongoing e-resource use.

A further study can also be carried focusing the effectiveness of collaborative platforms and peer-sharing initiatives among postgraduate students to provide insights into their impact on resource utilization and academic performance. Research can examine how different forms of collaboration (e.g., study groups, collaborative projects) influence students' understanding of electronic resources, as well as their overall learning experience.

A comparative analysis across different academic disciplines or institutions is also recommended to explore variations in the effectiveness of the AIDA model in enhancing e-resource utilization, considering contextual factors such as technological infrastructure and educational policies.

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APPENDICES

Appendix I: Consent to Participate in the Study

Mercy Shidemburi Musungu

Kenya Methodist University

P.O Box 267-60200

Dear respondent,

I am writing to seek for your consent to take part in my study which will help me to actualize my academic research that investigates the *adoption of (AIDA) model in enhancing electronic resources utilization among postgraduate students in Meru County*. This research hopes to give short and long –term best –practices and recommendations for improving e-resources usage.

Procedure to be followed

The questions in the questionnaires and interview are organized into sections ranging from A to F. Section A covers the introduction part constituting the biographical information of the selected respondents. Sections B, C, D and E contains questions regarding the independent variable, while section F constitutes questions on dependent variables. Most of the questions in the questionnaire are closed-ended, with a few open-ended ones for each construct. All sentiments in the questionnaire are on a 5-points Likert scale in total. It will take approximately 10 to 15 minutes to complete the questionnaire and responding to the interview questions. You are under no obligation to finish the questionnaire, answer every question, or participate in the interview. If there's a question that you choose not to answer, it can be skipped. I hope you will agree to take part in this study as one of the identified key respondents.

Discomforts and Risks

Participating in this study poses no risks, and your reputation will remain unharmed. You are welcome to discontinue your participation in the study at any moment if you feel uncomfortable.

Benefits

Your participation in this study will contribute significantly to enhancing the utilization of e-resources in Meru County through the adoption of AIDA model constructs. Your valuable input is crucial for generating new knowledge and will play a pivotal role in informing measures aimed at ensuring the optimal utilization of e-resources among postgraduate students in Meru County

Rewards

Participation in this study is voluntary. There is no reward for anyone who chooses to participate in the study.

Confidentiality

Your participation in this research will be held in strict confidence. No name will be recorded on the questionnaire or associated with any data provided. Collected data will be securely stored in a confidential location, ensuring that no identifying details are attached on it.

For any inquiries regarding your participation, feel free to reach out to me at mmusungu0290@stu.kemu.ac.ke. You may also contact my research supervisor at paul.maku@kemu.ac.ke.

I am kindly requesting you to sign the consent form provided below indicating your agreement to participate in the study.

Participant's Statement

I understand the details outlined concerning my role in the study. I have been able to raise queries, and all of them have been appropriately responded to. My decision to take part in this study is entirely voluntary. I am aware that my data will be kept confidential, and I have the liberty to withdraw from the study at any time. I am also aware that my participation or the choice to withdraw will not result in any reprisal within my workplace, nor will it affect how I am treated.

Name of Participant..... Date.....

Signature.....

Investigator's Statement

I, the undersigned, have clarified to the volunteer in a language they understand about the procedures involved in the study as well as the associated risks and benefits.

Name of Interviewer.....Date.....

Interviewer Signature.....

Appendix II: Questionnaire for Postgraduate Student

Instructions

Dear Respondents,

This questionnaire is designed to assess the adoption of AIDA model in enhancing the utilization of electronic resource among postgraduate students at universities in Meru County. Please do not write your name on this questionnaire. Kindly read the questions thoroughly and respond by ticking (✓) and filling in relevant information in the designated blank spaces appropriately. Your complete and honest responses are highly appreciated.

SECTION A: Demographic Information

1. Please indicate your Gender:

Male

Female

2. What is your highest level of Education?

Bachelors

Master's degree

Post graduate Diploma

SECTION B: Postgraduate students' attention to the utilization of electronic resources

3. To what extent do you agree or disagree with each sentiment provided below regarding your attention towards electronic resources utilization in your

university; SD = Strongly Disagree, D = Disagree, N = Neutral (Neither agree nor disagree), A = Agree, SA = Strongly Agree.

Statements on attention	SD(1)	D(2)	N(3)	A(4)	SA(5)
i. I am aware of the electronic resources available for my academic needs at the university library.					
ii. The library's homepage often provides guidelines on how to access the e-resources I need for my research.					
iii. My university has put measures in place that help capture postgraduate students' attention to electronic resources.					
iv. The e-resource portal is user-friendly with a simple design to navigate through the e-resources.					
v. The link provided for accessing the electronic resources database is visible and working.					
vi. The eye-catching announcements on the library website consistently update me on the newest e-resources.					
vii. The university library frequently organizes workshops and training sessions to enhance awareness of available electronic resources among postgraduate students.					
viii. The awareness programs conducted by the university library have significantly improved my understanding and utilization of electronic resources for academic purposes.					

4. Explain how attention affects the utilization of electronic resources at your university?

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5. State what needs to be done to enhance attention among postgraduate students in utilizing electronic resources in university libraries.

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SECTION C: Postgraduate students' interest in electronic resource utilization

6. To what extent do you agree or disagree with each sentiment provided below regarding your interest towards electronic resources utilization in your university; SD = Strongly Disagree, D = Disagree, N = Neutral (Neither agree nor disagree), A = Agree, SA = Strongly Agree.

Sentiments on Interest	SD(1)	D(2)	N(3)	A(4)	SA(5)
i. I am interested in incorporating electronic resources into my academic journey.					
ii. My library communicates about the relevance and importance of the electronic resources available on the library's websites.					

iii. The library has implemented measures that effectively cultivate my interest in utilizing electronic resources.					
iv. The library provides guidelines on how to access electronic resources through adequate training.					
v. There are adequate e-resources for academic purposes in the library.					
vi. The library's efforts to repackage e-resources to meet my needs make academic research less overwhelming.					
vii. I use e-resources more because they are convenient.					

7. How would you rate the library training provided by your university library towards cultivating your interest to utilize electronic resources?

Poor Fair Good Very good Excellent

8. State what needs to be done to enhance interest among postgraduate students in utilizing electronic resources.

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SECTION D: Postgraduate students' desire for electronic resource utilization

9. To what extent do you agree or disagree with each sentiment provided below regarding your desire towards electronic resources utilization in your university;

SD = Strongly Disagree, D = Disagree, N = Neutral (Neither agree nor disagree), A = Agree, SA = Strongly Agree.

Sentiments on Desire	SD(1)	D(2)	N(3)	A(4)	SA(5)
i. I express a strong desire to incorporate electronic resources into my academic research and studies					
ii. My library focuses on the benefits of e-resources during orientations and training sessions.					
iii. I enjoy the convenience of accessing e-resources anytime, anywhere.					
iv. The perceived value and convenience of e-resources strongly shape my preference for utilizing them.					
v. The e-resources available at the library are relevant and up-to-date.					
vi. The library's dedication to ensure e-resource accessibility greatly improves my desire in using them.					
vii. The library website is user friendly					
viii. Electronic resources are accessible whenever I want, no matter where I am or what time it is unlike print resources					
ix. Electronic resources provide real-time updates and access to the latest research findings, hence their relevance					
x. Electronic resources offer interactive features and multimedia content that enhance engagement and diverse learning styles compared to print materials.					

10. How would you rate the library training often offered by your university library towards cultivating your desire to utilize electronic resources?

Poor Fair Good Very good Excellent

11. State what needs to be done to cultivate desire among postgraduate students in utilizing electronic resources.

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SECTION E: To evaluate postgraduate students' proactive actions in utilizing electronic resources.

12. To what extent do you agree or disagree with each sentiment provided below regarding your action towards electronic resources utilization in your university; SD = Strongly Disagree, D = Disagree, N = Neutral (Neither agree nor disagree), A = Agree, SA = Strongly Agree.

Sentiments on Action	SD(1)	D(2)	N(3)	A(4)	SA(5)
i. I regularly search the library's digital database for e-resources.					
ii. I actively seek out e-resources in the library that align with my research needs, ensuring I have access to relevant materials.					
iii. I am motivated to utilize e-resources more frequently in my academic work due to the user-friendly procedures provided for accessing them.					
iv. I regularly check the library's e-resource portal on my own initiative, seeking out new additions to the collection that can benefit my research.					

v.	I collaborate with my peers to share knowledge and resources, hence expanding my access to electronic materials beyond what I can find individually.					
vi.	I make use of advanced search techniques to locate specific e-resources relevant to my research topics.					
vii.	I incorporate citations from electronic resources into my academic work, acknowledging their importance in enriching my research.					

13. What is your opinion on what the library should do to promote proactive action among postgraduate students in utilizing electronic resources?

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SECTION F: Utilization of e-resources

14. Please tick all the types of e-resources you have utilized

- E-books []
- E-journals []
- E-thesis/ dissertations []
- Online Public Access Catalogue []
- Digital Newspapers []
- Multimedia Resources []
- E-magazines []

15. To what extent do you agree or disagree with each sentiment provided below regarding your action towards electronic resources utilization in your university; SD = Strongly Disagree, D = Disagree, N = Neutral (Neither agree nor disagree), A = Agree, SA = Strongly Agree.

Sentiments on Utilization of e-resources	SD(1)	D(2)	N(3)	A(4)	SA(5)
i. Attention to e-resources enhances their utilization in university libraries					
ii. Having interest in e-resources enhances their utilization in university libraries.					
iii. Cultivating students desire for e-resources enhances their utilization in university libraries.					
iv. Taking proactive steps to utilize e-resources improves their utilization in university libraries.					
v. There is adequate infrastructure to enable postgraduates utilize e-resources					
vi. The 24/7 availability of e-resources interest me to utilize them.					
vii. The up-to-date status of e-resources interest me to utilize them					

16. Suggest ways in which the library can enhance the utilization of electronic resources among postgraduate students at your university.

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Thank you for your cooperation and time

Appendix III: Interview Schedule for Library Head of Sections

SECTION A: Demographic Information

1. What is your highest academic qualification?
2. For how long have you served as the head of the section in this university library?

SECTION B: Postgraduate Students' Attention to Electronic Resources:

3. How do postgraduate students manifest their attention to e-resources when they come to library?
4. Please, explain how the attention of postgraduate students to e-resources improves their utilization at your university libraries?
5. Describe the measures you have taken to improve postgraduate student's attention towards electronic resources at your university?

SECTION C: Postgraduate Students' Interest in Electronic Resource Utilization

6. How do postgraduate students manifest their interest for e-resources when they come to the library?
7. Describe the measures you have put in place to cultivate interest among postgraduate students in utilizing electronic resources?

SECTION D: Postgraduate Students' Desire for Electronic Resource Utilization:

8. How do postgraduate students manifest their desire for e-resources when they come to the library?
9. Explain how the desire of postgraduate students towards electronic resources contributes to their utilization in university libraries?

10. Describe the measures that you have put in place to ensure postgraduate students at your library have a strong desire to use electronic resources for their academic pursuits

SECTION E: Postgraduate Students' Proactive Actions

11. What are some of proactive actions taken by postgraduate students when using e-resources in the library?
12. Explain ways in which the proactive action taken by postgraduate students towards e-resources improves their utilization in university libraries?

SECTION F: Utilization of e-resources

13. What are the main drawbacks to the utilization of e-resources among postgraduate students in the university library?
14. State what you feel should be done to improve the utilization of e-resources among post graduates in your university library?

Thank you for your feedback and time

Appendix IV: Krejcie and Morgan (1970) Original Table for Cross Validation

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

Appendix V: Introduction Letter to NACOSTI



KENYA METHODIST UNIVERSITY

P. O. Box 267 Meru - 60200, Kenya

Fax: 254-64-30162

Tel: 254-064-30301/31229/30367/31171

Email: deanrd@kemu.ac.ke

DIRECTORATE OF POSTGRADUATE STUDIES

Our Ref: KeMU/NACOSTI/ISK/01/2024

May 13, 2024

Commission Secretary,
National Commission for Science, Technology and Innovations,
P.O. Box 30623-00100
NAIROBI.

Dear Sir/Madam,

RE: MERCY SHIDEMBURI MUSUNGU – (REG. NO. ISK-3-0290-2/2022)

This is to confirm that the above named person is a bona fide student of Kenya Methodist University, in the School of Science and Technology, Department of Information Science undertaking a Master's Degree in Information Science. She is conducting research on: "Adopting Attention Interest Desire Action (AIDA) Model in Enhancing Electronic Resource Utilization among Postgraduate Students at Universities in Meru County".

We confirm that her research proposal has been presented and approved by the University.

In this regard, we are requesting your office to issue a research license to enable her collect data.

Any assistance accorded to her will be appreciated.

Yours sincerely,


Dr. John N. Muchiri (PhD)
Dean, Postgraduate Studies

Cc: Dean-551

CoD, IS

Postgraduate Coordinator - IS

Supervisors

Appendix VI: Research Permit NACOSTI

 <p> REPUBLIC OF KENYA NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION </p>	 <p> NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION </p>
<p>Ref No: 826602</p>	<p>Date of Issue: 22/May/2024</p>
<p>RESEARCH LICENSE</p>	
	
<p>This is to Certify that Ms. Mercy Shideburi Mwangi of Kenya Methodist University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Meru on the topic: ADOPTING ATTENTION INTEREST DESIRE ACTION (AIDA) MODEL IN ENHANCING ELECTRONIC RESOURCE UTILIZATION AMONG POSTGRADUATE STUDENTS AT UNIVERSITIES IN MERU COUNTY for the period ending : 22/May/2025.</p>	
<p>License No: NACOSTIP/24/35961</p>	<p>Applicant Identification Number: 826602</p>
<p>Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION</p>	
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