IMPLEMENTATION OF DIGITAL TECHNOLOGY STRATEGIES TO ENHANCE
STUDENT EXPERIENCE: A CASE OF UNITED STATES INTERNATIONAL
UNIVERSITY-AFRICA.

BY

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UNITED STATES INTERNATIONAL UNIVERSITY-AFRICA

SUMMER 2019
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BY
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A Project Report Submitted to the Chandaria School of Business in Partial Fulfillment of the Requirement for the Degree of Masters in Business Administration (MBA)

UNITED STATES INTERNATIONAL UNIVERSITY-AFRICA

SUMMER 2019
STUDENT’S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the United States International University-Africa for academic credit.

Signed: ___________________________  Date: ___________________________

Grace Muthoni Ng’ang’a (ID 653903)

This project has been presented for examination with my approval as the appointed supervisor.

Signed: ___________________________  Date: ___________________________

Fred Newa.

Signed: ___________________________  Date: ___________________________

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ABSTRACT
The purpose of the study was to establish the influence of digital technology strategies on enhancing students’ experience at USIU-A. The research questions included: do the digital technology mechanisms adopted by USIU-A enhance students’ learning experience; do the current digital technology systems in place at USIU-A enhance student services especially course registration and library services; do the university’s digital technology systems influence student retention.

The study adopted descriptive statistics as the research design to examine the relationship between the research variables. The target population for the study was MBA students at USIU-A which totaled to 678 students. The sample size for the study was 252 and was determined using the Yamane’s formula. Primary data was collected by use of questionnaires where a likert scale was used to score the close-ended questions. Prior to distribution of the questionnaires, the data collection instrument was subjected to a pre-test and reliability analysis. Once all questionnaires were filled out, the data was entered on Excel for cleaning; it was then imported on IBM SPSS statistical software for coding and analysis. The findings were analyzed using descriptive statistics and inferential statistics and presented in tables and figures herein.

The findings reveal that indeed digital technology enhances student learning experience as indicated by the majority of respondents (86%) who found blackboard to be efficient for delivery of course content. The results show that blended learning was the preferred mode of learning for majority (86%) of respondents. The study’s findings indicate that learning management systems enhance student learning experience due to the fact that 81.5% of respondents agreed that blackboard enhanced their learning experience. 87.6% of the respondents acknowledged that blackboard is an essential tool for the learning process.

Results of the study show that digital technology enhances student services and in this case both course registration and library services. The study reveals that students prefer digital course registration process compared to conventional/walk in registration. Findings also illustrate that digital course registration eases the registration process to a great extent. Students also prefer logging onto the student portal to confirm fee balance as opposed to
walking into the finance office. The results show that students rely on the institution’s digital library for assignments and research purposes and majority of respondents acknowledged that the design of institution’s physical library has incorporated digital aspects.

Findings illustrate that digital technology influences student retention especially from the students’ perspective. The study results illustrate that the university’s digital technology capacity influences the decision of a student to enroll for each consecutive semester. This means among other factors such as financial ability, a student considers the university’s digital technology offerings prior to deciding on whether to enroll each consecutive semester or drop out. Results also shows that students appreciate academic monitoring systems to enable them assess and track their degree progress.

The study concluded that the digital technologies at USIU-A enhances student learning, student services and student retention all at different degrees and extents. The institution has made significant progress in adopting different digital technologies all which enhance the student experience.

The study recommends that USIU-A should leverage on data and learning analytics to develop an integrated system that will aid students in assessing their study progress. The study also recommends for the university to provide students with tutorials on how to access and navigate the digital library on campus and off campus. The tutorials should be simple, precise and embedded on the website for easy accessibility. Ultimately, the study recommends that USIU-A should continuously improve its digital technology capacities for the benefit of students and the institution
ACKNOWLEDGMENT

First and foremost, I thank the Almighty God for His sufficient grace, mercy and strength He has bestowed on me as I pursued my graduate studies.

I would like to appreciate and convey my gratitude to my supervisor, Dr. Fred Newa for his professional guidance and support throughout my project. I appreciate his advice, insights and supervision that ensured I deliver an exceptional research project.

I am grateful to the institution, United States International University-Africa and all the staff members for the top notch facilities, guidance and assistance throughout my studies. I am forever grateful to all my lecturers for imparting incalculable knowledge and for their guidance even beyond the classroom.

I am indebted to my family, friends and colleagues for the motivational and emotional support they have accorded me as I pursued my studies.
DEDICATION

I dedicate my research project to my loving parents Wilfred Ng’ang’a and Jane Wambui, thank you for your unwavering support throughout the learning journey. To Paul Wamalwa, Joyce Wangari and Charles Njihia, thank you for holding my hand and believing in me. To all who encouraged me to keep going when things got tough, thank you and God bless you.
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LIST OF ABBREVIATIONS

ACRL  Association of College and Research Libraries
AU    African Union
CSU   Colorado State University
ICT   Information Communication and Technology
KENET Kenya Education Network
KUCCPS Kenya Universities and Colleges Central Placement Service
LMS   Learning Management System
LSBU  London South Bank University
MBA   Masters’ in Business Administration
MIS   Management Information System
NEMIS National Education Management Information System
NMC   New Media Consortium
ODL   Open and Distance Learning
OPAC  Online Public Access Catalog
PDA   Personal Digital Assistants
SPSS  Statistical Package for the Social Sciences
SRSU  Student Registration System for Universities
ST&I  Science, Technology and Innovation
STISA Science, Technology and Innovation Strategy for Africa
CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Problem

Sahlman (2010) writes that over the past century, the business environment has become complex in terms of competition, economic and social factors. The complexity is as a result of rapid proliferation of information and continuous technological development. Schumpeter (1961) as cited by Sahlman (2010) posits that technology development and advancement induces emergence, fusion, evolution and disruption of industries over a period of time. This is the case especially in high technology industries therefore, organizations must adopt global technology based competitive strategies to enable them to compete on a global scale as well as stay profitable and relevant.

This then begs the question, how do firms strategically manage product offerings, product technology, value system, competences and capabilities in the turbulent environment that comes with technology development? Sahlman (2010) also highlights that today’s operating environment is said to be turbulent and complex and for firms to enhance and achieve productivity; technology, innovation and business model play a significant role. In order to guarantee value creation and sustained competitiveness, firms must use their capabilities and competences to create and implement business strategies geared by technology. Organizations must address underlying capability and competences issues to avoid adoption of ambiguous technology changes in an effort to exploit new opportunities.

Studies have been carried out to illustrate how digital technology can improve the higher education sector. In a recent report written by Alexander, Becker, Cummins and Giesinger (2017) highlights that the role of technology in teaching and learning lies on adaptability. The report emphasizes that college students must go beyond simply knowing how to use the range of technology i.e. mobile devices, software and media creation tools that they have access to at their institution. It is up for the students to purposely familiarize to new digital
environments, developing habits that cultivate long term learning and continuous mastery of new skills due to the rapid change of technological advancement.

Alexander et al. (2017) also note that development of digital literacies is uneven in the sense that institutions might have in place digital literacies to address desired competencies for their students to hold but implementation of the same is unequal throughout the world. For instance, level of digital technology available and rate of implementation in Africa is way behind that in the developed world. It is important to note that implementation of digital technology varies between institutions; individual faculty, academic departments and leadership of the institution just to name a few.

It is evident that digital technology and innovation is the epicenter of the success of firms in this digital era. Institutions of higher learning around the world have also adopted various digital strategies and mechanisms to enhance learning and overall school experience. Kryukov (2016) writes that majority of institutions of higher learning are incorporating digital technology strategies in their organization processes as they are key contributors of creating competitiveness.

Kryukov (2016) attributes this to the expansion of the internet, change of lifestyle and a generation of “digital natives” that is familiar with computers right from a young age. Kryukov (2016) also points out that digital technology has become one of the main priorities in universities’ development plan and use of technology in class to enhance and ease students learning experience is perceived to be appealing and could easily attract potential students.

Vajravelu and Muhs (2016) a Professor and Assistant Lecturer at University of Central Florida, Department of Mathematics developed an innovative teaching style in an effort to improve student performance and retention in math’s classes. The innovative teaching style integrated computers and MyLabsPlus software with application sessions in their classes. Vajravelu and Muhs (2016) notes that use of technology to solve problems in class as well as spark discussions enhances students understanding on a subject and in this case calculus. The technology based teaching style comprised of; daily online homework sets, online skills tests, application sessions and projects with Teaching Assistants, in-class tests, and comprehensive final exam.
At the end of their study Vajravelu and Muhs (2016) concluded that, as a result of the redesigned and innovation style, there was a significant higher success rate as compared to the traditional teaching methods which were both being used in the same semester. Another conclusion drawn from the study was that, the innovative teaching method led to a more consistent student experience in terms of content and assessment as compared to the traditional teaching method. This study goes ahead to reinforce that implementation of digital technology in institutions of higher learning plays a huge role in enhancing student’s learning experience by enabling them to understand various concepts and subjects faster.

Jowi et al. (2013) writes that higher education has a key role in Africa’s sustainable social, political and economic development. The sector however faces certain challenges such as; inadequate capacity, inadequate resources and lack of research and innovation capacity and the ability to implement the same in order to transform Africa. As a result, institutions struggle to respond to increasing demand and adoption of new technology. African Union (2016) is making efforts to change this where the Union has prioritized higher education as a vital area for Africa’s development in the African Union Second Decade of Education Action Plan.

Africa has always been perceived as a supplier of raw materials for export markets. The African Union (AU) aims to reposition this perception to a technology driven economy as noted by Juma (2016). African Union (2016) developed the AU Science, Technology and Innovation Strategy for Africa 2024 (STISA-2024) where science, technology and innovation are at the centrality of Africa’s socio-economic development and growth. STISA-2024 is part of a broader and long term AU Agenda 2063 and provides the framework and guidelines to achieve the goal for the first ten years. In the discussion paper Juma (2016), highlights that for the objectives of STISA-2024 to be achieved it will be important to align education, research and innovation with the long term socio-economic objectives.

Juma (2016) highlights the challenges that Africa faces in order to realize the AU goals. The most significant challenge is investing in capacity building by enhancing education in science, technology, mathematics and engineering. Investing in these will enable Africa leverage the existing global scientific and technical knowledge and use it to diversify the economy from the dependence of natural resources. This illustrates that technology and
innovation are the backbone of the future for any economy and if the AU’s STISA-2024 goals can be realized Africa’s economy will be transformed.

Ng’ambi, Brown, Bozalek, Gachago and Wood, (2016) reviewed how technology has enhanced South Africa’s higher education over 20 years in 4 phases i.e. Phase 1 (1996-2000), phase 2 (2001-2005), phase 3 (2006-2010), phase 4 (2011-2016). The study revealed that phase 1 was characterized by low Information and communication technology (ICT) infrastructure and institutional control and regulations. Back then higher education institutions were focused on overcoming lack of equality in physical access to computers in an effort to ensure computer aided instruction did not widen the digital divide. During this phase institutions built computer labs for students to access computer aided instruction. Phase 2 was centered on policies and infrastructure that would enable equitable access, uptake and use of ICT for teaching and learning in institutions.

Phase 3 ICT infrastructure had improved and mobile devices and communication networks entering the higher education sector. Institutions focused on how ICT practices could influence the scholarship of teaching, learning and professional development. The final phase is described as ICT infrastructure and high personal control through cloud based tools. The focus of institutions shifted to the role institutions given that all students now own mobile devices, socially connected, digital content easily accessible and available. This is still the focus of institutions to date and how they respond will define the future of higher education institutions in South Africa and globally.

In Kenya the government has made some tremendous adjustments in service delivery by digitizing government services through the e-citizen portal. People can easily access majority of services such as, business name registration, driving license renewal, pass port application as well as police clearance certificate among others. This has eased up the lives of Kenyans as the services are readily available and accessible at any given time and can be accessed by use of a smartphone. This shows that the government is committed to realize the Vision 2030 objective which is to transform Kenya to a globally competitive and newly industrialized middle-income country by providing a high-quality standard of life to all its citizens. It also
illustrates that adoption of technology even in government services aligns with the current global trends.

Ministry of Education (2017) formulated a science, technology and innovation (ST&I) policy which outlines how the Ministry of Education can harness science, technology and innovation for regional and global competitiveness. Under the National Development Agenda of Vision 2030, the ST&I policy has to be implemented alongside the Science, Technology and Innovation Act 2013. The Act emphasizes on the need to have a functional innovative system by having universities and research institutes playing a leading role in knowledge and technology generation through research and development. This places institutions of higher learning at the center of realizing the Vision 2030 objectives and scaling up Kenya to a global level for her to compete with and at the same level as developed countries.

United States International University Africa, also known as USIU-A is a private university in Kenya. It is ranked by Universities (2019) as the second best private university in Kenya and one of the top 100 universities in Africa (86th) position according to (Africa, 2019) and it has the most equipped and modern library in Africa. From an article written by USIU-Africa (2019) titles accreditations, honors and awards USIU-A is one of the few universities with double accreditation from the Western Association of Schools and Colleges (WASC) and it received its Charter through the Commission for University Education (CHE) in Kenya in 1999.

The fall 2018 fact sheet shows that the institution is home to 6,458 students as indicated by (USIU-Africa, 2018). USIU-A has students from 73 nationalities, currently offering 25 programs, and 19,300 alumni members and 25 global partners as captured by USIU-Africa (2019) under the explorer tab. The university is well known for courses such as International Relations and Masters in Business Administration. The diversity of nationalities illustrates that the university is preferred not just locally but across Africa and beyond. USIU-A has been able to attract foreigners through its digital technology systems which enhance learning as well as student services.
Having been a student at USIU-A, the researcher noted that the institution has adopted learning management systems Blackboard to be specific for course delivery, assignments and assessments. USIU-A also has in place knowledge management systems i.e. an Online Public Access Catalog (OPAC) within its library that students use to access the library database easily and faster as opposed to a manual catalogue. The university has also digitized the student’s registration process whereby students are able to register off campus, at their own convenience and using hand-held devices as well as computers. In Kenya majority of universities carryout manual registration of students which is a time consuming, tedious and hectic process due to the large numbers and the fact that a student has to walk from one office to another for approvals.

1.2 Statement of the Problem

Digital technology has become the basis of business lately due to globalization, ease of internet access and change of consumer preferences. As a result studies have been done to ascertain how companies can utilize digital technology to have a competitive edge and enhance customer experience.

Ogamba and Peters (2016) carried out a study on factors that affect mobile learning readiness among students and lecturers within Kenyan universities. Following the research, Habitzel (2006) as quoted by Ogamba and Peters (2016) observes that students when content is broken down into simpler and less content, students gain more knowledge effectively as it’s easier to understand. The authors point out that mobile learning would be the ideal medium to achieve simplification of content and mobile phones are constantly developing and advancing making them offer more services over and beyond communication.

According to Ogamba and Peters (2016) 53% of students in universities own smartphones. However, adoption of mobile devices as teaching and learning tools has been sidelined and overlooked. The study also reveals that as per the e-readiness survey of East African Universities (2008) indicates that all institutions in the region are at the second stage of the four stage Harvard index according to three markers i.e. internet affordability, availability and network speed. This illustrates that institutions of higher education in Kenya and developing countries are lagging behind as compared to those in the developed world.
Tarus, Muumbo and Gichoya (2015) carried out a study on the challenges that public universities face in the implementation of e-learning which is a technology based mode of teaching. The study focused on public universities and the challenges they face from implementing e-learning programs. Majority of previous studies on digital technology focused on sectors that technology has disrupted such as the banking sector. Digital technology has not to a large degree disrupted the higher education sector rather it has enhanced teaching, institutional processes and enhanced student’s learning experience.

There was a gap on the knowledge and studies done to determine the influence of digital technology strategies on enhancing students’ experience in institutions of higher education i.e. how digital technology can improve both student learning and services. The gap posed a problem because majority of higher learning institutions face challenges of student retention. Consequently, the higher education sector is still the epicenter for the growth and transformation of Africa. Institutions of higher learning are perceived to be the backbone of research, innovation and development of a country.

Therefore, there was the need to determine how the same institutions can leverage on digital technology in order to enhance Kenya’s research and innovation position as well as help achieve the Vision 2030 objectives. Through implementation and adoption of digital technology strategies, the institutions are able to improve student retention, compete on a global scale alongside the known institutions such as Harvard and Cambridge universities.

The study sought to examine the influence of digital technology strategies implemented by USIU-A on enhancing the students’ experience both in class as well as accessing services within the school and ultimately student retention. In order to truly determine how digital technology improves students’ experience, the study focused on how digital technology strategies aid in enhancing students’ learning, students services i.e. course registration and library services, and the influence of digital technology on enhancing student’s choice to be continuing students i.e. student retention.
1.3 Purpose of Study

The purpose of the study was to determine the influence of implementation of digital technology strategies on enhancing students’ experience at USIU-A.

1.4 Research Questions

1.4.1 Does the digital technology mechanisms adopted by USIU-A enhance students’ learning experience?

1.4.2 Does the current digital technology systems in place at USIU-A enhance student services especially course registration and library services?

1.4.3 Does the university’s digital technology systems influence student retention?

1.5 Significance of the Study

The study is significant to;

1.5.1 United States International University

The study is greatly beneficial to USIU-A as it informs the institution on how to leverage its existing digital technologies as well as adopting new technologies so as to improve student retention, enhance learning experience, reinforce its brand reputation, grow their market share and gain and sustain competitive advantage.

1.5.2 Other Institutions of Higher Learning

The study will be valuable to other universities as it can provide guidance on how to go about implementation of digital technologies strategies for those that have not adopted technology. Institutions with existing digital technologies can use the study to enhance the existing strategies so as to remain profitable, relevant and competitive in their industry.

1.5.3 Scholars

The research will contribute to building on existing knowledge on the relationship between digital technology and enhancing student experience. Researchers who wish to explore the subject within the context of universities and beyond will use the study for reference.
1.5.4 Policy Makers

Policy makers such as the government can use the study while developing policies and agendas that seek to enhance digital technology, innovation and research in institutions of learning. The study will also assist policy makers to realize the objectives linked to innovation and technology agendas that are currently underway such as Vision 2030.

1.6 Scope of the Study

The study focused on implementation of digital technology strategies to enhance student experience specifically at United States International University Africa. The study centered on the graduate students pursuing Masters’ in business administration (MBA) within the Chandaria School of Business. The researcher settled on United States International University Africa as it is one of the leading private universities in Kenya. The research was conducted between May 2019 and August 2019.

1.7 Definition of Terms

1.7.1 Digital Technology Strategy

Rouse (2017) defines digital strategy as a plan for maximizing the business benefits of data assets and technology focused initiatives. It entails breaking down the barrier between information technology teams and the customer facing departments in order to deliver a successful and consistent digital customer experience.

1.7.2 Student Retention

Cotter (2013) defines student retention as the duration that a student(s) continues to pursue their studies at a given institution. In institutions of higher learning, student retention is a metric that measures the percentage of students that continue to study until they graduate.

1.7.3 Student Learning Experience

According to the corporate author Great Schools Partnership (2013), learning experience is defined as the interaction a student has with a program, course or any other experience that leads to learning.
1.7.4 Student Services

In an article “Student services” written by The Encyclopedia of Education (2002), student services are services and programs for students that are aligned to the institution’s mission. The services range from academic support, academic advising, admissions, career services, counseling and community service to name a few.

1.8 Chapter Summary

This chapter elaborated on the background of the study area by illustrating studies that have been done in respect to the subject of the research. It also covered the problem of the study which highlighted on the need to carry out the study; it also captured the purpose of the study, research questions, significance of the study and definition of terminologies. The subsequent chapter covered literature review which expounded on previous studies that have been carried out by other authors on the subject matter. The following chapter three demonstrated the research methodology, chapter four covered analysis of collected data while chapter five covered discussions, conclusions and recommendations of the study.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction
This chapter covers the literature and research that has been done regarding the subject of the study. The chapter focuses on literature review on digital technology strategies in institutions of higher learning; the influence of digital technology on enhancing student’s learning experience, influence of digital technology on enhancing student services i.e. course registration and library services. Lastly, does digital technology influence student retention?

2.2 Digital Technology Strategies in Institutions of Higher Learning
In the article titled “What is Digital Strategy?” by (Liferay, 2019) digital technology strategy is defined as +the inclusion and use of digital technologies to a business model allowing development of novel, unique, differentiating business capabilities. The article points out that the focus of digital strategy is incorporating technologies in order to improve performance and processes by augmenting current products/services or creating new ones. Developing digital technology strategies stipulates the direction of a company towards achieving competitive advantage and the tactics required. Inclusion of digital technology involves changing business model(s) to allow for innovation of products and services.

Digital technology has transformed institutions of higher learning in terms of course delivery, research, learning and student services. Patton (2018) notes that students today who are the institution’s target market are highly connected and majority of them have grown up during the internet age. Therefore, they expect high level of technology in their studying environment as in their daily lives. However, Patton (2018) also writes that for higher education, it is more than adopting digital technology in learning and processes. This means that universities need to do more than just offer convenience to students but to take into consideration that their future relies on the skills they acquire from school.

Patton (2018) points out that failing to expose students to the various technologies for them to be technically proficient is preparing them for failure in the job market. Employers today are looking for graduates who are proficient in technology for communication, connection
and collaboration within the workplace as noted by Patton (2018). A gap between the expectations of employers and students leaving higher education institutions for employment can be disadvantageous to the careers of the students.

2.2.1 Student Learning Experience.

According to the corporate author Great Schools Partnership (2013), learning experience is defined as the interaction a student has with a program, course or any other experience that leads to learning. According to Patton (2018), digital technology is capable of providing novel and unique learning methods that involve/engage students and at the same time boost revenue streams, cut costs and reinforce brand reputation of the institutions.

Patton (2018) highlights that institutions of learning today are creating unique learning environments with the use of technology. Incorporating technology in order to enhance student learning prepares students for the job market by equipping them with the necessary skills and tools ideal for today’s workplace. At the same time, technology goes a long way in offering a satisfying learning experience (Patton, 2018).

Sebastian (2016) writes on the elements of a great learning experience and echoes that for a learning experience to be great, it must add value to the learner. Learning adds value to a learner when they understand concepts that they previously did not and the needs of the learner come first and the entire process should feel purposeful. Sebastian (2016) also notes that students should not learn just to pass exams as this is would be an unfortunate result of education. Sebastian (2016) is of the opinion that a good learning experience facilitates further learning where learning experiences motivate learners to be lifelong learners and instigate them to continuously broaden their studies.

2.2.2 Influence of Digital Technology on Enhancing Student Learning

Aldoobie (2015) notes that the constructivism theory dates back to the the Socrates, Plato and Aristotle who all spoke on creation of knowledge. Nevertheless, three people stand out for making positive impacts in demonstrating pattern of constructivism theory. They are; John Dewey (1859-1952), Lev Vygostky (1896-1934) and Jean Piaget (1896-1980). John Dewey is the early founder of the theory. Dewey believed that learning new things cannot take place if learners don’t have previous related experiences so as to complete the learning process.
Dewey recognized that learners learn better in groups as humans are social beings and they are able to build knowledge when working in teams as highlighted by (Aldooobie, 2015).

The 2017 New Media Consortium (NMC) Horizon report (higher education edition) is part of the NMC Horizon project established in 2002 reports that focus on identifying and describing important developments in technology that are likely to impact greatly on decision making in education on a global perspective as written by Becker, Cummins and Davis et al. (2017). The 2017 NMC Horizon report focused on six trends namely; advancing cultures of innovation, deeper learning approaches, growing focus on measuring learning, redesigning learning paces, blended learning designs and collaborative learning.

Redesigning learning spaces trend is driven towards institutions with strategies that incorporate digital aspects and encourage active learning within the physical classroom. Higher education institutions in the world are redesigning their physical appearance and environment to promote these academic shifts. Becker, Cummins and Davis et al. (2017) note that the university and school settings are being revamped to support project based learning, greater mobility, flexibility and multiple device usage. Higher education is shifting from lecture based lessons to more practical activities. Classrooms are being redesigned to look like real world work and social environments to encourage interactions and problem solving. (Becker, Cummins & Davis et al, 2017).

According to Becker, Cummins and Davis et al. (2017) blended learning design has been brought about by technology advancement in the education field such as online learning. More educators and students find online learning more feasible to some forms of face to face learning. Blended learning is therefore an amalgam of the best practices of both online and face to face methods. Blended learning has been on the rise due to the increase in digital learning platforms and expansion on how to leverage digital learning platforms for educational use. Students prefer blended learning as it is flexible, easily accessible and integrates technology and multimedia as noted by (Becker, Cummins & Davis et al, 2017).

Each of the trends that Becker, Cummins & Davis et al. (2017) write on in the NMC Horizon report of 2017 elaborate on how digital technology is transforming the education spectrum.
Most importantly, institutions of higher education need to leverage technology to enhance student learning, learning process, to remain relevant and attain competitive advantage.

2.2.3 Learning Management Systems to Enhance Student Learning

Ismail (2017) defines Learning Management System (LMS) as a software that allows organizations and institutions of learning to create and manage lessons, courses, quizzes and any other training material. An LMS enables a firm or institution deliver training material and lessons to employees or students. According to Becker, Cummins & Davis et al. (2017) LMS is made up of a category of software and web applications that allow online delivery of course materials as well as tracking and reporting of student participation.

Universities adopt LMS to manage and administer online and blended courses. With an LMS, students are able to access syllabi, notes, submit assignments, check grades, contact and communicate with faculty. Faculty members are able to track the engagement and performance of each student. Within the higher education space, common LMS include Canvas, Blackboard, Moodle, Edmodo, Desire2Learn and Sakai as highlighted by (Becker, Cummins & Davis et al, 2017).

Becker, Cummins and Davis et al. (2017) reports technology advancement of LMS has enabled institutions to access learning analytics, adaptive learning and dynamic communication. Nevertheless, there exist certain challenges which call for new and advanced models. The 2017 Higher Education Expert Panel as cited by Becker, Cummins and Davis et al. (2017) noted that the companies that own the LMSs tightly control their platforms. As a result it’s difficult for institutions of learning to customize and expand the features and integrate external features that best suit their needs i.e. both academic and institutional.

Pomerantz, Brown and Brooks (2018) posit that LMS has become vital to teaching and learning. Majority of universities have in place an LMS and in the United States LMS adoption by institutions stands at 99% and by faculty at 88%. This illustrates the importance of LMS for effective instruction delivery. As much as LMS is effective it has to be blended with face to face methods of teaching. Pomerantz, Brown and Brooks (2018) point out that blended instruction has better learning results as compared to face to face or online learning alone. In a study conducted by EDUCAUSE Center for Analysis and Research (ECAR) in
2017, 79% of respondents preferred blended instruction. In the same study, 77% of the respondents believe that a blended environment offers more benefits to their success as they learn best in this environment.

Kipkurui, Wanyembi, and Ikoha (2014) carried out a study to evaluate the factors that affect the usability of e-learning systems in Kenyan universities. According to Kipkurui, Wanyembi, and Ikoha (2014) LMS is the backbone of e-learning and universities have accepted e-learning systems and tools for teaching and learning. Universities accrue lots of benefits by having a suitable e-learning system and utilising it correctly. The benefits include but not limited to; improved lecturer productivity, consistant learning, flexible delivery, measureable learning and multi-cultural learning.

According to Nielsen, J (2005) as cited by Kipkurui, Wanyembi, and Ikoha (2014) e-learning systems must be adequately equipped. This is because inadequately equipped e-learning systems lead to confusion, frustration, anxiety and reduce learners interest. Usability of an e-learning system is the basis on which students assess their learning experience therefore, if the usability is bad then students fail to use it.

From their study Kipkurui, Wanyembi, and Ikoha (2014) found that all the respondents that were interviewed have had an experience with various e-learning systems as indicated in the table below. The results also showed the most used modules of the e-learning systems are; uploading (97.5%), assignments (100%), quiz (65%) and forum (95%). On the flip side the least used modules are; journal (32.5%), chats (15%), workshop (32.5%) and choice (42.5%).

**Table 2.1: Respondents experience with various e-learning systems**

<table>
<thead>
<tr>
<th>E-Learning System</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wiki</td>
<td>57%</td>
<td>43%</td>
</tr>
<tr>
<td>Moodle</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>WebCT</td>
<td>5%</td>
<td>95%</td>
</tr>
<tr>
<td>Blackboard</td>
<td>5%</td>
<td>95%</td>
</tr>
<tr>
<td>Sakai</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: (Kipkurui, Wanyembi & Ikoha, 2014)
It is clear that learning management systems are transforming education in institutions of higher learning. It is important for universities to fully adopt LMS not for administrative purposes but to ensure that the students are getting value i.e. enhanced learning. Universities that fail to embrace and keep up with the emerging trends that are resulting from technology advancement will have a hard time staying relevant in this era, student enrollment and retention will also drop and their brand reputation will be implicated negatively.

According to Aldoobie (2015) constructivism theory accentuates that learning is based on the learner i.e. the learner builds information within their mind based on experience and preceding knowledge. The theory negates the ideology that learning results from what an instructor says or what a learner hears. This therefore makes learning a construction process and the process impacts a learner’s society, language and environment. Similarly, construction of information differs from one individual to another and so does understanding and experiences that aid in building knowledge and ultimately influences the learning process. This theory thus emphasizes that repetition of information by an instructor does not necessarily lead to learning nor mental retention of information.

Constructivism theory is among one of the most vital theory that is used in the education sector. Aldoobie (2015) points out that the theory is ideal for dealing with changes taking place in the education sector and it has been significant in integration of technology in education. Aldoobie (2015) writes that adoption of technology in teaching haphazardly does not accrue the desired results. However, integration of technology and thoughtful scientific approach to transform education guarantees positive results. Previous research studies illustrate the effectiveness of integrating constructivism theory and technology in the education sector.

2.3 Influence of Digital Technology on Student Services

2.3.1 Student Services

In an article titled “Student services” written by Encyclopedia of Education (2002) student services are services and programs for students that are aligned to the institution’s mission. According to Long (2012), learning extends beyond the classroom and cuts across a
student’s university experience i.e. from their first day of enrollment in freshman year to their graduation day.

Student services/affairs contributes largely to the development of a student beyond the lecture hall. Long (2012) highlights that student development encompasses professional services such as academic advisors, on-campus residential staff, admissions, library services and career advisors. All professionals working within student services strive to develop intellectual and social skills of students, cultivate leadership, ethics and cultural understanding. Student services also emphasize on the significance of students’ wellbeing, assist them in discovering their identities and exploit their career potential and service to society.

2.3.2 Course Registration Process

Liu, Gao, and Liu (2012) wrote an article on the design and implementation of student registration systems. The authors describe Student Registration System for Universities (SRSU) as a type of Management Information System (MIS). An SRSU does more than record the information for student registration each semester efficiently and quickly. It also gathers statistics on students basic information, registration and payment information after which it provides results on the analysis. Prior to SRSUs, the student registration process was a tedious process and a crucial job for a university whereby course counsellors were responsible for registration. The course counsellors were required to stay in the office all day awaiting students to come in for registration. In this process information was closed, manual and low efficiency as noted by (Liu, Gao & Liu, 2012).

Liu, Gao, and Liu (2012) point out the traditional registration system was inefficient with high risks of manual error especially with large numbers of students. It was also time consuming and constraining for the course counsellors due to the long hours spent waiting in the office. The conventional system did not provide relevant records of a student after registration was done. This posed an inconvenience in the management of students because it was impossible for an institution to carryout any analysis on student registration as explained by (Liu, Gao & Liu, 2012).
Since an SRSU is an MIS, it monitors and organizes universities operations. Thus an SRSU enables an institution to predict the future, organize operations, and make decisions on a global scale and thus attaining its planning objectives. Furthermore, the system is able to synchronize student management between universities, information processing, sharing and delivery between departments in real time expounds (Liu, Gao & Liu, 2012).

Mashabela and Pillay (2017) carried out a study on the effectiveness of an integrated tertiary software mobile information for student registration and admission at a University in Gauteng. The study was based on the theory of enterprise system flexibility which differentiates between flexibility-to-use and flexibility-to change. Mashabela and Pillay (2017) writes that flexibility to use relates to the variety of process activities within a system that are supported without a major system change. Flexibility to change relates to technology infrastructure measured by effort required to adjust a system after its initial implementation. Technology infrastructure needs to be flexible for it to accommodate the changing and increased demands from customer without increasing costs of the same (Mashabela & Pillay, 2017).

The study took place after an unfortunate incident where a parent lost her life after a stampede incident at University of Johannesburg while in line for registration of her child. After the incident, universities had to scrap off walk-in registration and adopted digital registration and admission system as authored in the Mail and Guardian newspaper on the 11th October 2012 (Fazel, 2012, pp.1-2) and cited by (Mashabela & Pillay, 2017).

During the study Mashabela and Pillay (2017) found out that 51% of the respondents agreed that the online registration system is better than the walk-in registration. Another question that respondents answered was whether the online registration system was easy to use and here 68% of the respondents found the online system user friendly. Also 46% of respondents had managed to register successfully via the online system without having to physically walk into the campus and 65% of respondents found the instructions on the system easy to use.

Gitonga (2018) in a newspaper article wrote that Kenya’s Ministry of Education begun a countrywide exercise i.e. digital registration for all students. The project is under the jurisdiction of the National Education Management Information System (NEMIS) and
principals and head teachers were mandated to register the students in their school. Under the digital system, students right from primary and secondary school are given a unique identification code which allows their progress tracking at all levels of education. Kenya Universities and Colleges Central Placement Service (KUCCPS) is an agency under the Ministry of Education. It is an online portal onto which students are able to register and choose their university of choice after completing their secondary education. Previously, the registration process was done manually.

As stated earlier, universities in Kenya have embraced digital technology. Majority if not all have in place an online portal that enables students to register for courses at any time of day and from any location. For instance USIU’s portal enables students to easily register for courses during the registration window and students can access the portal on hand held devices, laptops and desktops and at any time and from any location in the world.

2.3.2 Library Services

The New Media Consortium (NMC) produced the NMC Horizon Library edition report in 2017 in collaboration with a couple of universities. The library edition is part of the NMC horizon project that was established in 2002 and whose purpose is to identify and describe advancement in technology that have the potential to impact technology planning and decision making in the education sector on a global scale.

Becker, Cummins and Davis et al. (2017) in the NMC library edition notes students are currently depending minimally on libraries for sourcing and accessing information but rather as a productive space. EBSCO conducted a survey to investigate the research methods that university students prefer and 68% stated that research process begins on Google and Wikipedia. Becker, Cummins and Davis et al. (2017) reports that libraries are being redesigned to accommodate active learning classes, media production studios and areas that favourable for collaborative and hands-on assignments. These changes illustrate a pedagogical shift in institutions of higher learning in order to enhance learning experience and ultimately enable development of up to date skills.

User experience is no longer a term used to evaluate an experience with operating systems and websites, libraries are now also applying the same usability to their spaces. User
experience is defined as the quality of interaction with services and products that an individual experiences as explained by Becker, Cummins and Davis et al. (2017). According to Becker, Cummins and Davis et al. (2017) libraries are starting to adopt user centric approaches, leveraging data in order to identify users’ needs in order to design quality engaging experiences. Libraries are now borrowing a leaf from technology companies such as Amazon and Google that use data and user patterns and behaviours to customize search results.

Liu and Briggs (2015) undertook a study to investigate the state of mobile services in United States of America’s top 100 academic libraries. From the same study by the ACRL, over 67% of students use their hand held devices for academic use as written by Liu and Briggs (2015). According to Elmore and Stephens (2012) for majority of students, a mobile phone is not just a communication device but a handheld information sourcing and retrieval tool. Therefore, academic libraries cannot turn a blind eye to the trend cites Liu and Briggs (2015). Results from the study conducted by Liu and Briggs (2015) show that the top 100 university libraries in the US have adapted mobile services. The most common services include; mobile apps, mobile sites, mobile OPAC, mobile access to databases, text messaging, QR codes and e-books.

Findings to the question “What basic types of mobile services do the libraries provide” (Liu and Briggs, 2015, p.138) illustrate that all of the 100 libraries offered one or more the mobile services as captured in the figure below. The authors also captured multiple entries so as to incorporate new and modern service patterns that the university libraries adopt in order to meet offer value and meet needs of the users.
From the above figure, Liu and Briggs (2015) writes it is evident that majority of the libraries that were assessed offer multiple mobile services and mobile websites, mobile access to catalog and databases, e-books and text messaging were the most common. QR codes and augmented reality were the least common services. It is clear from the NMC report and the findings of Liu and Briggs (2015) that university libraries need to transform and augment their services to include and consider the changing preferences and use of the digital student.

Digital technology tends to shift the status quo, rigid institutions try to resist and postpone its adoption for as long as possible. In the education setting, digital technology is transforming learning, content delivery, student services and many other aspects within a university. Successful adoption of digital technology in any institution of learning is determined by aspects such as communication, consultation, awareness and change embracement of both leadership and faculty members.

Marshall (2010) recognizes that leaders of institutions of learning that are in charge of change have to strike a balance between technology, academic and administrative interests. Management must consider strategy, organizational culture, resources and resource utilization and sustainability highlights Marshall (2010). Implementing change in a large entity such as a university is a complex process. Marshall (2010) describes change in large entities as operating at various levels i.e. process, structures, systems and organization.
According to Birnbaum (1998) as cited by Marshall (2010), change in universities can be seamless and effective when managed using the principles of cybernetics which is also referred to as the science of effective organization by Stafford Beer. Weick (1976) explains cybernetics as a process that involves organizing structures in an organization in a loose and linked manner and cited by Marshall (2010). Marshall (2010) points out that disruptive change is challenging for dominant firms as they tend to protect existing structures and activities especially if they have been working for them.

Marshall (2010) also emphasizes that universities need to factor in the purpose of change. This is because universities tend to drive change for financial accountability of funds. Universities receive pressure from different stakeholders all whom lobby for change that best suits their needs and resists that which does not benefit them. The conflicting tag of war poses a challenge to universities which hinders the use of performance metrics such as profits as a determining factor.

Digital technology cannot be ignored by universities and the fact that it (digital technology) was minimal or non-existent when some universities were founded can pose a threat to changing the status quo. Change management and theory is vital for successful adoption and implementation of digital technology within any institution. It is the mandate of leadership to ensure seamless transition from the old to the new.

2.4 Student Retention in Higher Education

As stated earlier Cotter (2013) defines student retention as the duration that a student(s) continues to pursue their studies at a given institution. It is a metric that institutions of higher learning, use to measure the percentage of students that continue to study until they graduate. Cotter (2013) in her white paper on student retention notes that low or poor retention rates are a global problem in universities and it is a constant problem across the institutions.

For institutions to survive, high student retention rates are fundamental. Institutions with low retention of students risk becoming unprofitable points out Cotter (2013). To understand student retention Cotter (2013) assesses it as a threefold process whereby an institution’s viability is dependent on its ability to draw students. It then ensures they have the appropriate
skills, capabilities and methods needed for students to learn and gain quality education and finally retain the students to the point they complete their course. It is important to note that the three dynamics are interdependent and interrelated and the environment and culture of an institution shapes the experience of its stakeholders (Cotter, 2013).

Institutions of learning should closely monitor their student retention rates as this provides an institution with an understanding of its performance as compared to competitors. High student rates are an indication that an institution is meeting the needs of its students and seen to be providing quality education as written by Cotter (2013). Provision of quality education gains an institution credibility in the academic sector and the recognition and credibility goes a long way in attracting more students and the cycle of retention begins again thus Cotter (2013) refers student retention as a cyclic process.

Cotter (2013) highlights that the number of returning international students can be used as a performance measure in comparison to the number of returning international students of competitors. This can be calculated at the end of year or semester and international students form the basis of assessment because their fee charges are higher than that of local students. Therefore, international students provide a high percentage of revenue to an institution thus, the number of international students that opt to return year after year is an indicator of the institution’s success.

A student’s choice to enroll for a consecutive semester within a university is influenced by their satisfaction with the quality of education being provided and this also translates to higher grade scores reports (Cotter, 2013). Students’ zeal and zest is important in forming the culture of an institution notes (Cotter, 2013). Faculty gain greater job satisfaction from their students being satisfied with their teaching.

2.4.2 Influence of Digital Technology on Student Retention

Baruah (2010) carried out a study to investigate the impacts of e-learning technologies on student retention in the Open and Distance Learning (ODL) program within India’s Indira Gandhi National Open University. E-learning is learning through use of virtual classrooms, electronic application, web based and computer based learning. Baruah (2010) points out that use of such technology leads to improved student performance, low cost, ease and increased
accessibility to course material and development of fundamental skills for learners as ICT is embedded in the curriculum.

In distance education system, student retention is a major concern notes Baruah (2010). The challenge is attributed to; perception that ODL is a second option as compared to on-campus delivery which has resulted in the belief that ODL program has lower student retention in comparison to the conventional teaching system. Baruah (2010) goes on to state that student retention is propelled by complicated financial considerations. There is a perception that institutions incur high costs in preparing course material for ODL as compared to conventional teaching method whose costs are fixed costs for the structures. Baruah (2010) reports that poor/low student retention can dilute and damage the reputation, accreditation and credibility of an institution yet the same institutions invest chunk of resources in attracting and enrolling students.

Findings from the study by Baruah (2010) indicate that the number of students admitted for different programs has been on the rise over the last 6 years. The increase in numbers is attributed to adoption of ICT tools and Baruah (2010) also notes that due to the ICT tools drop out rates had lowered resulting in student retention. As of July 2010, the number of students who were admitted for various course in January of the same year was 1,676 and that of returning students during the same period was t 958. During the July intake of 2010 number of new students was 3,049 and returning students was 2,150 as reported by (Baruah, 2010).

2.4.3 Learning Analytics for Student Retention

The NMC Horizon report of 2016 written by Johnson, Becker and Cummins et al. (2016) define learning analytics as educational application of web analytics whose purpose is to profile learner, gather and analyze individual student information and interaction on digital learning activities. The objective of learning analytics is to come up with improved pedagogies, encourage active learning, identify and target at risk students and evaluate issues influencing course completion and student success. According to Johnson, Becker and Cummins et al. (2016) learning analytics have the ability to promote personalized student learning. At the same time, they (learning analytics) provide
the institution with insights on the efficiency of instruction delivery. On the flip side, learning analytics around the world is quite imbalanced. Johnson, Becker and Cummins et al. (2016) give the example of Australia where adoption of learning analytics is still in the early stages. Findings of a study by the Office of Teaching and Learning on assessing the state of learning analytics in Australia’s higher education, illustrate that majority of initiatives are limited in scale and with a narrow focus on boosting retention. Johnson, Becker and Cummins et al. (2016) report that Yuan Ze University in Taiwan is the only university in the country that has study learning analytics. Yuan Ze University has focused on aspects such as visualized analytics to help students in their degree journey via core competencies, availing faculty with dropout predictions and assess methods to increase engagement for their Massive open online courses.

According to the corporate author U-Planner (2019) which is an organization that focuses on institutions of higher learning, wrote a report on how to improve student retention in the USA through various strategies and reports. Page 16 of the report illustrates how London South Bank University (LSBU) used a predictive system from existing data from various sources to help the institution identify students that required help before they dropped out. LSBU focused on minority populations in their university i.e. black and minority ethnic, adult and part time students. The university had noted that students of these populations were susceptible to financial difficulties. Therefore, the university used the predictive system to curb the drop out rates due to financial difficulties.

The U-Planner (2019) report points out that universities need to invest in technologies that monitor student progress, detect early warning signs of drop outs, communicate with students, systems that connect students to resources and offer personalized engagement. The report gives the example of Colorado State University (CSU) which integrated data systems that connect opportunities to proactive students, improve communication with students and involve students in academic planning. As a result, CSU’s retention rates went up from 82% to 86% and graduation rates increased from 62% to 66%.

It is evident that learning analytics can be beneficial to institutions of higher learning. The benefits are not just tied down to student retention, others include, enhance brand reputation, increased profits and market share growth. However, for the technologies to benefit the
institutions the solutions must be integrated and aligned with day to day internal processes and practices.

Aljohani (2016) highlights the work of three authors who developed renowned student retention models for the past four decades namely; Spady, Tinto and Bean. The work of the three authors was inspired by well known theories. They are; suicide theory by Durkheim 1951, the rites of passage in tribal societies that is centred on sociology by Van Gennep 1960 and concept of labour turnover based from human resources by Price 1977.

Durkheim’s suicide theory as cited by Aljohani (2016) views suicide as a person’s lack of social and intellectual integration in their social life within their society. According to the earlier works of Spady (1970,1971) and Tinto (1975) there is a link between suicidal behaviour and student attrition behaviour as reported by (Aljohani, 2016). Tinto (1993) argues that dropping out from a university does not qualify as failing but it is similar to process of suicide as cited by (Aljohani, 2016). The similarities between the two is that both behaviours can be viewed as a form of intentional retraction from a specific society. Aljohani (2016) writes that the suicide theory was incorporated into student retention theories by Spady (1971) in his pioneer study i.e. “Dropouts from Higher Education: Toward an Empirical Model.”

Van Gennep’s (1960) study of the rites of passage in tribal societies from the field of social anthropology has formed the basis of the most well-known student retention models including Tinto’s (1993) as cited by (Aljohani, 2016). The study of the rites of passage in tribal societies by Van Gennep (1960), describes the phases of transmission of relationships between succeeding groups in three stages i.e. separation, transition and incorporation. Aljohani (2016) writes that Tinto (1993) built from the concept of rites of passage to elaborate the extended process of student persistence in an institution.

According to Tinto (1993) as echoed by Aljohani (2016), the initial phase of a university student involves them having to separate/detach from their old communities to make way for adoption of the new norms and behaviours. The second phase involves transition/ change towards the last stage of incorporation of the new norms within the new community i.e. university. Lastly, in the third phase the students have succeeded in separating themselves
from the old norms and behaviours of their old communities and are now integrated into the new society in their universities.

Price (1977) and Price and Mueller (1981) studies on turnover in work institutions have also influenced theoretical foundation studies of student retention cites Aljohani (2016). Bean (1980) came up with the student attrition model which was based on Price’s (1977) work on turnover in the workplace. Price (1977) defines employee turnover in work organizations as the degree of movement of a person across the association border of a social system/ society as captured by (Aljohani, 2016).

According to Bean (1980) student attrition/retention relates to employee turnover and the reasons behind an employee and student choice to leave are similar as cited by (Aljohani, 2016). In both cases, organizational variables play a crucial role in making the decision to leave as reported by (Aljohani, 2016). This is because organizational variable influence satisfaction which is a fundamental predictor of both employee and student retention. In the employment set up salary is also an important variable while in the institutions of learning, the student’s Grade Point Average, quality of education, development and practical value are the corresponding predictors.

2.5 Chapter Summary

This chapter featured literature and works that have been studied in line with the study with digital technology being the independent variable and its engendering effects on enhancing student experience being the dependent variable. The chapter focused on the influence of digital technology on enhancing students learning experience and adoption of LMS on enhancing learning. It also covered the influence of digital technology on student services i.e. course registration and library services. Finally, the chapter covered the influence of digital technology on students’ choice to re-register for consecutive semesters (student retention) and how learning analytics improve student retention. The chapter also featured the following theories; constructivism theory, change theory and student retention theory. The next chapter covered the research methodology that will be used in the study.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter focused on the methodology that was used in the undertaking of the study. Research methodology involved, research design population and sampling design, data collection methods, research procedures, data analysis methods and a chapter summary.

3.2 Research Design

Research design is a plan that guides the study of a research problem, and the design determines the study type such as descriptive, experimental or meta-analytic. It is the outline that’s used to seek answers to research questions. Creswell (2014) defines research design as type of inquiry that gives specific direction for procedures in a research study. Denzin & Lincoln (2011) as cited by Creswell (2014) defines research design as strategies of inquiry. Due to technology development, researchers now have a wider and broader array of research designs as noted by (Creswell, 2014).

This study adopted a descriptive research design. Descriptive research is a research method that describes the characteristics of the population or phenomenon under study as described by (Bhat, 2019). The author points out that descriptive research focuses on more of the “what” aspects of the subject rather than the “why or how”. K’aol (2017) highlights that descriptive research describes the characteristics of a sample population or the relationship among the variables in a given study. According to Gall, Gall and Borg (2007) as cited by Nassaji (2015) notes that descriptive research employ tools such as observation and survey to collect data. The data collected in mostly qualitative however, it is analyzed quantitatively using frequencies, percentages, average and other statistical analysis tools reports Nassaji (2015).

Descriptive research design was preferred for this study because descriptive research allowed natural/realistic collection of data. Nassaji (2015), writes that descriptive research is naturalistic in that the study is conducted within its natural setting without manipulating the
variables. Descriptive research design is ideal for the study as it allows for the researcher to illustrate the characteristics and relationship between the variables of the study.

3.3 Population and Sampling Design

3.3.1 Population

Mugenda (2008) defines population as all the people or items with the similar characteristics that a researcher is studying. K’aoi (2017) describes population as the whole group of people, events or things that a researcher is interested in and wishes to investigate and forms the foundation on which sample of the study is drawn. The target population for the study included the 6,458 students enrolled at USIU-A as per the 2019 factsheet.

3.3.2 Sampling Design

3.3.2.1 Sampling Frame

Turner (2003) defines sampling frame as the set of elements from which the actual sample is drawn. The sample frame is important as it provides a means of choosing the specific sample of the target population that the study will focus on leading to credible and reliable data. Cooper and Schindler (2010) write that the sampling frame list should be made up of all the population members only. For this study, the sampling frame consisted of 678 MBA graduates students of USIU-Africa as per the 2019 spring enrollment records.

3.3.2.2 Sampling Technique

The process or technique used to select an appropriate sample as a representative of a population for the purpose of determining the characteristics of the entire population is called sampling as defined by (Mugo, 2002). The objective of sampling is to enable the researcher draw conclusions about a population without carrying out a complete enumeration or census of the population as indicated by (Mugo, 2002). Carrying out a census is difficult especially from a large population therefore sampling enables researchers to narrow it down. K’aoi (2017) recommends probability sampling techniques in order to ensure unbiased representation and generalization of the findings to the entire population and they include; simple random sampling, stratified random sampling and cluster random sampling.
This study employed a simple random sampling and stratified random sampling techniques. Simple random sampling is obtained by selecting elementary units in a way that ensures each unit in the population has an equal chance of being selected and the technique is free from sampling bias as pointed out by (Mugo, 2002). This will ensure the results are credible, valid and reliable. According to Mugo (2002), stratified random sampling is given by independently selecting a separate simple random sample from each population stratum. Population stratum is whereby the population is divided into different groups based on certain characteristics. For this study, the researcher stratified the sample size using the various MBA concentration options offered at USIU-A i.e. finance, strategic management, human resource, marketing, GSSE, GEMBA and MOD.

3.3.2.3 Sample Size

According to K'aol (2017) sample size is the actual number of subjects selected as the representative sample of the target population in a study and the sample size should represent the target population. There are various formulas of selecting a sample size. According to Creswell (2013) as cited in Creswell (2014), the formula for determining the sample size is dependent on the margin of error (confidence interval), the researcher should state the confidence interval and the standard deviation.

The study used the Yamane’s formula to determine the sample size for the study. The Yamane’s formula is given by;

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

Where;

\( n \) = sample size,

\( N \) = population size

\( e \) = alpha level i.e. \( e = 0.05 \) when the confidence interval is 95%

\[ n = \frac{678}{1 + (678 \times 0.05 \times 0.05)} \]

\[ n = \frac{678}{1 + 1.695} = \frac{678}{2.695} \]

\[ n = 252 \]
3.4 Data Collection Methods

Primary data collection methods were used to collect data for the study and to ascertain the research questions. Primary data is information that is obtained by the researcher from first hand sources. The primary data was collected using semi-structured questionnaires with open-ended and closed-ended questions. The questionnaire also had a likert scale in order to measure the attitudes and opinions of the respondents with a greater degree of distinction. This helped to determine whether the respondents agreed or disagreed with particular statements in the questionnaire.

The questionnaires validity was assessed through face validity which is determined when a research expert in the field of study reviews the questionnaire and draws a conclusion. The research expert then concludes by either agreeing or disagreeing that the test is a valid measure of the concept being measured as written by (Bolarinwa, 2015). Validity of the questionnaires was also determined through content validity which involves the degree to which the questionnaire fully measures the area of interest as authored by (Bolarinwa, 2015). Experts in digital technology in institutions of higher learning such as senior lecturers and faculty can be the experts to determine validity of the questionnaire.

Reliability of the questionnaire was assessed through Statistical Package for the Social Sciences Version 24 (SPSS) analysis of a pilot test of the questionnaire. This is whereby the researcher collects data from a number of subjects such as 20 who will not be included in the sample. The data from the pilot test is then analysed using SPSS which provides the ‘correlation matrix’ and ‘view alpha if item deleted’ column as captured by (Bolarinwa, 2015). The alpha is the most common measure of internal reliability. Bolarinwa (2015) points out that the reliability coefficient alpha can range from 0-1 where 0 indicates a questionnaire that is not reliable and 1 indicates an absolutely reliable questionnaire and a reliability coefficient (alpha) of 0.70 or higher is considered acceptable reliability in SPSS.

3.5 Research Procedures

Prior to collecting data from the population sample, the researcher administered a pilot test whereby the questionnaire was administered to 10 respondents who were not part of the population sample. This helped identify any unclear and ambiguous questions and the
researcher was able to adjust them accordingly to ensure clear communication during the actual data collection process. The researcher clearly indicated on the questionnaire and reassured respondents that their responses will be used for research purposes only and that their identity remained anonymous. The questionnaires were self-administered after which the responses were entered into SPSS statistical software for reliability analysis.

3.6 Data Analysis Methods

The initial step of data analysis involved data cleaning i.e. counterchecking the data to identify errors or omissions in order to ensure the data was accurate and consistent. The researcher then coded the data on (SPSS) for quantitative analysis. Quantitative analysis employed both descriptive and inferential statistics. Descriptive statistics included frequency and percentage distributions, measures of central tendencies and measures of dispersion.

Inferential statistics was used to measure the relationship between the two variables i.e. digital technology (independent) and student experience (dependent). The relationship was assessed through correlation analysis and regression analysis. The researcher used Pearson’s product moment coefficient to measure the strength of the relationship. The coefficients range between +1 and -1, where +1 illustrates a strong positive correlation and -1 indicates a strong negative correlation. Qualitative data was summarized, categorized and presented in the frequency distribution tables.

3.7 Chapter Summary

This chapter captured the methodology that was employed in carrying out the research. It examined research design, population of the study, sampling procedures, data collection methods, research procedures and data analysis. Descriptive research design was used; simple random sampling and stratified random sampling were the sampling techniques. The sample size was determined by the Yamane’s formula, primary data collection was the data collection method and finally the data was analysed using descriptive and inferential statistics through SPSS version 24. The next chapter focused on the analysis and presentation of data in relation to the research questions.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

This chapter expounds on the analysis of the study i.e. results and findings in descriptive statistics, charts, graphs and tables. The sequence of the analysis is in order of the questionnaire sections that was used for the study. Section A included the demographic data of the respondents, section B focused on the various digital technology systems at USIU-A, section C covered the influence of digital technology systems on enhancing student learning. Section D focused on the influence of digital technology systems on enhancing student services i.e. course registration and library services and finally section E focused on influence of digital technology systems on student retention.

4.2 General Information

4.2.1 Response Rate

The researcher distributed a total of 252 questionnaires to MBA students at USIU-A out of these, 194 were filled and handed back to the researcher. This represents a 77% response rate and this was satisfactory for this study.

4.2.2 Gender of Respondents

Majority of the respondents who took part in the study were female i.e. 59.28% and male population was 40.72% this gender distribution is well balanced. The results are illustrated in Figure 4.1.
4.2.3 Age of Respondents

Age bracket was part of the bio data that respondents were required to identify. The age brackets for the students ranged from 18 years to 30 and above. The result on the age of the respondents is shown in the figure 4.2 below. Majority of the respondents are aged 30 and above and the minority were aged between 18-22 years.
4.2.4 Student Enrollment

The researcher sort to find out the year and semester each respondent first enrolled at USIU-A. From the results, majority of the respondents that were interviewed enrolled this year while the minority first joined USIU-A in 2015 and 2016 for the MBA program. The graphs below (figure 4.3 and 4.4) represent the number of MBA students that enrolled for the MBA program between the years 2015 and 2019 and the semester during which they enrolled.

Figure 4.3 Year of Enrollment

Figure 4.4 Semester of Enrollment
4.2.5 MBA Concentration

The target population for the project are MBA students of USIU-A. Since the institution offers various concentration options, the researcher needed to understand the impact of digital technology systems across the various concentration options. Majority of respondents were enrolled for strategic management (44.33%), finance (13.92%), GEMBA (12.37%) and MOD (10.31%) in that order while the minority were enrolled for double concentration such as GSSE and marketing this is illustrated in Figure 4.5 below.

![MBA Concentration Analysis](image)

Figure 4.5 MBA Concentration analysis

4.3 Digital Technology Strategies at USIU-Africa

The second segment of the questionnaire focused on understanding the various digital technology strategies that USIU-A has adopted so as to enhance student experience. This section covered questions around the convenience of the student portal, the learning management system (blackboard), a comparison of USIU-A’s adoption of digital technology and other institutions.
4.3.1. Description of the Convenience of the Student Portal and Blackboard

Majority of respondents (34%) found that the student portal and blackboard are convenient and this was followed closely by 33% found that blackboard and student portal are greatly convenient and 32% found the same to be very convenient. Only 1% of the respondents found the student portal and blackboard to be inconvenient. The results are illustrated in the figure below.

![Convenience of Student Portal & Blackboard](image)

**Figure 4.6: Convenicence of Blackboard and Student Portal**

4.3.2 Adoption of Digital Technology at USIU-A versus Other Institutions

For this question, the researcher was seeking to find out the opinion of the USIU-A’s MBA students with regards to the institution’s adoption of digital technology as compared to other institutions of higher learning. It’s likely that quite a number of MBA students pursued their undergraduate studies in other institutions therefore, they are able to compare the uptake of digital technology in their previous institutions and USIU-A where they are currently studying. Results show that 51% find USIU-A’s adoption of technology highly satisfactory, 41.8% find the adoption of technology satisfactory, 4.6% were neutral, 0.5% and 2.1% unsatisfactory and highly unsatisfactory respectively. Figure 4.7 below show the results.
4.3.3 Digital Technology Systems at USIU-A

The researcher sought to understand the views of the MBA students regarding the implementation of various digital technology strategies at USIU-A. Under this section the respondents were required to choose the degree to which they strongly agreed, agreed, neutral, disagreed and strongly disagreed with various statements and questions. As a result, 41.2% strongly agreed that USIU-A has to a great extent implemented digital technology, 47.4% agreed that the student portal had increased efficiency with regards to administrative inquiries.

37.1 % agreed to the statement that their interaction with USIU’s digital systems has gained them proficient technology skills that are necessary in the job market. Slightly more than half 51% agreed that digital technology strategies have transformed learning and research at USIU-A. Finally, 51% strongly agreed that further implementation of digital technology strategies will help USIU-A gain competitive advantage. From the summary of the 5 point likert scale responses in terms of means implies that the MBA students agree that indeed
USIU-A has adopted various digital technology systems. Table 4.1 below illustrates the descriptive statistics for these findings.

**Table 4.1 Digital Technology Strategies at USIU-A**

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USIU has implemented digital technology systems to a great extent.</strong></td>
<td>2.6</td>
<td>0.5</td>
<td>7.7</td>
<td>47.9</td>
<td>41.2</td>
<td>4.25</td>
<td>0.827</td>
</tr>
<tr>
<td><strong>Student portal has increased efficiency for administrative inquiries.</strong></td>
<td>3.1</td>
<td>2.1</td>
<td>12.9</td>
<td>47.4</td>
<td>34.5</td>
<td>4.08</td>
<td>0.912</td>
</tr>
<tr>
<td><strong>Interaction with USIU’s digital systems aided in gaining proficient technology skills needed in the job market.</strong></td>
<td>2.6</td>
<td>7.7</td>
<td>31.4</td>
<td>37.1</td>
<td>21.1</td>
<td>3.66</td>
<td>0.980</td>
</tr>
<tr>
<td><strong>Digital technology has transformed research and learning at USIU-A.</strong></td>
<td>2.1</td>
<td>3.1</td>
<td>18.6</td>
<td>51.0</td>
<td>25.3</td>
<td>3.94</td>
<td>0.865</td>
</tr>
<tr>
<td><strong>Adoption of digital technology can aid USIU-A gain competitive advantage.</strong></td>
<td>3.1</td>
<td>1.0</td>
<td>6.2</td>
<td>38.7</td>
<td>51.0</td>
<td>4.34</td>
<td>0.885</td>
</tr>
</tbody>
</table>
4.4 Digital Technology Strategies to Enhance Student Learning

The first research question of the study was to determine the digital technology mechanisms that USIU-A has adopted so as to enhance student learning experience. Under this section, the researcher sought to establish the level of efficiency of the learning management system (blackboard), the student’s learning preference and the degree to which they agreed or disagreed with statements concerning how various digital technology systems enhance their learning process. The findings are summarized below.

4.4.1 Efficiency of Blackboard for Course Content Delivery

Here, the researcher was looking to understand how efficient or otherwise blackboard with regards to delivery of class notes, assignments and communication of students with faculty. Below is a summary of the findings.

![Efficiency of Blackboard for Content Delivery](image)

**Figure 4.8: Efficiency of Blackboard for course content delivery.**

Majority of the respondents (86%) found blackboard to be efficient in course content delivery. The results indicate that 31% of the respondents found blackboard to be very efficient, 55% found it to be greatly efficient, 13% found it to be moderately efficient and 1% found blackboard to be least efficient in terms of course content delivery.
4.4.2 Digital Technology on enhancing Student Learning Experience

This section focused on determining the type of learning the MBA students prefer, the role of blackboard in enhancing their learning process and whether digital technology encourages learning beyond their study scope.

From the results half (49.5%) of respondents disagreed with the statement that they preferred traditional learning only and this statement had a mean of 2.62 and a standard deviation of 1.190. On the preference of digital learning only the 50.5% (18% strongly disagreed and 32.5% disagreed) of respondents disagreed with the statement, 23.2% agreed with the statement. The majority 26.3% were neutral on the same. The statement had a mean of 2.6 and a standard deviation of 1.13.

Majority (86.1%) of respondents agreed that they prefer blended learning i.e. 39.2% agreed and 46.9% strongly agreed. 13.4% were neutral and only 0.5% of the respondents strongly disagreed. Blended learning preference had a mean of 4.32 and a standard deviation of 0.742.

81.5% of the respondents agreed that blackboard enhances their learning experience i.e. 49.5% agreed and 32% strongly agreed with the statement. A total of 1.5% disagreed and 17% were neutral. The statement that blackboard enhances learning experience had a mean of 4.11 and a standard deviation of 0.771. Majority (87.6%) agreed that blackboard is an essential tool for the learning process, 11.3% were neutral and only 1% disagreed. This statement had a mean of 4.24 and a standard deviation of 0.731. The next statement was whether blackboard is user friendly. Here 0.5% strongly disagreed, 1.5% disagreed, 13.9% were neutral, 52.6% agreed and 31.4% strongly agreed. The statement had 4.13 as the mean and 0.74 as the standard deviation.

On blackboard improving academic performance, 7.8% of respondents disagreed, 40.7% which represents the majority were neutral, 33% and 18.6% agreed and strongly agreed respectively. This statement had a mean of 3.60 and a standard deviation of 0.923. The next statement i.e. motivation of digital technology to learn beyond ones study scope 3.7% were in disagreement, 25.9% were neutral, a majority of 42.5% agreed and 28% strongly agreed. The statement had 3.93 as the mean and 0.887 as the standard deviation.
For the final statement under this section i.e. USIU-A’s classroom technology encourages active learning; 4.1% were in disagreement, 18.6% neutral, 47.7% representing the majority agreed and 29.9% strongly agreed. This statement had a mean of 4.02 and 0.839 as the standard deviation.
Table 4.2 Digital Technology on enhancing student learning

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preference of traditional learning i.e. face to face lectures only</td>
<td>20.1</td>
<td>29.4</td>
<td>25.3</td>
<td>18.6</td>
<td>6.7</td>
<td>2.62</td>
<td>1.190</td>
</tr>
<tr>
<td>Preference of digital learning only</td>
<td>18.0</td>
<td>32.5</td>
<td>26.3</td>
<td>18.0</td>
<td>5.2</td>
<td>2.60</td>
<td>1.130</td>
</tr>
<tr>
<td>Preference of blended learning i.e. both digital and traditional learning</td>
<td>0.5</td>
<td>-</td>
<td>13.4</td>
<td>39.2</td>
<td>46.9</td>
<td>4.32</td>
<td>0.742</td>
</tr>
<tr>
<td>Use of blackboard enhances learning experience</td>
<td>1.0</td>
<td>0.5</td>
<td>17.0</td>
<td>49.5</td>
<td>32.0</td>
<td>4.11</td>
<td>0.771</td>
</tr>
<tr>
<td>Blackboard is an essential tool for learning process</td>
<td>1.0</td>
<td>-</td>
<td>11.3</td>
<td>49.5</td>
<td>38.1</td>
<td>4.24</td>
<td>0.731</td>
</tr>
<tr>
<td>Blackboard is user friendly</td>
<td>0.5</td>
<td>1.5</td>
<td>13.9</td>
<td>52.6</td>
<td>31.4</td>
<td>4.13</td>
<td>0.740</td>
</tr>
<tr>
<td>Blackboard has improved academic performance</td>
<td>2.1</td>
<td>5.7</td>
<td>40.7</td>
<td>33.0</td>
<td>18.6</td>
<td>3.60</td>
<td>0.923</td>
</tr>
<tr>
<td>Motivation of digital technology to learn beyond my study scope</td>
<td>2.1</td>
<td>1.6</td>
<td>25.9</td>
<td>42.5</td>
<td>28.0</td>
<td>3.93</td>
<td>0.887</td>
</tr>
<tr>
<td>USIU-A’s classroom technology encourages active learning</td>
<td>1.0</td>
<td>3.1</td>
<td>18.6</td>
<td>47.4</td>
<td>29.9</td>
<td>4.02</td>
<td>0.839</td>
</tr>
</tbody>
</table>
4.5 Digital Technology Strategies to Enhance Student Services.

The second research question was to establish whether the current digital technology strategies currently in use at USIU-A enhance student services focusing on course registration and library services. Here the researcher focused on finding out the efficiency of student portal for course registration, student’s experience with OPAC and the extent to which the digital library enhances learning experience. The final bit focused on the degree to which they agreed or disagreed with statements concerning the relationship between digital technology and enhancement of student services.

4.5.1 Student Portal Efficiency for Course Registration

This segment centered on ascertaining the efficiency of USIU-A’s student portal for purposes of course registration. The figure below illustrates the findings on the same.

![Efficiency of Student Portal for Course Registration](image)

*Figure 4.9: Efficiency of Student Portal for Course Registration*

From the results above most respondents 51.5% found the student portal efficient for course registration. 24.7% found it to be very efficient, 22.2% moderately efficient, 1% and 0.5% found it to be least efficient and not efficient at all respectively.
4.5.2 Library OPAC Experience Rating

By asking this question, the researcher was investigating the student’s experience while using the library OPAC in searching and locating books and material within the institution’s library. The figure 4.10 below illustrates the findings.

![OPAC Experience Rating Graph](image)

**Figure 4.10: OPAC Experience Rating**

The greater percentage 40.7% of the respondents rated their experience with OPAC as satisfactory, 15.5% were highly satisfied with their experience with OPAC, 33% were neutral, 8.2% unsatisfied and 2.6% highly unsatisfied.

4.5.3 Digital Technology Strategies to Enhance Student Services

Under this segment focus was on establishing student’s course registration preference, whether the student portal eases course registration, student’s preferred method of confirming school fees, whether students rely on the digital library for assignments, student’s preference between the digital and physical library and their views on whether the physical library has incorporated digital aspects.
Table 4.3: Digital Technology Strategies to Enhance Student Services

<table>
<thead>
<tr>
<th>Preference of conventional course registration i.e. walking from office to office</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>61.9</td>
<td>23.7</td>
<td>7.7</td>
<td>5.7</td>
<td>1</td>
<td>1.6</td>
<td>0.929</td>
</tr>
<tr>
<td>Student portal eases course registration</td>
<td>2.6</td>
<td>1</td>
<td>11.9</td>
<td>34</td>
<td>50.5</td>
<td>4.29</td>
<td>0.904</td>
</tr>
<tr>
<td>Logging onto the student portal to confirm school fees compared to finance office</td>
<td>1.5</td>
<td>2.6</td>
<td>9.8</td>
<td>29.9</td>
<td>56.2</td>
<td>4.37</td>
<td>0.879</td>
</tr>
<tr>
<td>Reliance on USIU’s digital library for assignments and research</td>
<td>4.6</td>
<td>12.4</td>
<td>28.4</td>
<td>33.5</td>
<td>21.1</td>
<td>3.54</td>
<td>1.097</td>
</tr>
<tr>
<td>Digital library preference compared to the physical library</td>
<td>7.2</td>
<td>18</td>
<td>37.6</td>
<td>20.6</td>
<td>16.5</td>
<td>3.21</td>
<td>1.097</td>
</tr>
<tr>
<td>The digital library is user friendly and easy to navigate</td>
<td>5.7</td>
<td>6.7</td>
<td>39.2</td>
<td>33.5</td>
<td>14.9</td>
<td>3.45</td>
<td>1.013</td>
</tr>
<tr>
<td>The physical library design has incorporated digital aspects</td>
<td>2.6</td>
<td>2.1</td>
<td>29.4</td>
<td>44.8</td>
<td>21.1</td>
<td>3.8</td>
<td>0.885</td>
</tr>
</tbody>
</table>
More than half of the respondents 61.9% disagreed with the first statement i.e. their preferred method of course registration is conventional walking from office to office. 23.7% disagreed, 7.7% were neutral, 5.7% agreed and 1% strongly agreed. The mean was 1.6 and standard deviation was 0.929. The second statement stated that the student portal eases course registration process. Under this 2.6% strongly disagreed, 1% disagreed, 11.9% were neutral, 34% agreed and majority of 50.5% strongly agreed with the statement. The mean for this was 4.29 and standard deviation was 0.904.

The third statement was as follows I prefer logging onto the student portal to confirm school fees rather than visiting the finance office. Here 1.5% strongly disagreed, 2.6% disagreed, 9.8% were neutral, 29.9& agreed and 56.2% which represents the majority was in agreement with the statement. The mean was 4.37 and the standard deviation was 0.879. The fourth statement was investigating whether students rely on the institution’s digital library for assignments and research. Results indicate that 4.6% strongly disagreed, 12.4% disagreed, 28.4% neutral, 33.5% agreed and 21.1% strongly agreed. The mean for the statement was3.54 and 1.097 was the standard deviation.

The fifth statement was to find out the student’s preference between the digital library and the physical library. 7.2% strongly disagreed, 18% disagreed, 37.6% representing the majority were neutral, 20.6% agreed and 16.5% strongly agreed. The mean for this was 3.21 and 1.097 was the standard deviation. The sixth statement was investigating whether the digital library is user friendly and easy to navigate. Results show that 5.7% strongly disagreed, 6.7% disagreed, 39.2% were neutral and this was the majority, 33.5% agreed and 14.9 strongly agreed. Here the mean was 3.45 and 1.013 was the standard deviation.

The final statement in this section was to determine if the physical library has incorporated digital aspects. Results indicate that 2.6% strongly disagreed, 2.1% disagreed, 29.4% neutral, 44.8% were in agreement and this was the majority and 21.1% strongly agreed. The mean was 3.8 and standard deviation was 0.885.

4.6 Influence of Digital Technology Strategies on Student Retention

The final research question for the study was to determine if there is a relationship or influence between digital technology and student retention from the perspective of the
students. The final section focused on determining the extent to which USIU-A’s digital technology influences a student’s choice to register each consecutive semester. It also determined the extent to which the digital technology capacity of USIU-A influences student’s choice not to drop out. Thirdly, would the student recommend USIU-A to another student who isn’t enrolled at the institution. Finally, the final segment investigated the degree to which respondents agreed or disagreed with statements concerning the influence of digital technology on student retention.

4.6.1 USIU-A’s Digital Technology Capacity and Student Choice

The researcher wanted to determine the influence digital technology capacity has on a student’s decision to be a continuing student each semester/year. The findings are summarized below.

![Graph: Influence of digital technology on student choice](image)

**Figure 4.11: Influence of digital technology on student choice to register for each consecutive semester.**

The results above show that the decision of majority of students 44.8% to be continuing students is influenced by the institution’s digital technology capacity. For 17% of the respondents, USIU’s digital technology to a very great extent influence their decision to be continuing students, for 24.7% the institution’s digital technology capacity to a moderate
extent influences their decision. 8.2% and 5.2% of the respondents, the university’s digital technology capacity influences their decision to register for each consecutive semester to a little extent and no extent respectively.

4.6.2 USIU-A’s Digital Technology Capacity and Dropout Decisions

This section focused on establishing the influence of USIU’A’s digital capacity on a student’s decision to not drop out or leave the university. Below are the findings.

![Influence of digital technology on student's decision not to drop out of USIU-A.](image)

Figure 4.12: Influence of digital technology on student’s decision not to drop out of USIU-A.

From the results above, 32% of respondents felt that the university’s digital technology facilities influence their decision to not drop out to a great extent. USIU’s digital technology capacity influences to a moderate extent the decision of 29% of respondents to not drop out. For 14% of respondents, the institution’s digital technology capacity influences their decision not to drop out to a little extent. For 13% the university’s digital capacity does not influence their decision not to drop out.
4.6.3 Recommendation of USIU-A to Other Students

For this segment, the researcher wanted to find out if the students could recommend USIU-A to other students who wish to pursue MBA but are not enrolled at USIU-A. The findings are illustrated below.

![Recommendation of USIU-A to Other Students](image)

**Figure 4.13: Recommendation of USIU-A to other students that are not enrolled at USIU-A**

The findings illustrate that a majority 49.5% would recommend USIU-A to other students, 47.4% would absolutely recommend USIU-A while 3.1% were not very enthusiastic to recommend USIU-A to students who are not enrolled.

4.6.4 Satisfaction with USIU-A’s Adoption of Digital Technology

The researcher was investigating the level of satisfaction the students had with the adoption of digital technology at USIU-A. Results for this section are shown below. The results illustrate that majority i.e. 55.7% were satisfied with the digital technology at USIU-A. 39.7% were highly satisfied, 2.6% were neutral, 0.5% was unsatisfied and 1.5% was highly unsatisfied.
4.6.5 Influence of Digital Technology Strategies on Student Retention

Final segment was investigating the student’s opinion on the description of USIU-A as a smart institution, their opinion on whether digital technology aids in improving student retention and whether learning analytics can increase student retention rates at USIU-A. Lastly the researcher wanted to establish whether digital technology at USIU-A enhance their experience in class and beyond.
Table 4.4 Influence of Digital Technology Strategies on Student Retention

<table>
<thead>
<tr>
<th>Description of USIU-A as a smart institution of higher learning</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.5</td>
<td>9.3</td>
<td>58.2</td>
<td>30.9</td>
<td>4.18</td>
<td>0.698</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Does digital technology aid in improving student retention?</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>2.6</td>
<td>21.1</td>
<td>42.8</td>
<td>33</td>
<td>4.05</td>
<td>0.832</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning analytics can help USIU-A increase student retention rates</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.1</td>
<td>15.5</td>
<td>51.5</td>
<td>29.9</td>
<td>4.07</td>
<td>0.732</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Appreciation of a university with academic monitoring systems for student progress</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>10.3</td>
<td>51.5</td>
<td>36.1</td>
<td>4.21</td>
<td>0.747</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Early communication with and reaching out to students with academic difficulties can aid in student retention</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.5</td>
<td>10.8</td>
<td>45.4</td>
<td>41.2</td>
<td>4.24</td>
<td>0.787</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>USIU’s digital technology enhances student experience in class and outside class</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.5</td>
<td>10.3</td>
<td>54.1</td>
<td>34</td>
<td>4.2</td>
<td>0.722</td>
<td></td>
</tr>
</tbody>
</table>
Majority of respondents 58.2% agree that USIU-A can be described as a smart institution, 30.9% strongly agreed, 9.3% were neutral, 0.5% disagreed and 1% strongly disagreed. The first question had a mean of 4.18 and standard deviation of 0.698. For the second question, 42.8% representing the majority agreed that digital technology aids in improving student retention. 33% strongly agreed, 21.1% were neutral, 2.6% disagreed and 1% strongly disagreed. Here the mean was 4.05 and a standard deviation of 0.832.

The third statement was on finding out whether learning analytics can help USIU-A increase its student retention rates. Slightly more than half 51.5% of respondents agreed, 29.9% strongly agreed, 15.5% were neutral, 2.1% disagreed and 1% strongly disagreed. For this statement the mean was 4.07 and 0.792 as the standard deviation. For the fourth statement, the mean was 4.21 and a standard deviation of 0.747. Under this statement, 51.5% agreed that they appreciate an institution with academic monitoring systems for student progress. 36.1% strongly agreed, 10.3% were neutral and an aggregate of 2% were in disagreement.

The fifth statement focused on ascertaining that early communication and reaching out to students with academic difficulties can aid in student retention. The mean was 4.24 and standard deviation was 0.787. 45.4% who were the majority agreed with the statement, 41.2% strongly agreed, 10.8% were neutral and an aggregate of 2.5% disagreed. The last statement was to determine whether digital technology at USIU-A enhances student experience in class and beyond class. 54.1% agreed with the statement, 34% strongly agreed, 10.3% were neutral and an aggregate of 1.5% were in disagreement. The mean was 4.20 and standard deviation was 0.722.

### 4.7 Inferential Statistics

To determine the relationship between the independent variable and dependent variable, the researcher uses correlation analysis and regression which were derived from SPSS.

#### 4.7.1 Correlation Analysis

The researcher determined the relationship between the independent variable and dependent variable using correlation analysis. The findings below illustrate the correlation analysis.
between digital technology and factors that influence/impact student experience which are; learning experience, student services and student retention.

From the results, there was a positive correlation between digital technology and learning experience where \( r=0.352, p=0.000 \). The study also found a strong, positive correlation between learning experience and student services where \( r=0.428, p=0.000 \) and student retention \( r=0.612, p=0.000 \), which were all statistically significant at 0.01 level.

Findings show that there is a strong, positive correlation between digital technology and student services as indicated by \( r=0.470, p=0.000 \). There was also a strong, positive correlation between student services and learning experience i.e. \( r=0.428, p=0.000 \) and student retention as shown by \( r=0.401, p=0.000 \).

There was a relatively strong, positive correlation between digital technology and student retention as indicated by \( r=0.406, p=0.000 \). There was also a strong, positive correlation between student retention and learning experience where \( r=0.612, p=0.000 \) and a relatively strong, positive correlation with student services \( r=0.401, p=0.000 \).
Table 4.5: Pearson Correlation Analysis

<table>
<thead>
<tr>
<th></th>
<th>Digital Technology</th>
<th>Learning Experience</th>
<th>Student Services</th>
<th>Student Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Digital Technology</strong></td>
<td>Pearson correlation</td>
<td>1</td>
<td>.352**</td>
<td>.406**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>194</td>
<td>194</td>
<td>194</td>
<td>194</td>
</tr>
<tr>
<td><strong>Learning Experience</strong></td>
<td>Pearson correlation</td>
<td>.352**</td>
<td>1</td>
<td>.612**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>194</td>
<td>194</td>
<td>194</td>
<td>194</td>
</tr>
<tr>
<td><strong>Student Services</strong></td>
<td>Pearson correlation</td>
<td>.470**</td>
<td>.428**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>194</td>
<td>194</td>
<td>194</td>
<td>194</td>
</tr>
<tr>
<td><strong>Student Retention</strong></td>
<td>Pearson correlation</td>
<td>.406**</td>
<td>.612**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>194</td>
<td>194</td>
<td>194</td>
<td>194</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).**

4.7.2 Regression Analysis Digital Technology and Learning Experience

The model summary below summarizes the relationship between digital technology and learning experience. The R Square value is interpreted to mean that the chance that digital technology influences students’ learning experience is 11.9%

**Table 4.6 Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.352a</td>
<td>.124</td>
<td>.119</td>
<td>.51113</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Learning Experience
Analysis of Variance

The ANOVA results indicate that digital technology has a statistically significant impact on the learning experience since the value of P =0.000 is less than 0.05.

Table 4.7 ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>7.091</td>
<td>1</td>
<td>7.091</td>
<td>27.143</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>50.161</td>
<td>192</td>
<td>.261</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>57.252</td>
<td>193</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Digital Technology
b. Predictors: (Constant), Learning Experience

The results below indicate that there is a positive significant relationship between digital technology and learning experience where ($\beta=0.422$, $t=5.210$ $p=0.000$) meaning, 1 unit increase in digital technology increases learning experience by 0.422. The regression equation therefore is:

$$DT = \alpha + \beta_1 LE + \varepsilon$$

Where; $\alpha$= Constant

$DT$= Digital Technology

$LE$= Learning experience

$\varepsilon$= Standard Error

Therefore;

$$DT= 2.101 + 0.422LE + 0.308$$
### Table 4.8 Digital Technology and Learning Regression Analysis Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>2.101</td>
<td>.308</td>
<td>6.828</td>
<td>.000</td>
</tr>
<tr>
<td>Learning Experi</td>
<td>.422</td>
<td>.081</td>
<td>.352</td>
<td>.000</td>
</tr>
</tbody>
</table>

4.7.3 Regression Analysis Digital Technology and Student Services

The model summary below summarizes the relationship between digital technology and student services. The R Square value is interpreted to mean that the chance that digital technology influences students’ services is 21.7%

### Table 4.9 Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.470a</td>
<td>.221</td>
<td>.217</td>
<td>.48190</td>
</tr>
</tbody>
</table>

a. a. Predictors: (Constant), Student Services

Analysis of Variance

The ANOVA results for digital technology and student services are as shown below. The results indicated that digital technology has a statistically significant impact on the student services since the value of P =0.000 is less than 0.05.

### Table 4.10 ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>12.665</td>
<td>1</td>
<td>12.665</td>
<td>54.536</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>44.588</td>
<td>192</td>
<td>.232</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>57.252</td>
<td>193</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Digital Technology

b. Predictors: (Constant), Student Services
Digital Technology and Student Services Simple Regression Analysis

From the table 4.11, there is a positive, significant relationship between digital technology and student services as indicated by the values ($\beta=0.570$, $t=7.385 \ p=0.000$). This is interpreted to mean that 1 unit increase in digital technology increase student services by 0.570.

$$DT = \alpha + \beta SS + \epsilon$$

Where; $\alpha$= Constant

$DT$= Digital Technology

$SS$=Student Services

$\epsilon$= Standard Error

Therefore;

$$DT= 1.746 + 0.570SS + 0.266$$

Table 4.11 Digital Technology and Student Services Regression Analysis Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.746</td>
<td>.266</td>
<td>6.571</td>
<td>.000</td>
</tr>
<tr>
<td>Student Services</td>
<td>.570</td>
<td>.077</td>
<td>.470</td>
<td>7.385</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Digital technology

4.7.4 Regression Analysis Digital Technology and Student Retention

The model summary below summarizes the relationship between digital technology and student retention. The R Square value is interpreted to mean that the chance that digital technology influences student retention is 16.1%

Table 4.12 Model Summary

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.406a</td>
<td>.165</td>
<td>.161</td>
<td>.49892</td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Student Retention
Analysis of Variance

The ANOVA results for digital technology and student retention are as shown below. The ANOVA results above indicate that digital technology has a statistically significant impact on the student retention since the value of P = 0.000 is less than 0.05.

Table 4.13 ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>9.460</td>
<td>1</td>
<td>9.460</td>
<td>38.004</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>47.792</td>
<td>192</td>
<td>.249</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>57.252</td>
<td>193</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Digital Technology

b. Predictors: (Constant), Student Retention

Digital Technology and Student Retention Simple Regression

Lastly, there was a positive, significant relationship between digital technology and student retention as given by ($\beta$=0.461, $t$=6.165 $p=0.000$) at 0.05 confidence level. This means that 1 unit increase in digital technology increases student retention by 0.461.

$$DT = \alpha + \beta_iSR + \epsilon$$

Where; $\alpha$= Constant
- DT= Digital Technology
- SR= Student retention
- $\epsilon$= Standard Error

Therefore;

$$DT= 1.946 + 0.461SR + 0.285$$
Table 4.14 Digital Technology and Student Retention Regression Analysis Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td>1.946</td>
<td>.285</td>
<td>.506</td>
</tr>
<tr>
<td></td>
<td>Student Retention</td>
<td>.461</td>
<td>.075</td>
<td>.406</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Digital technology

4.7.5 Regression Analysis Digital Technology and Student Experience

Regression was used to predict the effect/impact of the independent variable on the dependent variable.

The model summary below summarizes the relationship between digital technology and student experience. The R Square value is interpreted to mean that the chance that digital technology influences student experience is 25.2%.

Table 4.15 Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.506a</td>
<td>.256</td>
<td>.252</td>
<td>.32272</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Digital technology
Analysis of Variance

The ANOVA results for digital technology and student experience are as shown below. The results indicated that digital technology has a statistically significant impact on the student experience since the value of P =0.000 is less than 0.05.

Table 4.16 ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>6.875</td>
<td>1</td>
<td>6.875</td>
<td>66.014</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>19.996</td>
<td>192</td>
<td>.104</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>26.872</td>
<td>193</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Student Experience
b. Predictors: (Constant), Digital technology

Digital Technology and Student Experience Regression Analysis Coefficients

The results below indicate that there was a positive, significant relationship between digital technology and student experience as given by ($\beta=0.347$, $t=8.125$ $p=0.000$) at 0.05 confidence level. This means that 1 unit increase in digital technology increases student experience by 0.347.

SE = $\alpha + \beta DT + \epsilon$

Where; $\alpha$ = Constant

DT = Digital Technology
SE = Student experience
$\epsilon$ = Standard Error

Therefore;
SE = 2.377+0.347DT+0.159
Table 4.17 Digital Technology and Student Experience Regression Analysis Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>2.377</td>
<td>.159</td>
<td>14.931</td>
<td>.000</td>
</tr>
<tr>
<td>Digital technology</td>
<td>.347</td>
<td>.043</td>
<td>.506</td>
<td>8.125</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Student Experience

4.8 Chapter Summary

This chapter expounded on the results and findings of the study carried out at United States International University-Africa. The researcher distributed 252 questionnaires of which 194 were filled out. General information of the respondents was analyzed using descriptive statistics and summarized in graphs. Research findings for each of the research questions are further summarized using descriptive and inferential statistics i.e. use of blackboard to enhance student learning, use of student portal and digital library to enhance student services and influence of digital technology on student retention. All the results are presented in tables and graphs. The next chapter will discuss the findings and provide recommendations and conclusion of the study.
CHAPTER FIVE

5.0 DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter discusses the research findings in comparison to the study’s literature review. The section gives a summary of findings for each research question, conclusions drawn from the analysis and recommendations.

5.2 Summary

The purpose of the study was to determine the influence of digital technology strategies on enhancing student experience at United States International University –Africa. The study’s research questions were: do the digital technology mechanisms adopted by USIU-A enhance students learning experience, do the current digital technology systems at USIU-A enhance student services especially course registration and library services and lastly, do the digital technology systems at USIU-A influence student retention. The study was conducted due to the gap on the influence of digital technology on student experience in and out of class in institutions of higher learning. Majority of studies have focused on influence of digital technology on student learning in higher education institutions.

Descriptive statistics was the research design used for the study with the target population being MBA students enrolled at USIU-A. The researcher chose to focus on MBA population because they are part time students with majority of classes being held after working hours. Therefore, they rely on the institution’s digital platforms for course work as well as student and administrative services. The study had a sample size of 252, the research adopted questionnaires as the research tool which were administered to the MBA students to fill after which they were collected. The collected data was analyzed using SPSS which derived descriptive statistics such as mean, percentages and standard deviation as well as inferential statistics all presented in tables and figures.
Regression analysis of the data indicates that there is a positive, significant relationship between digital technology and student services. There is also a positive, significant relation between digital technology and student services as well as student retention.

The first research question focused on establishing the influence of digital technology strategies adopted by UISU-A on enhancing student learning experience. The study’s findings showed that more than half of the respondents (55%) found blackboard to be efficient with regards to course content delivery. At the same time a huge number of respondents (81.5%) were in agreement that indeed blackboard enhanced their learning experience. The results also found that 51.5% of the students agreed that blackboard plays an essential role in improving their academic performance.

The second research question was to determine the influence of digital technology on enhancing student services at USIU-A student services being course registration and library services. From the findings, 76.2% of the respondents agreed that the student portal is indeed efficient with regards to course registration. Results also showed that a majority of students (86.1%) opted to log onto the student portal to confirm school fees balance. Findings also showed that 84.5% of respondents agreed that the student portal has eased course registration and at the same time 85.6% of the students did not prefer manual registration process. With regards to library services, 54.6% of respondents rely on the university’s digital library for assignments and research. Results indicated that 56.2% of the respondents were satisfied with their experience and interaction with OPAC. 65.9% of the respondents also agreed that the design of the physical library at USIU-A has integrated digital aspects.

The final research question focused on the relationship between digital technology strategies adopted in USIU-A and student retention from the perspective of students. Results showed that 61.8% of respondents’ decision to be continuing students is influenced by the university’s digital technology capacity. Findings also indicated that 95.4% of the respondents were satisfied with the institution’s adoption of technology. From the results, 87.6% of respondents appreciated academic monitoring systems to track student progress. Lastly, results revealed that 61% of respondents’ decision to not drop out is indeed influenced by the university’s digital technology capacity.
5.3 Discussions
5.3.1 Digital Technology on Enhancing Student Learning Experience

The first research question focused on examining whether the digital technology strategies employed by USIU-A enhance the students’ learning experience. From the literature review, Patton (2018) pointed out that the current target populations for institutions of higher learning are students who have grown up with the internet. This means that the students have grown up relying on the internet for life’s aspects beyond education. Patton (2018) noted that when institutions of learning fail to provide students with various technologies for them to interact with and gain proficient technology skills is an injustice. This goes to reinforce that digital technology is essential for the learning process in this digital age and exposing students to the current digital trends allows students to acquire the necessary skills required in today’s job market.

USIU-A has adopted the use of a learning management system (LMS) i.e. blackboard which is used for course content delivery. Results revealed that 55% found blackboard to be efficient for course content delivery. Study results also indicated that 81.5% of MBA students agreed that blackboard enhances their learning experience. 87.6% of respondents found blackboard to be an essential tool for their learning process. Study results also showed that 51.6% of respondents consider blackboard to have improved their academic performance.

These results are aligned to the study by Pomerantz, Brown and Brooks (2018) who wrote that in the digital age a learning management system is an essential for both teaching and learning. The results also revealed that by adopting blackboard, USIU-A as an institution can be compared to other global universities in the United States where adoption of LMS stands at 99% as written by (Pomerantz, Brown & Brooks, 2018). This means that adoption of blackboard at USIU-A is in line with global university trends and in this aspect, USIU-A can compete on a global perspective.

From the literature review, Becker, Cummins and Davis et al. (2017) wrote that students prefer blended learning due to its flexibility and accessibility. As mentioned in the literature review, Pomerantz, Brown & Brooks (2018) noted that blended learning produces better
learning results as compared to use of traditional or online learning methods only. Results from this study revealed that 86.1% of students preferred blended learning as opposed to purely conventional or digital learning only. This goes to support a study mentioned in the literature review that was carried out by EDUCAUSE Center for Analysis and Research (ECAR) in 2017 where 79% of respondents preferred blended learning.

In the study Kipkurui, Wanyembi, and Ikoha (2014) cite Nielsen, J (2005) who emphasized that for an LMS to be effective it has to be adequately equipped. According to Kipkurui, Wanyembi, and Ikoha (2014) students fail to use a learning management system that is not user friendly and such a system leads to reduction in students’ interest, confusion and frustration. It is therefore a great advantage for USIU-A as the study results showed that 84% of the respondents found blackboard to be user friendly.

The study’s findings indicated that 77.3% of respondents agreed that the institution’s classroom technology encourages active learning. These findings are in line with a previous study by Becker, Cummins and Davis et al. (2017) which reported that, trends within institutions of higher learning are focused on redesigning learning spaces by incorporating digital aspects in classrooms to encourage active learning. Becker, Cummins and Davis et al. (2017) noted that institutions of higher learning are redesigning classrooms to promote social interactions, problem solving, multiple device usage and practical activities.

5.3.2 Digital Technology on Enhancing Student Services.

The second research question was on examining the enhancement of student services by use of digital technology at USIU-A. The research focused on two student services at USIU-A i.e. course registration process and library services. Course registration at USIU-A is done through the student portal. A student’s university experience goes beyond their learning experience and cuts across the day to day activities right from their first day of enrollment to the graduation day as highlighted by (Long, 2012).

The research findings illustrated that 76.2% of the respondents found the student portal to be efficient for course registration process. From the literature review, Liu, Gao and Liu (2012) found the conventional or manual registration process to be inefficient, time consuming and it poses a high risk for human error for a large number of students.
The results herein found that 86.1% of students preferred to log onto the student portal to confirm school fees balance as opposed to walking to the finance office. This supports the findings from the study by Liu, Gao, and Liu (2012) who noted that the manual registration system did not provide further student details that are relevant and important for both the student and institution. The authors pointed out that a student registration system is able to record and capture a more than just basic information i.e. it gathers more than the courses/units they will be taking in a semester. The registration system is able to also a student’s payment information as well harmonize student management across the various departments and information processing and retrieval as highlighted by (Liu, Gao & Liu, 2012).

The results from this study revealed that 84.5% of the respondents found that the student portal has eased course registration process. The findings also showed that 85.6% of respondents did not prefer conventional/manual registration process. The results are aligned to the findings from the study by Mashabela and Pillay (2017) where 51% of respondents at a University in Guateng found that online registration was better than manual registration.

The findings from the research showed that 56.2% of respondents were satisfied with their experience with using the library OPAC system for searching for books and material in the library. In the literature review, Becker, Cummins and Davis et al. (2017) noted that libraries are now adopting user centric approaches to provide an impeccable user experience. Becker, Cummins and Davis et al. (2017) wrote that libraries are maximizing on user data which is used to identify their needs and generate excellent and engaging experiences. Since more than half of the respondents found the library OPAC experience to be satisfying showed that OPAC system gives students a great user experience which supports the findings by (Becker, Cummins and Davis et al, 2017).

Findings revealed that 54.6% of respondents rely on the university’s digital library for research and assignments. This means that more than half of the respondents opt for digital content such as e-books and journals as opposed to hardcopy books. This goes to support the findings in the NMC report by Becker, Cummins and Davis et al. (2017) which indicated that students now minimally rely on libraries as a source and access to information. This means that student nowadays prefer digital libraries when it comes to sourcing and accessing
information and due to this libraries are being revamped to accommodate these changes by digitizing their content and books.

Study findings revealed that 65.9% of the respondents were in agreement that USIU’s physical library has incorporated digital aspects. By incorporating digital aspects in the physical library allows for students use multiple devices within the library, connect to the internet and engage in group discussions. These results are aligned to the NMC library edition report by Becker, Cummins and Davis et al. (2017) who noted that since students don’t consider libraries to be information hubs, libraries are now redesigning their outlook. This means that physical libraries are being redesigned to encourage active learning, media production studios and providing areas for collaborative and hands on assignments.

5.3.3 Influence of Digital Technology on Student Retention

The final research question was to determine whether the digital technologies at USIU-A influences student retention from the perspective of the student. The researcher wanted to establish whether a student considers the institution’s digital technology capacity prior to making a decision to remain or continue being a student at the university.

Findings showed that 61.8% of respondents indeed consider the university’s digital technology capacity when making the decision to continue being a student at USIU-A each semester or year. Study results also revealed that 61% of respondents’ decision not to drop out of USIU-A is influenced by the institution’s digital technology capacity. These results support the previously reviewed study by Baruah (2010) who undertook a study on the influence of e-learning technologies on student retention in India’s Indira Gandhi National Open University. Findings from the study showed that adoption of ICT tools at the university increased admission rates for different programs and at the same time the ICT tools reduced the drop out rates that resulted in student retention.

From the study, it was found that 95.4% of the respondents were satisfied with USIU’s adoption of digital technology. The high percentage of respondents indicates that the current digital technologies at USIU-A are meeting their needs thus boosting student retention rates. This is aligned to a previously reviewed literature by Cotter (2013) that emphasized that high retention rate of students signifies that the institution is meeting the needs of the students.
Cotter (2013) also noted that a student’s choice to register for a consecutive semester in an institution is motivated by their level of satisfaction with of education being provided.

81.4% of respondents from the study were in agreement that learning analytics boost student retention rates. This means that learning analytics in an institution can provide information on the progress of a student. This is aligned to the report by Johnson, Becker and Cummins et al. (2016) that gave the example of Yuan Ze University in Taiwan which uses learning analytics to assist students in their degree journey by provision of core competencies and providing faculty with drop-out predictions. Johnson, Becker and Cummins et al. (2016) also noted that learning analytics are beneficial to the institutions as they provide an understanding on the efficiency of course or instruction delivery.

Results from the study showed that 86.6% of respondents agreed that prompt communication with students facing academic difficulties goes a long way in improving student retention. This finding supports the U-Planner (2019) report which highlighted the London South Bank University on page 16 which consolidated data and developed a predictive system. The system was used to identify students that required assistance before they dropped out. The system was targeted to identify students facing financial difficulties after which the university reached out and offered the financial assistance needed thus reduced their dropout rates. This goes to show that institutions of learning can customize a predictive system to focus on a particular area that is affecting students from financial difficulties to academics and career issues.

The study results indicated that 87.6% of respondents appreciate an institution that has academic monitoring systems to assess student progress. This is aligned to the U-Planner (2019) report that emphasized on the importance of investing in technology that monitors student progress in institutions of learning. The U-Planner (2019) report gave the example of Colorado State University which developed an integrated data system that focused on improved communication with students and involvement of students in academic planning. This led to an increase of the university’s student retention rate from 82% to 86% and a 4% increase in graduation rates.
Study results showed that 89.1% of the respondents described USIU-A as a smart/digital institution of learning. The results also revealed that 96.9% of respondents agreed that they would recommend USIU-A to other students who would like to pursue their MBA. The results are in line with the literature by Cotter (2013) where he described student retention as a threefold process. The initial step is where an institution’s feasibility depends on its capability to attract students, followed by the capabilities and competencies of the institution to provide students with quality education and lastly retain the students till they complete their course. Cotter (2013) emphasizes that all three processes are interdependent and interrelated and culture and environment of an institution influences the experience of its students.

The findings above are an indication that since majority of students regard USIU-A as a smart institution, influences their choice or decision to recommend USIU-A to others. This means that current students of USIU-A are their brand ambassadors who can easily recommend students to enroll at the institution which translates to an increase in new students. The institution’s adoption of digital technology is one of its capabilities that the institution exploits so as to provide quality education and an impeccable student experience. This is right from the first day of enrollment till the graduation day and this contributes to the improvement of student retention rates.

5.4 Conclusions

5.4.1 Digital Technology on Enhancing Student Learning Experience

The findings illustrated that digital technology especially learning management systems/blackboard enhance student learning experience. Majority of respondents found blackboard to be very efficient for course content delivery especially class notes and syllabi. The results demonstrated that blackboard is an essential tool for the learning process and that it (blackboard) improves student’s academic performance. From the findings, most of the respondents prefer blended learning which is an amalgamation of face to face lectures and digital learning. Majority of respondents agreed that classroom technology encourages active learning. Going by the results of the study, digital technology indeed enhances students’ learning experience. The regression analysis results showed that digital technology has a significant impact on learning experience.
5.4.2 Digital technology on Enhancing Student Services.

Students at USIU-A found the student portal to be very efficient for the course registration process and majority also agreed that the digital course registration has greatly eased the registration process. The results illustrated that majority of students preferred online course registration as opposed to the conventional registration process. Students at USIU-A were relatively satisfied with their library OPAC experience. However, some expressed concerns with the OPAC system stating that it was not user friendly. A high percentage of the students relied on the digital library for research and assignments. Nevertheless, some pointed out that the digital library is difficult to navigate and they require assistance on the same.

5.4.3 Influence of Digital Technology on Student Retention

From the results, a student’s decision to enroll for each consecutive semester or year is influenced by USIU-A’s digital capacity. The digital technology capacity of the institution influences a student’s decision not to drop out of the university. The findings indicated that majority of the respondents were satisfied with the university’s adoption of digital technology. Most students at USIU-A regarded it as a smart institution of higher learning. Majority of students also agreed that digital technology aids in improving student retention rates. Majority of students expressed the need for learning analytics and academic monitoring systems to enable them track their study progress. The results demonstrated that students appreciate an institution that communicates and reaches out to students with academic difficulties as early as possible. Early intervention and communication contributes significantly to the student’s choice not to drop out due to the difficulties they are facing. The regression analysis results showed that digital technology has a significant impact on student retention.
5.5 Recommendations
5.5.1 Recommendations for Improvement

5.5.1.1 Digital Technology on Enhancing Student Learning Experience

In this digital era, institutions of higher learning cannot ignore the importance and need of incorporating digital technology in the learning process. Going by the results it is evident that digital technology plays a significant role in enhancing student learning experience. Due to the significance of digital technology on learning, the study recommends that the institution should continuously improve its learning management systems and keep abreast with global technology trends in order to ensure that they offer their students quality education and an impeccable learning experience.

5.5.1.2 Digital Technology on Enhancing Student Services.

Due to technology advancement, the current and future target populations of universities will have grown up with the internet and majority will be tech savvy. Due to this, the students will expect similar advancement and use of technology in accessing student services in institutions of learning. Therefore, the influence of digital technology on student services cannot be disregarded. Students require a system that is user friendly and easy to navigate in order for them to utilize it as well as enjoy its benefits. The study recommends that USIU-A should provide run through tutorials on the library website on how students can access and navigate the digital library on campus and off campus as well as usage of the library OPAC system. The study also recommends that the institution should continuously improve their student services systems to make them as simple as possible but efficient.

5.5.1.3 Influence of Digital Technology on Student Retention

Student retention is a key parameter for institutions of learning. High student retention rates increase an institution’s credibility, profitability and brand reputation and indicate that the institution offers quality education. From the study results, it is evident that digital technology significantly influences student retention. Results indicate that students appreciate an institution that offers academic monitoring systems that help them track their progress. The study therefore recommends that USIU-A should leverage on learning analytics,
predictive systems and academic monitoring systems. Leveraging on the above systems would boost the university’s student retention as well as attract new students which is a win-win for both students and USIU-A

5.5.2 Recommendation for Further Studies

There is need to conduct more studies focusing on how institutions of higher learning can utilize the various technologies that are being developed every other day so as to enhance learning, and improve quality of education. Further studies should be carried out to help institutions of higher learning strategize on how to meet the needs and demands of the current digital generation whose preferences are rather new to the education sector. This will enable and equip higher learning institutions with the necessary competencies, digital systems, facilities and learning methods and modes that will ensure the institutions remain profitable, relevant and provide quality education to the digital students.
REFERENCES


Cotter, B. (2013). *Student Retention-An issue, a discussion and a way forward, for higher education professionals*.


U-Planner. (2019). How to Improve Student Retention in Higher Education in the USA.


APPENDICES

APPENDIX 1: COVER LETTER

18 July 2019

To whom it may concern

RESEARCH PROJECT BY — NG’ANG’A GRACE MUTONE: ID 653903

The bearer of this letter is a student at the United States International University-Africa pursuing a Master in Business Administration-Strategic Management.

As part of the program, she is required to undertake a research project on “Implementation of digital technology Strategies to enhance student experience. A Case of United States International University-Africa.” This requires her to collect data and information from various relevant institutions.

Kindly assist by enabling her access data, information and contacts with respondents who can complete his questionnaires. I assure you that the information provided will be treated with the utmost confidentiality.

Should you have any queries regarding the student research please feel free to contact me on my email, tlinge@usi.ac.ke or phone, +254 730116419

Yours sincerely

[Signature]

Dr. Teresa Linga
Acting Dean, Chandaria School of Business
APPENDIX 2: QUESTIONNAIRE

My name is Grace Ng’ang’a, a student at the United States International University - Africa pursuing a Master’s Degree in Business Administration. As part of my requirement, I am carrying out a research on digital technology strategies to enhance student experience in higher education institutions. I would be delighted and grateful if you accept to participate in this research. The information you give will be treated with the utmost confidentiality and shall be used exclusively for this research study. Kindly answer all the questions truthfully by ticking in the spaces provided.

SECTION A: DEMOGRAPHIC DATA

1. Gender (tick appropriately)

   Male  […]
   Female […]

2. Age Bracket

   18-22 [ ] 26-30  [ ]
   22-26 [ ] 30 and above  [ ]

3. Which year did you join USIU-A for your Master’s Program?

   2015 […] 2018 [ ]
   2016 […] 2019 [ ]
   2017 [ ]

4. During which semester did you first join USIU-A for your Master’s Program?

   Spring […]
   Summer […]

80
Fall 

5. What’s your choice of MBA Concentration? (for graduates tick appropriately)

- Strategic Management [...]
- GSSE [...]
- Finance [...] 
- GEMBA
- Human Resources [...] 
- MOD
- Marketing [...]

SECTION B: DIGITAL TECHNOLOGY SYSTEMS AT USIU

6. How would you describe the convenience of the student portal and blackboard?

- Not convenient at all [ ]
- Greatly convenient [ ]
- Inconvenient [ ]
- Very convenient [ ]
- Convenient [ ]

7. How would you describe USIU’s adoption of digital technology in comparison to other institutions?

- Highly satisfactory [ ]
- Unsatisfactory [ ]
- Satisfactory [ ]
- Highly Unsatisfactory [ ]
- Neutral [ ]
8. Kindly, indicate using the scale the extent to which you agree or disagree with the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The institution implemented digital technology systems to a great extent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student portal (cx) has increased efficiency for administrative inquiries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My interaction with USIU’s digital systems has aided in gaining proficient technology skills that are necessary in the job market</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Digital technology has transformed research and learning at USIU-A.</td>
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<td></td>
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<tr>
<td>Adoption of digital technology can aid USIU in gaining competitive advantage</td>
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</tr>
</tbody>
</table>

**SECTION C: DIGITAL TECHNOLOGY SYSTEMS TO ENHANCE STUDENT LEARNING**

9. What is the level of efficiency of blackboard in regards to course content delivery i.e. class notes, assignment and communication with faculty etc?

<table>
<thead>
<tr>
<th>Level of Efficiency</th>
<th>Not efficient at all</th>
<th>Least/little efficient</th>
<th>Moderately efficient</th>
<th>Greatly efficient</th>
<th>Very efficient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

82
10. Kindly, indicate using the scale the extent to which you agree or disagree with the following statements:

<table>
<thead>
<tr>
<th>Learning Management System (blackboard)</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I prefer traditional learning i.e. relying solely on face to face lectures for content delivery.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I prefer digital/online learning only i.e. learning that excludes physical/face to face lectures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I prefer blended learning i.e. learning through lectures and online systems such as blackboard.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of blackboard enhances my learning experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackboard is an essential tool for the learning process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackboard is user friendly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackboard has improved my academic performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital technology motivates me to want to learn and research more beyond my study scope</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>USIU’s classroom technology encourages active learning.</td>
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</tbody>
</table>
SECTION D: DIGITAL TECHNOLOGY TO ENHANCE STUDENT SERVICES

11. How would you describe the efficiency of the student portal (cx) in regards to course registration?

<table>
<thead>
<tr>
<th></th>
<th>Not efficient at all</th>
<th>Least/little efficient</th>
<th>Moderately efficient</th>
<th>Greatly efficient</th>
<th>Very efficient</th>
</tr>
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<tbody>
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<td></td>
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</tbody>
</table>

12. How would you rate your experience with the Library Open Public Access Catalog (OPAC) in searching and locating books and material in the library?

Highly satisfactory [ ] Unsatisfactory [ ]
Satisfactory [ ] Highly unsatisfactory [ ]
Neutral [ ]

13. To what extents has USIU’s digital library (e-books, e-repository and journals) enhanced your learning experience?

<table>
<thead>
<tr>
<th>No extent</th>
<th>Little extent</th>
<th>Moderate extent</th>
<th>Great extent</th>
<th>Very great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
14. Kindly, indicate using the scale the extent to which you agree or disagree with the following statements:

<table>
<thead>
<tr>
<th>Student Services</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I prefer conventional registration i.e. walking from office to office rather than online course registration</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>USIU’s student portal eases course registration process.</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>I prefer logging onto the student portal to confirm fees rather than visiting the finance office</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I mostly rely on USIU’s digital library for assignments and research</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>The digital library is my first stop for research as opposed to SEOs such as Google scholar.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I prefer the digital library compared to the physical library</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>The digital library is user friendly and easy to navigate.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The physical library design has incorporated digital aspects</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION E: DIGITAL TECHNOLOGY AND STUDENT RETENTION

15. To what degree does USIU’s digital technology capacity influence your decision to register for each consecutive semester?

<table>
<thead>
<tr>
<th>No extent</th>
<th>Little extent</th>
<th>Moderate extent</th>
<th>Great extent</th>
<th>Very great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
16. To what degree does the institution’s digital technology capacity influence your decision to not drop out/leave?

<table>
<thead>
<tr>
<th>No extent</th>
<th>Little extent</th>
<th>Moderate extent</th>
<th>Great extent</th>
<th>Very great extent</th>
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</table>

17. Would you recommend another student to study at USIU-A?

Not at all [ ] Yes [ ]
No [ ] Absolutely [ ]
Not so much [ ]

18. How satisfied are you with the institution’s adoption of digital technology?

Highly satisfactory [ ]
Satisfactory [ ]
Neutral [ ]
Unsatisfactory [ ]
Highly unsatisfactory [ ]
19. Kindly, indicate using the scale the extent to which you agree or disagree with the following statements;

<table>
<thead>
<tr>
<th>Student Retention</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would you describe USIU as a smart/digital institution of higher learning?</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>In your opinion does digital technology aid in improving student retention?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Learning analytics i.e. systems that monitor student progress and identify those falling back can help USIU increase student retention rates</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I appreciate an institution with academic monitoring systems of student progress</td>
<td></td>
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</tr>
<tr>
<td>Early communication and reaching out to students having academic difficulties can aid in student retention</td>
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<td></td>
</tr>
<tr>
<td>The institution’s digital technology enhances my experience as a student in class and outside class</td>
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</tr>
</tbody>
</table>

THANK YOU, I TRULY APPRECIATE.
APPENDIX 3: NACOSTI PERMIT

RESEARCH LICENSE

This is to certify that Ms. Grace Ng’a n a of United States International University Africa, has been licensed to conduct research in Nairobi on the topic: IMPLEMENTATION OF DIGITAL TECHNOLOGY STRATEGIES TO ENHANCE STUDENT EXPERIENCE. A CASE OF UNITED STATES INTERNATIONAL UNIVERSITY - AFRICA for the period ending 29/July/2020.

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E-mail: dg@nacosti.go.ke / registry@nacosti.go.ke
Website: www.nacosti.go.ke