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LEADERSHIP CHALLENGES IN VIRTUAL MANAGEMENT OF UNIVERSITIES AND CHURCHES: A COMPARATIVE STUDY OF LUSAKA URBAN

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ABSTRACT

The background to the study stems from the outbreak of Coronavirus and the closure of many public facilities including universities and churches as contained in Statutory Instrument No 22 of 2020. A descriptive survey design applying a concurrent mixed approach was preferred as it allowed the researcher to collect both qualitative and quantitative data at the same time in this Comparative Study on the Leadership Challenges in Virtual Management of Universities and Churches within Lusaka Urban. The objectives of the study were to investigate challenges in virtual management of universities and churches; exploring leadership's adaptation to institutional digital transformation; explore the barriers faced by students and congregants with regard to virtual meetings as well as examine the socio-economic factors associated with virtual management. The universities were purposefully sampled while churches were randomly selected and applied the maximum variation technique to purposefully sample some university Registrars, Pastors, Information Technology staff and general secretaries of church mother bodies bringing the cumulative total to 699. On the other hand, the study used convenience sampling for students and church members a non-probability sampling done through a smart online survey. The method was selected because the study was done during the Covid 19 outbreak.

All quantitative data was analyzed using the Statistical Package for Social Sciences (SPSS) version 23.0. Furthermore, qualitative data was analyzed systematically using a thematic approach. The study was grounded on the adaptive structure theory. The challenges included among others, poor internet connectivity, electricity load shedding, limited knowledge of software applications and the cost of equipment. Universities were doing better than churches in adapting to virtual management.

There was some initial resistance and withdrawal by students, while churches cited reluctance to adapt to virtual platforms. The cost had forced universities to switch to cost-effective platforms such Zamren while churches continued to use the ordinary mode of accessing internet. The key recommendations included the need for regulators and internet service providers to ensure reliable virtual access for the two institutions to operate effectively and find ways of reducing the cost of importing the required ICT infrastructure. Furthermore, there was need for leaders in both institutions to carry out awareness programs on the benefits of virtual meetings. Like universities, the church should deliberately ensure that some of their lessons/services are strictly online to facilitate rapid adaptation to digital transformation.

Keywords: Virtual Leadership, Management, Challenges, Universities, Churches.

CHAPTER ONE: INTRODUCTION

1.0 Overview

This chapter sets out to provide an overview of the study covering a summary of leadership in virtual management in relation to universities and churches as well as to give a background to the introduction of the virtual space for learners and congregants. It will furthermore, highlight the statement of the problem that forms the basis of this study, the objectives, research questions, significance of the study, operational definition of terms, its limitations and delimitations, and the area in which it will be conducted. The aim of this paper is to carry out a comparative study of the leadership challenges in virtual management of universities and churches within Lusaka urban.

1.1 General Background

Change and its management are a subject that is consistent when it comes to leadership in various sectors of life. Modern society cannot detach itself from the need to adapt to change which is at times driven by natural disasters or health pandemics as the case is with the outbreak of the Coronavirus pandemic. This pandemic has globally changed the societal code with regard to physical associations and hence the need for the expanded use of the virtual space to do all kinds of things including learning and worship activities. According to Samartinho, Faria, and Silva, (2013:1), it is common knowledge that the emerging paradigm of e-leadership arises in a context of economic global changes, which organizations and leaders have been facing during the last decade, characterized by the transformation of the business model.

The “new normal” demands among other things, that people wear face masks, observe social distance and avoid crowded places. The above demands mean that the global village is left without any option to trade or function except in the virtual space which presents its own challenges especially in the rush to ensure that some form of normalcy returns. This tragedy had also shaken up the education sector, and this fear is likely to resonate across the education sector globally. The Covid-19 pandemic outbreak forced many schools and colleges to remain closed temporarily. Several areas were affected worldwide and there was a fear of losing the whole ongoing semester or even more in the coming future Dhawan (2020:6).

In the words of Beck, LaFrance, and Richardson (2014:1) school leadership is vital across every educational context. However, new educational environments such as virtual schools may be challenging the standards of effective school leadership. From the preceding views, it can be noted that society can no longer depend on the conventional mode of managing universities specifically in the area of lecturing. The use of the virtual space provides what may be termed as a “university or church without walls.” The new paradigm forces organizations to defy the conventional business models and leaders to adapt and expand the leadership and virtual communications (Colfax, Santos and Diego, 2009: 133-139).

The shift to virtual management requires transformational leadership to arise in the two institutions under study. Transformational leadership is built on a strong foundation of vision and the key assumption that, the central focus

of leadership ought to be the commitment to organizational goals and greater capacities for accomplishing those goals are anticipated to result in extra effort and greater productivity (Leithwood: 2003). On the positive side, the fact that the virtual space provides an opportunity for lecturers and pastors to teach at various campuses at the same time may result in reduction of the operational bills.

The impact of technological innovations on teaching methodologies as noted by Mathew, Sreehari and Al-Rubaat (2019:100) has always been a subject of debate due to its sophistication to substitute face-to-face teaching-learning contexts with a virtual learning environment. From the foregoing observation, the complexity of departing from face-to-face teaching and worship to virtual learning and church services makes this study relevant for the present and future generations. Virtual learning is learning that is not confined within the walls of a classroom, but that which expands the possibility of using internet facilities, platforms, satellite links, and related system to access, analyse, create, exchange, and use data, information, and knowledge in ways which until recently, were almost unimaginable (Lokie, 2011:102).

In relation to the church, the Vatican (2022) paper on the presented by the Pontifical Council for Social Communications on the Church and Internet observed that the internet is helping bring about revolutionary changes in commerce, education, politics, journalism, the relationship of nation to nation and culture to culture—changes not just in how people communicate but in how they understand their lives. This admission by the Vatican goes to show that today's church cannot ignore the role of the internet if it is to effectively carry out its mission work and narrow the potential interactive cyber space and thereby narrow the global time zones. Virtual management may be more applicable in developed states due their technological advancements unlike a country like Zambia where a large part of the population is still lagging behind with regard to the use of the internet besides limited access to the latter.

The Vatican further notes that although the virtual reality of cyberspace cannot substitute for real interpersonal community, the incarnational reality of the sacraments and the liturgy, or the immediate and direct proclamation of the gospel, it can complement them, attract people to a fuller experience of the life of faith, and enrich the religious lives of users (Hutchings, 2015:151). The foregoing observation points to some of the traditional modes that have shaped the order of church management for many generations past and present in general terms. The consolation is that the use of smart phones is giving people an opportunity to access the internet even though it may at times be limited in functions compared to computers.

The global space has for a long time continued to narrow down between several nations as the world seeks solutions to common challenges. Globalization entails those specific challenges encountered in one zone can easily spread to the rest of the world as seen by how the Covid-19 pandemic has deeply affected the globe. Levenson and McLaughlin (2020:1) note that the COVID-19 pandemic has suddenly and dramatically upended the working world, creating unanticipated business and leadership challenges. Some organizations are pivoting hard to new delivery channels, new products, and new operating models without having enough time to manage the impact of these changes

thoughtfully. What should be noted from the above is that universities and churches cannot afford to lag behind and close down while waiting for things to return to the usual way.

This study therefore, attempted to focus on studying management rather than regulation in that the virtual space is like a global village that is governed by millions of "headmen" in different locations and time zones. Downey (2014:54-66) further notes that virtual communities have expanded into education and online schooling, virtual offices for working, virtual libraries, virtual dating, virtual visiting, and the enhanced virtual gaming that precipitated the movement.

In the wake of globalization, the idea of sticking to customary ways of managing universities and churches cannot be sustained more so, with the global health pandemics besides the effect of climate change. In the words of Yang and Chi-Yin (2012:271), the internet as one of the modern communication tools has been changing our society and communication rapidly. Religious activity is one of the growing areas proving that there are significant users who use internet for their spiritual life. Several researches are done in the past about the online religious life.

As earlier stated, the cyber space is providing an "environment" for leaders to be in more than one geographical location. Some will argue that the virtual space or management approach is not as effective as the face-to-face meetings, but it must be noted that it could be because society is still generally evolving into this "new normal." It's hard enough to lead an organization through a period of difficulty and uncertainty. It's even harder to lead through the extreme societal and organizational disruption we are experiencing in the wake of a pandemic and to do so virtually with team members juggling work with watching children, caring for sick loved ones, navigating difficult home situations, and managing a roller coaster of emotions (Community Wealth, 2020:1).

1.2 Virtual Management

The type of management under discussion is facilitated through virtual reality which Mandal (2013:1) defines as a technology which allows a user to interact with a computer-simulated environment, whether that environment is a simulation of the real world or an imaginary world. According to Mehtab, Rehman, Ishfaq and Jamil (2017:183), virtual management is a collection of individuals, dispersed from each other geographically or organizationally but connected by information technology to accomplish assigned goals.

It must be stated that virtual management of universities and churches is not necessarily a new concept especially in the developed world but has presently come into discussion due to the outbreak of the 2019 coronavirus pandemic. The restrictions on public gathering of a certain number entails that these two institutions have to either accept change or become extinct and the skew has been to accept the former.

Henceforth, the kind of management required in an organization at any given time takes various forms in that it is to a large extent driven by internal and external factors. Management of universities and churches has for some time being under the spot light especially when it comes to effectiveness and efficiency. For instance, university lectures are at times disrupted by a few unruly students paid to promote political agendas at the expense of other students who

may not even be aware of the background to some protests. The use of virtual management in such a scenario can avert the challenges that come with the closure of universities which has a huge impact on the academic calendar of an institution which usually impacts negatively as it tends to among other things delay the progression of students academically.

One setting of management that has become particularly vital is that of the virtual team, a team that has members who potentially span different organizations, time zones, geographic locations, and cultures with technology enabling communication and coordination between members (Huang, Kahai, & Jestice, 2010:182). The foregoing observation shows that a number of things are involved in ensuring that virtual management becomes a reality for any institution whether it be a university or church. From the onset, an institution needs the infrastructure, right software and personnel to effectively and efficiently manage itself in this regard. Change and adaptation are necessary for institutions to survive or remain relevant to meet societal needs. Therefore, effective management of universities and churches can no longer depend on the orthodox ways that lecturers, the clergy, learners and congregants are accustomed to. The challenges of adapting to virtual management may be lesser than to continue to completely depend on physical meetings and classes.

In the wake of the coronavirus pandemic, the Government of the Republic of Zambia signed Statutory Instrument No. 22 of 2020 which among things puts restrictions on public gatherings and the number of people allowed in one room at a given time. The positive side of this Statutory Instrument is that it puts a necessary test on the country's preparedness to change and adapt to virtual meetings. In the same vein, the challenges relating to virtual management of universities and churches also brings to light the growth and performance of Information and Communication Technology (ICT) sector which now its own ministry.

In the words of Mehtab, Rehman, Ishfaq and Jamil (2017:183) with advancements of technology, the trend towards virtual teams as unit of an organization has increased. Lately, many organizations have shifted from conventional team work to virtual teamwork. The preceding observation does not entail that institutions and people will not generally face hurdles in the course of shifting from dependence on physical meeting to the virtual space as is always the case in migrations. The virtual management of universities and churches also requires that students and congregants must have remote access to teachings and in various forms.

The adoption of virtual meetings and classes may also, to a large extent, help solve not only high operational costs such as metered utility bills, water and electricity and other such bills but include student accommodation challenges. This is because, both private and public tertiary institutions in Zambia have an unfavorable student bed-space ratio as Masaiti (2013) notes, that, room arrangement in the student halls of residence that were initially designed to accommodate two people are now made to accommodate more students. Lecture halls are overstretched across all public universities (Masaiti, 2013:5).

In like manner, the church cannot be detached from adapting to new technological trends of management especially in the wake of global health pandemics that history shows to be repetitive from time to time. Furthermore, it must be

noted that some Christians are unable to attend physical meetings due to other factors such as old age and inability to access places of worship because of perennial flooding experienced in areas like Misisi, Garden house and Kanyama of Lusaka urban and other such flood prone areas. The above scenario is a highlight of challenges that some argue can be resolved through virtual management.

Others like Sporre and Svedberg (2009:43) argue that it seems to be a common conception that religion and technology do not mix, as there is a contradictory relation between the two entities. The preceding argument about the form that the church should take is one of the reasons that a number of present denominations especially protestants have lagged behind in key areas such as education, health and skills development. The failure to migrate into modern approaches mainly stems from the church's inability to distinguish the message from the method of transmitting it.

Furthermore, Sporre and Svedberg (2009:43) noted that the underlying idea behind this assumption is for example that Churches are traditional institutions and technology is modern, and that information technology undermines traditions, old organizational structures and authority, aspects that are important to the Church. This assertion of keeping to church tradition needs to be weighed against the church's relevance in addressing the challenges of the present generation especially that the religion boasts of having a message of good will to all humanity.

The question for the non-practitioner would be; why keep to tradition at the expense of carrying out the core mission of the organization for fear of taking the risk to use the virtual space? The survival of current organizations is according to Samartinho, Faria, and Silva, (2013:1) directly connected to the ability to promote change and being able to adapt, evolve and not be stuck in time and space. This study brought to a test the capacity of both universities and churches to successfully adapt to virtual management.

In reality, virtual management of churches is more complex as its implementation borders on matters that relate to eschatology which the part of theology is concerned with things such as death, judgement and the final destiny of the soul and of humankind. In that regard, debates will always remain in the corridors of clergy although others like Schultze (2008) note that there is a desire among Christian groups to "use new technologies to advance the kingdom of God." This study among other things, gives a good indication as to how far the church has gone in managing itself virtually and was further a litmus test of the quality of leadership in the church within Lusaka urban.

1.3 Statement of the Problem

Traditional schooling and church service have always been grounded in coming together, as a class or group of learners and believers respectively. Traditionally, educationists hold the view that a learner can achieve success by being in a physical class through social exposure that, alongside academics, help them develop skills that benefit them for the rest of their lives (Dhawan, 2020:1). They further argue that lack of social exposure is bound to damage the future of the learner's social engagement and negotiating skills. On the other hand, Biblical Christian Scholars hold that physical fellowship is an important part of their faith in that, coming together to support one another is an

experience that allows them to learn, gain strength, and show the world exactly what God is, a union of saints and believers. Davis et al. (2016) noted that such research does not come naturally, even to Christian scholars who have been trained in the necessary methods. Such research requires both skepticism and intellectual humility an understanding that one's knowledge may be fallible and willingness to change one's beliefs when presented with new evidence

> **Matthew 18:19-20** *"Again, truly I tell you that if two of you on earth agree about anything they ask for, it will be done for them by my Father in heaven. For where two or three gather in my name, there am I with them."* (NIV)
>
> **Hebrews 10:24-25** *"Let us think of ways to motivate one another to acts of love and good works. And let us not neglect our meeting together, as some people do, but encourage one another, especially now that the day of his return is drawing near."* (NLT)

Labenek (2014) stated that the position of the Catholic church is that the church (the service) is only acceptable in the realm of the physical, meaning in the brick-and-mortar church, because gathering, fellowship, and community is fundamental to fulfilling the ordinances that God set forth for the church. In identifying gaps, it must be noted that previous moves by the church to use online platforms like the cited cases were planned for, the case and timing of the study under review was an act of emergency to avert the loss of lives. The outbreak of the coronavirus pandemic led to a global call by the World Health Organisation (WHO) for strict adherence to social distancing, and in the worst-case scenario, imposition of restrictions as was the case in Lusaka urban.

From the foregoing assertions, the scenarios, responses and outcomes may not be the same. Additionally, the cited studies have not completely tackled how the virtual approach to management of universities and especially churches affect societies in Africa which largely thrives on Ubuntu or working together culture. Moreover, the doctrinal differences identified in past studies on the church and the internet warrant this research in order to compare the two institutions so as to facilitate an exchange of knowledge.

Additionally, the study done by Labenek (2014) was only centered on the position of the Catholic Church and not protestants which were included in this research, while another study was designed to bring a prescription for a successful global virtual manager and not look at the end-users (Kayworth and Leidner (2000:183-194). Additionally, the study conducted by Yohannes (2017) shows that the Cyber church was driven by hostility and demanded a complete switch from physical meetings while this research was dealing with situation that was initially seen as a temporal but has resulted in blended learning.

On universities and institutions of learning, it must be noted that although the study done by Lampi (2013) gave positive findings, it focused on computer networking and not on theoretical courses that the proposed study is designed to cover. Additionally, the study was primarily a quantitative study using two-stage true experiment design testing two variables. On the hand, this study was both qualitative and quantitative in nature. Furthermore, the study

by Mukosa and Mweemba (2019: 860), was a systematic review that demands a comprehensive and systematic search to locate all relevant published and unpublished work that addresses one or more research questions. This is followed by a systematic presentation and integration of the characteristics and findings of the results of that search. The best reviews synthesize studies in order to draw broad theoretical conclusions about what a literature means, linking theory to evidence and evidence to theory (Siddaway, Wood, and Hedges, 2019).

The outbreak of the Coronavirus pandemic meant many institutions including universities and churches had to a shift from the traditional long held practices to the 'new normal' for their operations and hence the use of virtual platforms. According to Rieley (2020), social distancing was preeminent at this stage and was likely to have negative effects on learning opportunities. Educational units were struggling to find options to deal with this challenging situation. These circumstances raised the need for scenario planning need for academic institutions This is a situation that demands humanity and unity. There was also an urgent need to protect and save students, faculty, academic staff, communities, societies, and the nation as a whole.

It is against the preceding background specifically the strong views attributed to the management of universities and churches that the study sought to investigate the Leadership Challenges in Virtual Management of Universities and Churches in Lusaka Urban.

According to the World Bank (2020), when internet coverage is complemented by human capital investments, growth per capita increases by approximately 5 percentage points and the poverty headcount falls by 2.5 percentage points per year. These contributions to growth are mainly due to growth in productivity across economic sectors; digital transformation is thus part and parcel of economic transformation. In view of the foregoing assertion, it was paramount to draw a parallel between the two institutions as their role in society, in particular Lusaka urban has for a long time been complimentary.

The study was driven by the fact that both were affected by government's immediate action to restrict physical meetings. There was need to examine how they were coping with virtual management considering that they had to embrace this mode of management as an emergency against the mode they have strongly held for generations. To what extent would they go to embrace the 'new normal' in a crisis. It must be noted that any form of adaptation is already a challenge, how much more during a crisis?

Issues relating to virtual management are not new and therefore not bereft of past research globally, yet most of the cited works focused on online learning while the study was broader in that it encompassed the various aspects of managing universities and churches including e-learning. It also endeavored to give a factual reflection of the sector in relation to accessibility, affordability, flexibility and learning.

Another gap identified is that previous moves by the church to use online platforms like the cited cases were planned for, the case and timing of the proposed study was an act of emergency to avert the loss of lives. Additionally, the cited studies have not completely tackled how the virtual approach to management of universities and especially

churches affect societies in Africa which largely thrives on Ubuntu or working together culture. The study done by Labenek (2014) was only centered on the position of the Catholic Church and not protestants which were included in this research, while another study was designed to bring a prescription for a successful global virtual manager and not look at the end-users (Kayworth and Leidner (2000:183-194).

For the local context, it must be noted that although the study done by Lampi (2013) gave positive findings, it focused on computer networking and not on theoretical courses that the proposed study is designed to cover. Additionally, the study was primarily a quantitative study using two-stage true experiment design testing two variables. On the hand, this study was both qualitative and quantitative in nature. For Mukosa and Mweemba (2019: 860), theirs was a desktop study that involved literature review of already published papers and reports in order to draw the conclusions in this research. On the other hand, study under review was broader in size and scope.

1.4 General Objective

The main objective of this study was to investigate leadership challenges that exist in the virtual management of universities and churches in Lusaka Urban.

1.5 Specific Objectives

The following were the specific objectives of the study: -

1. To explore the university and church leadership's adaptation to institutional digital transformation.
2. To examine socio-economic factors affecting virtual management of universities and churches?
3. To investigate whether there existed challenges in virtually managing the universities and churches
4. To investigate the barriers faced by students and congregants in coping virtual meetings.

1.6 Research Questions

1. How were leaders in universities and churches adapting to institutional digital transformation?
2. How are the socio-economic factors associated with virtual management affecting universities and churches?
3. What are the challenges of virtual management of universities and churches in Lusaka Urban?
4. What barriers are students and congregants facing in coping with virtual classes and meetings?

1.7 Significance of the Study

In general terms, the comparison between the challenges that exist in the virtual management universities and churches may be useful to drawing a healthy parallel that can enhance the exchange of knowledge especially that a large percentage of Zambia's population are members of a particular congregation. The findings of this comparative study were likely to accelerate the usage of Information and Communication Technology (ICT) in the country. The education sector can work hand in hand with the church and use the influence of religious leaders in advocating for

increased and improved access to internet by the masses while paying attention to issues of ethics, digital citizenship education, morality and excellence. On the other hand, the church may benefit from the skills and knowledge base upon which universities operate and as such improve their standard of excellence. This may also accelerate knowledge transfer through the two sectors who have in many aspects been partners in educating the masses. Some of the best schools in Zambia are faith-based meaning that the church is in many aspects a school. In that regard, there was need to ensure that the partnership continued even through the switch to virtual management

The virtual management of universities and churches may on one hand be a challenge but on the other hand provide an opportunity to grow the ICT sector and create more competition among internet service providers which may in turn benefit universities and churches. Additionally, the quality of internet services may also improve as the study may likely produce information that will be useful even to the Zambia Information Communications and Technology Authority (ZICTA). Furthermore, it is hoped that this study may act as a platform for the Higher Education Authority (HEA) to update it statistics and report on the performance of online learning on the sector and further use the information as a factor for change and growth especially in the ICT sector**.**

The findings of this study may also be beneficial to the various church mother bodies and will hopefully result in more collaborations to assist church leaders that may be lagging behind in the use of the cyber space as a tool for mission work.

1.8 Definitions of Key Terms and Concepts

Challenges: Impediments towards achievement of pre-determined university education missions, objectives and goals

Management: The process of setting and achieving church and university missions, objectives and goals through planning, organizing, coordinating and controlling that utilize human, financial and materials resources.

University: an institution designed for instruction and examination of students in many branches of advanced learning conferring degrees in various faculties.

Church: a particular Christian organization, typically one with its own clergy.

Virtual Management: the supervision, leadership, and maintenance of virtual teams. i.e Online classes, School /church websites, School you tube channel etc.)

Leadership: the capacity of an individual or organization to influence the behavior of others (remotely)

1.9 Summary of the chapter

The chapter has given a historical background on virtual management and ICT from a global, regional and Zambian context. The chapter also highlights the statement of the problem that warrants this study. Additionally, it also comprises the purpose of the study, research objectives, research questions, significance of the study, delimitation of the study, limitation of the study, conceptual framework and definitions of operational terms. The next chapter will bring out a review of various literature considered to be relevant by the researcher to the study with a view of putting it into the context of similar works done so far thereby providing justification for the study.

CHAPTER TWO: LITERATURE REVIEW

2.0 Overview

The purpose of this chapter is to provide an overview of literature and research done on issues pertaining to the virtual management of universities and churches globally and locally. One of the major elements of the chapter is identifying the gap in the literature reviewed. It also highlights best practices with regard to the subject matter relates them to what is obtaining locally. It will further bring out significant information available on the topic of study gathered through various authors and researchers. Thereafter, the identification of the gaps in the literature will be done.

2.1 Literature Review

2.1.1 Best Global Practices of Virtual Management

Well established fields are usually governed by norms and practices that become a guideline for practitioners as well as prospective organisations. Standard practices are key to success in that they help a particular field to grow and maintain credibility among end users. The Oxford Advanced Learners defines best practices as a quality of high standard, excellence, highly improved outstanding par excellence service. According to Szwejczewski (2011) "best practice is a practice that has been shown to produce superior performance and the adoption of best practices is viewed as a mechanism for improving the performance of a process, business unit, product, service, or entire organisation. In the words of Druery, McCormack and Murphy (2013), it is generally believed that the term grew out of the manufacturing industry's interest in and implementation of benchmarking.

In considering that the concept of best practice has been established, it necessary to look at how it applies to virtual management which Mehtab et.al (2017:183), define as a collection of individuals, dispersed from each other geographically or organizationally but connected by information technology to accomplish assigned goals. Additionally, virtual team management is the capability to organize and coordinate effectively a territorially dispersed group whose members not only that are not in the same location, but they may not even have the same time zone (Powell, Piccoli and Ives, 2004:6).

Some of the best practices of virtual management according to Samartinho (2013) are effective communication, trust and coordination. These three pillars are vital to any form of management much more when it is virtual in the wake of mixed feelings about the reliability of this mode of running institutions. Effective communication is only possible when the sender and the receiver have no barriers in between such as some the things challenges that were highlighted by other studies. In the same manner that physical meetings require a set environment to achieve the learning goals, virtual management has its own atmosphere which if violated not guaranteed results in lack of alignment and integration of the lecturer/Preacher and their virtual audience.

Furthermore, the success of virtual management also depends on the relationship built on trust among the participants which demands that the facilitator takes into account the various levels of software knowledge among the members or students. The audience will easily participate if a collaborative environment is built so as to ensure the sharing of knowledge.

2.1.2 ICT in Zambia

In a study conducted by the Policy Monitoring and Research Center (PMRC, 2020:5) on the implementation status and challenges of ICTs in Zambian schools, the ICT sector gained influence in the global development agenda and is an essential investment required by all nations to achieve the 2030 Global Agenda. ICTs are important catalysts in the achievement of Sustainable Development Goals (SDGs) with specific focus on development goal number 4 which aims to ensure inclusive and equitable education and promotion of lifelong learning opportunities for all.

As accurate as this observation is, the realization of the above SDG is only possible when citizens have access to computers, smart phones, internet and reliable supply of electricity besides the knowledge of the use of the computer and smart phones.

This comparative study provided an opportunity to highlight the extent to which the cited sector has gained influence and the preparedness of universities and churches in virtual management especially that the migration into cyber space has to a large extent been imposed on them. Furthermore, the cited study's emphasis on the need for Zambia to reach SDG number four (4) also entails that the researcher is likely to touch on whether equitable education in achievable amidst the challenges of low internet speed, limited ICT knowledge and electricity loading.

According to ZICTA's (2018:6) national survey on access and usage of information and communication technologies by households and individuals, the proportion of households that owned computers country wide stood at 8.1 percent in 2018; less than 2.7 percent of the households accessed internet services through fixed internet services.

This survey could just be a tip of the iceberg that the sector faces that may negatively affect the virtual management of universities and churches. The limited access to the internet as depicted in the above report could entail that some challenges may stem from the service providers to the end users and ultimately hamper the idea of effective virtual management of universities and churches. If the nation faced the cited challenges when only a certain sector depended on the current internet service providers, how much more now when the two institutions which the study is focused on are forced to depend on online services? This question among others raises the need to carry out a comparative study so as to narrow the gap between universities and churches especially that these institutions are key stakeholders in shaping societal values.

The twenty-eighteen ZICTA report is against the background of Zambia being the fifth country in Africa and the first in the entire Sub-Saharan Africa, aside from South Africa, to have full access to the Internet on 22 November 1994

as noted by Mambwe (2015:13). The foregoing findings border on Zambia's slow progress in the use of the cyber space in spite of the county being among the first in the region to have full access to the internet. The demands brought about by the Coronavirus outbreak among other things provides a perfect timing for this study. Will this switch to virtual management positively stir the growth of these two institutions or it will result into negatively affect them? In the course of addressing the study objectives, the researcher will endeavor to generate answers to such questions from the targeted stakeholders.

Furthermore, the ZICTA survey report indicates that on access to electricity which has possible causal influence on uptake of ICTs, only 32.9 percent of the households indicated that they source power through a utility company. The findings of this regulatory body are indicative of some of the challenges that leaders of universities and churches face in providing virtual services to the community. In that respect, this comparative study is likely to bring out the current state of affairs with regard to power deficit challenges and the extent to which they are affecting the target population in their quest to virtually manage universities and churches.

2.2 Related Research

2.2.1 Challenges of Virtual School Leadership

In a study to examine challenges faced by virtual school leaders in the United States, Richardson, LaFrance and Beck (2015:18) explored challenges faced by eighteen leaders of fully online or blended online programs. Analysis through semi structured interviews revealed six main challenges: funding, staff, accountability, time, parents, and professional development. All of these findings relate to this study as they common to all societies; for instance, funding may remain a huge challenge for universities and churches for a long time. In spite of these findings, Caulat (2006) noted that virtual teams are increasingly becoming the life-blood of most companies: they tend to undertake the most global, strategic and complex projects. They have the strong advantage of gathering the best people for a specific task independent of their geographical location in a sort of 'Just in time talent' approach.

One can only imagine what the case is for Zambia if the United States can list funding as a challenge. Late payment of salaries is almost a perennial story for public universities, this means that virtual management and its requirements could add to their financial burden. This study is a necessary undertaking as it will provide an opportunity for stakeholders to share the unique challenges associated with funding of universities and churches in relation to the demands of virtual management.

There is a copious amount of research available on virtual leadership and leadership theories, however, virtual leadership in higher education is under-researched (Peart, 2014). The foregoing study findings formed a basis for further research covering institutions of higher learning and churches especially amidst the challenges resulting from coronavirus outbreak. In the words of Mohr & Shelton (2017:123-140), in this contemporary environment, virtual leaders must apply up-to-date leadership and collaboration skills to increasingly complex work environments, such

as in the higher education space. It is hoped that the study findings will provoke various stakeholders to step-up their skills in virtual management of churches and universities.

A study was done on leadership in virtual teams: a comparison of transformational and transactional leaders by Ruggieri (2009). Its findings showed that the role of a leader in a virtual environment has created the possibility to redefine the concept of leadership, since traditional leadership often is based upon the possibility to offer encouragement, reward and motivation but mostly through physical presence and the development of personal relations with the group. The study sought to assess the readiness of the leadership of both institutions to adapt to digital transformation. It was clear to see that effective virtual management would remain a far-fetched dream in the absence of transformational leaders in universities and churches which is primarily driven by vision and change.

In other words of Muresherwa, Hlupo and Mupa, (2017:53), to transform is to bring about complete change. Transformational leaders should therefore bring about positive change to the organization, country, or entity concerned. An additional challenge facing virtual school leaders may center on staffing. Miller and Ribble (2010) pointed out that not all teachers have the knowledge and skills to teach online. Virtual school leaders need to be aware that many teachers are transitioning from a traditional classroom to virtual teaching environments and may undergo resistance due to shifting workloads and a lack of technical and pedagogical assistance. For Zambia, the student population stretches across the country with some living far-flung areas which may not be connected to the power utility grid and internet network.

Furthermore, Miller and Ribble (2010) also noted that the use of virtual mode in management demands that staff, students and parents are educated to cope with the use of various software applications. From the above assertion, it must be noted that the shift takes time and effort which may likely impact on the performance of the institution. The research sought to add value to Zambia's higher education sector and church management as it provides a chance for academicians and religious leaders to address some of the challenges to virtual management with view of coming up with solutions.

Strengths, Weaknesses, Opportunities and Challenges of Online Learning

Dhawan (2020:6) conducted a study on the importance of online learning and strengths, weaknesses, opportunities and challenges as well as analysis of e-learning modes in the time of crisis in India. The study also put some light on the growth of Education Technology Start-ups during the time of pandemic and natural disasters and includes suggestions for academic institutions of how to deal with challenges associated with online learning. One of the things worth noting about the foregoing study is that it associates challenges to opportunities associated with change. In view of the above findings, the study endeavored to discuss the possibility of both universities and churches turning their challenges into opportunities especially that Dhawan's study was also conducted during a time crisis.

A study conducted by Yaya & Adeyokun, (2011) focusing on the digitization of library services in Nigeria, found that there is a revolution in information technology that will essentially shatter the effectiveness of traditional, scientific and authoritative methods of management. The study sought to highlight the whether the revolution is also happening in universities and churches within Lusaka urban and also highlighted the virtual services that were available to end-users of both institutions.

As Dhawan (2020:6) further stated, online learning is considered to be a relatively cheaper mode of education in terms of the lower cost of transportation, accommodation, and the overall cost of institution-based learning. This assertion may not be accurate for the targeted institutions within Lusaka Urban in that one cannot generalize the findings in India to the area in question considering the varying socio-economic factors associated with the sector. Hence need for the researcher to bring out the socio-economic factors that relate to virtual management for universities and churches within Lusaka urban.

For instance, one can in general terms argue whether it would be it less costly for institutions to switch to the cyber space than use physical rooms for instruction and learning. The other side of looking at the matter is that it may just be an issue of transferring the cost to the student which in turn may result in some dropping out of school. These are some of the key socio-economic issues that the study borders on. Another potential challenge of virtual school leadership is funding. In their report for the National Education Policy Center, Bathon and Baker (2013) suggested that the model for virtual schools should be based on the instructional units provided to students to advance their progress toward program completion rather than using traditional school rates.

They further indicated that the funding model that is used for brick-and-mortar schools would be ineffective if applied to virtual schools. This assertion touches on matters relating to the cost of providing virtual services especially that Zambia does not manufacture ICT equipment is reliant on importing things like computers and servers besides the payments to use software packages used to facilitate virtual meetings.

Dhawan's (2020:6) study also shows that several arguments are associated with e-learning such as accessibility, affordability, flexibility, learning pedagogy, life-long learning and policy. It further states that online mode of learning is easily accessible and can even reach to rural and remote areas. It is a possible that the findings of the study could help inform the local scene in relation to educational policy and church governance or liturgy. This assertion is obviously valid in the long term for a country like Zambia which is yet to ensure that access to ICT is available to all areas without interruptions.

It must be noted that the cited work focusses on online learning while this study is broader in that it encompassed the various aspects of managing a higher learning institution which includes e-learning. It also endeavored to give a factual reflection of the sector in relation to accessibility, affordability, flexibility, learning and policy. In the context of this study, one thing worth noting from the above findings is that as much as universities may face several challenges in their quest to lead and manage their institutions virtually, the study sought to highlight some possible benefits that will in the long term accrue to the two institutions.

A study on the current state of e-learning at universities in Zimbabwe: opportunities and challenges, Chitanana, Makaza and Madzima (2008) found that E-learning is gaining some ground in university education throughout the world. Currently, a large number of universities world–wide support e-learning in different forms. Despite this wide spread adoption of e-learning in university education, research on e-learning adoption suggests that it has not reached its full potential.

The foregoing observation to a large extent provided a basis for this comparative study and it is was designed to examine whether the challenges experienced above are similar to the Zambian scenario and if there are lessons that can be picked to ease things locally. Like the cited study, one cannot argue about the huge potential that virtual space provides in relation to virtual management systems. What this research sought to highlight is how much that potential is being utilized by universities and churches in their quest to offer services remotely.

In a study on the student preparedness for university e-learning environments by Parkes, Stein and Reading (2014:10), students were found to be not sufficiently prepared for balancing their work, family, and social lives with their study lives in an online learning environment. It is well known fact that adaptation to change is process that takes time and may sometimes be completely resisted by those it is meant to empower. In that regard, the study wanted to explore leadership in institutional digital transformation and adaptation. In the words of Maxwell (2007:267) everything rises and falls on leadership which means that one cannot discuss the student's preparedness for university e-learning without first ensuring that the leadership is ready and ahead of the stirring and sustaining the desired change or migration to virtual management.

Furthermore, the findings of the aforementioned study border on socio-economic factors, as some parents and self-sponsored students pay a huge price to raise their tuition fees which do cover internet bundles unless they are physically at the university campus. According to Richardson, LaFrance and Beck (2015:18), these factors confirm the need for further research to address the complex, unavoidable technological evolutions that are impacting today's schools. The purpose of their case study was to examine challenges faced by virtual school leaders in the United States through semi structured interviews.

While as the researchers explored challenges faced by eighteen leaders of fully online or blended online programs, this study covered both managers as well as end-users for the sake of a balanced outcome. It went further to tackle church which is predominantly voluntary in terms of commitment. The comparison was necessary to see the differences and similarities between the two especially that student's attendance may be driven by the fact that they have to ensure that they do not lose the money paid for tuition.

Additionally, the frequency in attendance cannot be as guaranteed as it is for physical classes. A lecturer may start with a certain number of students at the beginning and end up with a handful that can afford. In the findings of Rusu, Saplacan and Lile (2020:799), productivity from the management point of view is at risk when employees work outside of a conventional office. Employees may not use their time efficiently and wisely in an environment without day-to-day supervision.

The use of Online Software Applications

The study under review went further to look at productivity of from the aspect of students and congregants as it measured the effectiveness of the online platforms as mode of leadership. On the other hand, due to a lack of boundaries, some employees risk burnout when they work remotely. Parkes, Stein and Reading (2014:10) noted that students were also found to be poorly prepared for several e-learning competencies and academic-type competencies. Also, there is a low-level preparedness among the students concerning the usage of Learning Management Systems.

For instance, a number of students and lecturers struggle with the use on software applications such as Moodle, Zoom, Google meet and Telegram. This results in loss of a number of possible hours of lectures that could be easily be done in physical theatre rooms. In a study on moving beyond bricks and mortar: Changing the conversation on online education, Miller and Ribble (2010:3-6) demonstrated that schools are not keeping up with the rapid changes that are advanced by technological innovations. The scenario described above shows the gap that exists between leaders of institutions and the students. It is for this reason that the researcher sought to bridge this chasm as students can only go as far as the leaders facilitate for them. Leadership is key in facilitating technological development.

According to a study conducted by Ukpai and Emuji (2016:74) focusing on the current challenges and the needed competences in the management of university education in Nigeria, the position of universities in the development of any nation cannot be overemphasized. The explanation lies on the fact that the bulk of specialized human resource need of the private and public sectors are usually turned out by the universities, colleges and polytechnics. McLeod and Richardson (2011) observed that despite the growing body of research on online learning, little research exists on leaders of virtual schools.

From the above findings, one is left to imagine the quality of students that will eventually graduate from universities in Lusaka urban and their level of understanding if the bulk of those that were schooled via physical classes have ended up job hunting and even changing careers.

The findings of Ukpai and Emuji (2016:74) are common in developing countries Zambia included. The number of students graduating from both public and private universities does little to create jobs because most times the approach to education is theoretical. In the norm, challenges are the fuel that stir critical thinking among researchers. The study sought to highlight the challenges faced by both institutions with the view of bargaining for growth of the ICT sector especially that they serve a huge constituency that spreads across demographic divide.

This researcher sought to provide a platform for university registrars to discuss such key issues through open-ended questions such as the effect of virtual management on maintenance of academic quality. A study by Mbirithi (2007:57) on the management challenges facing Kenya's public universities and implications for the quality of education states that quality in higher education is perceived as consisting of a synthesis of conformity, adaptability and continuous improvements. It is a synthesis of a range of expectations of many stakeholders. Quality can therefore be viewed from many approaches. While as Mbirithi (2007:57) sought to investigate the nature and magnitude of

management challenges that face Kenya‟s public universities and their implications for quality education. This study was broader in that it endeavored to find out the challenges experienced by the management and end-users of one (1) public university, five (5) private universities and six (6) churches from various denominations.

Ukpai and Emuji (2016:74) further stated that the universities must be competent in the production of highly knowledgeable, skillful and morally sound individuals that can propel the nation's economy into development especially in the face of the global trend. A study on best practices framework for online faculty professional development carried out by Mohr & Shelton (2017:123-140) stated as that the popularity of online classes continues to grow, it is important for institutions to support faculty, staff and students in ways that are conducive to their needs. In this contemporary environment, virtual leaders must apply up-to-date leadership and collaboration skills to increasingly complex work environments, such as in the higher education space.

Another view on virtual management presented in the findings of Richardson, LaFrance and Beck (2015:18) was that at times there are boundary problems because it is not a traditional school where lecturers work from morning to late afternoon. Virtual management at times demands that one have that cell phone and students call you any hour of the day or night. This expectation can only be achieved through quality teaching-learning, and research. It is in view of the preceding finding that this comparative study attempted to highlight some ways that quality teaching-learning can be realized for both universities and churches as they play huge role in shaping the societal values and principles that eventually accelerate community and national development.

A study on the challenges facing University Education in Zimbabwe by Majoni (2014:21) found a lack of access to computer hardware and software in relation to information communication technologies (ICT) assisted teaching and learning. The challenges of the foregoing study are common for developing countries like Zambia. A failure to access to computer hardware and knowledge of software applications literally hampers any chance of making virtual management a reality whether it be at universities or churches. These two are the interface to cyber space and therefore necessary for successful virtual management as one cannot function without the other as the case is with Siamese twins co-joined by the heart. Whether or not the above findings match the scenario in Lusaka urban is question that this study sought to inquire from the key stakeholders namely; university registrars, pastors, ICT staff, representatives, church mother bodies, students and church members.

A study carried out by Rajasingham (2011:10) on the new challenges facing universities in the Internet-Driven Global Environment found that internet advances can theoretically support learner-centred and interactive learning. On the other hand, challenges of internet enabled learning such as e-learning considered within the changing nature of knowledge, changing needs of society, changing teacher roles, and learner expectations. Considering these findings, there was need to look at the readiness of the universities and churches to fully employ digital applications in their management systems so as to further the use of the internet in the country considering that the two targeted institutions have a huge constituency at various levels and ages.

In the words Martin, Budhrani, Kumar & Ritzhaupt (2019), the phenomenal growth of online learning in higher education institutions has created an indisputable need for guidelines that assist new and continuing online instructors about how best to teach in the online environment. In this regard, the study provided an opportunity to compare the challenges encountered by the two institutions and whether these are unique to Lusaka urban. It is possible that each institution deals with challenges differently hence need to have this cross-pollination of ideas and responses to virtual management. According to Mehtab et.al. (2017:184), the virtual leader can't physically observe the members and should be creative to observe the expectations virtually. Virtual team leader can't assume that members are ready to start virtual meetings. Virtual leader must have a sense to understand that an electronic silence means acquiescence rather than inattention.

As earlier started, the comparison of the leadership challenges faced in the management of universities and churches was envisioned to be complimentary to the two institutions and beyond. This is because they both wield a lot of influence in the country in regard to shaping to the mindset of the masses. Additionally, Rajasingham (2011:10) notes that the challenges of virtual management go beyond innovative ICT implementations to the design and development of a holistic university system that responds to national and global needs, and to the community of demand. As Mbirithi (2007:57) observed, quality assurance in education standards should be assessed from various fronts.

Students may focus on facilities provided and perceived usefulness of education on future employment. Academic staff may pay attention to the teaching learning process. Management may on the other hand give importance to the institution's achievements while parents may consider the competence of graduates. The study under review provided an opportunity to have an appreciation of the challenges confronting universities and churches and the extent to which they are guaranteeing that quality is not compromised.

As Richardson, LaFrance and Beck (2015:18) noted, leaders indicated that time was a challenge. They discussed juggling many responsibilities, working long hours, and feeling the need to always be virtually available. Their findings suggested that maintaining a balance without the structure of a traditional school day was challenging. The study further highlighted the opportunities that the challenges present for universities and church management and how to best exploit them for benefit of the community at large.

2.2.2 Virtual Management of Churches

In study on the cyber church and how it is understood by its participants, with special reference to the Ethiopian Christians, Yohannes (2017:1) states that since the introduction of the internet, organizations and individuals from all over the world and people of different cultures have used cyber for connection, communication and to enhance and simplify their day-to-day lives.

The foregoing findings entail that all spheres of society need to migrate into cyber space failure to which service delivery will hampered. For instance, lecturers and the clergy use the same road mode of transport and road networks and are sometimes held up in traffic hence delayed or fail to be on time for physical classes. The virtual space can provide a solution to such challenges and ensure that time is effectively managed in the best way.

The need to carry out this study was among other things driven by the fact that while previous moves by the church like the cited case were planned for, the case in question was an act of emergency to avert the loss of lives due to the coronavirus outbreak meaning that responses and outcomes may not be the same. In other words, the issue may not necessarily be about the benefits of the virtual space but rather about how churches have responded to the restrictions in physical meetings.

The Virtual and Physical Church

A study conducted by Russell (2016:5) on whether the virtual church is a viable alternative to brick-and-mortar church and delved into the perceptions of the elder population regarding the phenomenon of virtual church. The findings were that though there is connectivity with the virtual teleconference church and interaction is important, the virtual teleconference church is not necessarily a replacement for brick-and-mortar church. One of the critical points brought out by the above study is that attempts to completely replace physical church gatherings with virtual meetings may overtime be an exercise in futility.

It means that the virtual management of church should be seen as a complementary move to meeting the needs of those that may not be able to attend in person. This probably explains why some sections of the church resisted the imposition of restrictions on public gatherings in certain areas of Lusaka. The resistance may be driven by the challenges of virtual management. This study helped bring out the key issues especially that it targeted the church mother bodies as well as the resident and church members at the grassroots.

Russell (2016:5) also sought to determine whether there are obstacles in either physical or virtual churches that would impede spiritual growth and can be overcome. This study found that for the elderly in a virtual church environment, neither their denomination nor physical proximity were concerns and that the elderly consented to a changing world. This prospective study will be key to measure some of the above cited findings in relation to Zambia in particularly Lusaka urban.

The question of whether there are obstacles in either physical or virtual churches that would impede spiritual growth and how to overcome them evolves with time and location especially that the various respondents may not see things in the same way. It was envisioned that each virtual environment would in one way or another have some challenges which require solutions from the part of management. For instance, teaching and interpretation of the sermon requires more time and internet bundles which comes at a cost to the institution and the congregant. The study highlights how leaders are dealing with the challenge of effective communication through the virtual space.

Yohannes (2017:1) notes that church going may not be the usual term for the future generation since going to a building which we call a church my not be a relevant issue for them. People who claim to have an online Church are nowadays dominating the traditional method of Church function. The cyber church is progressively covering all areas of life in the society in a very rapid manner. This comparative study to a large extent brings out the state of affairs with regard to the performance of the virtual church in Zambia in relation to the above statements.

In view of the fact that a number of churches have been forced by health guidelines to switch to the virtual space, it is yet to be seen whether the virtual management of the church is sustainable or it is a temporal measure due to the current challenges.

Anyone involved in virtual world ministry will according to Estes (2009:93) know that people will ask the hard questions, the real questions, the questions that need to be answered, much more freely in the virtual world than the real world. His assertions are valid, in that the physical church is most times a restricted environment when it comes to addressing real questions as the mode of teaching is generally monologue and not dialogue in nature.

In this regard, the study gave an opportunity to church leaders to reveal how they are dealing with the management of virtual churches which are without walls or boundaries. Estes (2009:93) further observes that in a very real sense, this loosening of inhibition could allow a person a starting point for becoming a fully devoted disciple of Christ in the virtual world better than the real one. But to guide people in this process authentic virtual churches, not just websites with static (and often outdated) information are necessary.

Opposition and Support for Virtual Church Management

Although the above findings are valid, one of the challenges of doing church via the cyber space is that some denominations are opposed to its use as they believe conspiracy theories that the outbreak of the Coronavirus has been triggered by the installation of the 5G network system (Bruns, Harrington and Hurcombe, 2020).

A church that sees things from such a vantage point is already challenged in that they are not open to accept the need to change or switch to the virtual space in their management approach. It is in view of such beliefs the researcher sought to carry out a comparative study so as to facilitate an exchange of knowledge. It is possible that many religious people may be destroyed due to lack of accurate knowledge on the subject.

In the responding to whether the virtual church be real, Roberts (2009) in his article on the challenge and opportunity of virtual church observed that the virtual church purports to offer a full church experience that is not dependent on a physical church, but is meant to provide a stand-alone, genuine church experience in a virtual reality world of the Internet. In view of the preceding assertions, it must be noted that the idea of a virtual church becoming an ultimate substitute for the physical church may bring some resistance from orthodox theologians who usually apply a puritan approach to dealing with any new mode that appears to temper with the customary format of worship.

In such a scenario, such congregations do not consider the virtual church to be any close to physical meetings and resist the idea from the onset. The proposed study also gave stakeholders an idea of the stance of various denominations on the issues relating to the virtual church management. This comparative study provided an opportunity to assess the extent to which the virtual church is possible in Zambia in relation to the above definition or it is can stand alongside physical meetings for congregants. This was in view of the assertions made by Downey (2014:54-66) that while the virtual communities expanded and became wider spread, the implications for virtual

social life also accelerated and intensified. The virtual communities that exist within the virtual world have been so richly developed for those whose opportunities exist for almost any kind of virtual interaction

There are those in the Christian body who believe the religious experience should only occur in the consecrated, brick and mortar church services. Labenek (2014) stated that the position of the Catholic church is that church (the service) is only acceptable in the realm of the physical, meaning in the brick-and-mortar church, because gathering, fellowship, and community is fundamental to fulfilling the ordinances that God set forth for the church. The preceding stance is just an example of how divergent the church views are with regard to its response to several societal questions.

Unfortunately, more time is usually devoted to doctrinal debates about what should be done to serve humanity at the expense the work itself. For instance, study findings by Ossai-Ugbah (2011:49) on 'the use of information and communication technologies (ICT) resources in churches and related constraints found that Baptist churches pastors use ICT for sermon preparation, worship and running of teaching materials during service.' These three can be said to be among the common or basic ways in which churches use ICT to enhance their services to their members. Additionally, the study also indicated that educational background played a great factor in the use of ICT by the pastors themselves and in their churches.

Some of the challenges faced by Baptist pastors in the use of ICT principally are lack of ICT education, personnel and finance. The above findings highlight one of the possible challenges that churches are likely to encounter in a quest to engage virtual management in their leadership. The current level of computer literacy and access to the internet as shown by the ZICTA report gives clues of the status this assertion.

The National Directory for Catechesis (NDC 21) indicates the clear need to use new technologies to express the word of God to all people in all generations. It further states that "using the media correctly and competently can lead to a genuine inculturation of the gospel which calls for training of pastoral ministers to be specialists in communications technology, state-of-the-art productions centers and Communication networks. The foregoing recommendations by the Vatican goes to show that even religious institutions that have been in existence for generations cannot afford to ignore the need to use the virtual space to propagate their message.

More importantly, the statement also underscores some of the probable challenges that churches are facing in Zambia in their quest to effectively serve congregants. It means today's trainee minister or seminarian has to be equipped with more than homiletical skills and must be well versed in ICT knowledge. The need for state-of-the-art productions from the church cannot be under-estimated especially that Zambia's population is predominantly youthful and is attracted to visual art in the wake of many social media platforms.

In that regard, the church cannot afford to be a spectator to the growth and use of the virtual space even if it comes a huge price. A study conducted on church-based research: challenges and opportunities by Dunaetz (2020) found that Christians may feel a tension concerning research. Such research does not come naturally, even to Christian scholars who have been trained in the necessary methods. Skepticism is needed because people, including (or perhaps

especially) Christians, often make bold claims that may or may not be true. Yet research may indicate that it is not always true.

For example, Soerens (2020:1) observed that when the COVID-19 crisis forced houses of worship to close their doors, most churches quickly adapted and pivoted to doing online church. Pastors have had to adjust their preaching style to accommodate moving from a big platform to speaking to their flock on a small screen. Churches have also had to learn how to handle the offering moment virtually. While this move may make the management of finances in religious organisations more transparent and secure from thefts that occur at church premises, the study was set to appreciate the challenges faced especially that it's a new norm or culture which usually take time to change. The study endeavored to find out how this change is affecting the running of affairs.

National development planning usually takes a worst-case scenario when it comes to disasters, but the reality is that critical and innovative minds are many times born through times of crises. It is hoped that this study will help to positively stir the transformative agenda among leaders of the two institutions. Leadership is about making quality decisions, and it is therefore necessary for the church and universities to face the challenges associated with virtual management.

2.2.3 Comparison of previous study findings

In considering that the study focuses on virtual management, it must be noted that the challenges go beyond the lecturer to student and clergy to congregant relationship. It also covers the capacities of the leadership teams or staff within these two institutions which are both key to shaping the mind of society at large. In their study on the "Global Virtual Manager: a perspective for success," Kayworth and Leidner (2000:183-194) suggest that the challenges faced by global virtual teams can be divided into four major areas: communication, culture, project management, and technology. These areas may interact with one another; for example, communication challenges may be related to cultural differences or to the use of computer-mediated communication technologies.

In view of the preceding results, it must be noted that language is not just limited to tribes and clans but includes codes, which goes to say that the ICT world or the virtual space has its own language. This language can be more dynamic than the local dialects that are rooted in ancestry though passed on orally. This means that learning and constant upgrades that are a normal feature in the virtual world can be a challenge to staff, clergy, students and congregants. The extent to which the two institutions are fluent in speaking the digital or cyber language is one of the questions that this study sought to answer.

It is not possible to effectively manage church virtually without effective communication which requires the removal of barriers between the communicator and the audience. If English is a challenge, what more hardware and software language? Rusu, Saplacan and Lile (2020:747) note that communication is important in any workplace, but it is a significant challenge when managing remote workers especially because almost all the interactions occur via email, chat or calls. Ensuring a reliable flow of accurate information throughout the structure of the organization means recruiting the right people, using the right resources for the job and encouraging a communicative culture.

The study sought to have an understanding of how universities and churches are dealing with the challenge of learning to speak the digital banking language in the quest of ensuring that students and congregants pay their fees, tithes and offerings remotely which was covered under the socio-economic factors of virtual management.

For people new to church or new to online giving, the idea of giving money to a church may be unfamiliar and off-putting. According to Aukland (2020), so many people are attending church online—many for the first time, churches need to provide some context for why giving is important. While universities may not have to explain why students still need to pay fees, the church on the hand has to justify it especially to those new to the faith.

In Zambia as the case is elsewhere, bank notes have been labelled as conveyor belt of the coronavirus. Although this study may touch on the effects of the current outbreak, it must be noted the need to utilize and the virtual space for universities and churches goes beyond the present-day probable challenges. For instance, Soerens (2020:1) notes that every church has been impacted by the pandemic. Congregants have been adversely affected by job loss, pay cuts, illness and death because of the Coronavirus. This observation is obviously linked to universities as loss of jobs for parent's means that students who are not on government bursary are likely to struggle to continue with their studies whether it be physical or virtual.

Furthermore, the loss of jobs could also entail a reduction in income for both institutions. The study was key to highlighting how the socio-economic factors have affected these two institutions**.** The reality about development is that it evolves over time and change is usually sparked by challenges of a particular epoch. The 2020 to 2030 decade has started with a global health pandemic (coronavirus) which presents critical questions to leaders of universities and churches with regard to their service delivery.

A study on the use of Information and Communication Technology (ICT) in Academic Libraries in Nigeria showed that advances in information technology have led to far-reaching developments in higher education sector; an example of which is the application of digital information in learning. Furthermore, libraries and information centres in Nigeria are not only equipped with materials that are in traditional format but also in electronic formats: they offer users a vast selection of information resources (Solarin, 2013:1).

The degree to which universities in Lusaka urban have digitalized their libraries came under scrutiny in the process of data collection. It is not enough to provide virtual classes for students mainly because universities are designed to add to the body of existing knowledge. The study under consideration included virtual management of university libraries within Lusaka Urban. Research requires that students have access unlimited access to books, journals and articles from academic luminaries in the comfort of their home especially that most universities do not have enough library room to accommodate their student population at the same time especially during exam or study breaks.

According to Stansfield et al. (2010:12), the issues of effectively utilizing and harnessing technology can present a number of problems both in terms of getting the technology infrastructure set up, as well as overcoming peoples' initial negative attitudes or sense of uncertainty in relation to the learning technologies underpinning a virtual campus.

For instance, resistance to virtual classes can sometimes be as a result of a lack of sufficient knowledge in the use of software besides lack of reliable computer hardware.

The one touch button approach to accessing knowledge is a huge challenge to both institutions in that while on it one hand accelerates progress, it could on the other hand result in producing a generation that is docile and emotionally disconnected as people are now learning that work, learning and worship can happen within the comfort of one's home. Simply applies the cut and paste method in sharing information.

A study conducted by Lampi (2013) on the effectiveness of using virtual laboratories to teach computer networking skills in Zambia found that the use of virtual labs to train students in computer networking skills is uncertain when real equipment is limited or unavailable. The purpose of the study was to determine the effectiveness of using virtual labs to train students in the acquisition of computer network configuration and troubleshooting skills. The study also found there was an acute shortage of network lab equipment in Zambia.

Furthermore, the results showed that the use of virtual labs contributes positively to the transfer of practical computer networking skills from the virtual to the real lab environment. Hence, virtual labs were found to be effective in the teaching of computer networking skills relating to configuration and troubleshooting. In as much as the preceding study gave positive findings, it must be noted it focused on computer networking and not on theoretical courses that the study was designed to cover.

Another study was carried out by Mukosa and Mweemba (2019: 1) on the Digital Divide Hindering E-learning in Zambia. The paper brings out several challenges that the education sector is facing in implementing eLearning programs which include a lack of adequate investment in ICT infrastructure leading to the high cost of internet services and this has impacted on the expansion of eLearning programs. The quality of internet in Zambia is also a huge challenge in delivering eLearning especially that attitudes and cultural issues are still barriers that need to be broken down in order for eLearning to completely succeed.

The methodology and design applied in carrying the cited work involved analyzing work that was done by other authors on similar subjects and building on gaps that were identified. It was a systematic review; this entails a comprehensive and systematic search to locate all relevant published and unpublished work that addresses one or more research questions, and a systematic presentation and integration of the characteristics and findings of the results of that search (Siddaway, Wood and Hedges, 2019:3). This meant that the study was based on collection of secondary data and did not involve any primary data. On the other hand, this study was broader as it was designed to use both primary and secondary data to generate findings besides that fact that it addressed management as well as the end-users. The qualitative and quantitative findings are likely to add to the existing body of knowledge in that it gave respondents an opportunity to present challenges from a practical viewpoint.

2.3 Conceptual Framework

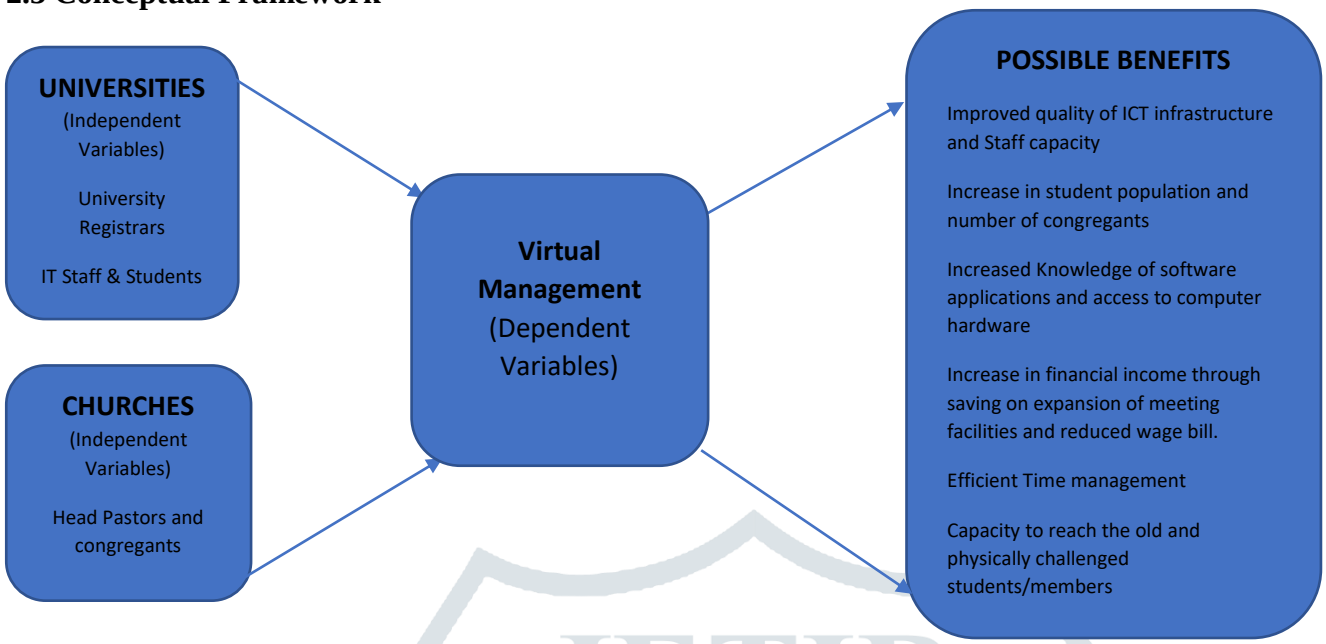

Figure 1: Various benefits of Virtual Management of Universities and Churches, Source: Researcher (2022).

Figure one (1) above highlights the conceptual framework which is a depiction of the relationship between the variables in this study. It shows the application of virtual management (dependent variable), the two institutions being tested (independent variables) and the feasible benefits to both institutions. The researcher's view of virtual management of universities and churches is that it's a path that is less trodden locally and yet if well-handled offers a lot of opportunities for all stakeholders in the sector.

2.4 Theoretical Framework

The study was grounded on the Adaptive Structure Theory (AST) It has been shown that leadership and technology influence each other through the AST. According to AST the core part of this theory is communication, it is through communication that structure arises. It also states that human actions are driven by structures, while organizational structures are created by technology (Avolio, Sosik, Kahai & Baker, 2014). With this, it can be said that the leader might need further skills in order to create the wanted relationship with the followers through virtual space.

The study endeavored to examine how the leadership of both institutions are influencing the acceleration of the ICT sector while providing various services to their target audience.

This is based upon the lack of face-to-face interactions, the physical proximity, verbal cues and absence of facial expressions. There also comes the challenge of making sense of technology in order to being able to make the most possible use of it (Jawadi et al. 2013).

The AST application in this study entails that capacity of the leaders of both institutions to adapt to digital transformation is key to establishing virtual structures that will result in the growth of the influence academically and morally. In this regard, leadership will in the words of Klitmøller and Lauring (2013) touch on the area of media richness that includes the possibility for the media to transmit different characteristics such as personalization, rapid

feedback and language variety. As Conine (2014) states, the importance of preparing the future leaders for the unexpected complexities that can occur from operating in a global environment which becomes wider through virtual management.

2.4.1 Summary of Identified Gaps in Literature and Justification

Issues relating to virtual management are not new and therefore not bereft of past research globally, yet most of the cited works focused on online learning while the study was broader in that it encompassed the various aspects of managing universities and churches including e-learning. It also endeavored to give a factual reflection of the sector in relation to accessibility, affordability, flexibility and learning. Furthermore, the study site and timing are also another factor that distinguished it from past work done in India in that one cannot generalize the findings to the area in question considering the varying factors associated with the sector. Hence the researcher brings out the specific socio-economic factors that relate to virtual management in Lusaka Urban.

Another gap identified is that previous moves by the church to use online platforms like the cited cases were planned for, the case and timing of the proposed study was an act of emergency to avert the loss of lives. In that regard, the scenarios, responses and outcomes may not be the same. Additionally, the cited studies have not completely tackled how the virtual approach to management of universities and especially churches affect societies in Africa which largely thrives on *Ubuntu* or working together culture. Moreover, the doctrinal differences identified in past studies on the church and the internet warrant this research in order to compare the two institutions so as to facilitate an exchange of knowledge.

The study done by Labenek (2014) was only centered on the position of the Catholic Church and not protestants which were included in this research, while another study was designed to bring a prescription for a successful global virtual manager and not look at the end-users (Kayworth and Leidner (2000:183-194). Additionally, the study conducted by Yohannes (2017) shows that the Cyber church was driven by hostility and demanded a complete switch from physical meetings while this research was dealing with situation that was initially seen as a temporal but has resulted in blended learning.

For the local context, it must be noted that although the study done by Lampi (2013) gave positive findings, it focused on computer networking and not on theoretical courses that the proposed study is designed to cover. Additionally, the study was primarily a quantitative study using two-stage true experiment design testing two variables. On the hand, this study was both qualitative and quantitative in nature. For Mukosa and Mweemba (2019: 860), theirs was a systematic study that involved literature review of already published papers and reports in order to draw the conclusions in this research. On the other hand, study under review was broader in size and scope.

2.5 Summary

The preceding chapter has outlined a review of literature that is fairly representative and perceived to be of value to the study. The literature covers studies spanning from global, regional, and local context. The cited works offered broad experiences to the study. Hence, the following chapter outlines the methodology used to carry out this study.

CHAPTER THREE: METHODOLOGY

3.0 Overview

In view of the fact that various literature across the globe discussed earlier gave the study a context to proceed, this chapter presents the methods that the researcher used in carrying out the study. It highlights the research design, the sources of information, sampling techniques, size, research instruments, data collection methods, data analysis, data interpretation, and ethical consideration issues.

3.1 Study Design and Approach

Research designs are plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis with qualitative and quantitative being the two main research paradigms used in social research (Creswell, 2009 and Bryman, 2008). The study employed a descriptive survey and had a combination of both qualitative and quantitative research strategies. In the words of Orodho (2005) a descriptive survey is a method of collecting information by interviewing or administering questionnaires to a sample of individuals.

This study applied a concurrent mixed method. Creswell (2014) notes that this method allows the researcher to merge qualitative and quantitative data in order to provide a comprehensive analysis of the problem. Furthermore, the method demands that data is collected simultaneously and integrates the information in the interpretation of the overall of results. This allowed for the collection of data from a large number of respondents for the data to be reliable. It was preferred as the researcher sought to collect the specific data by applying research instruments such as questionnaires to university students and church members. Structured interview guides were administered to university registrars, head pastors, IT staff and heads of some church mother bodies.

McCombes (2020) further notes that descriptive research aims to describe a population, situation or phenomenon accurately and systematically. It can answer *what, where, when* and *how* questions, but not *why* questions. The study further applied a comparative approach which allows one to analyse phenomena and then put them together to find the points of differentiation and similarity (MokhtarianPour, 2016:9). This design was used to carry out the study in an uncontrolled and natural setting – the university and churches in Lusaka urban seeking differences and similarities so as to share knowledge.

Ragin (2014:13) states that comparison provides a basis for making statements about empirical regularities and for evaluating and interpretating cases relative to substantive and theoretical criteria. In a broad sense, comparison is central to empirical social science as it is practiced today.

It further combined descriptive and comparative research questions seeking on one hand to describe the occurrences of certain phenomena and how they vary between the two institutions and on the other hand investigate in different the relationship between the independent variable and a dependent variable (Stromback and Van Aelst, 2010:41,

Holtz-Bacha and Norris, 2001:123). The researcher picked on this method because of the nature of the targeted audience and data.

The method provided an open forum to ask questions that deal with opinions and grades the respondents' opinions on the problem under investigation. Further, this approach guaranteed respondents a chance to give their personal remarks and contributions without undue influence and does not employ predetermined and restrictive answering modes. Mouton (1998) states that this approach is tailored to include multiple sources of data collection in order to increase reliability of the observations.

3.2 Study Site

According to Dominik (2013:319-323) there are various factors that can influence the researcher's choice of the study area, among them are the nature and incidence of the problem, research time frame, and data accessibility, clients 'interest and instructions, resource availability, goals and objectives of the study. In view of the foregoing assertions, Lusaka urban was chosen because of the number of universities and churches in the area affected by the switch to virtual management. Additionally, the decision to conduct the study in Lusaka urban was cost- effective on the part of the researcher as they live in area and therefore made convenient to sample the target population.

3.3 Study Population

Achola and Bless (1988) describe target population as the set of elements that the researcher focuses upon and to which results obtained testing the sample should be generalized. Lusaka Urban currently has thirty-nine (39) universities registered with the Higher Education Authority (HEA). The country has four (4) church mother bodies namely; Christian Council of Churches in Zambia (CCZ), the Evangelical Fellowship of Zambia (EFZ), Zambia Conference of Catholic Bishops (ZCCB) and the Independent Churches of Zambia (ICOZ).

It must also be noted that there are also has others like the Seventh Day Adventists that do not fall under the above mother bodies but have also switched to the use of virtual platforms and were for that reason included. The churches that took part all have more than two hundred members which was for this study classified as large. The study further included the end-users of virtual platforms namely, students and church members in order to understand the challenges from their view point.

3.4 Sample Size

The sample size of the study refers to the number of items to be selected from the universe to constitute a sample. Hence the size of sample should neither be excessively large, nor too small but should be optimum meaning that it should fulfill the requirements of efficiency, representativeness, reliability and flexibility (Kothari, 2004). The study focused on twelve (12) institutions with six being universities and the other six churches.

The study initially sought to cover one hundred and forty-six respondents but had more responses as it was self-administered through a smart online systematic approach that spread faster than hard copy questionnaires. The

number of respondents was 699 representing 513 students and 170 church members. The study applied the maximum variation technic to purposefully sample the office bearers with information and knowledge about the subject matter. It entails the selection of cases with maximum variation for the purpose of documenting unique or diverse variations that have emerged in adapting to different conditions, and to identify important common patterns that cut across variations (Palinkas, Horwitz and Hoagwood, 2015). The technic was found to be useful in examining the variation of challenges faced by universities and churches in the quest to adapt to virtual management.

Thus, included 4 university registrars, 5 pastors, 4 IT staff and 3 representatives of church mother bodies. The increase in respondents is also attributed the fact that the researcher was referred to other respondents than earlier targeted for the purposes of obtaining a complete view of the challenges under discussion. For instance, some university registrars stated that there was need to spread the survey across all faculties of the institution to avoid a case where the results were skewed in particular direction. In that regard, the sample size is considered to be sufficiently representative of the target population. The above sample size sample size was arrived at because it meets the cited requirements. The sample was drawn as follows:

Table 1: Sample of Study Target Population

CATCHMENT AREA Lusaka Urban	TARGETED RESPONDENTS	SAMPLE SIZE	TYPE OF INTERVIEWS
Management of Universities and Churches	Registrars and Head Pastors	9 respondents	Qualitative guided interview
University and Church	IT and Media staff	4 respondents	Qualitative guided interview
Virtual platform end-users	Congregants and Students	683 respondents	Quantitative questionnaire
Church Mother Bodies	General Secretary	3	Qualitative guided interview
Total number of respondents = 699			

3.5 Sampling Techniques

Achola and Bless (1988) defines sampling technique as a precise course of action or procedure that can be followed when selecting a portion or segment that is representative of a whole. The study used purposive sampling technique to select the university registrars, Pastors and General Secretaries of church mother bodies and other stakeholders who include information technology staff.

Cresswell (2012) concurs that purposeful sampling involves identifying and selecting individuals or groups of if individuals that are especially knowledgeable about or experience with a phenomenon of interest. One of the benefits

of using this method is that it is tailored or restricted to a specific target group that are directly/indirectly affected by a phenomenon and on that basis provide the best information to address the purpose of the research.

On the other hand, the study used convenience sampling for students and church members. According to Dornyei (2007) it as a non-probability sampling where members of the target population that meet certain practical criteria such as easy accessibility, geographical proximity, availability at a given time, or willingness to participate in a study. The method was selected because the study was done at a time when social physical interactions where highly restricted due to the Coronavirus outbreak.

The selection of universities was done using purposeful sampling which meant constant follow-ups to get clearance from targeted universities to proceed with data collection in order to keep the research timeline. The letters were sent various universities after they had been clustered based on the findings of Ranking Web (see figure 2 below). Kassambara (2017:3) notes that clustering is one of the important data mining methods for discovering knowledge in multidimensional data. The goal of clustering is to identify pattern or groups of similar objects within a data set of interest.

Rank Web ranks universities every six months using both webometric (all missions) and bibliometric (research mission) indicators. Its primary objective is to promote open access to the knowledge generated by the University. This world ranking is based on examining an institution's visibility (impact of web contents), transparency or openness (top cited researchers) and excellence (top cited papers) it is designed to improve an institution's rank which requires them to increase quantity and quality of their web contents. Additionally, the ranking of the selected universities is aimed at presenting a non-academic league table of the top Lusaka Universities based on valid unbiased and non-influenceable web metrics provided by independent web intelligence sources rather than data submitted by the Universities themselves.

The study covered the University of Zambia (UNZA), University of Lusaka (UNILUS), Zambia Center for Accountancy Studies University (ZCAS), Eden University, Harvest University and Information and Communication University. The University of Zambia (UNZA) is the first and largest public higher learning institution in the country.

In that regard, data collected is representative of other public universities besides it being helpful the new schools. UNILUS was the leading private university with a huge student population above 8000 offering through full, part time and long-distance learning. It was also ranked third after UNZA and Copperbelt University (CBU) in Zambia at the time of the study.

Furthermore, the data collected from ZCAS is useful since it was among the first private institutions to be established in Lusaka offering accountancy studies and is fifth on Web ranking; while Eden and Harvest Universities was useful in order to appreciate the challenges of universities that are run by faith-based organisations. Generally, the six (6) universities gave the study an unbiased and broad view of leadership challenges associated with virtual management as the institutions are at various levels of growth. Eden University is among the most advertised within Lusaka through its sponsorship of the Football Association of Zambia Division one league and switched to online learning and never had any break or disruption in their academic calendar.

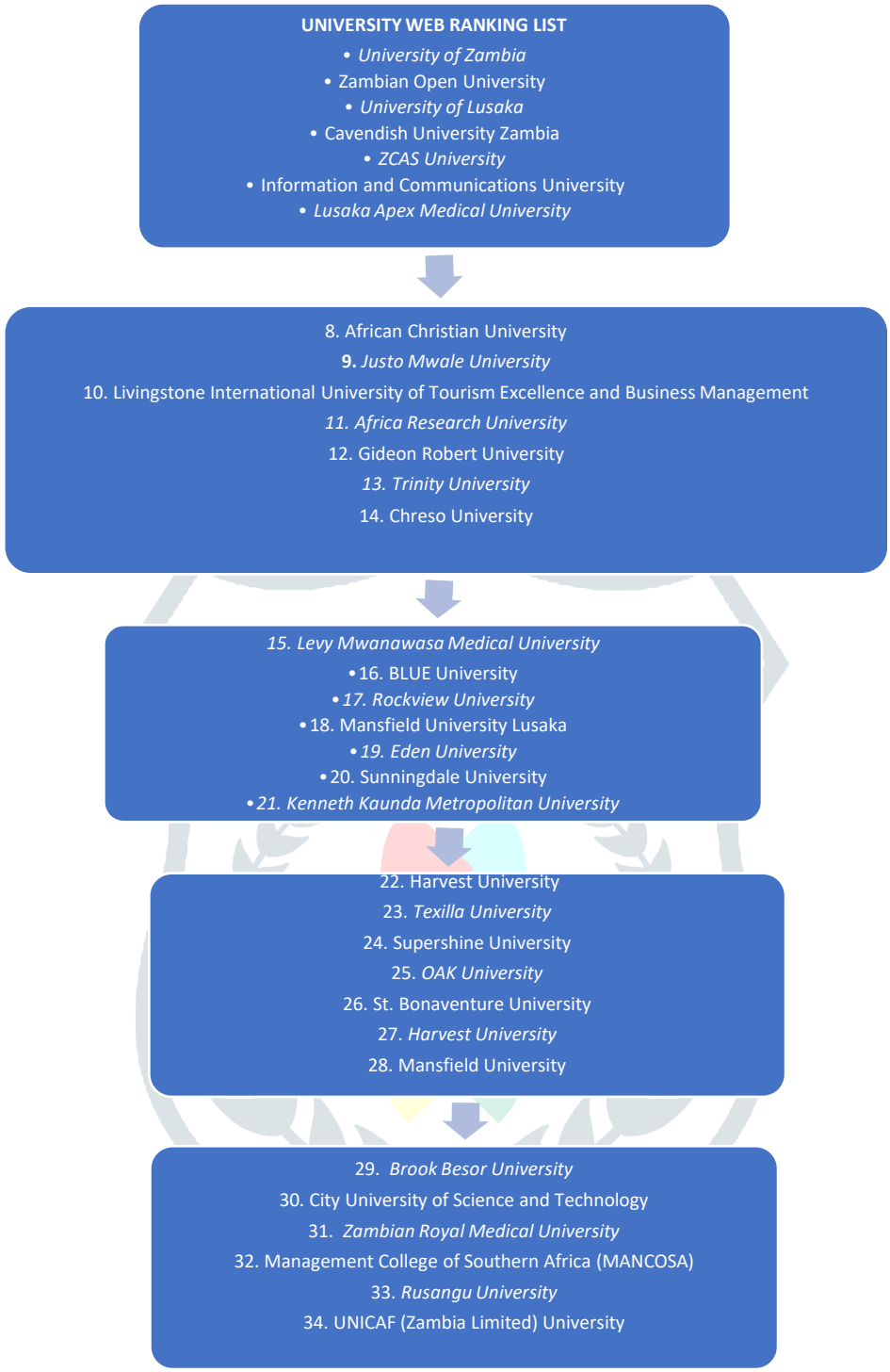

Figure 3.0: University Web Ranking List and Clusters Did you use clusters to sample universities?

The study applied purposeful sampling method to select the six (6) churches targeted across all denominations within Lusaka urban based on the early respondents to requests for data collection. Furthermore, an online smart survey was used to collect data from students and church members to get a perspective of the end-users. It was used because the timing of the research was done during the outbreak of the coronavirus which meant that face to face contact was restricted by SI 22 of 2020.

The country has four (4) church mother bodies namely; Christian Council of Churches in Zambia (CCZ), the Evangelical Fellowship of Zambia (EFZ), Zambia Conference of Catholic Bishops (ZCCB) and the Independent Churches of Zambia (ICOZ). It must also be noted that city also has others like the Seventh Day Adventists and Jehovah's Witness that do not fall under the above mother bodies but also switched to online services even more rapidly than the other denominations. For the church mother bodies, the researcher interviewed three (3) out of the six (6) as the others were not available due to the challenges imposed by covid 19 restrictions as well as their office policy does not allow the use of the smart online survey format of collecting data as security measure from cyber-attacks.

3.6 Data Collection Methods and Instruments

The research was conducted through in-depth, semi-structured interviews consisting of open-ended questions to gather qualitative data ease of systematic analysis. Primary quantitative data was collected through smart online survey with close-ended questions and constitutes the main source of actual data or information collected during the process of the research. This is new information or knowledge unknown to the public and unpublished. The main sources of primary data are field work using a variety of instruments or tools (Mwanza, 2008). The study employed a Dictaphone and phone to record interviews for the sake of originality in reproduction of the data which could be used for future reference and defense of findings.

The key sources of secondary data for the study constituted written books and recommended research reports which provide theoretical perspective, unpublished materials and published official data from many stakeholder institutions like Higher Education Authority.

Other sources include survey reports from individual and institutions that have undertaken similar survey on topics related to this study and documented their findings.

3.6.1 Structured Interview guide

The interview guide was applied as it allows respondents to freely submit their views and suggestions. A structured interview guide is tailored to ask each respondent the same questions created prior to the interview. This particular data collection tool is according to Kabir (2016) effective in that it does not require the development of rapport between interviewer and interviewee, and they can produce consistent data that be compared across a number of respondents. In this regard, structured interview guides were used to collect data from university registrars, head Pastors, General Secretaries of Church mother bodies and ICT staff.

3.6.2 Structured Questionnaire

Brown (2001:6) defines a questionnaire as any written instrument that presents respondents with a series of questions or statements to which they react either by writing out their answers or selecting from existing answers. The study administered questionnaires made up of close-ended questions which entails that the researcher provides respondents with options from which to choose. In order to efficiently collect quantitative data, the researcher used a smart online survey to reduce face-to-face contact with the target population in view of the health guidelines that demanded social distancing. This was done by generating links that were shared with university Registrars and head Pastors and passed on to students and members through WhatsApp groups and websites.

3.7 Data Analysis

According to Kathuri and Pals (1993), analysis means ordering, categorizing, manipulating and summarizing of data to obtain answers to research questions. The data has been presented using tables and bar charts. All quantitative data was analyzed using the Statistical Package for Social Sciences (SPSS) version 23.0 and descriptive statistic was employed to analyze the data from which frequencies, percentages, tables and charts were generated. According to Bhattacharjee (2012:119), descriptive analysis refers to statistically describing, aggregating, and presenting the constructs of interest or associations between these constructs. In that regard, this software package was helpful in the analysis of quantitative data as it is designed to ensure accuracy and speedy entry of data from questionnaires. Additionally, the package gave the researcher room to create cross tabs for comparison and descriptive analysis.

The interview transcripts of the collected data gave the research a broad sense of the challenges at hand from various angles of the presentations of key stakeholders of the two institutions giving room for a balanced comparison. This involved transcribing the audio recording, understanding the verbatim and taking primary notes, and generally looking through the data to get familiar with it. The researcher further used the Otter software package to convert audio recordings into word documents through which time was efficiently utilized.

The data collected from the field was then examined for uniformity, consistence and accuracy. Thereafter, the data for open ended questions were grouped and analyzed using qualitative analytical tools. The researcher endeavored to give an accurate explanation of the qualitative data collected so as to gain deeper insights from what the respondents submitted. This is because information may at times not be clearly understood if presented only in tables and charts, thus the qualitative method was used to consolidate the data collected quantitatively.

Furthermore, qualitative data was analyzed systematically by grouping the responses to according to themes and frequency and uniqueness based on the research questions and objectives. Thematic analysis is a method of analyzing qualitative data. It is usually applied to a set of texts, such as interview transcripts. The researcher closely examines the data to identify common themes, topics, ideas and patterns of meaning that come up repeatedly (Caulfield, 2020). The use of a Dictaphone to record the respondents helped the researcher to ensure the use of some key statements

without paraphrasing them. This approach helps to maintain the originality of the responses as well as avoiding the loss of meaning through interpretation or decoding by the researcher which could give a lot of room for biasness based on one's understanding or view of matters.

3.8 Issues of Reliability and Validity

In the words of Kombo and Tromp (2006), validity is defined as a measure of how well a test measure what it is supposed to measure. The study sought to ensure reliability of the data collected by using questionnaires and guided interviews so as to avoid bias.

The data was collected from individuals and institutions directly involved in the management of churches and universities. The study used clustering of the institutions as method to eliminate chances of biasness.

The institutions under study were clustered based on hierarchy, size and denomination. Bhattacharjee (2012:58) observes that validity, often called construct validity, refers to the extent to which a measure adequately represents the underlying construct that it is supposed to measure. Reliability is the degree to which the measure of a construct is consistent or dependable. For this reason, the researcher ensured that a pilot study was carried out to guarantee that the outcome is in correlation to the research objectives and questions. According to Malmqvist et al. (2019) a proper analysis of the procedures and results from the pilot study facilitates the identification of weaknesses that may be addressed. A carefully organized and managed pilot study has the potential to increase the quality of the research as results from such studies can inform subsequent parts of the research process. Triangulation of collected data was done to ensure validity. Nightingale (2020) defines it as a technique to analyze results of the same study using different methods of data collection. It is used for three main purposes: to enhance validity, to create a more in-depth picture of a research problem, and to interrogate different ways of understanding a research problem.

3.8.1 Ethical Considerations

The researcher made an effort to respect the beliefs and perimeters that respondents deem to be comfortable with and further ensured that information is not based on particular affiliation.

Therefore, the current study strived to adhere to the following ethical principles: respect for persons, beneficence and justice. According to Singh (2006), ethics refers to the quality of research procedures, with regard to their adherence to professional, legal, and social obligations to the research participants.

Efforts were made to protect individual autonomy, minimize harm and maximize benefits by using procedures, which are consistent with sound research designs that take these issues into consideration, such as reading out word for word the consent/assent form before the beginning of the interviews so that potential study participants are fully aware of what the study was all about. Primarily, this study also guaranteed informed consent and confidentiality of responses. The study was entirely on voluntary basis.

3.8.2 Confidentiality

Responses were held in confidence, and only taken quantitatively and qualitatively for analytical purposes and ensured that respondents are only cited in the final report with their consent.

3.8.3 Anonymity

The data collection tools did not demand the respondents to disclose their identity or residential addresses so as to protect their privacy. This was done by ensuring that identification codes represented the universities, churches and office bearers in to protect the informants who can easily be linked to the data by virtue of the positions they hold in these institutions.

3.8.4 Informed Consent

The study did not compel individuals to participate in the study but rather sought their consent through letters that were written as presented in the appendices which indicated the purpose the study. In that regard, some of the targeted respondents declined to participate and their decision was respected.

3.8.5 Study Limitations

The study only covered Lusaka urban only due to limitation of time and financial resources. The study sample only constituted six (6) universities and six (6) churches. The findings of the study may therefore, not be generalized to other districts however, they provide an insight on what could be expected on the subject matter. The collection of qualitative data was also negatively affected by the limited time allocated to the researcher to conduct interviews via physical meetings, online applications and phone calls. Furthermore, some churches feared that to have their system hacked through the use of the online survey questionnaire.

3.8.6 Delimitations of the Study

This study was conducted in six (6) universities and six (6) churches within Lusaka urban. One (1) was a public university and one (1) Faith-based university and four (4) private universities. These were UNZA, UNILUS, Eden, Harvest, Information and Communication University and ZCAS. The study also sampled churches from six (6) different denominations namely United Church of Zambia, Roman Catholic, Reformed Church in Zambia, Bread of Life Church, Mount Zion Christian Center and the Seventh Day Adventists.

According to White (2003), perimeters for research establishes the boundaries, exceptions, reservations and qualifications inherent in every study in this regard, delimitations address how the study will be narrowed in scope while limitations highlight potential weaknesses of the study. The study is restricted to specified areas due to time and financial constraints considering that it is self-sponsored.

3.9 Summary

The preceding chapter has carefully detailed proposed methods guiding the study. It comprises research procedures and techniques that the researcher plans to use in order to provide answers to research questions raised in the first chapter. Having outlined the operational aspect of the study, the next chapter will present the findings of this study in relation to the above question.

CHAPTER FOUR: PRESENTATION OF RESEARCH FINDINGS

4.0 Overview

This chapter presents the findings of the study which aimed at investigating leadership challenges that exist in the virtual management of universities and churches in Lusaka Urban. The findings were presented based on the objectives of the study which were: to investigate whether there exist challenges in virtually managing the universities and churches; to explore the university and church leadership's adaptation to institutional digital transformation; to investigate whether there are barriers faced by students and congregants in coping with virtual meetings and to investigate any socio-economic factors associated with virtual management of universities and churches.

The findings from University Registrars, Head Pastors, General Secretaries of Church mother bodies and ICT heads of department were presented alongside those of the students and church members. In order to ensure that the report is authentic and not based on secondary data, it contains the verbatim from respondents where necessary to avoid loss of meaning through paraphrases. Two (2) responses were translated for the sake of readers that may not relate to the local setting from which the data was collected. In view of the study being comparative and both qualitative and quantitative, data sets were presented in tables and figure systematically. The quantitative and qualitative findings from universities will be followed by the data from the churches in order to ensure that the reader is able to track the comparison with ease.

4.1 Demographics of the Respondents

A clear description of the background characteristics of respondents covered in this study was done before the actual presentation of the findings directly related to the research questions. This was to ensure that the readers have a picture of the sample observed, perspective of the respondents that took part in this research. The core characteristics considered in the study included gender, age, level of education, church size, name and type of institution. Hence, this part of the chapter endeavors to show the social demographic characteristics of study participants. The following charts and tables show the biographical data and the social characteristics realized from the questionnaires as already stated above.

UNIVERSITY AND CHURCH FINDINGS

The following section is a presentation of study findings collected from respondents from the universities namely; University Registrars, students and IT staff. In order to uphold the demands of the ethical considerations presented in the previous chapter, the six (6) universities were coded as U01 to U06 and churches as Ch01 to Ch06. ('U' stands for university and 'Ch' for church). In view of the foregoing description, the University registrars and Pastors will thus be linked the specific institutional that they represent. Furthermore, quantitative findings will be presented first followed by the qualitative data and discussion.

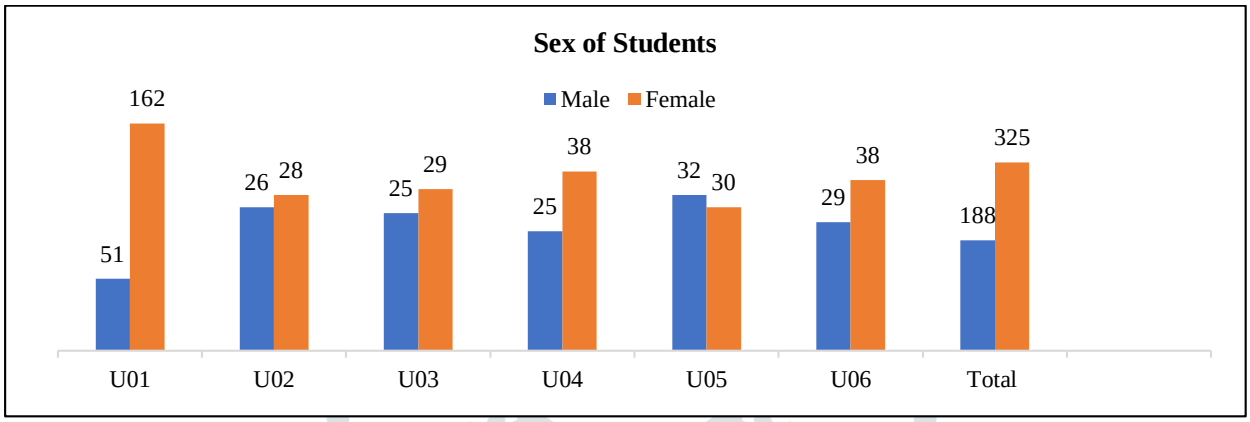

Figure 4.1: Sex of Students

Figure 4.1 above shows the gender distribution of the respondents with the females leading in number in all but one university. The highest number of respondents were females at 325 representing 63%. There was a total of 188 male participants representing 37%.

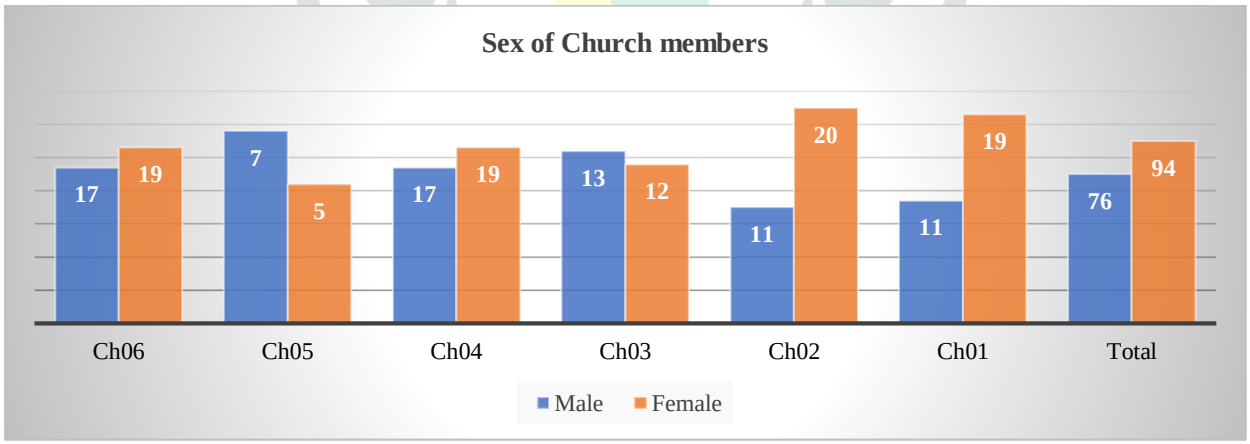

Figure 4.1.1: Sex of respondents for church members

The findings in figure 4.1.1 above reveal that out of 170 participants, majority (94) were female translating to 55% while 76 were male translating to 45%.

Table 4.1: Ages of student respondents

Name of Institution	Below 20	20-35 years	36-45 years	46 and above	Total
U01	24 11%	180 85%	8 3%	1 1%	213 100%
U02	2 4%	52 96%			54 100%
U03		26 48%	19 35%	9 17%	54 100%
U04	8 13%	43 68%	10 16%	2 3%	63 100%
U05	15 24%	42 68%	4 7%	1 1%	62 100%
U06	1 1%	36 53%	26 39%	4 6%	67 100%
Total	50 9%	379 69%	67 17%	17 5%	513 100%

Age is also an important factor to have been considered for this study because it could also influence the findings. Table 4.1 above shows the ages of the respondents, the largest group was between 20 to 35 years as represented by 69% drawn from 379 of the 513 participants. The lowest group of respondents were 46 years and above with 17 participants and which translates to 5%.

Table 4.1.1: Ages of church respondents

Name of Church	Age				Total
	Below 20yrs	20-35 years	36-45 years	46yrs & above	
Ch06	1	14	8	13	36
	3%	39%	22%	36%	100%
Ch05		10	2		12
		83%	17%		100%
Ch04		23	10	3	36
		64%	28%	8%	100%
Ch03		9	8	8	25
		36%	32%	32%	100%
Ch02		10	11	10	31
		32%	36%	32%	100%
Ch01		10	7	13	30
		33%	23%	43%	100%
Total	1	76	46	47	170
	1%	48%	26%	25%	100%

The above table 4.1.1 therefore shows the distribution of respondents by age. Out of the 170 participants, the highest number fell within the 20-35 years bracket with 76 representing 48%. Only 1 respondent was aged below 20 years representing 1%.

Table 4.2: Distribution of Respondents by University

Pseudonyms of Universities		N	Percent
	University 01 (U01)	213	42%
	University 02 (U02)	54	11%
	University 03 (U03)	54	11%
	University 04 (U04)	63	12%
	University 05 (U05)	62	12%
	University 06 (U06)	67	13%
	Total	513	100%

Table 4.2 above shows that there were five hundred and thirteen (513) respondents to the smart online survey questionnaire with two and thirteen (213) students from university (U01) representing forty-two percent (42%) of the total of the respondents.

Table 4.2: Distribution of Respondents by Church

Pseudonyms of Churches	N	Percent
Church 01 (Ch01)	30	17%
Church 02 (Ch02)	31	18%
Church 03 (Ch03)	25	15%
Church 04 (Ch04)	36	21%
Church 05 (Ch05)	12	7%
Church 06 (Ch06)	36	21%
Total	170	100%

Table 4.2 shows that the total number of respondents from all the 6 churches was 170 with 36 as the highest number from two churches.

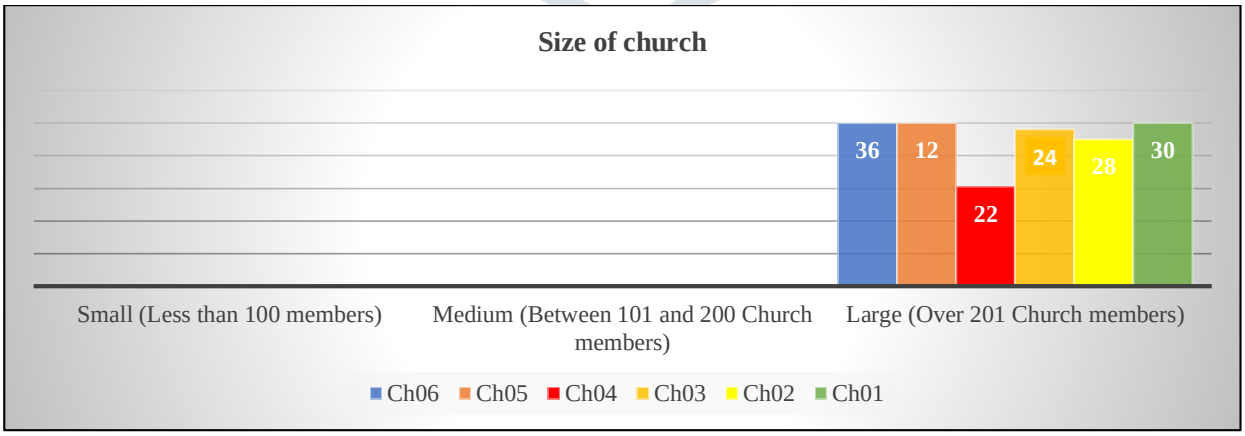

Figure 4.2: Size of the church When asked about the

approximate size of their church, the participants responded as presented in the above figure 4.2 Out of 170 respondents, most of them indicated that their churches were falling in the category of large meaning over 201 members.

Table 4.3: Highest level of education reached by respondents in sampled universities

Name of Institution	Diploma student	Undergraduate student	Postgraduate student	Doctorate student	5th Year	College completed	University Undergraduate completed	University Post-graduate completed	Total
U01	196	16		1					213
	92%	7%		1%					100%
U02	48	5		1					54
	89%	9%		2%					100%
U03		38	15	1					54
		70%	28%	2%					100%
U04		31	17	13			1	1	63
		49%	27%	22%			1%	1%	100%
U05	13	26	13	5	1		3	1	62
	21%	42%	21%	8%	1%		6%	1%	100%
U06	1	3	31	26	1		5		67
	1%	45%	46%	39%	1%		8%		100%
Total	257	119	77	47	2		9	2	513
	50%	23%	15%	9%	0.4%		2%	0.4%	100%

Table 4.3 highlights the education level of respondents with the highest being diploma students with total of 257 representing 50%. The lowest number of respondents were university post graduate students standing at less than one percent. The above statistics further show that most respondents were fresh from secondary schools and could therefore be computer literate considering that it is now an examinable subject at O' level.

Table 4.3.1: Highest level of education attained by respondents in sampled churches

	Secondary School	College	University Undergraduate	University Post-graduate	
Ch06	2	4	13	17	36
	6%	11%	36%	47%	100%
Ch05	2	3	3	4	12
	17%	25%	25%	33%	100%
Ch04	5	11	14	6	36
	13%	31%	39%	17%	100%
Ch03		5	11	9	25
		20%	44%	36%	100%
Ch02	2	1	16	12	31
	7%	2%	52%	39%	100%
Ch01	1	9	11	9	30
	3%	30%	37%	30%	100%
Average Total	12	33	68	57	170
	8%	20%	39%	33%	100%

Table 4.3.1 shows the responses to the question on highest level of education of the church members from the participated in the study. The highest number of respondents were university undergraduates at 68 representing by 39%. The lowest group of respondents were 12 at secondary school representing 8%.

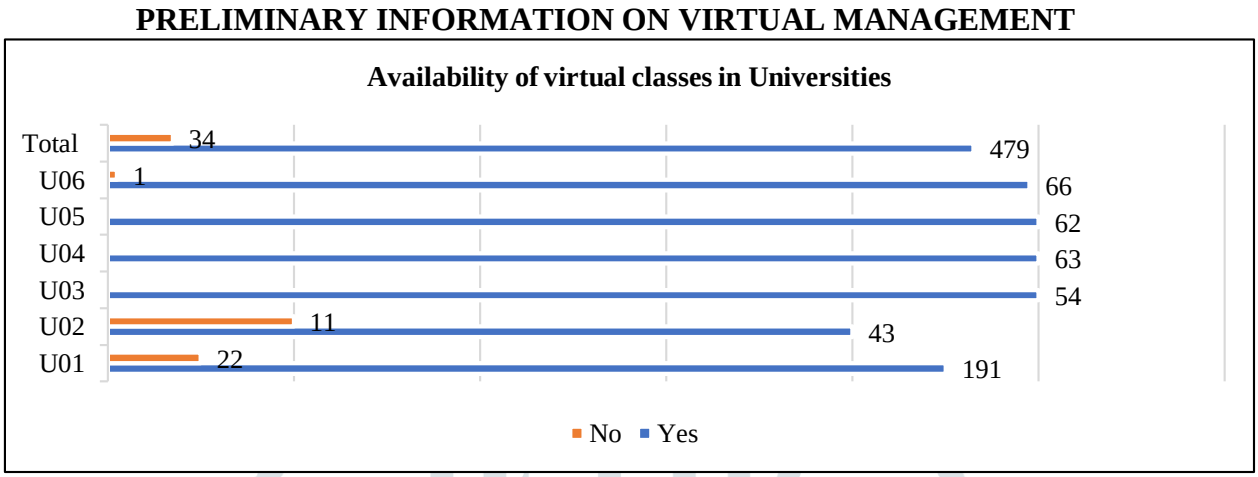

Figure 4.3: Availability of virtual classes

Figure 4.3 shows that 479 respondents translating to 93% stated that the university provided virtual services. Only 34 respondents representing 7% stated otherwise. These findings provided a validity for undertaking this study at the said institutions of learning in the sense that they could relate to the subject.

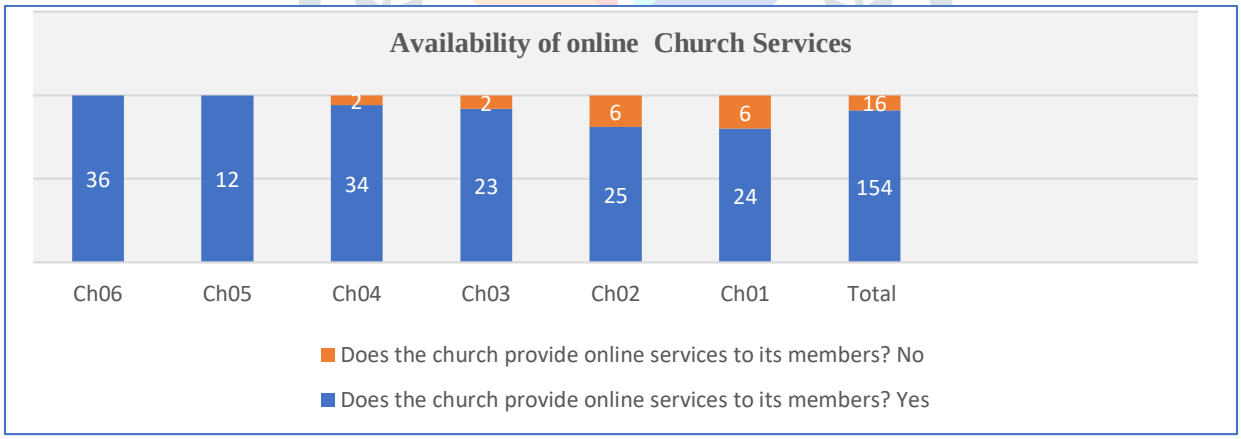

Figure 4.3.1: Availability of online church services

The results in figure 4.3.1 show the responses with regard to the provision of online services. Out of 170 participants, 154 representing 91% said Yes, while 16 which translates to 9% indicated 'No'.

Table 4.4: Existence of challenges in virtual management of universities

	Yes	No	Total
U01	195	18	213
	91%	9%	100%
U02	44	10	54
	81%	19%	100%

U03	49	5	54
	91%	9%	100%
U04	48	15	63
	76%	24%	100%
U05	55	7	62
	89%	11%	100%
U06	58	9	67
	87%	13%	100%
Total	449	64	513
	86%	14%	100%

Table 4.4 shows that 449 respondents out of 513 translating to 86% indicated yes to having challenges during online lessons. The other 64 participants stated No, representing 14%.

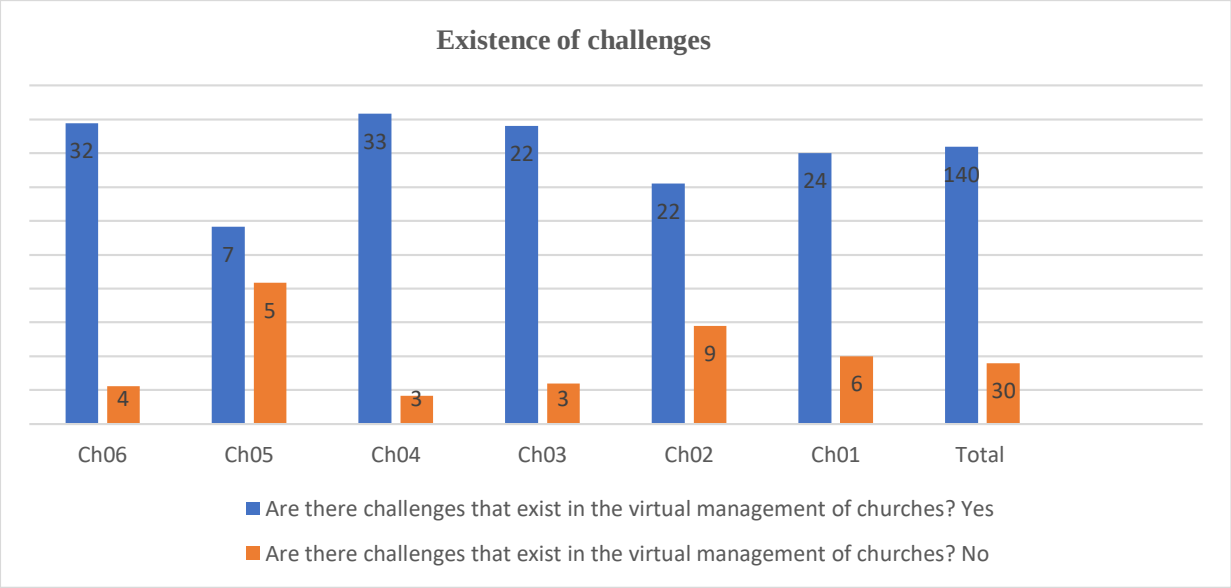

Figure 4.4: Existence of challenges in virtual management of churches

Figure 4.4 shows responses to whether congregants were experiencing challenges with virtual management. 140 respondents out of 170 which translates to 82% gave an affirmative response to the question. 30 participants stated that they were not having challenges translating to 18%. The preceding data clearly shows that there are challenges associated with virtual management of universities and churches.

CHALLENGES OF VIRTUAL MANAGEMENT OF UNIVERSITIES AND CHURCHES

The subsequent charts and tables highlight all the matters relating to the first objective of the study which was to investigate the challenges that exist in the virtual management of universities and churches. The data under this sub-

section covers the major challenges and views of the respondents on virtual management in relation to universities and churches according to the responses obtained through a smart online survey.

Table 4.5: Major challenges in virtual management of universities

Name of Institution	ICT	Staff Capacity	Load Shedding	Distractions from learning from home	Students' failure to cope
U01	70 36%	49 26%	141 73%	110 57%	127 66%
U02	9 21%	15 34%	11 25%	24 55%	24 55%
U03	19 39%	12 25%	26 53%	16 33%	26 53%
U04	17 35%	2 4%	23 48%	30 63%	28 58%
U05	27 49%	11 21%	22 42%	45 83%	47 86%
U06	6 10%	2 4%	15 26%	22 39%	29 50%
Average Total	148 32%	**91** **19%**	238 44%	247 55%	**281** **61%**

*The respondents were asked to tick all the challenges that applied to them meaning that it had multiple responses.

Figure 4.5 shows that the major challenge faced by 281 respondents was student's failure to cope with the virtual learning represented by 61%. Additionally, the second major challenge was distractions from home (55%) drawn from 247 respondents, while the lowest challenge was staff capacity at 19% representing 19 respondents.

Table 4.5.1: Major challenges in virtual management of churches

Name of Institution	ICT	Staff Capacity	Load Shedding	Distractions from learning from home	Members' failure to cope
Ch01	13 54%	5 21%	9 38%	9 38%	16 67%
Ch02	11 50%	8 36	5 23%	7 32%	17 77%
Ch03	13 41%	3 14%	4 18%	11 50%	14 64%
Ch04	16 52%	12 36%	13 39%	13 39%	25 76%
Ch05	4 43%	3 43%	4 57%	4 67%	3 43%
Ch06	25 22%	1 3%	8 25%	8 25%	22 69%
Average Total	80 47%	32 25%	43 33%	52 42%	**97** **66%**

Table 4.5.1 shows that the major challenge for all churches that took part in the study was failure to cope with online services represented by 66% as indicated by 97 respondents. The second major challenge was ICT while the least was staff capacity.

Table 4.6: Views on virtual management at your university

Name of Institution	Challenging	Growing	Costly	Restrictive	Unreliable	Total
U01	58 27%	56 26%	78 37%	8 4%	13 6%	213 100%
U02	13 24%	14 26%	22 41%	1 2%	4 7%	54% 100%
U03	8 15%	31 57%	9 17%	4 7%	2 4%	54 100%
U04	14 22%	26 41%	11 18%	8 13%	4 6%	63 100%
U05	13 21%	22 36%	14 23%	2 3%	11 18%	62 100%
U06	8 12%	40 60%	15 22%	2 3%	2 3%	67 100%
Total	114 20%	189 **41%**	149 29	25 **5%**	36 7%	513 100%

Virtual management: the supervision, leadership, and maintenance of virtual teams. i.e Online classes, School websites, School you tube channel etc.

In response to their position on how universities were fairing with regard to virtual management, Table 4.6 shows that the highest number of respondents indicated that it was growing as reflected by 189 out of 513 participants translating to 41%. 25 of the respondents indicated that it was restrictive which translates to 5%. 36 participants stated that virtual management was unreliable which represents 7%.

Table 4.7: Views on virtual management at your church

Name of Church	Challenging	Growing	Costly	Restrictive	Unreliable	Don't Know
Ch01	31%	44%	19%		6%	
Ch02	14%	50%	23%	9%		4%
Ch03	9%	50%	25%	8%	8%	
Ch04	17%	39%	13%	9%	22%	
Ch05		100%				
Ch06	8%	64%	12%	12%		4%
Average Total	13%	**58%**	15%	7%	**6%**	1%

The findings in table 4.7 shows that 58% of the respondents from churches indicated that virtual management (which for this paper entails; the supervision, leadership, and maintenance of virtual teams. i.e., Online classes, School websites, School you tube channel etc.) was growing. 6% of the respondents indicated that it was unreliable while 1% indicated that they did not know.

INSTITUTIONAL DIGITAL TRANSFORMATION AND ADAPTATION

The findings under this sub-section relate to the second objective which was to examine the readiness of the leadership of universities and churches for digital transformation and adaptation especially the views for the students and church members.

Table 4.8 Rating of University's readiness for digital transformation and adaptation

Name of Institution	0	1	2	3	4	5	6	7	8	9	10	Total
U01	24 11%	5 2%	4 2%	4 2%	11 5%	57 27%	24 11%	30 14%	30 14%	4 2%	20 10%	213 100%
U02	4 7%	0	2 4%	4 7%	2 4%	11 20%	7 13%	3 6%	8 15%	7 13%	6 11%	54 100%
U03	3 5%			1 2%	2 4%	4 7%	11 20%	8 15%	16 30%	6 11%	3 6%	54 100%
U04	3 5%		1 1%	2 3%	3 5%	8 13%	10 16%	13 21%	10 16%	7 11%	6 9%	63 100%
U05	4 6%	1 2%	6 10%	3 5%	9 14%	13 21%	10 16%	6 10%	5 8%	3 5%	2 3%	62 100%
U06	9 13%				3 5%	5 8%	7 10%	9 13%	18 27%	4 6%	12 18%	67 100%
Total	47 8%	6 1%	13 3%	14 3%	30 6%	98 16%	69 14%	69 13%	87 18%	31 8%	49 10%	513 100%
Mean	1.3	0.1	0.5	0.5	1	2.7	2.3	2.1	3	1.3	1.7	16.5

Table 4.8 reflects the rating given by the respondents on their institution's readiness for digital transformation and adaptation. The findings show that the highest rating stood at 8 represented by 18% drawn from 87 respondents which is two points below the perfect score. It is indicative of the fact that universities were almost fully ready for digital transformation and adaptation. The lowest rating was less than 1% representing 6 respondents. Additionally, the readiness of all universities had a total mean of 16.5.

Table 4.9: Rating of church's readiness for digital transformation and adaptation

Name of Church	Rating											Total
	0	1	2	3	4	5	6	7	8	9	10	
Ch01	6 19%		6 19%	6 19%		2 6%	8 25%		2 6%	2 6%		30 100%
Ch02	6 18%		1 5%	1 5%	4 14%	3 9%	4 14%	3 9%	6 18%	1 5%	1 5%	31 100%
Ch03		2 8%			4 17%	2 8%	2 8%	10 42%	4 17%			25 100%
Ch04	6 17%	3 9%	2 4%		2 4%	5 13%	5 13%	8 22%	6 17%			36 100%
Ch05	6 50%										6 50%	12 100%
CH06	6 16%						4 12%	4 12%	10 28%	3 8%	9 24%	36 100%
Total	29 17%	5 3%	9 5%	7 4%	10 6%	11 7%	23 13%	25 15%	28 16%	6 4%	16 9%	170 100%
Mean	**3**	**0.5**	**1**	**0.6**	**1**	**1.2**	**2.2**	**2.5**	**2.7**	**0.6**	**1.5**	**16.8**

The findings in table 4.9 show that the highest rating of the sampled churches readiness for digital transformation and adaptation stood at 0 (zero) represented by 17% from the submissions of 29 respondents. On the other hand, 28 respondents which translates to 16% indicated a rating of 8. It is indicative of the fact that there was a minimal difference between churches that were far from digital transformation and adaptation and those that were doing well. Additionally, their readiness had a total mean of 16.8.

In a bid to have a wider understanding of the level of preparedness, it was necessary for the researcher to examine some variables to that brough out how universities and churches were fairing virtually. These included among others, student/member contact, state of active learning, quality of the content, internet access, reliability and the clarity of the presentations.

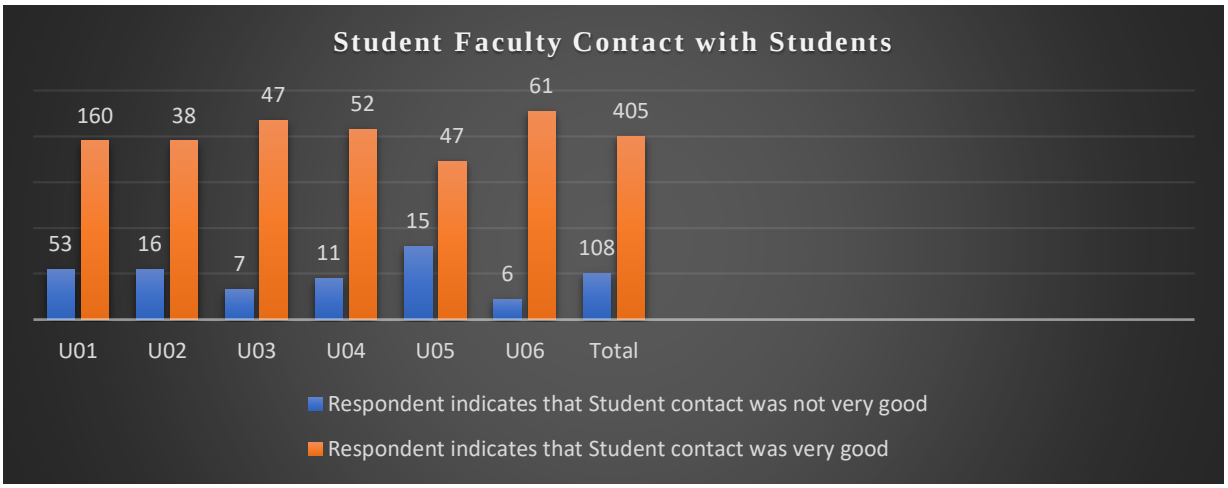

Figure 4.5: Student Faculty Contact

Figure 4.5 shows that the faculty's contact with students was rated as very good by 405 of the 513 respondents which translates to 80% compared to 108 students representing 20% who indicated that it was not very good.

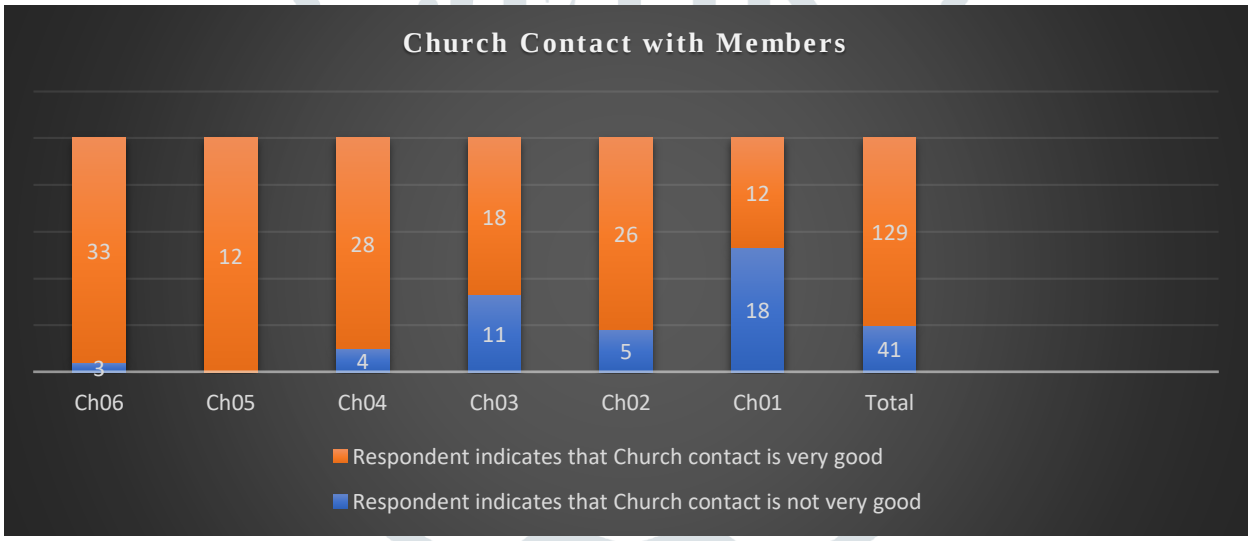

Figure 1

Figure 4.5.1: Church Contact

The results in the figure 4.6.1 above show 41 representing 20% of the respondents indicated that church contact was not very good. While 129 of the respondents representing 80% of the stated that church contact was good.

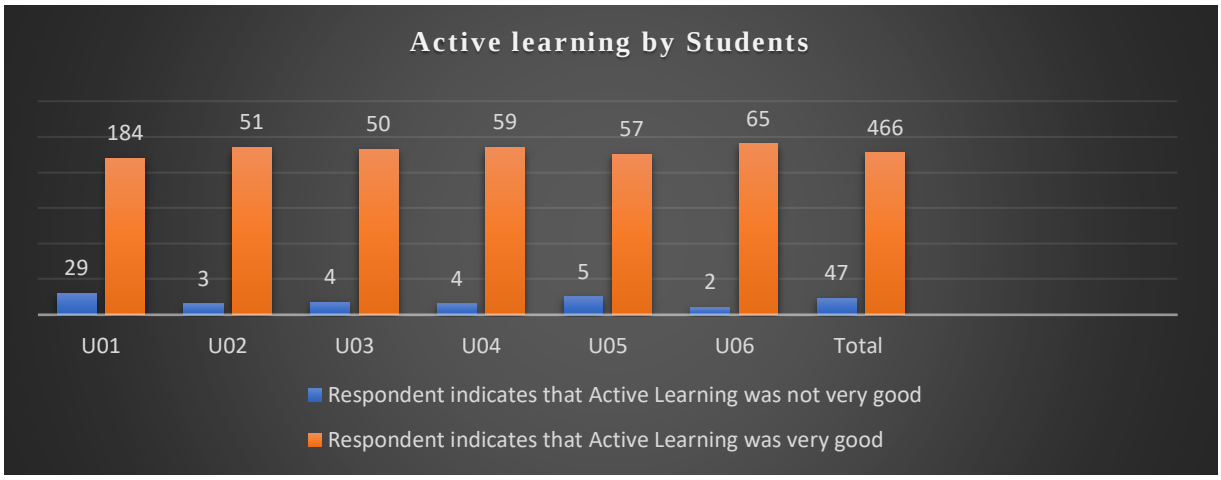

Figure 4.7: Active Learning

The findings in Figure 4.7 above highlights the responses of the students with regard to the state of active learning virtually. 466 respondents out of 513 indicated that it was very good translating to 91%. While 47 participants stated that it was not very good representing 9%.

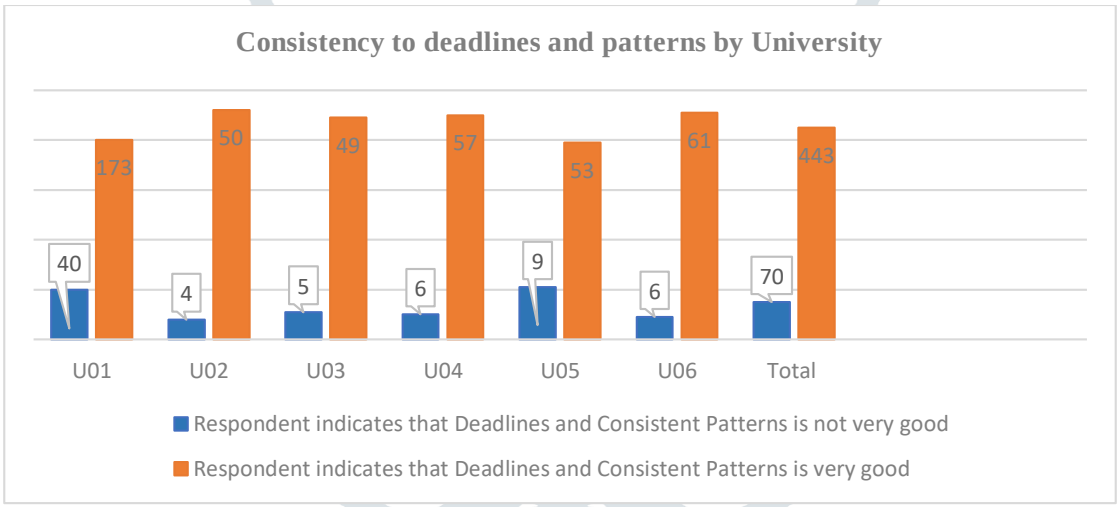

Figure 4.7.1: Consistency to Deadlines and Patterns

Figure 4.7.1 shows that 443 respondents translating to 85% indicated that the school's capacity to stick to deadlines and consistent patterns was very good. On the other hand, 70 respondents representing 15% of the participants stated that it was not very good.

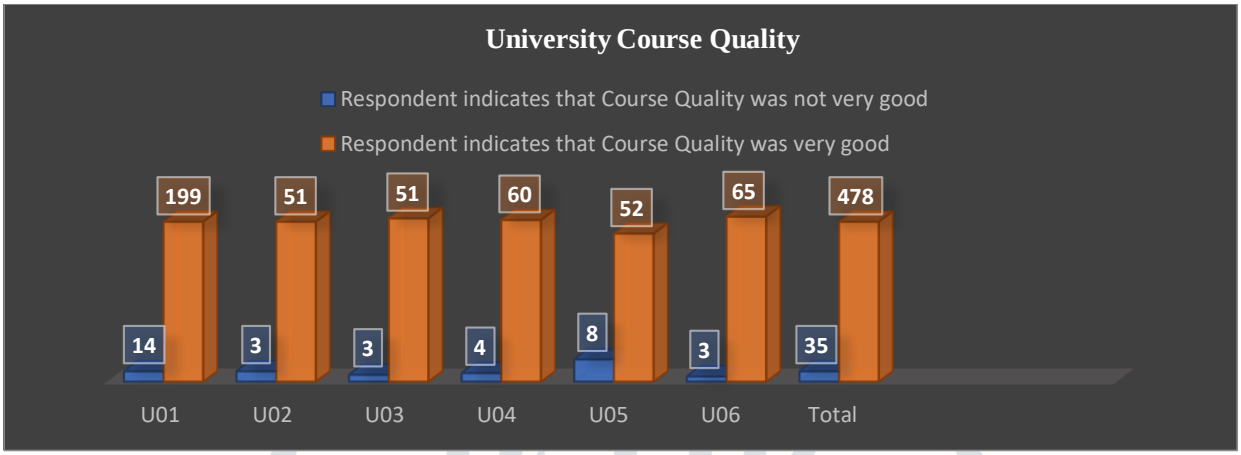

Figure 4.8: Course Quality

Figure 4.8 above highlights the findings with regard to quality of courses provided the universities that took part in this study. 478 respondents translating to 94% indicated that the quality of their course was very good, while 35 participants representing 6% stated that it was not very good.

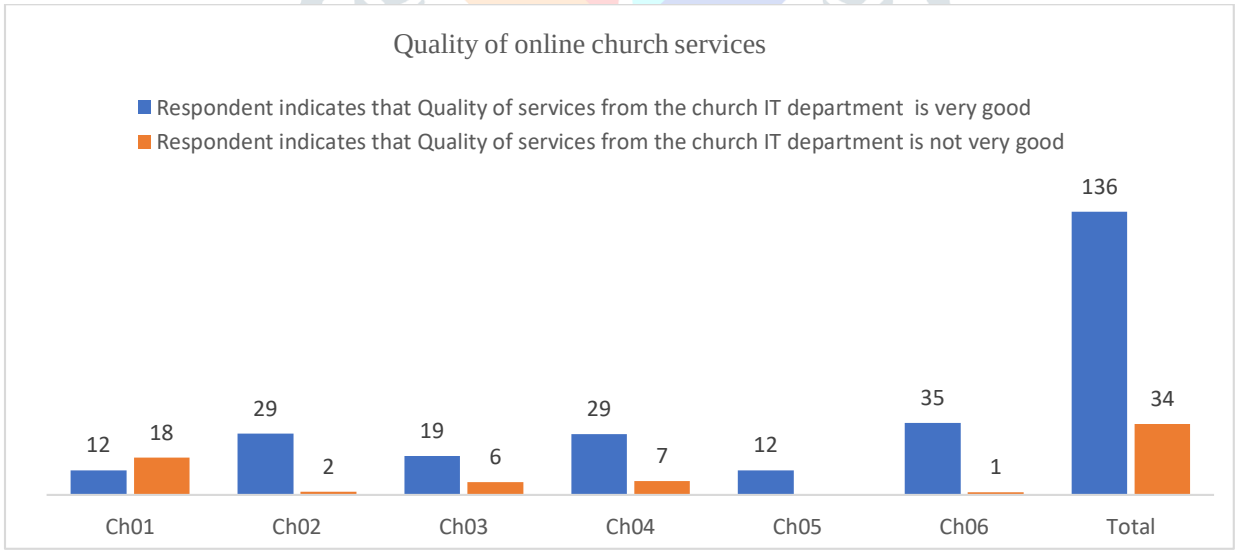

Figure 4.8.1: Quality of online church service

The findings in figure 4.8.1 indicate that 81% of the respondents (136) stated that the quality of online service was very good, while 19% representing 34 participants felt that it was not very good.

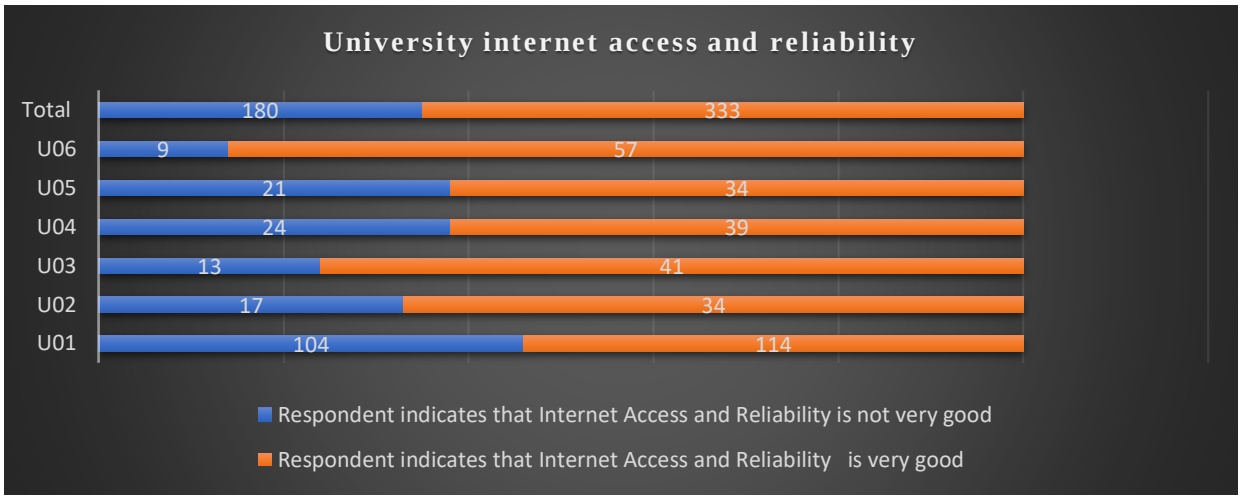

Figure 4.9: University Internet Access and Reliability

Figure 4.9 shows that 333 representing 65% of the respondents indicated that internet access and reliability is very good. On the other hand, 180 representing 35% of the participants indicated that it was not very good.

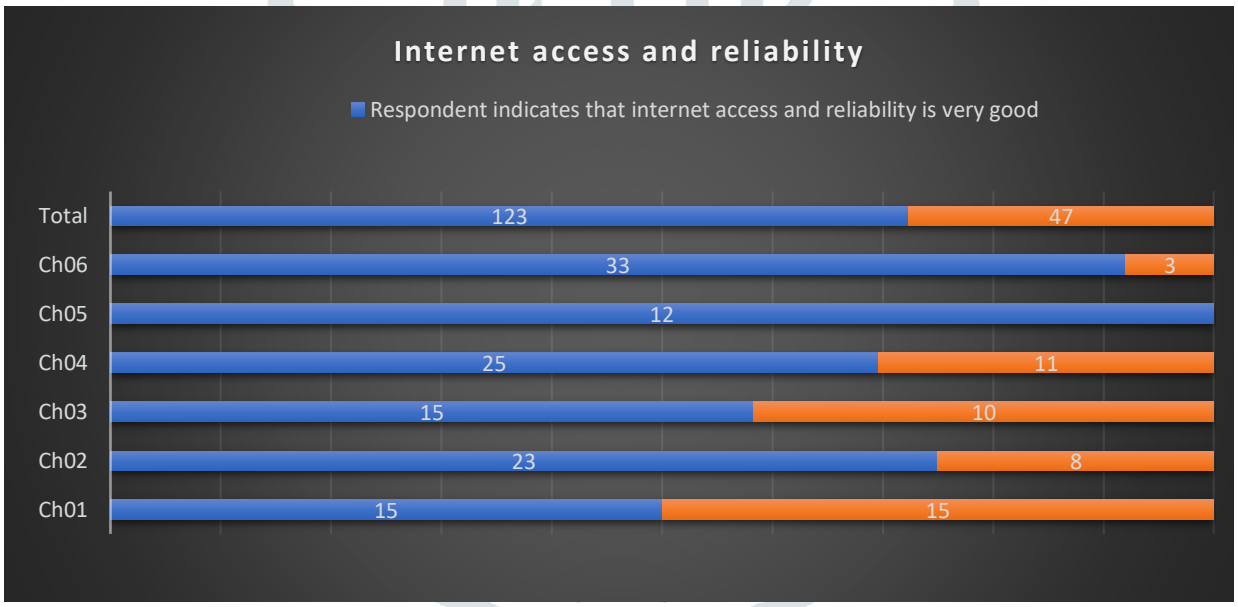

Figure 4.9.1: Internet access and reliability

The results in the figure 4.9.1 above show 47 representing 28% of the respondents indicated that internet access and reliability was not good. 123 representing 72% of the participants stated that Internet access and reliability was good.

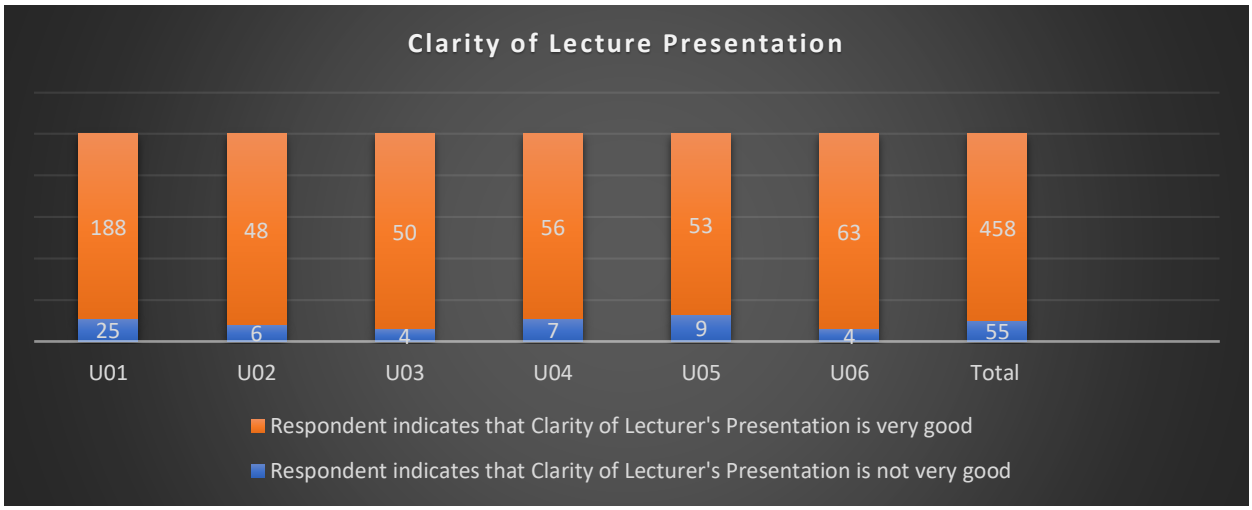

Figure 4.10: Clarity of Lecturer's Presentation is good

According to Figure 4.10 above, respondents that submitted indicated that the clarity of lecture presentations was very good were 458 representing 90%, while 55 translating to 10% stated that it was not very good.

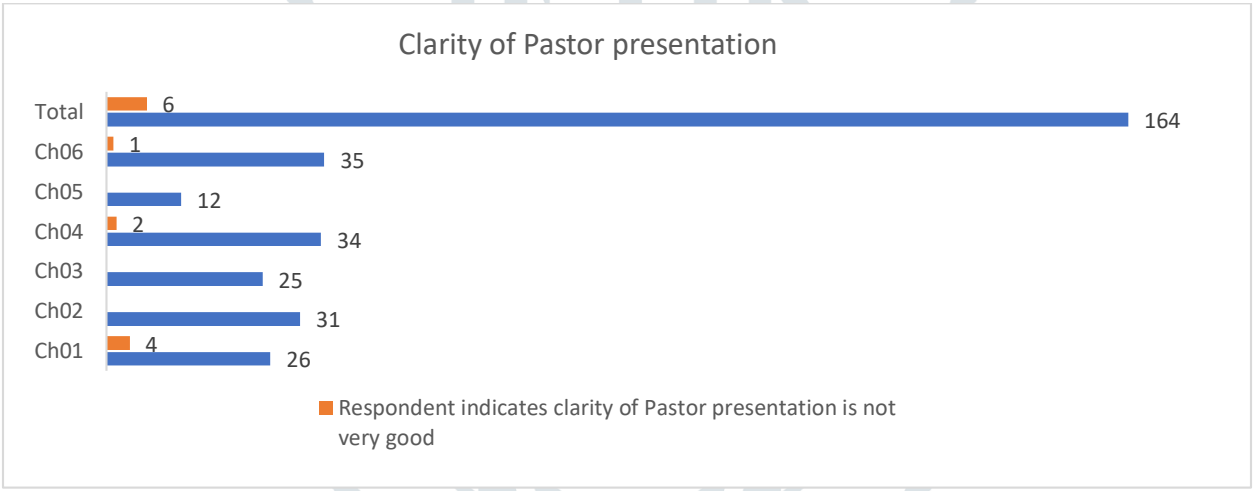

Figure 4.10.1: Clarity of Pastor's Presentation

The findings in the above figure show that 97% representing 164 of the respondents stated that the clarity of their Pastor's presentation was very good. While 6 representing 3% of the respondents indicated that it was not very good.

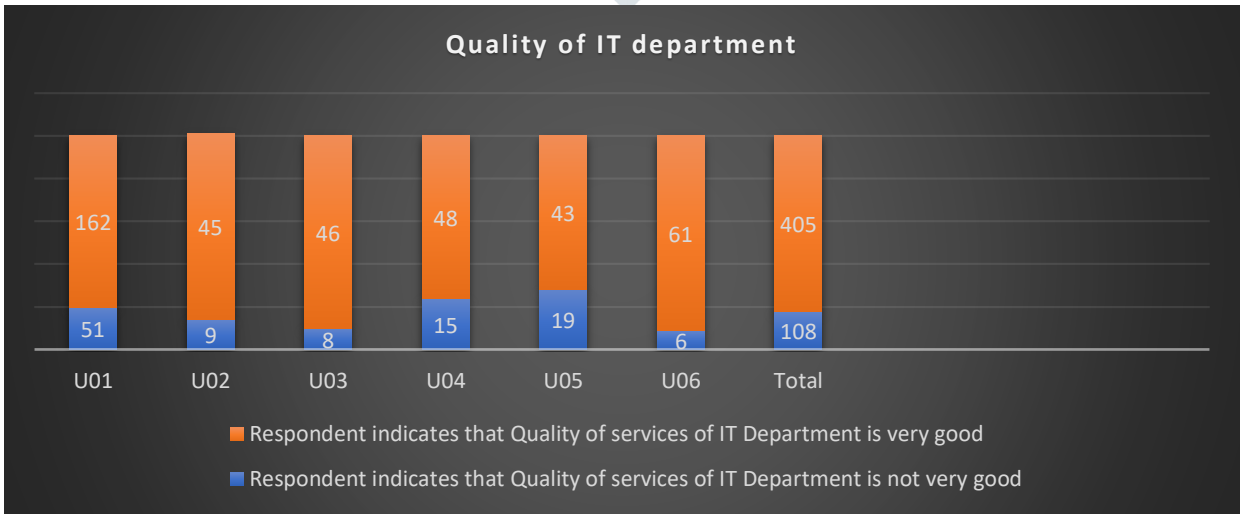

Figure 4.11: Quality of University IT Department

The figure 4.11 shows that 405 respondents stated that the quality of services offered by the IT department was very good representing 82%. 18% drawn from the 108 respondents indicated that it was not very good.

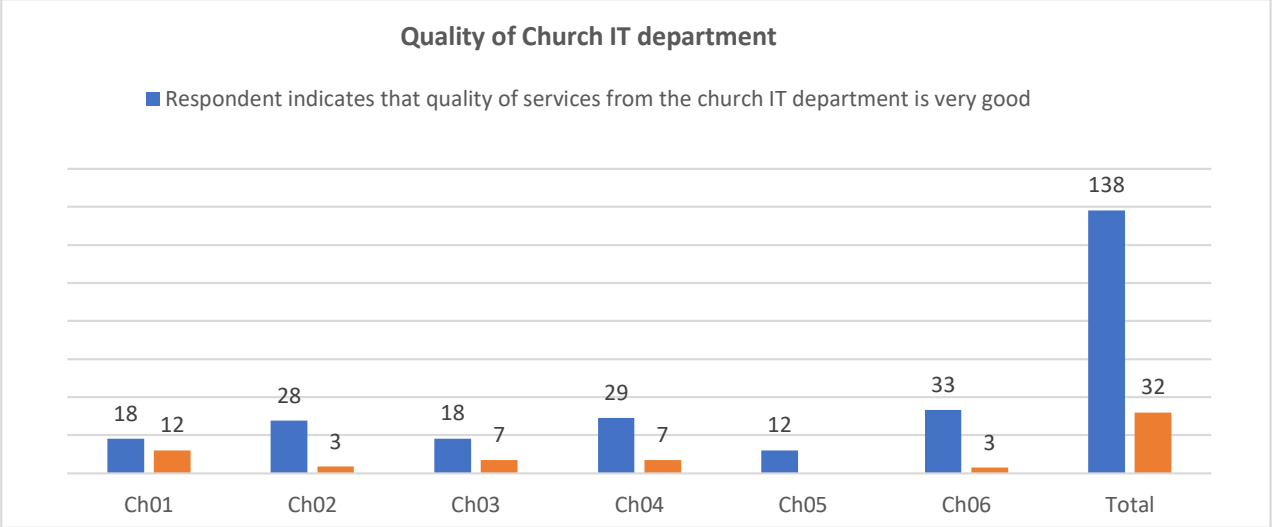

Figure 4.11.1: Quality of church IT department

The findings in figure 4.11.1 show that 138 representing 80% of the respondents stated that the quality of services from their church IT department was very good. On the other hand, 32 representing 20% of the respondents indicated that it was not very good.

WAYS TO IMPROVE VIRTUAL MANAGEMENT

In order to have a wider understanding of the quality of service offered by universities and churches, the respondents were asked to indicate what was required to ease Virtual Management at their universities and churches? This was necessary for the researcher to apply the Adaptive Structure theory upon which the study was grounded especially how leaders in the two institutions seeking ways to fully actualize virtual management. The findings are presented in the following figures:

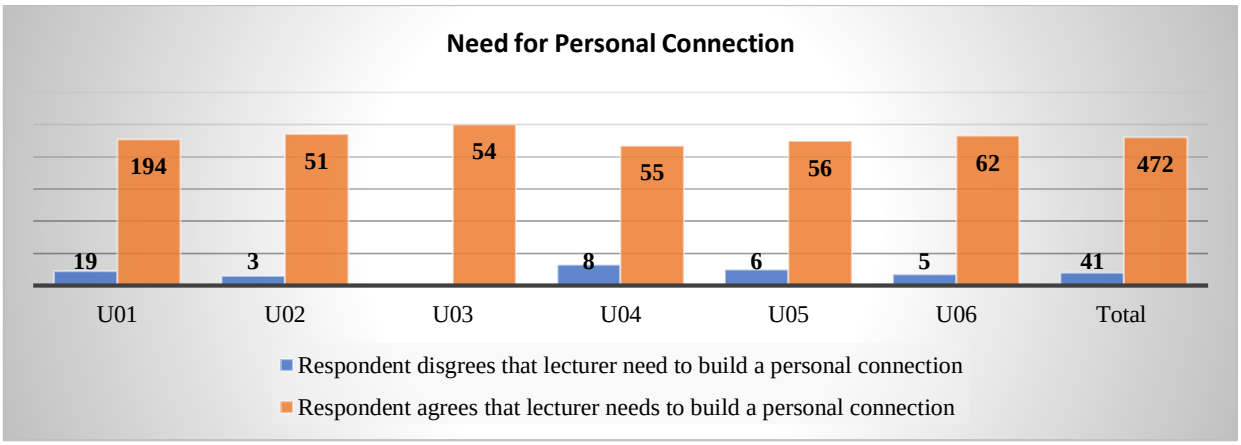

Figure 4.12: Need for personal connection

Figure 4.12 shows responses on whether there was a need for lecturers to build a personal connection with students. 472 from 513 respondents agreed with the statement translating to 92%. Another 41 respondents representing 8% disagreed with the assertion.

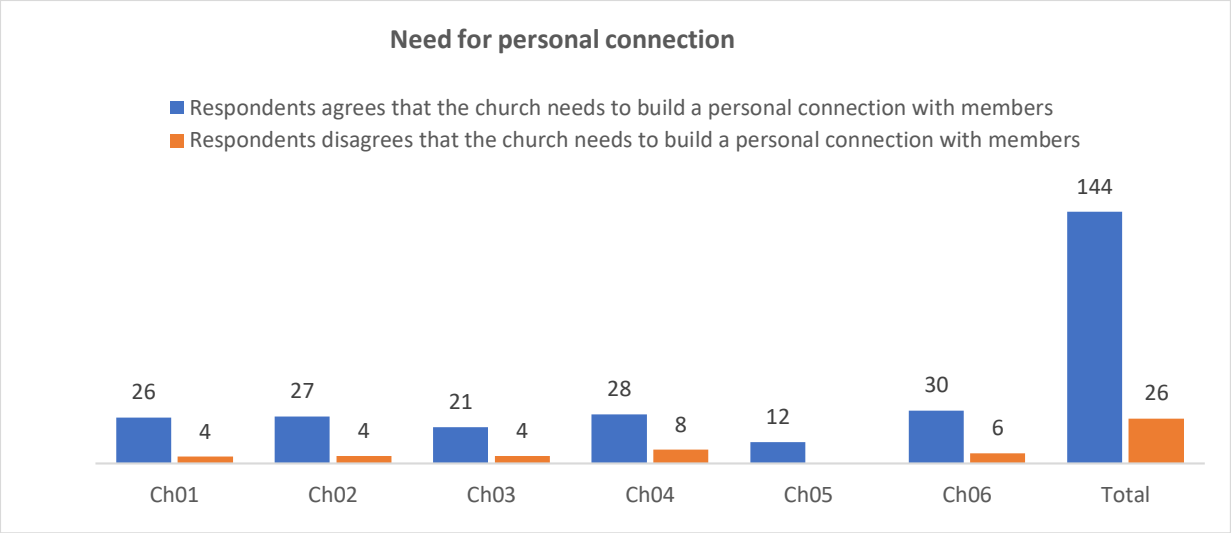

Figure 4.12.1: Need for personal connection

The results in the figure above show that 144 representing 87% of the respondents agreed that the church needs to build a personal connection with members. On the other hand, 26 respondents representing 13% disagrees that the church needs to build a personal connection with members.

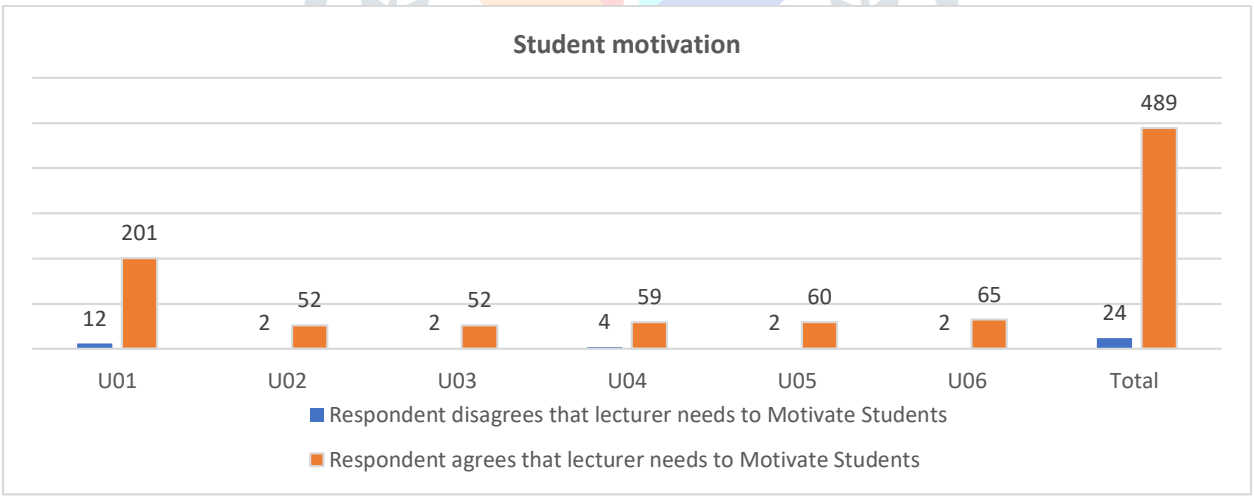

Figure 4.13: Student motivation

Figure 4.13 shows the responses with regard to motivation of students. Out of 513 respondents 489 translating to 95% were in agreement with the need to motivate students. The remaining 24 participants representing 5% disagreed.

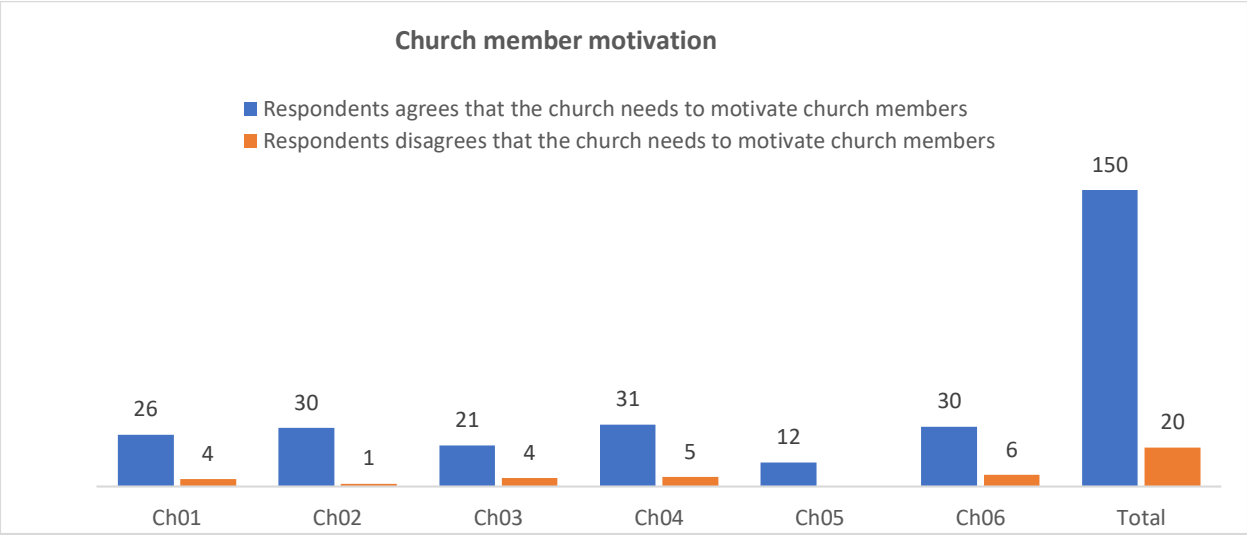

Figure 4.13.1: Church member motivation

The findings in figure 4.13.1 shows the responses to whether the church members needed to motivation to use virtual platforms. 150 representing 90% of the respondents agreed as shown in the above figure. While 20 representing 10% of the participants disagreed with the statement.

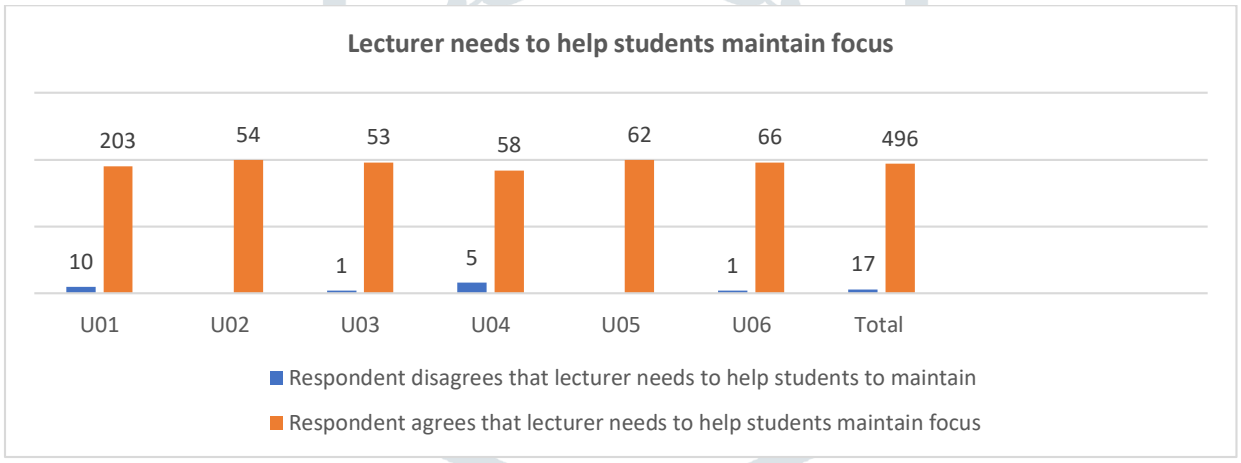

Figure 4.14: Help students maintain focus

Figure 4.14 above is a presentation of the findings on responses as to whether lecturers needed to help students to maintain focus. 496 out of 513 respondents translating to 97% were in agreement with the statement. The remaining 17 participants representing 3% disagreed.

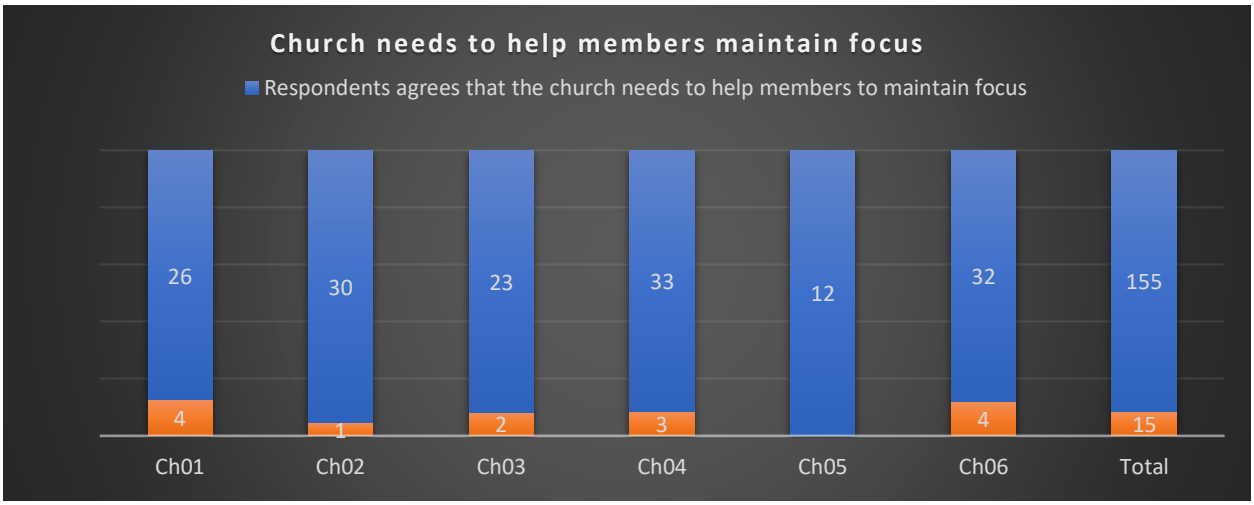

Figure 4.14.1: Help church members maintain focus

The responses shown in figure 4.14.1 show that 155 representing 92% of the participants agreed that the church needed to help members to maintain focus. While 15 representing 8% disagreed with the statement.

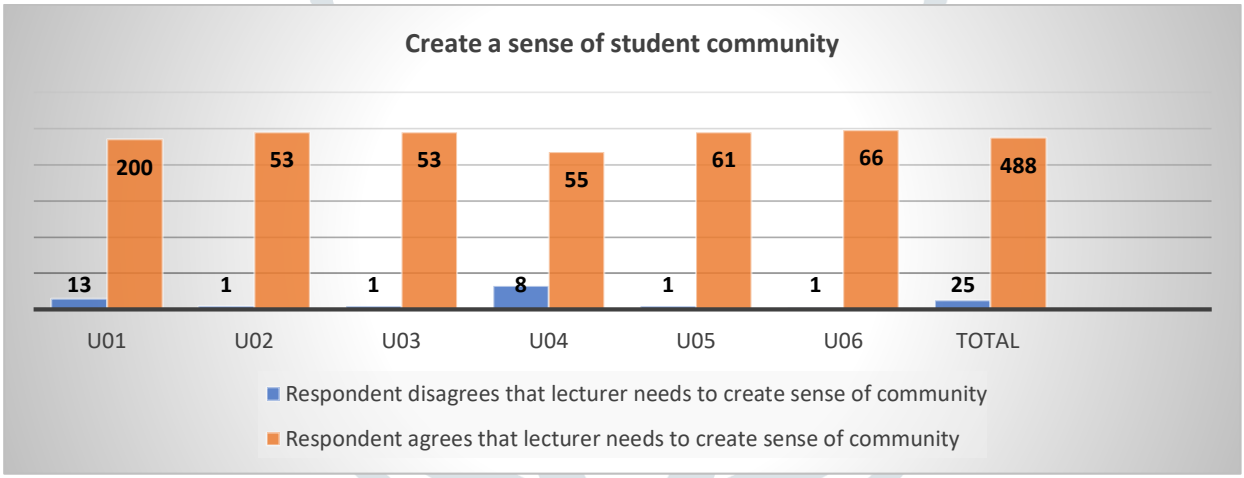

Figure 4.15: Create a sense of student community

The findings in figure 4.15 shows the respondent's views on the need for lecturers to create a sense of community. Out of the 513 respondents. 488 translating to 95% were in agreement with the statement. The remaining 25 participants representing 5% disagreed.

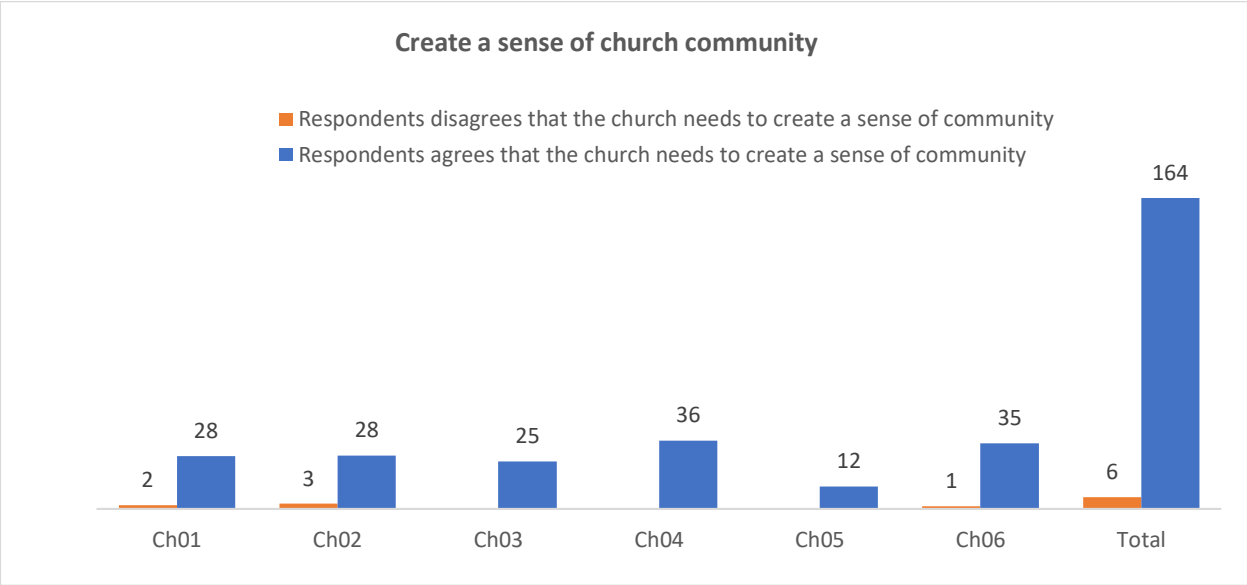

Figure 4.15.1: Create a sense of church community

The findings in figure 4,15.1 indicate that 164 of the respondents representing 97% agreed that there is need for the church to create a sense of community. Only 6 representing 3% of the participants disagreed with the statement in question. The creation of a sense of community is key especially that the church is designed to operate as one.

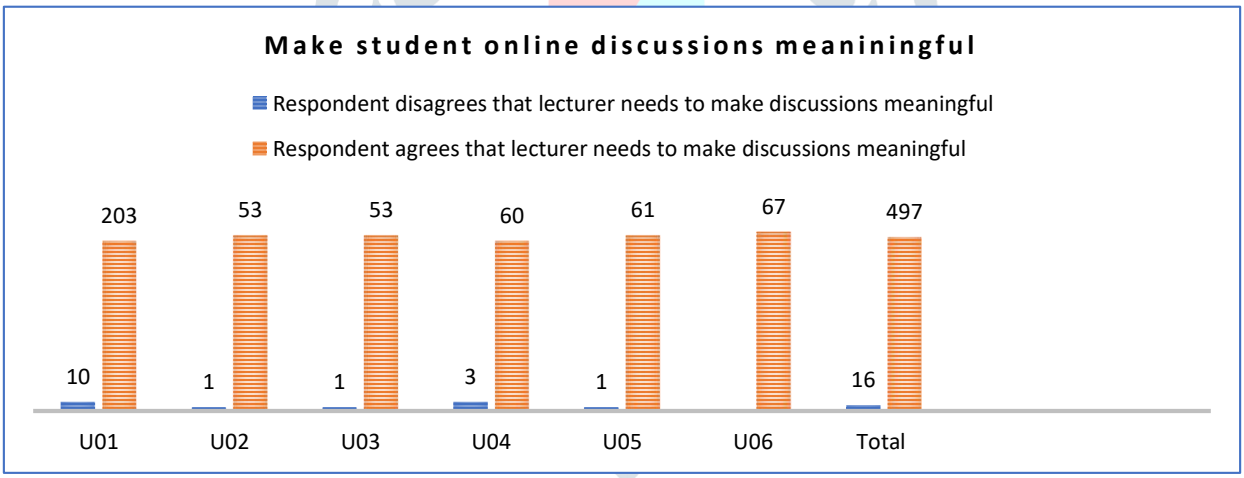

Figure 4.16: Make student online discussions meaningful

Figure 4.16 above highlights the response to whether there was need for lecturers to make discussions meaningful. The findings review that 497 out of 513 respondents translating to 97% were in agreement with the statement. The remaining 16 participants representing 3% disagreed.

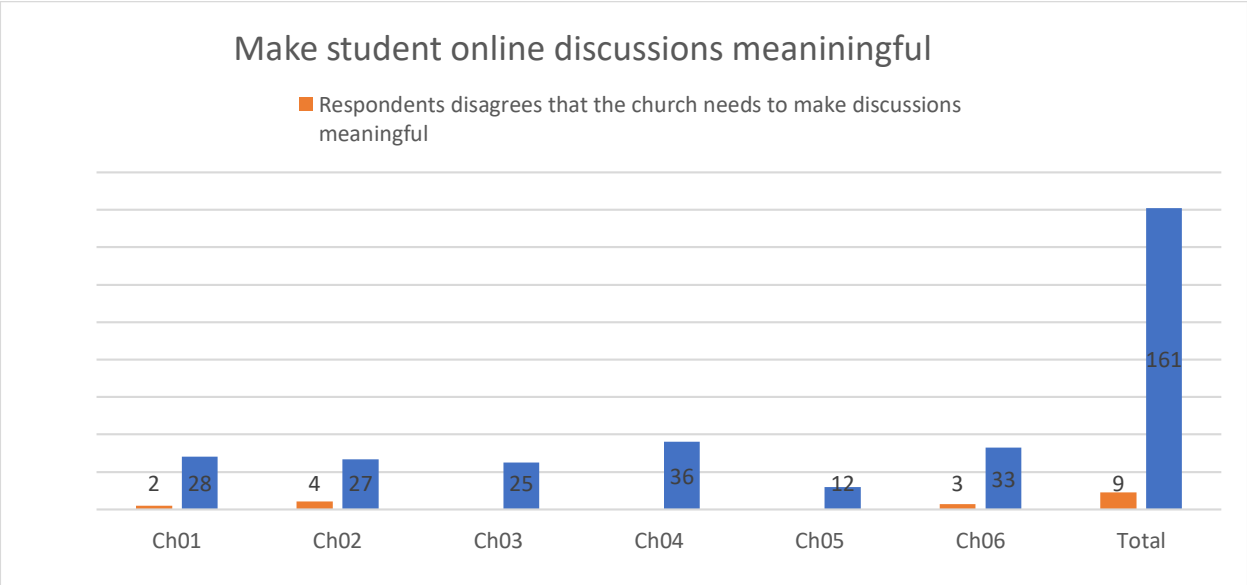

Figure 4.16.1: Make Church online discussions meaningful

The results shown in figure 4.16.1 indicate 161 representing 95% of the respondents agreed that there was need for the church to make online discussions meaningful. Only 9 representing 5% of the participants disagreed with the statement in question.

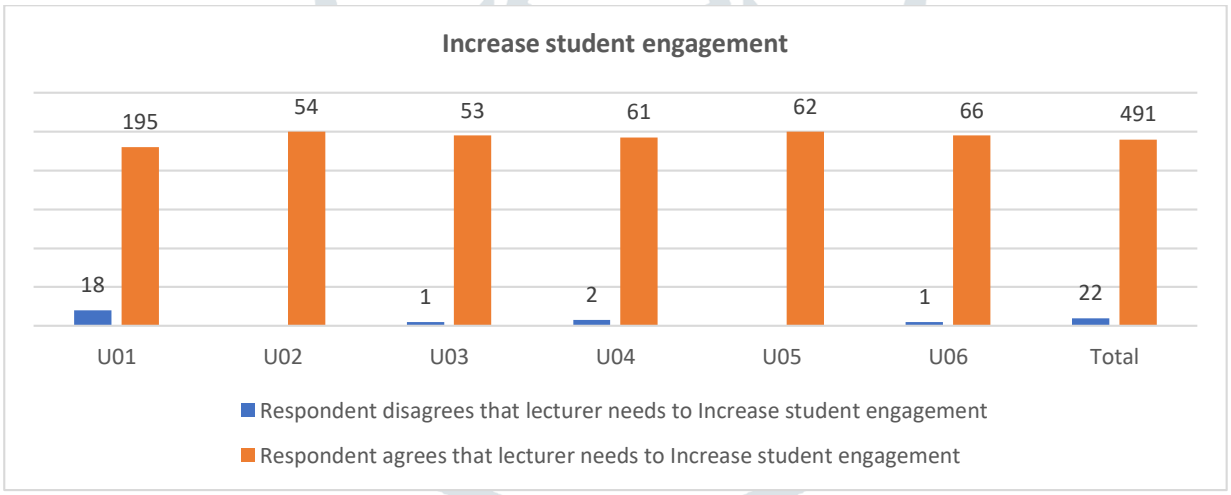

Figure 4.17: Increase student engagement

Figure 4.17 shows that there was generally an agreement among the covered institutions of learning with regard to the need for lecturers to increase their engagement with students. The findings reveal that 491 out of 513 respondents translating to 96% were in agreement with the statement. The remaining 22 participants representing 4% disagreed.

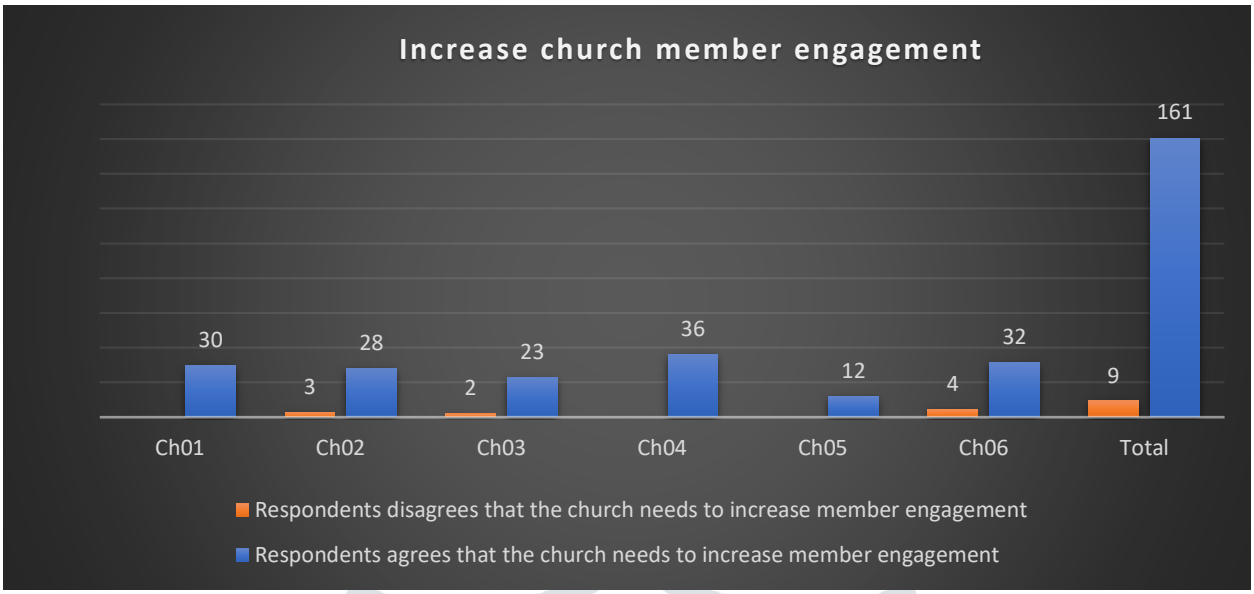

Figure 4.17.1: Increase church member engagement

The results captured in figure above indicate 95% of the respondents representing 161 agree that there is need for the church to make to increase church member engagement. Only 9 representing 5% of the participants disagreed with the statement in question.

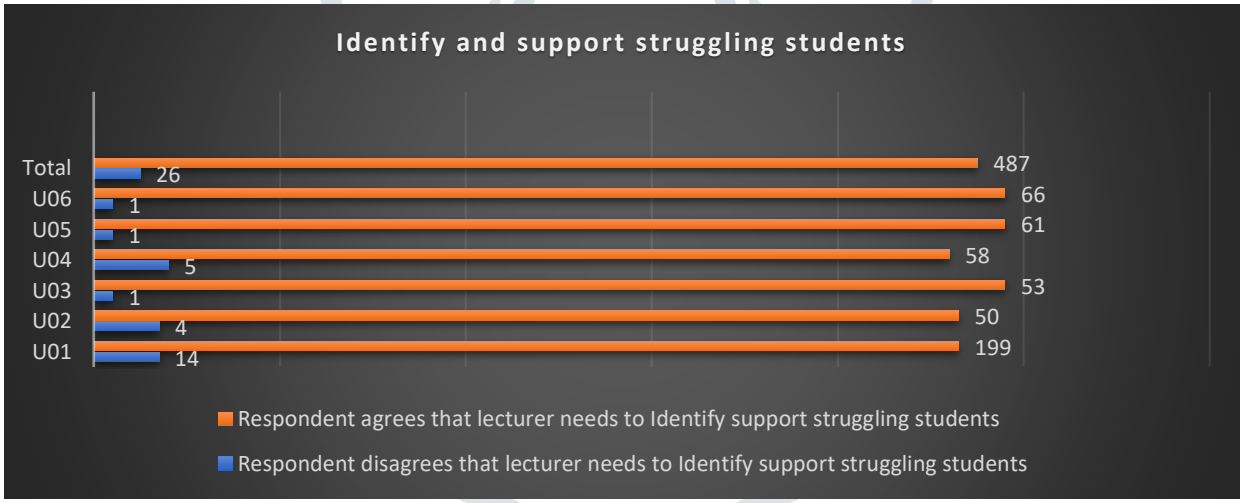

Figure 4.18: Identify and support struggling students

Figure 4.18 is a presentation of responses to whether lecturers need to identify and support struggling students. The findings show that 487 out of 513 respondents translating to 95% were in agreement with the statement. The other 26 participants representing 5% disagreed.

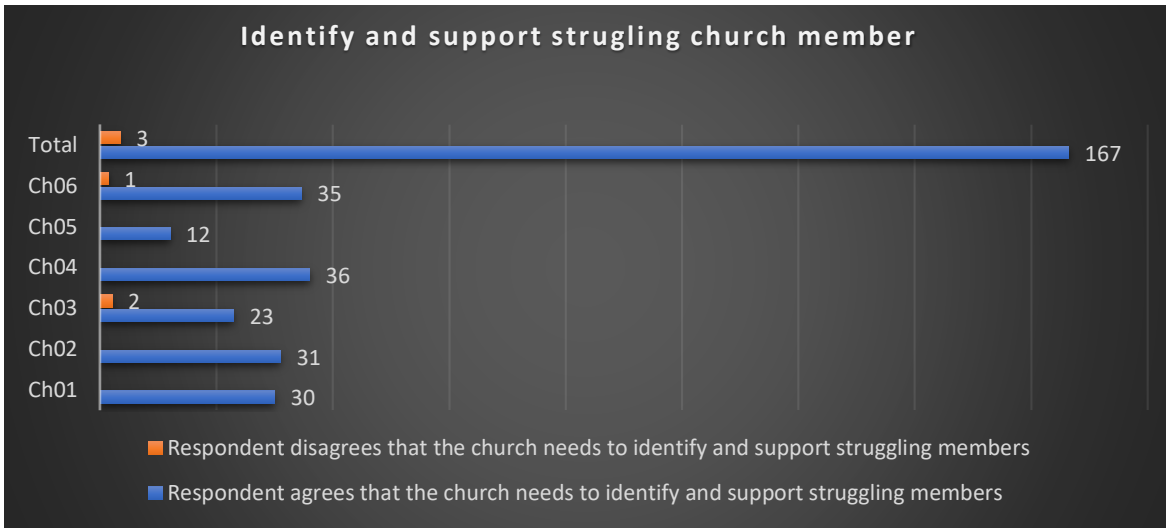

Figure 4.18.1: Identify and support struggling church members

The results captured in figure 4.18.1 indicate that 98% of the respondents representing 167 agreed that there was need for the church to identify and support struggling members. Only 2% representing 3 of the participants disagreed with the statement in question.

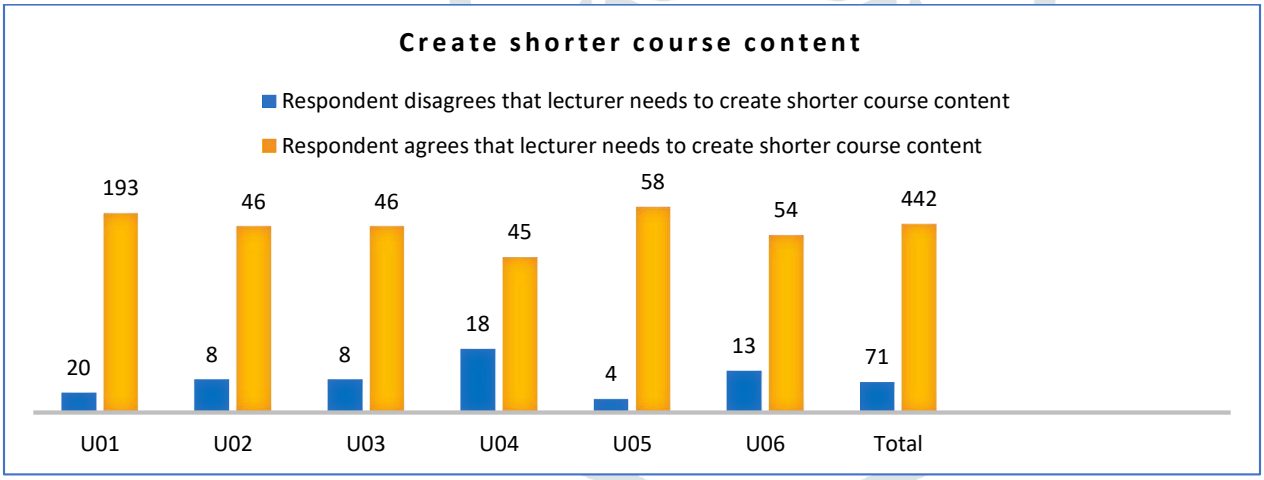

Figure 4.19: Create shorter course content

Figure 4.19 shows the responses from students on whether there was need for the university to create a shorter course content. The findings indicate that 442 out of 513 respondents translating to 86% were in agreement with the statement. The remaining 71 participants representing 14% disagreed.

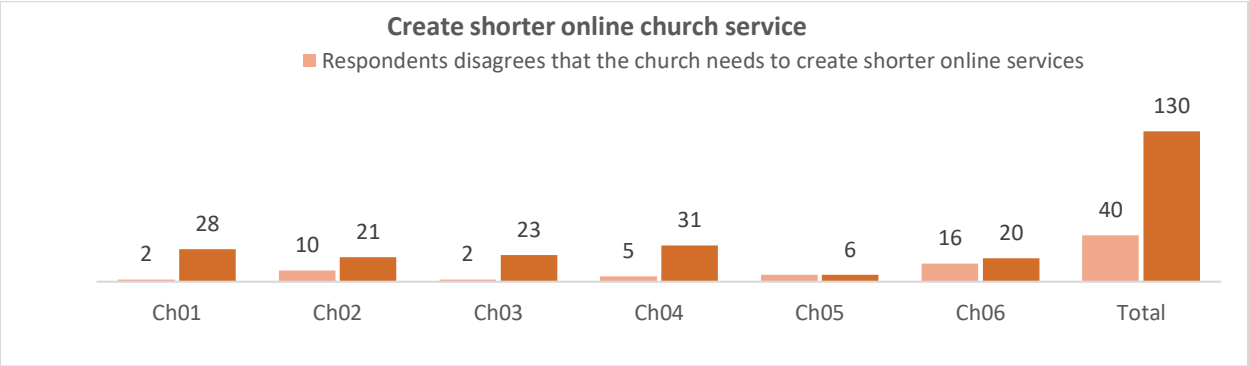

Figure 4.19.1: Create shorter online church services

The data in figure 4.19.1 indicates 74% of the respondents representing 130 agree that there is need for the church to create shorter online services. While 26% of the participants representing 40 disagreed with the statement in question.

BARRIERS TO VIRTUAL MANAGEMENT

The tables and charts under this section are for the purpose of addressing the third study objective which was to examine the barriers faced by universities and churches in the course of operating virtually. They include the effect of the quality of virtual leadership, power and ICT infrastructure, Knowledge of software applications, access to computer hardware, financial income and time management.

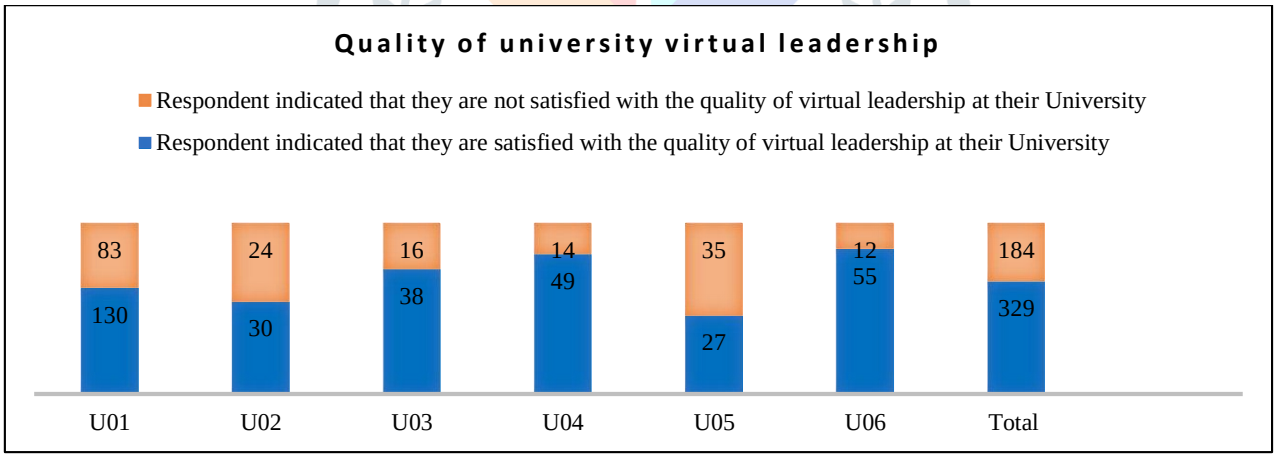

Figure 4.20: Quality of university virtual leadership

The results in figure 4.20 show that 329 representing 65% were satisfied with the quality of virtual leadership at their university. The remaining 184 representing 35% were not satisfied.

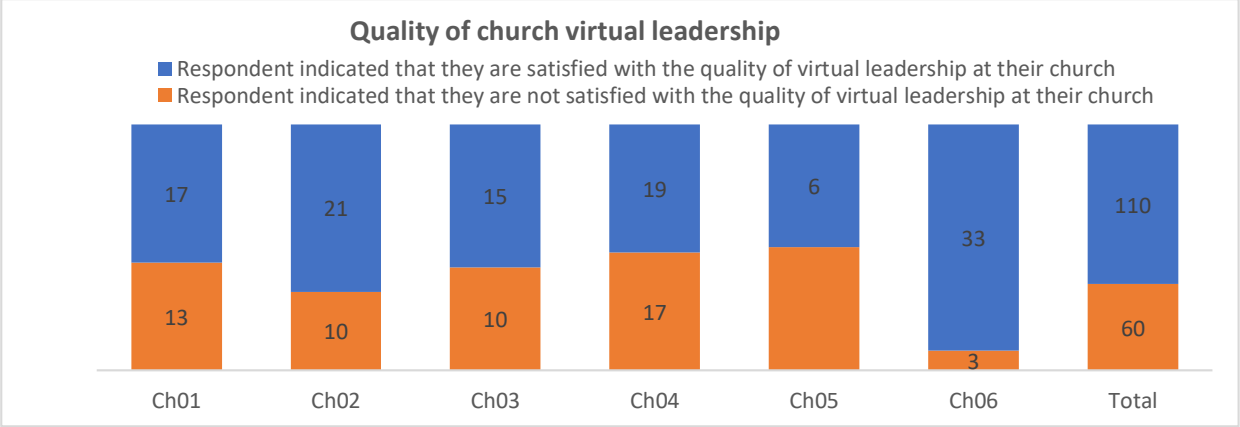

Figure 4.20.1: Quality of church virtual leadership

The results captured in figure above show that 63% of the respondents representing 110 indicated that they are satisfied with the quality of virtual leadership offered at by their church. The remaining 60 representing 37% of the participants stated that they were dissatisfied with the quality of virtual leadership offered at church.

Table 4:10 Availability of a standby power generator and ICT infrastructure

Name of institution	Does the University have a standby power generator/source and all required infrastructure to effectively operate virtually?		Total
	Yes	No	
U01	187	26	213
	88%	12%	100%
U02	17	37	54
	32%	68%	100%
U03	30	24	54
	56%	44%	100%
U04	61	2	63
	97%	3%	100%
U05	32	30	62
	52%	48%	100%
U06	62	5	67
	92%	8%	100%
Total	389	124	513
	76%	24%	100%

Table 4.10 shows that 389 university students representing 76% indicated that their school had a standby generator and ICT infrastructure to run virtually while 24% representing 124 said No.

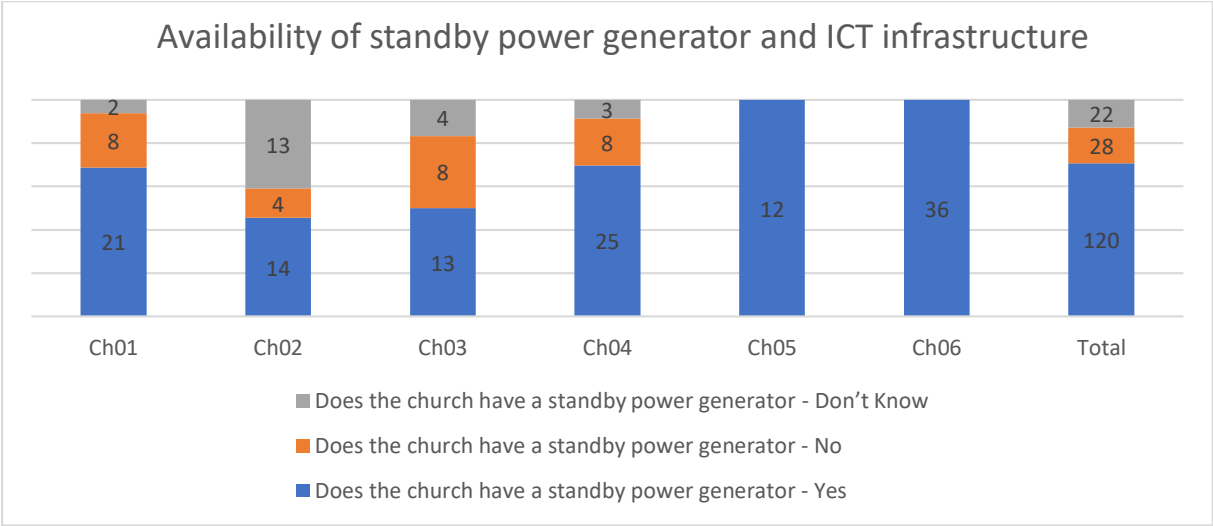

Figure 4.21: Availability of standby power generator and ICT infrastructure

The results captured in figure 4.21 above show that 120 representing 72% of the respondents indicated that the Church have a standby power generator and infrastructure to effectively operate virtually. While 28 representing 16% of the participants stated that the church did not have the required infrastructure and another 22 representing 12% had no idea.

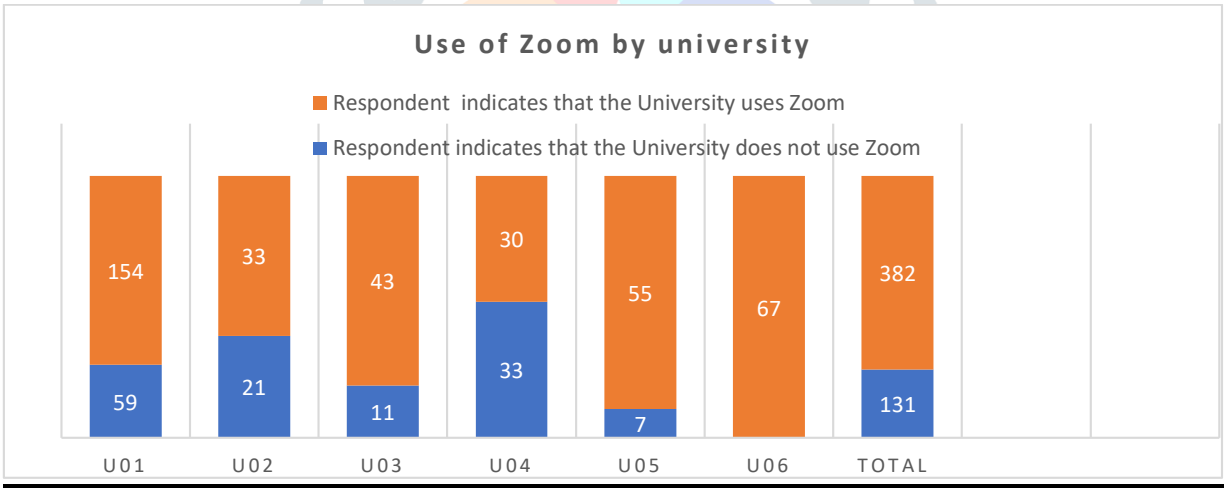

Figure 4.22: Use of Zoom by university

The findings in figure 4.22 above reveal the responses with regard to the use of Zoom online application. 382 out of 513 respondents translating to 75% stated that they use Zoom. The remaining 131 participants representing 25% indicated that they do not use Zoom.

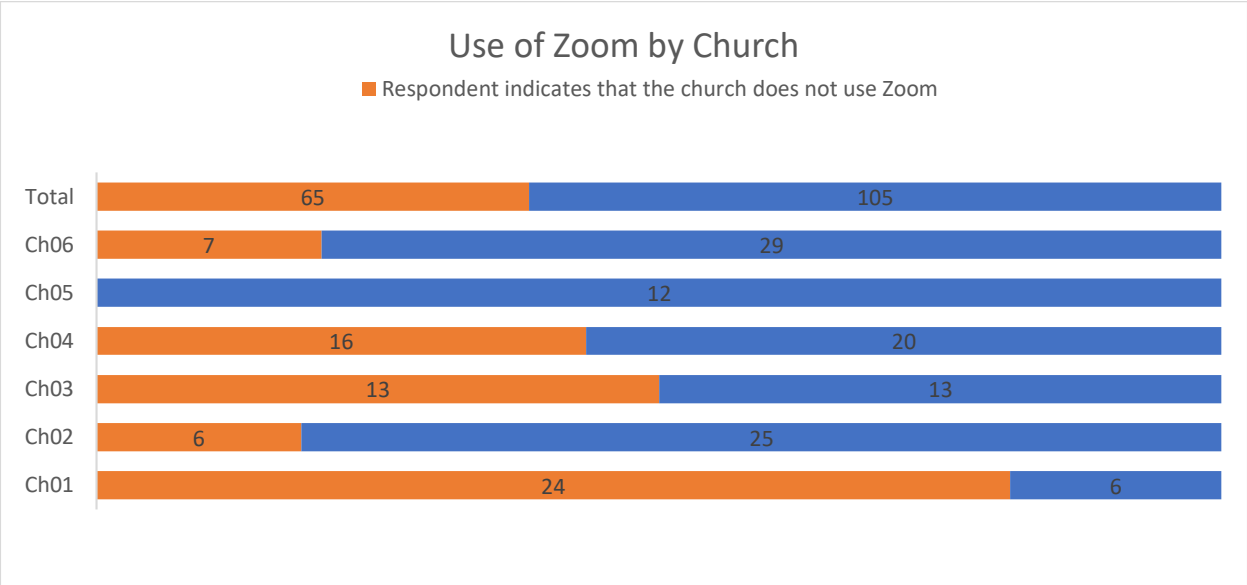

Figure 4.22.1: Use of Zoom by Church

The findings in figure 4.22.1 show that 105 representing 62% of church respondents indicated that they used Zoom. While 65 which translates to 38% stated that they were not using this particular platform.

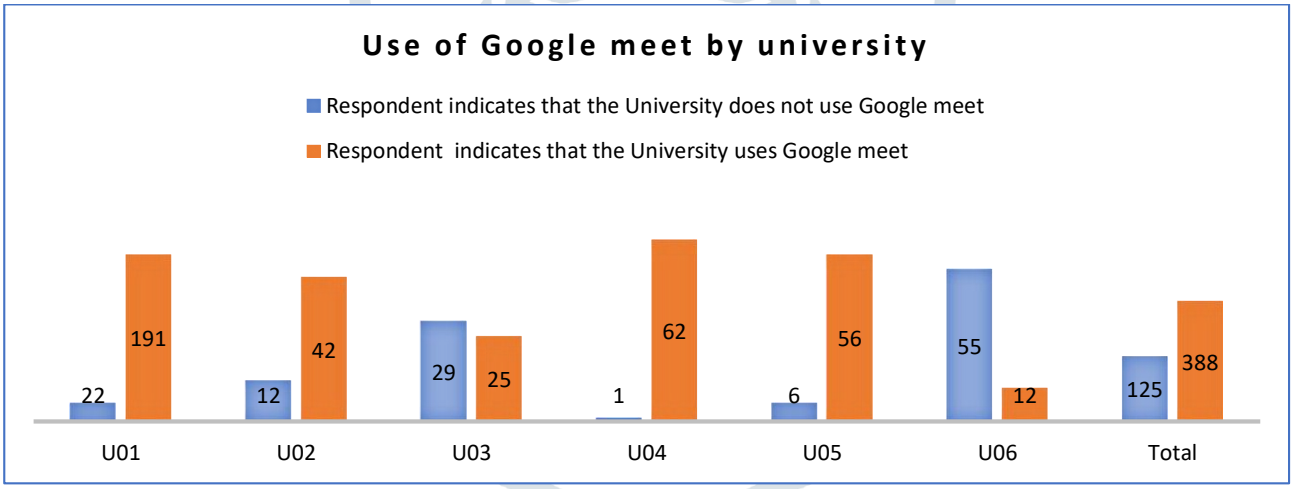

Figure 4.23: Use of Google meet by university

The findings in figure 4.23 above reveals the responses with regard to the use of Google meet online application. The findings review that 388 out of 513 respondents translating to 76% stated that they used Google meet. The remaining 125 participants representing 24% indicated that they did not use Google meet.

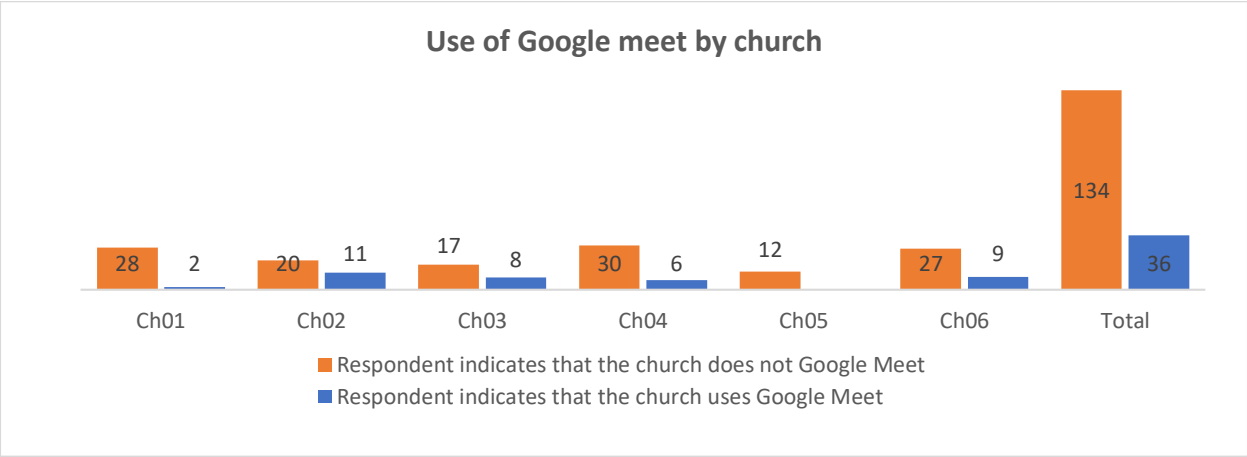

Figure 4.23.1: Respondent indicates that the Church uses Google meet

The findings in figure 4.23.1 show that 20% of the respondents drawn from 36 indicated that they used google meet online application. On the other hand, 134 representing 80% of the participants stated that they were not using this particular platform.

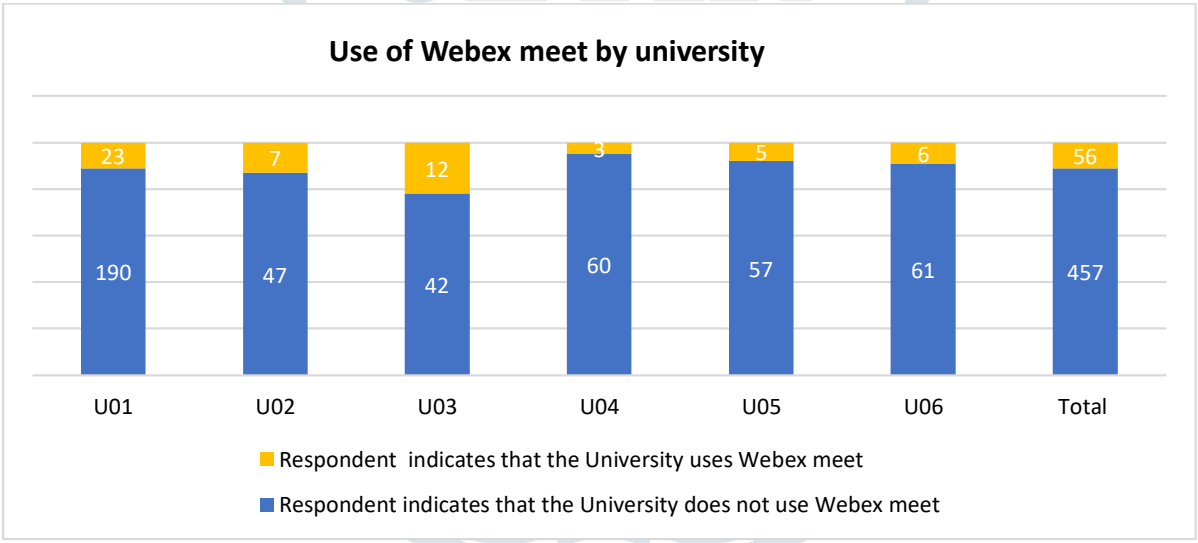

Figure 4.24: Respondent indicates that the University uses Webex meet

Figure 4.24 indicates the results with regards to the use of the Webex meet online platform. The findings reveal that 56 out of 513 respondents translating to 11% stated that they used Webex meet. The remaining 457 participants representing 89% indicated that they did not use Webex meet. The findings further show that the application in question was not usually used by most universities covered in this study.

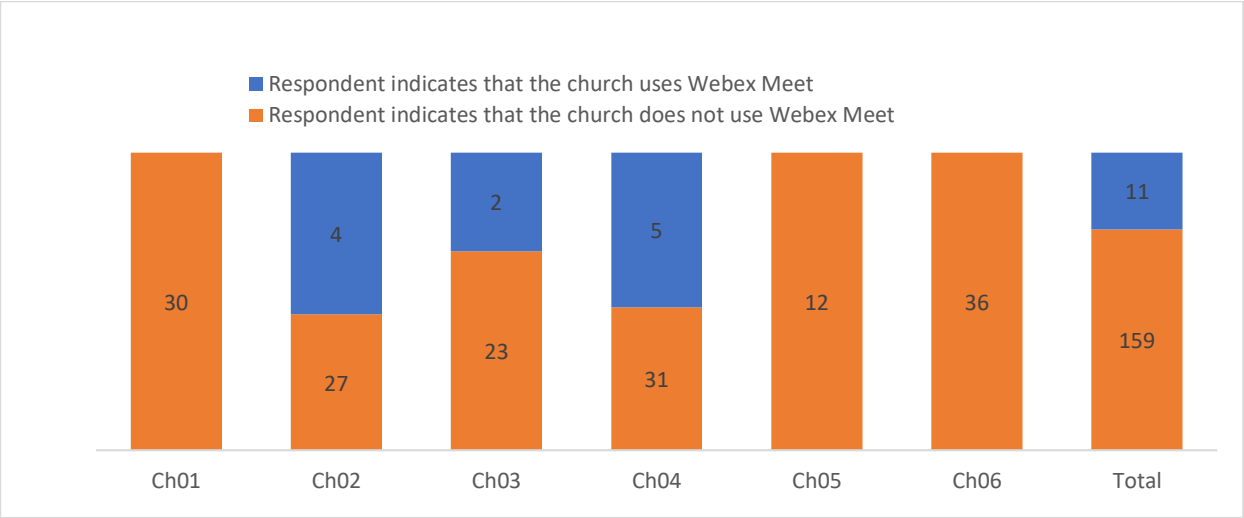

Figure 4.24.1: Use of Webex meet by church

The findings in the above figure 4.24.1 show that 11 representing 6% of the respondents indicated that they used Webex meet online application. On the other hand, 159 representing 94% of the participants stated that they did not use this particular platform.

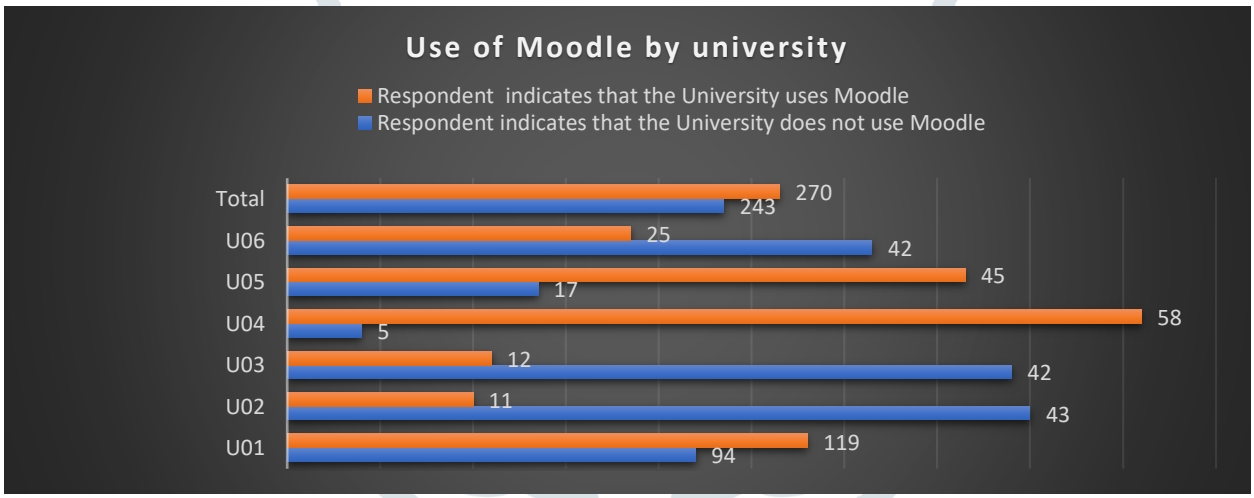

Figure 4.25: Use of Moodle by university

The results in figure 4.25 show the responses to the use of the Moodle online platform. 270 out of 513 respondents translating to 53% stated that they used Moodle. The remaining 243 participants representing 47% indicated that they did not use Moodle.

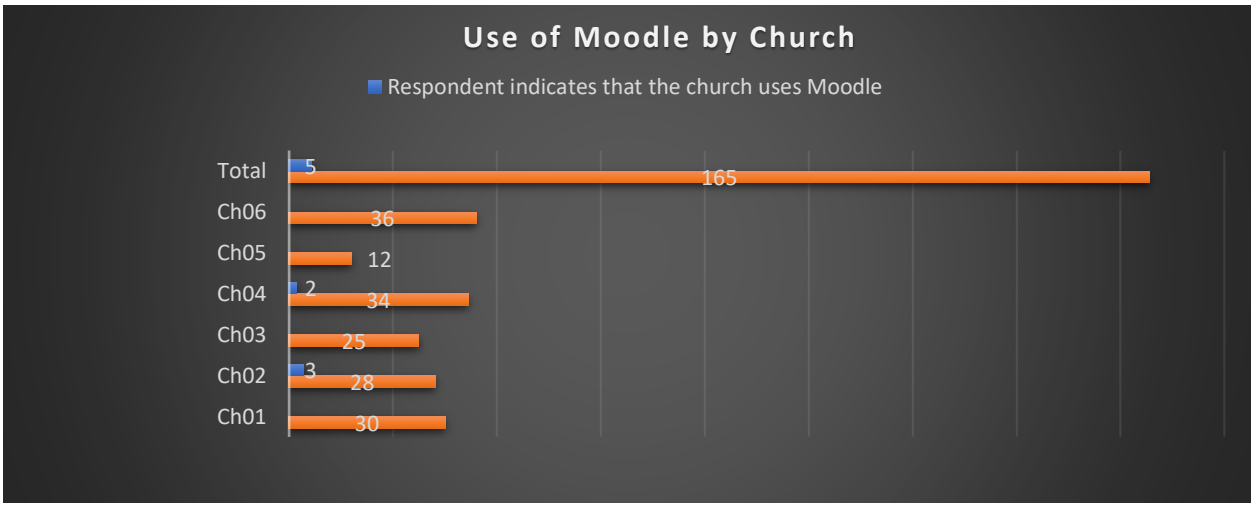

Figure 4.25.1: Use of Moodle by the Church

The findings in figure 4.25.1 show that only 5 representing 2% of the respondents indicated that the church used Moodle online application. The other 165 representing 98% of the participants stated that they did not use this particular platform.

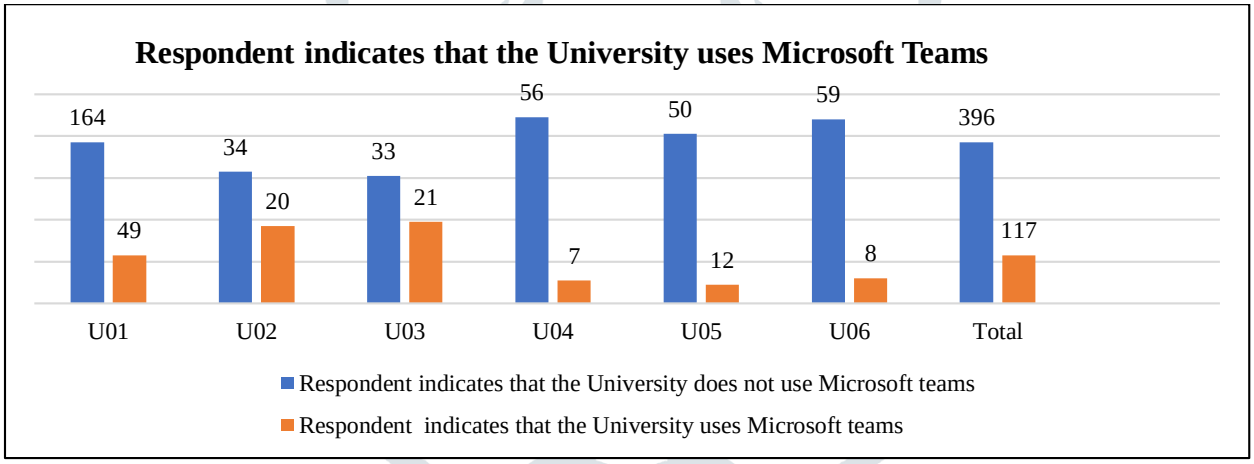

Figure 4.26: Respondent indicates that the University uses Microsoft Teams

The results in figure 4.26 show the responses to the use of the Microsoft Teams online platform. The findings reveal that 117 out of 513 respondents translating to 23% stated that they use Microsoft Teams. The remaining 396 participants representing 77% indicated that they did not use Microsoft Teams.

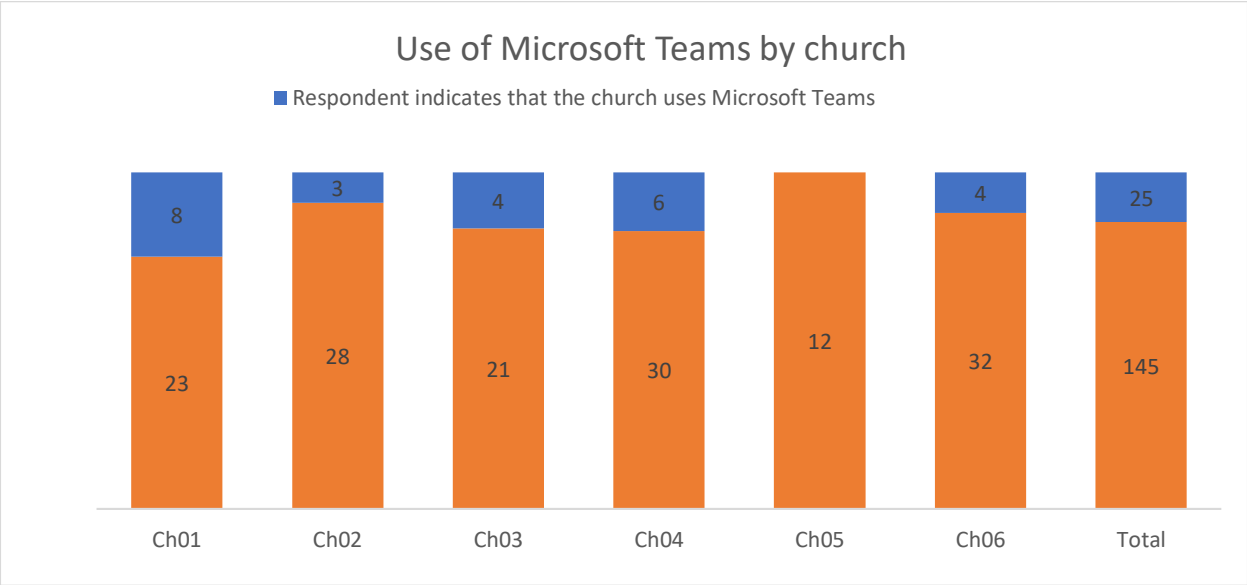

Figure 4.26.1: Use of Microsoft teams by Church

The results captured in the above figure show that 25 representing 13% of the respondents indicated that the church uses Microsoft online application. The other 145 representing 87% of the participants stated that they were not using this particular platform.

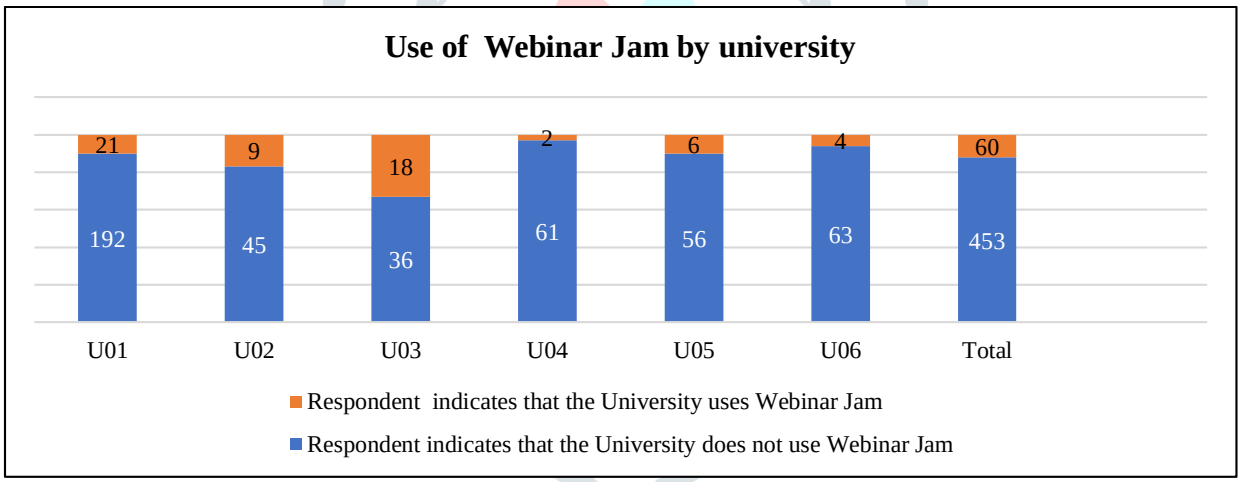

Figure 4.27: Use of Webinar Jam by University

The results in figure 4.27 show the responses to the use of the Webinar Jam online platform. The findings reveal that 60 out of 513 respondents translating to 12% stated that they used Webinar Jam. The remaining 453 participants representing 88% indicated that they did not use Webinar Jam.

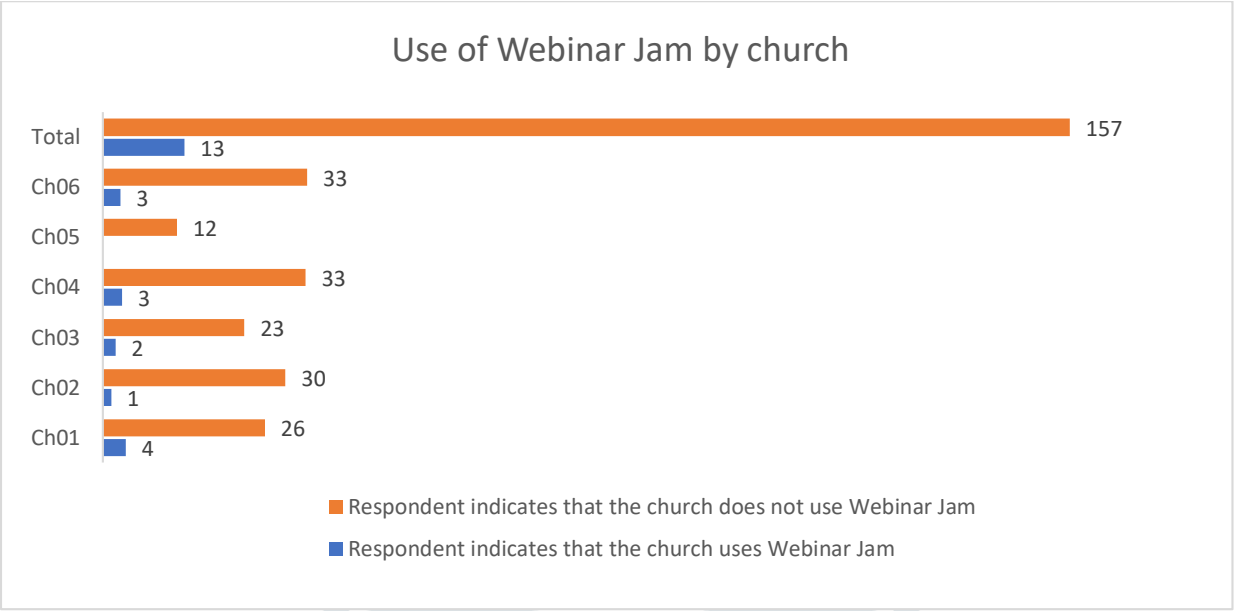

Figure 4.27.1: Use of Webinar Jam by Churches

The findings in the above figure 4.27.1 show that only 13 representing 7% of the respondents indicated that the church uses Webinar online application. The other 157 representing 93% of the participants stated that they were not using this particular platform.

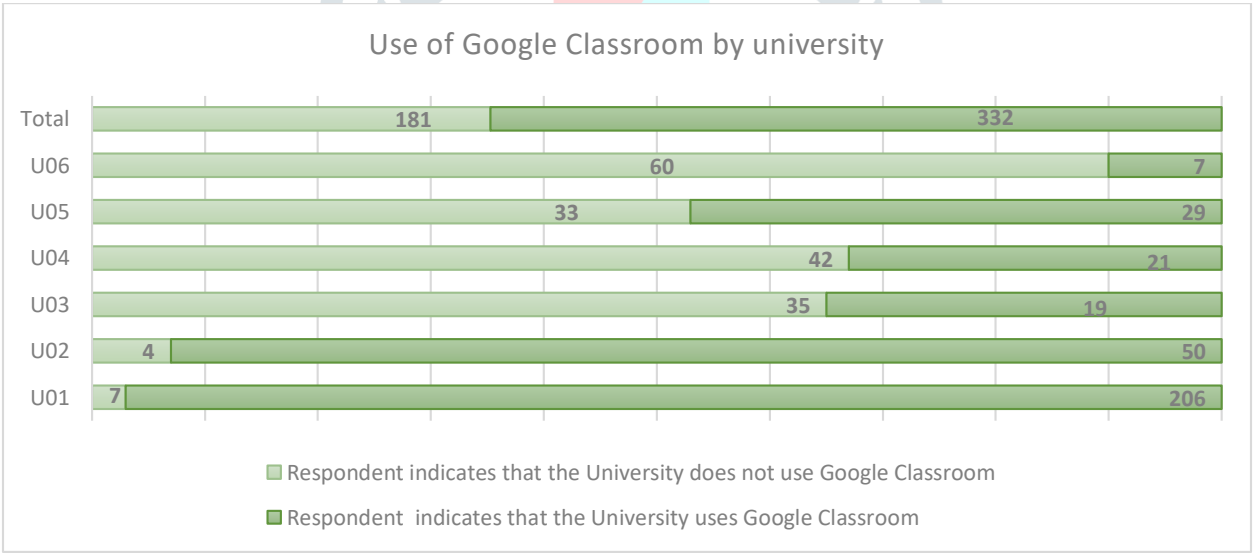

Figure 4.28: Use of Google Classroom by University

The results in figure 4.28 show the responses to the use of the Google Classroom online platform. The findings reveal that 332 out of 513 respondents translating to 65% stated that they used Google Classroom. The remaining 181 participants representing 35% indicated that they did not use Google Classroom.

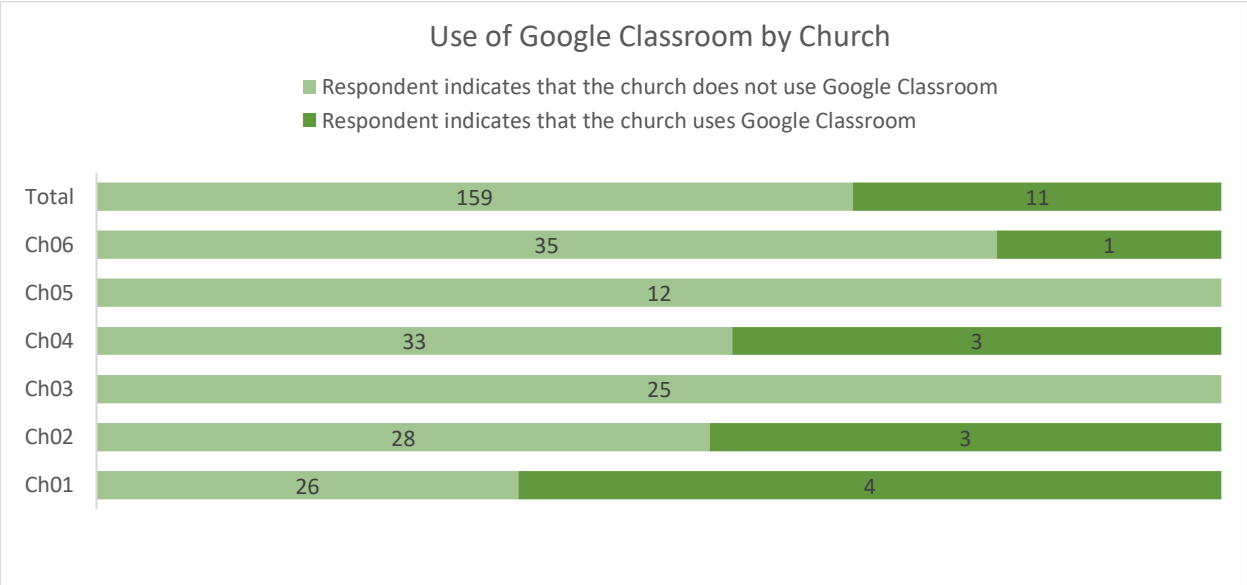

Figure 4.28.1: Use of Google Classroom by Church

The findings in figure 4.28.1 show that only 6% of the respondents indicated that the church used Webinar online application. The other 94% of the participants stated that they did not using this particular platform.

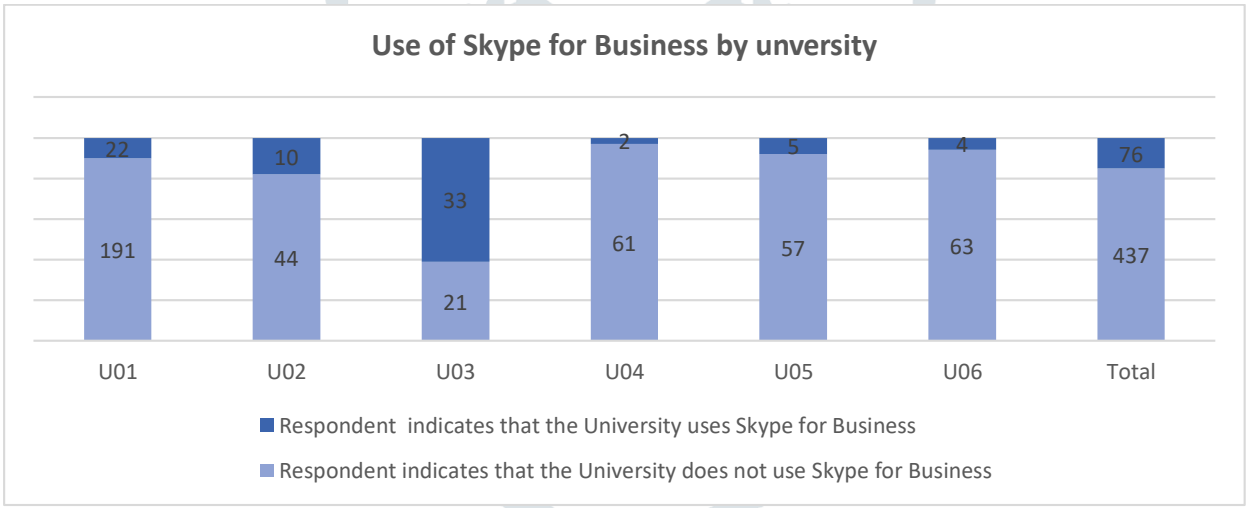

Figure 4.29: Use of Skype for Business by University

The results in figure 4.29 above shows the responses to the use of Skype for Business online platform. The findings reveal that 76 out of 513 respondents translating to 15% stated that they used Skype for Business. The remaining 437 participants representing 85% indicated that they did not use Skype for Business.

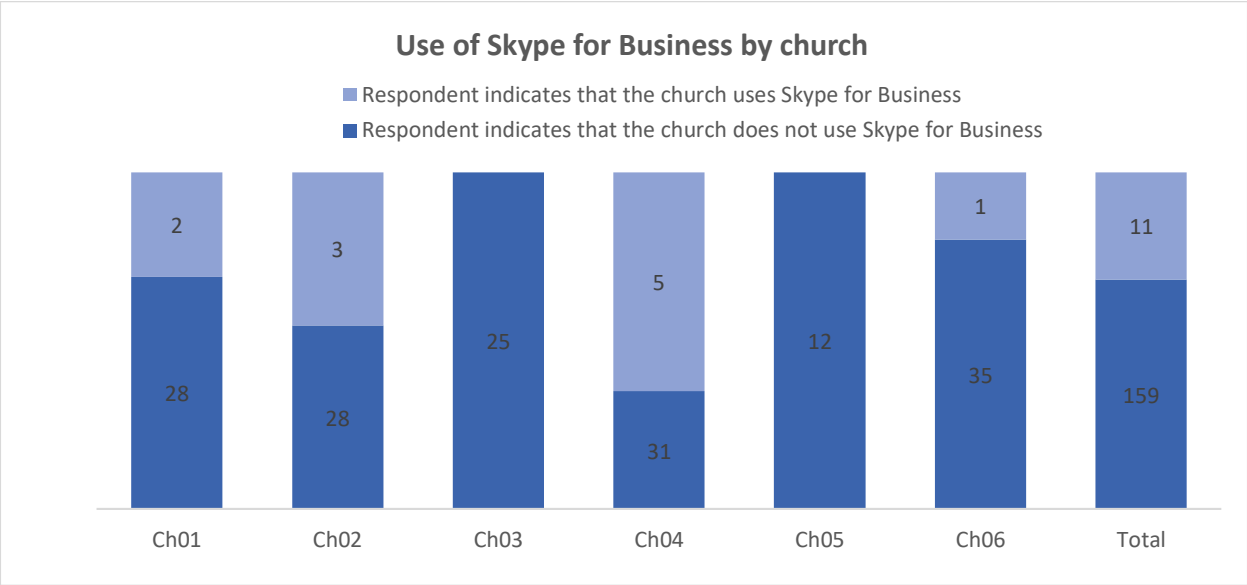

Figure 4.29.1: Use of Skype for Business by Church

The findings in figure 4.29.1 show that only 11 representing 5% of the respondents indicated that the church used Skype for business online application. The remaining 159 representing 95% of the participants stated that they did not using this particular platform.

Table 4.11: Barriers experienced by students to access virtual lessons

		Knowledge of software applications	Access to computer hardware	Financial income	Time management	Electricity Load shedding	Limited Access to Internet	Distractions Everywhere	
U01		103	74	116	83	115	93	40	175
		59%	42%	66%	47%	66%	53%	23%	
U02		26	20	31	20	17	24	15	41
		63%	49%	76%	49%	42%	56%	37%	
U03		35	23	26	32	35	36	9	49
		71%	47%	53%	65%	71%	74%	18%	
U04		30	30	32	27	48	43	37	59
		51%	51%	54%	46%	81%	73%	63%	
U05		29	31	44	35	40	43	36	60
		48%	52%	73%	58%	67%	72%	60%	
U06		29	23	23	27	33	37	20	59
		49%	39%	39%	46%	56%	63%	34%	
Total		252 57%	201 47%	272 60%	224 51%	288 64%	276 65%	157 39%	513

Table 4.11 shows results of the responses to specific barriers experienced by students in coping with virtual lessons. Limited access to internet represented by 65% as submitted by 276 respondents was the biggest barrier experienced

by students from all the covered universities. The least challenge faced by all students that responded to this questionnaire was distractions everywhere represented by 39% representing 157 respondents.

Table 4.11.1: Barriers experienced by Church members to access virtual services

Name of Church	What barriers are experienced by members								Total
	Knowledge of software applications	Access to computer hardware	Financial income	Time management	Electricity Load shedding	Limited access to internet	Poor connectivity	Distractions Everywhere	
Ch01	11	9	10	5	7	12	13	4	16
	69%	56%	62%	31%	44%	75%	81%	25%	
Ch02	13	14	10	8	9	15	14	7	20
	65%	70%	50%	40%	45%	75%	70%	35%	
Ch03	7	8	8	7	6	9	10	6	12
	58%	67%	67%	58%	50%	75%	83%	50%	
Ch04	18	11	15	9	12	14	16	5	23
	78%	48%	65%	39%	52%	61%	70%	22%	
Ch05							6	6	12
							50%	50%	
Ch06	17	12	14	10	13	18	22	10	24
	71%	50%	58%	42%	54%	75%	92%	42%	
Total	66	54	57	39	47	68	81	38	107
	57%	48%	50%	35%	41%	60%	74%	32%	

Table 4.11.1 shows the findings of the responses to the question regarding the barriers experienced by church members in their quest to access virtual services. Poor connectivity to the internet was the most common barrier faced by members as represented by 81 respondents which translates to 74%. ‘Distractions everywhere’’ was the least barrier experienced by various church members across denominations and stood at 32% representing 38 participants.

SOCIO-ECONOMIC FACTORS RELATED TO VIRTUAL MANAGEMENT

The fourth objective of the study dealt with some socio-economic factors relating to virtual management of universities and churches and were key especially that it was done at the height of the Coronavirus pandemic. It covers among others, financial implications of virtual management, effects on student and church member population, academic performance, spiritual growth and the level of online participation. The following charts and tables present findings:

Table 4.12: Financial implications to virtual management of university

Name of University	Yes	No	Not Every time	Total
U01	107	50	56	213
	50%	24%	26%	100%
U02	31	11	12	54
	57%	20%	22%	100%
U03	44	2	8	54
	82%	4%	15%	100%
U04	44	3	16	63
	70%	5%	25%	100%
U05	43	5	14	62
	69%	8%	23%	100%
U06	49	5	13	67
	73%	8%	19%	100%
Total	318	76	119	513
	62%	15%	23%	100%

The table 4.12 above shows responses to whether virtual management had financial implications to students? The results indicate that 318 from 513 respondents translating to 62% said yes. 76 participants said no translating to 15%.

Table 4.12.1: Financial implications to virtual management of the church

Name of Church	Yes	No	Not Every time	Don't Know	Total
Ch01	19 63%		8 25%	4 12%	30 100%
Ch02	27	2		3	31

	86%	5%		9%	100%
Ch03	21 83%		4 17%		25 100%
Ch04	23 65%	5 13%	3 9%	5 13%	36 100%
Ch05	12 100%				12 100%
Ch06	26 72%	1 4%	3 8%	6 16%	36 100%
Total	128 75%	8 5%	18 11%	17 10%	170 100%

Table 4.12.1 shows responses to whether virtual management has financial implications to church members? The results indicate that 128 respondents translating to 75% said Yes. 8 representing 5% of the participants said No.

Table 4.13: Effect of virtual management systems on student population

	Positively	Negatively	Not sure	
U01	69	74	70	213
	32%	35%	33%	100%
U02	15	26	13	54
	28%	48%	24%	100%
U03	26	12	16	54
	48%	22%	30%	100%
U04	14	18	31	63
	22%	29%	49%	100%
U05	11	32	19	62
	18%	52%	30%	100%
U06	37	12	18	67
	55%	18%	27%	100%
Total	172	174	167	513
	34%	34%	32%	100%

The table 4.13 above shows findings of the effect of virtual management systems on the number of students at the sampled universities. 174 respondents out of 513 representing 34% stated that it had negatively affected the number of students. 172 respondents indicated that the effect was positive translating to 34%. Another 33% stated that they were not sure. The above finding clearly show that there is a minor difference among the respondents.

Figure 4.13.1: Effect of virtual management systems on the number of church members

Name of Church	Positively	Negatively	Not Sure	Total
Ch01	6 19%	11 37%	13 44%	30 100%
Ch02	4 14%	13 41%	14 45%	31 100%
Ch03	4 17%	6 25%	15 58%	25 100%

Figure 4.14: Impact of management systems on academic performance

Name of institution	Rating											Total
	0	1	2	3	4	5	6	7	8	9	10	
U01	20	8	7	10	19	48	28	28	21	7	17	213
	9%	4%	3%	5%	9%	23%	13%	13%	10%	3%	8%	100%
U02	2	4		2	4	11	8	6	7	3	7	54
	4%	8%		4%	7%	20%	15%	11%	13%	5%	13%	100%
U03	1	2			3	11	7	15	6	7	2	54
	2%	4%			5%	20%	13%	28%	11%	13%	4%	100%
U04	2	2	2	5	6	16	12	8	6	4		63
	3%	3%	3%	8%	10%	25%	19%	13%	10%	6%		100%
U05	2	9	7	5	7	9	7	9	2	2	3	62
	3%	15%	11%	8%	11%	15%	11%	15%	3%	3%	5%	100%
U06	5		1	3	5	12	6	14	10	7	4	67
	8%		1%	4%	8%	18%	9%	21%	15%	10%	6%	100%
Total	32	25	17	25	44	107	68	80	52	30	33	513
	5%	6%	3%	5%	8%	20%	13%	17%	10%	7%	6%	100%
Mean	**1**	**1**	**0.5**	**1**	**1.3**	**3.3**	**2.1**	**2.8**	**1.7**	**1.2**	**1**	**15.9**

Ch04	5 13%	9 26%	22 61%	36 100%
Ch05	12 100%			12 100%
Ch06	9 24%	13 36%	14 40%	36 100%
Total	40 23%	52 31%	78 46%	170 100%

Table 4.13.1 shows the responses relating to the effect of virtual management systems on the number of church members who attended church. 78 respondents stated that they were not sure translating to 46%. 40 participants representing 23% stated that the effect was positive while another 52 indicated that it was negative translating to 31%.

On the question of how virtual management systems of the university was impacting academic performance, Table 4.14 shows that the highest score was rated at 5 which stood at 20% with a mean of 3.3. The rating of 5 was half of the perfect score. The total mean for all universities stood at 15.9.

Table 4.14.1: Impact of virtual management systems on spiritual growth

	1 – 4	5 – 7	8 –10	Don't Know
Ch01	7	4	2	3
	44%	25%	12%	19%
Ch02	7	7	6	2
	32%	32%	27%	9%
Ch03	2	7	1	2
	17%	58%	8%	17%
Ch04	7	10	2	4
	30%	44%	9%	17%
Ch05		1	1	
		50%	50%	
Ch06	3	13	7	2
	12%	52%	28%	8%
Total	26	42	19	13
	26%	42%	19%	13%
Mean Total =16.5	**4.3**	**7**	**3.1**	**2.1**

On the question of how virtual management systems of the church impacting spiritual growth, Table 4.14.1 shows that 42 of the respondents stated that it was positive translating to 42%. Another 26 indicated that rated the effect to be between 1-4 which is negative which represents 26%. Lastly, 13% of the participants indicated that they did not know. On average, the highest score was between 8-10 representing 3.1 with the total mean being at 16.5

Table 4.15: Student participation during virtual class

Name of institution	**Respondent indicates that student participation during virtual class is not Very Good**	**Respondent indicates that student participation during virtual class is Very Good**	**Total**
U01	98	115	213
	46%	54%	100%
U02	31	23	54
	57%	43%	100%
U03	17	37	54
	32%	68%	100%
U04	32	31	63
	51%	49%	100%
U05	32	30	62
	52%	48%	100%
U06	23	44	67
	34%	66%	100%
Total	233	280	513
	45%	55%	100%

The table 4.15 above shows results of how the respondents rated the participation of students during lessons online? 280 out of 513 indicated that it was very good translating to 55%. While 233 respondents said it was not very good representing 45%.

Figure 4.15.1: Member Participation

Name of Church	Respondent indicates that member participation during virtual services is not Very Good	Respondent indicates that member participation during virtual services is Very Good	Total
Ch01	26 87%	4 13%	30 100%
Ch02	25 82%	6 18%	31 100%
Ch03	23 92%	2 8%	25 100%
Ch04	28 78%	8 22%	36 100%
Ch05	2 13%	10 87%	12 100%
Ch06	23 64%	13 36%	36 100%
Total	127 75%	43 25%	170 100%

The results captured in table 4.15.1 show that only 23% of the participants stated that church member participation during virtual services is very good as drawn from 43 submissions. The remaining 127 which represents 77% of the respondents indicated that church member participation during virtual services is not very good.

4.2 QUALITATTIVE FINDINGS

As earlier stated in the preview to chapter four (4), this section is presentation of the findings collected through guided interviews with key stakeholders, namely university registrars, Head Pastors, IT staff from both institutions and some Heads of the Secretariat from church mother bodies. The presentation of findings will be done based on common and unique themes that addressed the research questions. In order ensure that the reader is able to follow the presentation of findings in a manner a structured manner, the first part captures all submissions from universities which will be followed by the data collected from the sampled churches.

The presentation will begin by highlighting the readiness of the leadership of universities and churches for digital transformation and adaptation, it will then bring out the socio-economic factors relating to virtual management. Thereafter, a presentation of the challenges and barriers that the two institutions face from different fronts will be done.

4.2.1 Institutional Leadership's readiness for Digital Transformation and Adaptation.

The purposefully sampled informants were presented with the following questions to address the study objectives:

1) How would you describe the institutional leadership's readiness for digital transformation and adaptation?

2) What were some of the measures that the University/Church has put in place to ensure that it virtually operates without interruptions?

3) What were some the socio-economic factors of virtual management of universities/churches?

4) What were the challenges faced in virtual management?

4.2.2 University Readiness

An IT staff at U04 made the following submission when asked about the university's readiness that highlighted the important role that leadership plays in facilitating institutional digital transformation:

> *If the leadership an institution is rigid and keeping to the traditional way, it becomes difficult especially when things are viewed from the cost aspect. Such a leadership will feel that this whole issue of digital platforms and virtual management is just costly to the institution. Once the leadership is willing and open to new ideas then people get to open up and give ideas.*

The study findings indicated that there was need for a mindset change meaning reorientation of members of staff especially those used to the physical meetings. This demanded a lot tutorials and basically to hold the hands of the those virtually challenged through the adaptation process until they were able to handle things on their own.

The university registrar at U01 said;

> *We are very far behind and still have a lot to learn and manage as historically our learning profile has been physical. For online learning, most universities including private ones have only gotten into this mode in the last 10 years. In actual fact, people are just adapting and learning how to use both physical and online platforms. The students also need orientation in order to increase their participation.*

The study also found that some universities had advanced in their implementation of virtual management as observed by an IT staff at U06:

> *Although we are a relatively young university, we are at 80% in terms of readiness though we have a knowledge gap especially for the older generation as they are challenged on the use of the PC. They are behind in terms of computer knowledge and cannot deliver or engage students on the available platforms.*

The foregoing submissions were augmented by the registrar (U06) as follows:

> *Our institution was able to switch to virtual platforms within two days of the closure induced by Covid19 restrictions because our staff are heavily empowered. All academic staff have access to a*

> *computer and MiFi's to help them deliver a lecture from any point. Our library has an electronic side, you can access it with or without internet. So that is our business continuity plan. For future employment, I can tell you that prospective candidates with a weakness in ICT skills will not be considered.*

When asked if digital transformation and adaptation is a must for institutions of higher learning, the responses were captured as shown below:

> *It is a must because the world is dynamic and you have no choice but to adapt if you want to capture students most of whom are working and hence do not have the time to sit in full time physical classes. The above prospective students make up the bulk of the ones who can afford to pay school fees. If you are just waiting for school levers, most parents are not able to sponsor 2- 3 of their children at the same time, sometimes not even one so you just have to adapt.*

The U06 IT staff said the following in summary of others interviewed:

> *A virtual working environment presents an opportunity where the employees only go to the office now for two days. The rest of the time they are working from home because of this virtual environment that has now been set up. So, it is the way the world will be working. There are a lot of companies that have permanently shifted their employees to the virtual environment and from the university point of view, it saves us certain costs if lectures can happen home, the lecturers don't have to come to the university.*

The study also found that the switch to virtual management presented some risks and opportunities to the future operations of higher learning institutions as submitted by the U03 registrar:

> *The virtual space has got a lot of experimentation which can be reduced if we could have environments where institutions would share experience so that they can then move together.*

Another aspect that was brought out during the interview covered the importance of training and as stated by the university registrar at U03:

> *Training is necessary to appreciate online platforms as well as creating partnerships for things like an e-library sharing or collaborations required to ease the access to materials. There is need for serious orientation to upskill the top leadership so that this challenge is cascaded down to the lowest levels.*

Additionally, the study found that a rapid adaptation to virtual management was generally imposed all the sampled universities even though some had already put in place ICT systems that they planned to roll out in future. This meant that in the immediate sense, both staff and student needed to establish protocols of engagement through the new norm of management.

In the words of the U06 Registrar:

Work place policies to regulate the use of these platforms is also necessary, for instance, how do ensure that exam quality is the same as before we went virtual? How do monitor the engagement of students by our academic staff particularly the older generation who are virtually challenged?

We have had a good response though our staff is kind of mixed as some are not very good with ICT and adaption has not been easy. The investment in technology is also a challenge since you need to have certain software installed including the training of staff that is equipped in that area. There is a cost to both training and software. For 3rd world countries, it has not been easy as it expected at that universities would be forced to operate virtually.

4.3 Challenges of virtual management in relation to university

In order to make a structured comparison of the two institutions, the study used some common variables to help identify the areas of convergence and divergence such as student faculty contact, course quality, capacity to keep to deadlines and active learning.

4.3.1 Student contact

In discussing student contact, the U06 registrar observed that;

Internet connectivity is a problem, "for example, if we have students in Mulobezi and Katima Mulilo, how do we reach them? I do not think we have the infrastructure as yet; we are not ready."

Another challenge was highlighted from the interviews with IT staff (U01) was that sometimes the contact with students is hampered by limited knowledge in the use of online platforms by older lecturers.

The older lecturers are not technologically astute to handle these online applications. Some struggle to upload materials or exams for students to access. This has affected the students. For instance, some login and their microphones are muted and students are not able to hear what they are teaching.

Furthermore, the challenges facing universities were presented from three different fronts during interviews with IT staff from U01, U05 and U04 as highlighted below:

For the University*:* It found that most of the required technologies were dependent on other factors. For instance, load shedding. Many universities (private and public) did not have capacity to buy the required standby generators to effectively operate during such times of power interruptions.

For Lecturers*:* It hindered the level of interaction between them and students. It was observed that virtual classes were not learner centered as the case was supposed to be and that the use of videos consumed more internet bundles and the bid to avoid that lowered the much-needed exchange between the lecturer and students.

For Students: The difference in the types of gadgets that students used was another challenge. The sound/visual quality was not the same. Furthermore, their concentration was not consistent, others would be watching TV, so maintaining that discipline was difficult. In exam administration, there was no surety as to whether a student was alone in the room when answering the question. Another common challenge for students was that sometimes students were not able to download the answer sheet depending on the configuration of the PC.

4.3.2 Active learning

The study also found were ready to ensure that their academic calendars were not negatively affected by either covid 19 or the switch to virtual platforms. The in-depth interviews with the U06 Registrar and the Head of ICT indicated that their institution was ready to operate virtually long before the outbreak of Coronavirus.

4.3.3 Course quality

From the vantage point of some university registrars interviewed U04 and U06 stated,

> *Additionally, an IT staff went on to say "for exams, it was not good because some questions were subjective such multiple choice. It was subject to malpractice; some would seek help from google or parents to answer for them. It was not favoring the students in terms of the progression criteria."*

4.3.4 Consistency to deadlines

The study also found that most universities had challenges at first as both the IT department and students did not prepare for it and were forced to switch to virtual platforms due to the outbreak of the coronavirus. This abrupt move disadvantaged slow learners as they could not ask questions and the lecturers were rushing to cover as much material as they could within a certain frame.

4.3.5 Lecture clarity

The following were the findings gathered from interviews with university registrars and were best represented by U04:

> *Some of the students and staff were not technically savvy to handle this change. Some lecturers needed training and orientation to handle the flow of work. On the positive, it provides an opportunity to learn or upgrade themselves with the regard to the use of online platforms, PowerPoint presentations and recordings that can then be later downloaded by students for clarity and revision.*

4.3.6 Measures implemented for the University to virtually operate without interruptions

The following are some of the submissions that were gathered from interviews. The university registrar (U03) stated:

> *In order for us to remain operational, we are looking for best practices and see how others are learning virtually and sought backup solutions such as gensets.*

Another IT staff (U05) said:

> *We also have a connection that is part of eduroam that gives us a good connectivity to the internet for support. The university has bought back up in terms of power, so we have put a very big genset that we use so at least there's power. We have also invested in several different kinds of devices and hardware to support our digital environment.*

The data gathered through interviews also showed that two universities (U04 and U06) had a lot better than others in terms of investing in ICT infrastructure to ease virtual management and make it as close it can be to face-to face classes:

> *eLearning or virtual management requires an investment in a few technologies. "We have invested in smart boards which used during virtual classes that that quantitative in nature. When a lecturer is just talking, the students won't appreciate but if he/she is scribbling on the board, students can have a learning environment closer to physical classes. It is more interactive, they can interject, ask questions and even write on top of it. You can also look at tablets, headphones because most of these lecturers have to conduct lessons from home or the university depending on the restrictions. The institution has also had to provide alternative internet for lecturers hence investment in MiFi's."*

In a related manner, the U03 Registrar made the following observations with regard to the need for regulatory authorities to guidelines to as to guarantee quality assurance which was on the major concerns of the university administrators:

> *There is need to continue to learn and guidance from the Higher Education Authority (HEA) is necessary on the modes to use so as to avoid compromising the standards.*

Additionally, the U04 registrar also noted that;

> *Universities do not have to provide as much office space, tea or coffee now that lecturers can teach from home. The universities are also saving on printing lecture notes thereby reducing on consumption of power at the institution because everybody is at their home. Virtual management has given us an opportunity to reach more students and increase on returns that one may not even be able to quantify in money terms.*

On the positive, the Registrar from U01 said;

> *Virtual learning is the future of education because it allows the universities to expand beyond their physical walls. It is a more efficient way of learning and in combination with face-to-face classes, a blended learning approach is probably the more appropriate mode of learning good especially for the master's degree programs."*

4.4 Socio-economic factors of virtual management

Another objective of the study centered on highlighting some socio-economic factors relating the virtual management and the interviews with IT staff at U04 stated the following:

> *eLearning or virtual management requires an investment in a few technologies. "We have invested in smart boards which used during virtual classes that that quantitative in nature. When a lecturer is just talking, the students won't appreciate but if he/she is scribbling on the board, students can have a learning environment closer to physical classes. It is more interactive, they can interject, ask questions and even write on top of it. You can also look at tablets, headphones because most of these lecturers have to conduct lessons from home or the university depending on the restrictions. The institution has also had to provide alternative internet for lecturers hence investment in MiFi's."*
>
> *They resort to sending by email from another point resulting in their submissions being rejected by lecturers because it has passed the stipulated deadline.*

4.4.1 Internet Access and Reliability

One of the major points that was raised by all the stakeholders was internet access and reliability and the U06 registrar best captured the views of others;

"The biggest challenge is internet availability because of the cost implications with regard to getting what you require to provide the services. This has obviously affected students as they are not able access the internet besides the cost of bundles."

On the positive, the findings pointed to the fact that virtual learning was the future of education because it allowed the universities to expand beyond their physical walls. It was a more efficient way of learning and in combination with face-to-face classes, a blended learning approach would probably be the more appropriate mode of learning good especially for the master's degree programs that people who were not able to be in full time school evening classes due to the demands of their work and families.

Some of the key findings gathered from university registrars (U03 and U01) were as follows:

> *Student participation is much better. The classes used to have problems which goes back to the same thing of students complaining about financial resources. In that regard, it is hard to get even more than 80 to 90% attendance of a class when it is online.*

The findings also showed that availability recorded lectures was in reality affecting online student participation as they preferred always request for recordings means that they were deliberately missing the online class. The idea was that they can watch the video, but then the aspect of the video denied the student and the lecturer of the much-needed interaction, So, the participation in terms of the virtual environment was less compared to the physical environment.

4.4.2 Identify and support struggling students

The study also brought to light the need for students struggling with virtual learning to get support one of the registrars (U03) observed that Blended learning was good, if students spent 50% in class and the other 50% was done virtually, one would be able to have a stronger engagement with students as opposed to going completely virtual. At the time of the study, a complete switch was seen to have a negative impact on the quality of students that graduate and go and work out there especially those in practical fields like health sciences.

4.4.3 Create short course content

On whether there was need to reduce the courses content offered virtually, the responses indicated that they did not demand for a change to the content as they were able to deliver it with the given time frame. An IT staff from U04 stated that;

> *At first, we had challenges both as IT and students because we did not prepare for it and were forced to switch to virtual platforms. This disadvantaged slow learners; they could not ask questions and the lecturer was rushing to cover as much material as he could within a certain frame.*

Another registrar (U06) said:

On lecture time, the virtual environments have helped. And they have made us more efficient in managing time, the same also applies to students because it gives us room to carry out other activities that would normally require longer duration, organizing people to come together and have this collaboration. But now it's much more efficient and easier with the virtual environment.

4.5 Barriers to virtual management

Three registrars and two IT staff said the following on the barriers affecting virtual management:

Access to internet, the cost of bundles and difficulties to access school materials are among the barriers that we face.

4.5.1 Effect of virtual management on population and performance

When asked about the effects, the registrar at U01 had the following views;

Covid19 and not necessarily virtual management has driven the student percentage lower as some feel that this mode of learning is not effective especially those who are doing practical courses like health and fire and safety. "It is difficult to ascertain the exact percentage because you know that some companies laid off workers as way of reducing the wage bill due to low income triggered by Covid19. This meant that those who were supported by these parents or companies had to drop out."

The IT staff at U04 also stated;

The first week we migrated to virtual platforms we had challenges from all fronts including resistance from students stating that this is not what I paid for, I was billed for full time classes and I cannot be seeing recordings.

4.6 Church Response to Digital Adaptation

The following were some of the key submissions from the interviews with the targeted church leaders capturing the common themes on adaptation to digital platforms which all admitted to be a fairly new mode of providing leadership to the members. The study findings from the key informants showed that church was always ready to adapt to modern way of doing things, though in many ways challenged. The biggest challenge for the respondents that the church faced in the wake of modernization was that it risked being influenced by principles that do not conform to the mandate of the church.

In words of one of the Pastors (Ch01)

Science develops in all directions but there are certain things that may be questionable in terms of safeguarding the human rights. It is not everything that science proposes that can be acceptable but generally the church is ready if that is what will happen for the whole world to interact.

The Priest from Ch02 stated:

> *Well, my immediate thought is this regarding the church and visual management of the flock, I suppose it is something that we need to adopt as we are living in ICT era, it's called the fourth revolution as it were. But we also need to embrace it with prudence and spontaneously. Prudence demands good quantitative and qualitative judgment in the use of these technologies, which we know can often be abused. The fourth revolution is with us which is the cutting edge of artificial intelligence. And so, we need to adapt to this reality. The virtual platform is part and parcel of it we need to move with it. Sometimes it can bring with it what is known as a cultural shock, but we have to live with that culture shock, because this reality has been sort of thrust on our shoulders.*
>
> *Furthermore, and speaking of our parish, we have embraced the digital context into which we will be thrust and we are appropriating the context in which we are working. We also have institutions that are involved in media as part of working the media is having the digital comparative advantage with state-of-the-art equipment that is able to process data at high-speed rate.*
>
> The Pastor of Ch01 observed:
>
> *I think the church is ready, because already we have experienced the COVID-19 whether we like it or not especially with the elite, they are very much hesitant even when they are not supposed to put on a mask, they will put on a mask. And so probably they are better off in their homes, so the digital kind of management is welcome, despite the challenges it comes with.*

The Pastor from Ch04 also gave his experience on adaption;

We have taught them and directed them to make programs and online groups for congregations, for presbyteries and even for the sinners, we are all people affiliated in those various categories, and it is so far working out well. For instance, I belong to almost all those groups, I see what is happening and people are very active. You know, of course, like we are saying *because of limitations, most of our people still cannot access those facilities.*

In the words of one General Secretary;

The country is technically behind with no reliable power and internet regardless of one's socio-economic status besides the cost of gadgets. Additionally, many churches do not have a deliberate policy with regard to their communication strategy simply because they have based their communication on physical meetings, audio and live presentations.

Another representative said,

A number of churches were and are ill equipped for any virtual programs because we have held on to the belief that people have to gather or meet and have someone to physically preach to them. This is besides some Pastors being ill-prepared because they take Facebook and internet to be worldly and unchristian.

4.7 Challenges that exist in the virtual management of churches

It was learnt in the course of carrying the study that the church was also confronted by a number of challenges which are covered below under a few variables as compared to universities. The IT staff at Ch05 stated the following during interviews the church in Zambia was late to embrace virtual platforms. It was further noted that there was a huge space and crowd out there that can be reached virtually but financial constraints had been a barrier.

The Pastor at U04 made the following observations:

From a very practical point of view, people have been used to actual contact in sessions of preaching. A few days ago, I was talking to somebody who said that virtual meetings feel like when their minister is talking to them on the phone, 'it's like we are just watching a TV program. We want direct contact with the servants of God' So, people have that understanding, because they have been socialized to that form. So up to now we have a challenge.

4.7.1 Church Contact with members

From the findings obtained from Pastor Ch03 and Ch04, it was learnt that leaders did not have a big problem in following virtual meetings because they knew at that level as leaders and had an understanding. But the challenge come in, when one looked at the ordinary people that a particular Minister was leading.

Distance can be felt in the sense that when you are into face-to-face conversation with somebody, there's also what is known as a non-verbal communication. How do you pick it? How do you pick up as communication is not just a word, it is our posture or our demeanor? But also, they are disturbed because you are talking to them through an electronic gadget."

From the submission gathered through interviews, the Priest at Ch02 stated;

> *The flipside to the switch to virtual management has been in the increasing cases of demand in terms of psychosocial counseling services because of this isolation and also the lack of close companionship induced by restrictions of physical meetings.”*

Another Pastor (Ch01) stated that although virtual platforms gave one the comfort of staying home, they were also subject to many distractions negatively affecting concentration and focus and, in that sense, a major aspect of fellowship was lost.

4.7.2 Church service quality

The above data shows that churches have done their part to facilitate for the provision of quality online services even when it was initially imposed on most of them due to the outbreak of the Coronavirus. One of the church mother body representatives submitted that;

> “*The church is still not prepared and need to be trained. For example, do you just wake up, sit in the corner of your kitchen and start live streaming? The etiquette, behavior, need for media teams in churches so that it is not just the children of the clergy that handle these platforms. You need professional expertise, which was missing even in some of the big churches in Lusaka and it took a number of months to catch up especially when it was realized that Covid19 would take long to disappear.”*

4.7.3 Help Church members to maintain focus

One Pastor (Ch04) interviewed captured the views of others and agreed with the statement;

> “*There is need to help members to maintain focus especially that virtual management was fairly new to most churches. It is easy to lose members because they go through many problems such as lack of finances. So, to follow online programs may not be possible which thus leaves the church in the hands of members who are financially sound.”*

Additionally, another Pastor stated;

"Fellowship is not the same virtually even to you who is speaking to people. We have also noted that the levels of faithfulness to giving is dropping. In a physical meeting, people are encouraged to give offerings as no one wants to be seen or known for not giving in public.’’

4.7.4 Personal connection with church members

The IT staff at Ch05 stated the following during interviews;

"*The church in Zambia was late to embrace virtual platforms. There is a huge space and crowd out there that we can reach virtually but our financial constraints have been a barrier."*

4.7.5 Identify struggling church members

The submissions of the Pastor from Ch04 best capture the views echoed by others:

> *A Pastor should visit members. We reverted to using phone calls as way of checking on them. Now imagine calling a thousand members, it is time consuming and challenging to meet the needs of people. Group calls are also not effective as some may not clearly get your thoughts.*

4.7.6 Church access to internet

The findings could be indicative of the fact that most respondents are living in areas that have a good internet access and that the service providers are doing a good job. The following are the some of the perspectives of one Priest from Ch02 which were similar to others interviewed:

> *Although ICT use may not be a challenge for individuals, the related costs are. It was noted that not everyone has access to a smartphone, or an iPad or a computer. All along, we have been doing face-to-face ministry. The best we could do even in the time of no Mass was to talk over the phone. But now we graduated, to using Zoom, WhatsApp and Telegram. So, there is the issue of the learning curve for Pastors and Priests, also, the learning curve for people to be able to put to use these online groups. So that is also a challenge."*

4.7.7 Measures to ensure that the church operates virtually without interruptions

Some indicated that they had come up with a Media Committee to ensure that they were active in virtual programs. In view of the demands of virtual management, the study findings indicated that most churches did have the required equipment to do it. The case was different for one church as captured below in an interview their IT staff:

> *To facilitate a more reliable internet connectivity, we got a fiber connection to the church. This was done when the church was closed and there was a high demand for us to go virtual. The move is a departure from prepaid internet that uses bundles. The fiber cable allows us to access the net on a monthly basis. We also had to employ full time staff that handle the technology side of things besides investing in church application that runs on Android and IOS. We further boosted our Facebook page to increase the viewership.*

In response to some of the measurements that they had put in place to operate, the Pastor from Ch05 stated that they in the last two years heavily invested in good sound and visual equipment so as to give people an experience that was as close as possible to a face-to-face service.

It was further learnt that their leadership was very dynamic and aggressive in embracing the demands of the time. Generally speaking, it was not the case in other churches because they had to had a particular or traditional way of doing ministry.

The Pastor at Ch02 submitted as follows:

> *I personally think what is very important for now is a shift in our mindset and our understanding that the time we are in, we need to use the virtual programs. Everyone must take it upon themselves to make sure that we take responsibility and do most of these programs by checking then we'd like to continue.*

The submissions of the Pastor at Ch04 best represented the others interviewed:

> *Our future seminars have a component of training people on how to handle Zoom and Google meetings. In our strategic plan, one of the objectives is to have well-coordinated WhatsApp and Facebook groups where we are going to teach our beliefs. We do not just want to use these platforms for announcements, we want lessons to be presented there. We plan to use them more for evangelism than just information. We have taken a deliberate move in that direction.*

4.7.8 Create shorter church services

When asked about their views over the duration of online meetings, the Pastor at Ch04 said;

> *The challenge with online worship is that it targets or appeals to a certain age group. For example, it is very difficult to make children to sit down and follow programs and also their concentration levels are low. Additionally, the aged members are not conversant with the use of computers besides the challenge of having enough internet bundles to be online for a long time.*

4.8 Barriers to virtual management

Another Priest (Ch02) made the following submissions on some of the common barriers such background sounds during virtual meetings:

Well, it's amazing sometimes that the participation is by and large, spontaneous. Like I've said, sometimes you get more information than you bargained for. Okay, the microphone is on. There's some noise in the background. Little ones making noise and shouting, but it adds to the sort of reality of the context that we are in.

One Pastor (Ch04) said: *the other challenge was that sometimes the internet providers would not communicate that their system will down the next day. So, members would buy bundles in readiness for Sabbath only to fail to access the service due non-availability of internet connectivity.*

4.9 Views of virtual management in relation to church

Although the responses to provision of online services by churches was above ninety (90%) percent from the quantitative data collected through questionnaires, the submissions of the Pastors and church mother bodies presented a different picture. The following submissions that were made by one church mother body represent the views of others interviewed on the issue of virtual management and the steps needed to fully realize it benefits:

> *A lot needs to be done in terms of training and purchase of good equipment. Additionally, reliable internet, it should not be a preserve of the elite. For example, lack of smart phones, internet bundles and personal computers means that some churches just went dead and could not have prayers during the times when face to face meetings were completely suspended due to outbreak of Covid 19. Many church leaders do not talk about these things and are not alive to the fact that their absence can frustrate worship and their service to the members.*

In order to foster growth of the ICT sector as vehicle for virtual management, a general secretary of another church mother body observed:

> *There is need for the clergy to take their elected officials to task, for instance ask why do they do not have reliable internet and phone connectivity in their area?*
> *"It has implications in the event that we have challenges like Covid19 because it hinders you from meeting the needs of the people in your constituency. These should become an issue of interest by the church. Engagement with civic leaders is necessary for us to become like other parts of the world.*

> *Virtual management gives you capacity to reach a wider audience and people that would not ordinarily come to attend a physical church meeting.*

4.2 Summary

The foregoing chapter presented both quantitative and qualitative findings of the study. The research findings were presented in tables and bar charts for all quantitative data while qualitative information was presented in a descriptive form. The findings contain some actual interview verbatim as transcribed the researcher.

In view of the research questions, the major issues captured in the findings were that both universities and churches faced challenges such as struggle to cope with the sudden switch to virtual management, cost of the required equipment, unreliable internet services, resistance by students to adapt to the new mode and on the other hand reluctance by the church members. Furthermore, some older lecturers, students, Pastors and church members struggled to manage and follow online programs due limited knowledge of software applications. While the church

generally used Zoom application, the universities had Moodle, Google meet/classroom, Skype for business and Zoom.

On the issue of adaptation to virtual management, most universities were advanced compared to churches as the later initially saw it as temporal measure. In principle, both institutions were agreed on the fact that the demands of the day left them without a choice but embrace virtual management. The challenge of adaptation affected both from different fronts on some variables and similar on others. For instance, quality assurance for the universities was to safe guard exam administration while for churches, it could only be seen through commitment to the teachings was at times difficult to grade as it required physical presence inhibited by the Coronavirus outbreak.

An assessment of the barriers showed that while limited access to internet and electricity loadshedding stood out for universities, the churches were affected by poor connectivity and limited access to internet. Although the responses to provision of online services by churches was above ninety (90%) percent from the quantitative data collected through questionnaires, the submissions of the Pastors and church mother bodies presented a different picture.

The findings with regard to the socio-economic factors affecting the two institutions were that both went to various issues but the major ones were financial income, time management, poor monitoring of students and the high cost of equipment. The chapter brought out various issues of convergence and divergence when examined against the two institutions. The quantitative findings for universities showed that students are generally struggling to cope with virtual management due several factors. On the other hand, the qualitative findings as obtained from the administrators indicated that most universities sampled had employed user-friendly virtual platforms and ICT equipment for students and mainly stated that the challenges faced driven by external factors such as poor internet connectivity and electricity loading.

The quantitative findings from church members showed a positively skewed picture with regard to the quality of online services provided by the churches. It is possible that members were conscious of need to uphold the name of the congregation and did not want to appear to discredit their leadership. This view stems from the fact that the qualitative findings gathered from the Pastors from some the churches showed a completely opposite picture. The reality from the side of the church leaders was that most sampled churches were ill- prepared for the switch to virtual management and could not wait to return the orthodox mode of doing church services. They indicated that the idea was foreign and to a large extent contrary to the demands of the Holy Scriptures especially that it negatively affected some key aspects of their church liturgy such as confession, holy communion, offerings and strict observance of the Sabbath day.

Therefore, the next chapter attempts to discuss the findings in relation to the research objectives.

CHAPTER FIVE: DISCUSSION OF FINDINGS

5.0 Overview

This chapter presents a discussion of the findings on the challenges that exist in virtual management of universities and churches. It also covers some opportunities that have risen out the challenges faced by the two institutions in their quest to that service delivery is done virtually. The findings are discussed in relation to the research objectives and the existing knowledge on virtual management underpinned by existing theories. The discussion of findings from the students and church members has been carefully combined with those from University Registrars, Head Pastors, Information and Technology staff, and some heads of Church mother bodies. The following were the specific objectives of the study:

1. To investigate whether there exist challenges in virtually managing universities and churches.
2. To explore the university and church leadership's adaptation to institutional digital transformation.
3. To investigate why students and congregants are struggling to cope with virtual meetings.
4. To examine the socio-economic factors associated with virtual management of universities and churches?

The discussion first looks the demographic data of the respondents from both universities and churches which are; gender, age, type/size of institution and education level.

5.1 Sex

The findings presented in the previous chapter indicate that the majority of the respondents from universities and churches were female which could have an effect on the outcome of the study. It was necessary to include sex as it helps to have an understanding of how both sexes are coping and the findings show that the challenges are not unique to one sex. The statistics of the respondents favoring women shows that they are keener to online learning compared to men. These findings reflect the conclusions of Anderson and Haddad (2005) who also investigated the idea that female students were more reflective in their learning, appeared less hesitant to engage in the online environment, felt they had more control over their learning and found the mode a positive experience compared to face to face courses in similar academic areas. They believed online learning complemented women's 'ways of knowing.'

In the same vein, Yoo and Huang (2013: 156), found that "female students have a stronger intrinsic motivation to take online courses than their male counterparts."

5.2 Age

The highest number of respondents from universities and churches was aged between 20-35 represented as presented in the previous chapter. According to Smith (2014), while the elderly population has been slower adapting to technology than the younger generation, the elder pattern of usage has continued to rise. The interview submissions showed that the challenges experienced by some older lecturers, Pastors, students and church member is related to the fact that their background did not have an ICT component specifically internet usage. Therefore, there is need to

ensure that virtual management is gradually implemented meaning that a blended approach is highly advisable. Only then will it be easier for slow learners as well as the older generation from both institutions to cope and adapt with the demands of change. The fact that the highest number of participants was aged between 20-35 years agrees with another aspect that was brought out during interviews as some Pastors stated that virtual management appeals to a younger age group.

The study findings are contrary to Russell (2016:5) who found that for the elderly in a virtual church environment, neither their denomination nor physical proximity were concerns and that the elderly consented to a changing world. The findings for sampled churches in Lusaka urban indicated that congregations with a fairly youthful membership did not have challenges with regard to knowledge of online software packages.

5.3 Education Level of Respondents

It was judicious to find out the education level of respondents because the use of online applications demands that one has education specifically relating to ICT. The findings show that almost half of the respondents from church members have either attained or are pursuing their university undergraduate studies. On the other hand, the highest number of the university respondents are studying for their diploma. The results suggest that most of the respondents from both institutions (universities and churches) were literate enough to handle various virtual platforms because of their level of education. This is contrary to the findings of Parkes, Stein and Reading (2014:10) in which students were said to be poorly prepared for several e-learning competencies and academic-type competencies. Also, there is a low-level preparedness among the students concerning the usage of learning management systems.

5.4 Type and Size of Institution

The study covered six (6) universities out of which five (5) were private and one (1) public. It further included six (6) churches comprising various denominations which gave depth to the research as it was the respondents were drawn from cross section of the two institutions. The universities were generally more responsive to the study than churches as the latter took it as an audit of their organization and feared that the findings would end up on social media and lead to negative publicity. This shows that the churches are not accustomed to academic research and do not have an understanding of its value to the growth and improvement of their institution.

The researcher's findings agree with Dunaetz, (2020) who stated that Christians feel a tension concerning research because research may not seem necessary and such, research does not come naturally, even to Christian scholars who have been trained in the necessary methods. This is also an indicator that churches were not yet ready to embrace or migrate to the demands of the time considering that research is way of finding solutions to existing problems in a given sector.

5.5 Challenges that exist in the virtual management of the Universities and Churches

This section of the chapter endeavors to discuss the research findings covered under the first research objective which was to investigate whether there are challenges that exist in virtually managing universities and churches. The findings are further broken into common themes generated from quantitative and qualitative data as outlined in the preceding chapter. The findings generally indicated that most students and church members stated that they were experiencing challenges with virtual lessons and services respectively. The preceding results indicate that virtual management challenges are not unique to one institution and the following discussion highlights areas of convergence and divergence.

5.5.1 Failure to cope with online sessions

The results show that both institutions indicated that failure to cope with virtual lessons and services was the most common challenge as represented for both universities and churches. In comparative terms, it is clear one challenge stood out for respondents of both institutions. The failure to cope clearly shows that change from face-to-face meetings is a process that requires a paradigm shift both for the management and end users in universities and churches further justifying the Adaptive Structure Theory which holds that leadership influences technology and that people form structures. The preceding findings conform to a study done by Parkes, Stein and Reading (2014:10), in which students were found to be not sufficiently prepared for balancing their work, family, and social lives with their study lives in an online learning environment.

The qualitative findings further showed that both universities and churches need to do more to ensure that users easily cope with virtual management. As Mehtab et. al (2017:189) observed, most of the work of virtual team is to be done at home, therefore, it can be problematic to create a balance between work and family matters. The data collected through in-depth interviews with officials that were purposefully sampled for their role in these institutions shows that some of the challenges such as electricity load shedding had led to the purchase of standby generators though it was not cost effective to constantly keep them running. Most university students indicated that their school had a standby generator and ICT infrastructure to run virtually as the case was for Churches. The findings go to show that both institutions had taken a proactive stance with regard to implementation of virtual management.

According to Mehtab et.al. (2017:184), the virtual leader cannot physically observe the members and should be creative to observe the expectations virtually. Virtual team leader can't assume that members are ready to start virtual meetings. Virtual leader must have a sense to understand that an electronic silence means acquiescence rather than inattention. The study found that universities were struggling to monitor lecturers with regard how they were teaching and that the mode of delivery sometimes fails and resulting in a break in communication. The foregoing findings are contrary to Dhawan's (2020:6) study which found that online mode of learning is easily accessible and can even reach to rural and remote areas validating the arguments about accessibility, affordability and flexibility of virtual management.

Furthermore, the study found that internet connectivity is a huge challenge to the actualization of virtual management in both universities and churches. In the words of Martin et.al (2019), the phenomenal growth of online learning in higher education institutions has created an indisputable need for guidelines that assist new and continuing online instructors about how best to teach in the online environment. For universities, some registrars and IT members of staff submitted that they had to switch to platforms such as ZAMREN and Eduroam that were more cost effective to avert poor internet connectivity than the ordinary ones used by the churches sampled in this study.

5.5.2 Home Distractions and ICT Challenge

Another comparison drawn from the previous chapter shows that while the second major challenge for universities was distractions from learning at home, the second major challenge for churches was ICT which points to hardware and software packages. As Miller and Ribble (2010) noted, the use of virtual mode in management demands that staff, students and parents are educated to cope with the use of various software applications. The fact that the least challenge for both universities and churches was staff capacity shows that the challenge was more on the part of end-users namely students and church members. So, while as universities have alternatives to internet connectivity, churches do not which explains why member participation was lower compared to that of university students.

5.5.3 Online Applications

The study found that another contributing factor to failure to cope with online meetings limited knowledge in the use of online platforms such as Zoom on the part of church members. It was said that the members were disturbed because the teachings were through electronic gadgets which were also subject to many distractions negatively affecting concentration and focus. In that sense, a major aspect of fellowship was lost. According to Aukland (2020), so many people were attending church online—many for the first time. The reality in this assertion was that adapting to a new mode of managing anything including the church had its own challenges and clearly explained why many stated that they were struggling to cope.

Pastors indicated that for some of their people, online platforms were seen as a temporal measure only useful during the covid 19 outbreak and therefore did not see any need for them to trouble themselves with learning how to access church meetings virtually.

This was contrary to the approach taken by universities as they had embraced the demands of change in order to remain operational. Soerens (2020:1) noted that every church had been impacted by the pandemic. Congregants had been adversely affected by job loss, pay cuts, illness and death because of the Coronavirus. The foregoing observation highlights had a bearing on the reluctance by church members to embrace to the use of online platforms.

A comparison of quantitative data from the two institutions shows that though they both faced the same major challenge (failure to cope with online lessons) the other challenges were not similar such as distractions from home learning and ICT.

5.5.4 Challenges of learning quantitative courses

The submissions by some registrars and IT staff at universities further indicated that students in quantitative courses were struggling to cope with lessons and decided to invest in electronic boards and gadgets that made lectures more interactive considering that practice and visuals were key for students to capture concepts and formulas. The preceding finding agree with Kayworth and Leidner (2000:183-194) who suggested that the challenges faced by global virtual teams can be divided into four major areas: communication, culture, project management, and technology. These areas may interact with one another; for example, communication challenges may be related to cultural differences or to the use of computer-mediated communication technologies. The findings showed that not all universities had the capacity to invest in electronic boards to ease the learning of quantitative courses and yet continued to virtually offer them to students.

Additionally, Rajasingham (2011:10) noted that the challenges of virtual management go beyond innovative ICT implementations to the design and development of a holistic university system that responds to national and global needs, and to the community of demand. In comparative terms, more universities than churches had advanced in the use of virtual platforms.

5.5.5 Resistance and Reluctance to switch to virtual platforms

The data gathered from the interviews further showed that resistance and reluctance to adapt to virtual learning were among the challenges faced by universities and churches. There was some initial resistance and withdrawal by students some private universities. The findings agreed with the quantitative data which indicated the need for lecturers to motivate the students to embrace virtual learning. In the absence of motivation, students tend to shy away from any learning methodology that they are not accustomed to.

The resistance for the university students may stem from a lack of experience with virtual platforms as noted by Parkes et.al (2014:10), students were found to be not sufficiently prepared for balancing their work, family, and social lives with their study lives in an online learning environment.

On the other hand, while the church did not experience resistance from its members, the shift to virtual management bordered on the erosion of the sense of community which was a bigger challenge to deal with especially that it seemed to be a violation of the doctrinal beliefs upon which they are the church is established. It is well known fact that adaptation to change is process that takes time and may sometimes be completely resisted by those it is meant to empower.

The move by leaders in both institutions to create channels to train their staff through seminars firmly conforms to the Adaptive Structure Theory (AST). The AST shows the impact they have on each other, which has its foundation that human actions are being driven by structures, where organizational structures are being created by technology, and at the same time, these structures can be influenced of both technology and leadership (Avolio et al.2014). The

decision to train virtual facilitators is an admission that leadership is necessary to ensure that technology thrives and that the latter is helpful in creating organizational structures done as part of business re-engineering process.

On the other hand, all the six (6) churches did not experience resistance but reluctance driven by the fact that a switch to virtual platforms generally meant that they could not observe some of their biblical practices such as the observance of the Sabbath day, confessionary and celebration of the eucharist. The reluctance by churches was attributed to the fact that virtual meetings may erode the sense of community upon which the church is established from generations past. In agreement to this submission, the quantitative findings from churches submitted that there was need to virtually create a sense of community.

This is in line with the study conducted by Labenek (2014), in which it was stated that the position of the Catholic church is that church (the service) is only acceptable in the realm of the physical, meaning in the brick-and-mortar church, because gathering, fellowship, and community is fundamental to fulfilling the ordinances that God set forth for the church.

In view of the above challenges, there is a lot of work that needs to be done and leadership is key to influence the use of technology so as to prompt a mindset shift starting with the leaders of universities and churches. Additionally, the fear expressed by administrators of these the two institutions is that people in church as well as students at universities may become accustomed or frozen to virtual platforms to a level where the auditoriums, lecture theatres, fast food facilities and hostels will be abandoned. This was said to be a huge financial loss to both institutions as will be discussed in detail later in this paper. In the words of Caulat (2006), there is often frustration around virtual working: people consider it to be only a necessary (but often poor) substitute for face-to-face meetings.

5.5.6 Poor monitoring system

Another challenge brought out by all the four (4) registrars was the fact that they were struggling to monitor both lecturers and students. For lecturers, the mode of delivery of teaching sometimes fails and resulting in a break in communication. In the words of Jawadi, Daassi, Favier, and Kalika (2013:199-211), the struggle to monitor lecturers and students is based upon the lack of face-to-face interactions, the physical proximity, verbal cues and absence of facial expressions. There also comes the challenge of making sense of technology in order to being able to make the most possible use of it. While as both institutions had challenges with monitoring their target audience, universities were advanced in that students had no choice but to adapt in order to complete their studies.

On the other hand, only one (1) of the six (6) churches covered was using a direct optic fiber connection to the internet and had created their own customized software application that allowed them to monitor and interact with their members on without a break. The rest of the five (5) churches had their virtual presence limited and open to insecure applications such as and Google meet, WhatsApp and Zoom which were more costly to run and access by the members.

On the other hand, more findings as drawn from in-depth interviews with all 4 university registrars on the issue of poor monitoring was that one cannot run way from the fact that virtual management systems for exams at the time of the study compromised the standard of education and quality assurance was not guaranteed. It was also stated that the possibility of awarding qualifications to a person who may not own the results remained high. This agreed with the findings of Drew (2010:66) which stated that there was need to find a balance around the business model, a more regulated environment with increased administrative demands, and academic quality. In order to uphold quality standards of education, some of the university registrars advocated for blended learning as a way of finding the balance between virtual lessons and physical classes. Their suggestion bordered on the need to ensure that universities do not allow business imperatives to undermine academic standards.

The findings validate those of Mbirithi (2007:57) in which it was observed that quality assurance standards should be assessed from various fronts. In this case, University Registrars, Pastors, Priests, IT staff, students and church members do not have the same standard for quality. For instance, the study found that while a student may focus on facilities provided and perceived usefulness of education on future employment, a church member craves for physical meetings through which they bond with others of similar beliefs. While as academic staff may pay attention to the teaching learning process, the Priest looks out for practice in the congregant which may not be easy to observe virtually.

The study findings show that quality assurance was not guaranteed going by the challenges experienced during virtual meetings in the institutions covered in this study. The respondents from the administration side of both institutions indicated that the challenge of maintaining the quality of their students and congregants while responding to demands of virtual management cannot be ignored. On the side of the university, the concern was about exam administration while the Pastors were struggling with ensuring that the members remain committed which is one of the ways that growth is measured. As Rusu, Saplacan and Lile (2020) observed, productivity from the management point of view is at risk when employees work outside of a conventional office.

In their submission on the issue of monitoring systems, one out the four (3) Church Mother Bodies indicated that truthfulness and credibility of the information that they received was doubtful considering that they lead from a distance (virtually). This means that they relied on the information passed on by people on the ground. The challenge was that one can make wrong decisions if the information does not reflect the situation on the ground. There was lack of certainty of the credibility of the information an administrator received as it is based on trust. As Richardson, LaFrance and Beck (2015:18) noted, leaders indicated that time was a challenge. They discussed juggling many responsibilities, working long hours, and feeling the need to always be virtually available.

Another representative from the church mother bodies interviewed also observed that one of the effects and dangers of the virtual management was that it may not be easy to correct content once it goes viral and could lead to the spread of unbiblical teachings. As far as the issue of the doctrinal background of the speakers is concerned, Yohannes (2017:80) states that those who are assigned to serve in leading prayers, discussions and other programs need to be

investigated before they can use the microphone to serve since it would be difficult to correct it once it was already broadcasted.

In summary, the findings show both institutions may have challenges with regard to quality control and monitoring of the progress of their target audience. For the universities, the challenge is about controlling and ensuring that students are examined in a manner that is as effective as in physical exams as it determines the quality of their graduates in the various fields. On the other hand, the church sees virtual management as a challenge as it is not easy to monitor content once it spreads and false teachings could threaten the very existence of the institution.

5.5.7 Cost of ICT Infrastructure

The findings further indicated that some students and church members indicated that virtual management was costly. Additionally, all the university registrars and IT staff submitted that the equipment required to facilitate virtual management was costly despite being available. Miller and Ribble (2010:3-6) demonstrated that schools are not keeping up with the rapid changes that are advanced by technological innovations. The study found that the struggle to keep up with advanced ICT technology was not because of the lack of interest but largely constrained by limited financial resources required to effectively facilitate virtual management. The findings collected through interviews with university registrars and IT staff showed that institutions of learning have cost effective platforms through they facilitate virtual services namely ZAMREN. On the hand, none of the church representatives interviewed indicated that they were using any similar platform to reach their members.

The findings of Ruggieri (2009) would help address the challenges of the church as they indicated that the role of a leader in a virtual environment created the possibility to redefine the concept of leadership, since traditional leadership often is based upon the possibility to offer encouragement, reward and motivation but mostly through physical presence and the development of personal relations with the group. The foregoing statement underscores the application of the adaptive structure theory as it is the responsibility of leaders to influence technological advancement and create the required structures.

5.5.8 Sources of Income

Furthermore, while as the source of income for universities largely from mandatory payment of tuition fees by students, the church representatives indicated that they have to depend on well-wishers and the offertory. The above findings spell out the huge difference in revenue between the two institutions when related to the cost of investment in the required ICT infrastructure to facilitate a robust virtual management system. The submissions from some representatives of the two (2) institutions under this study agreed to the fact that income of the churches and universities had dropped due to less offerings and withdrawals from courses by some long distance and loss of income usually generated from provision of student accommodation.

Dhawan (2020:6) stated that online learning is considered to be a relatively cheaper mode of education in terms of the lower cost of transportation, accommodation, and the overall cost of institution-based learning. The study findings

were contrary the assertion made by Dhawan (2020:6) as respondents indicated that one of the major challenges to successfully realizing virtual management in universities and churches was the cost of the required ICT infrastructure.

5.5.9 Cost-effective ICT infrastructure

The submissions from IT staff from one university indicated that a computer server required to effectively operate was about three hundred thousand (300,000) kwacha and an institution needed two servers to effectively operate virtually. This was definitely a huge challenge for most institutions covered by the study in that they had to factor in so many other competing needs for them to remain operational. Most universities covered submitted through their IT staff that they had opted to hire servers via the cloud application to cut on the cost of purchasing one besides stating that it was also a way of backing up their local ICT systems to ensure consistency of operations.

While as Lampi (2013) indicated that the use of virtual labs to train students in computer networking skills is uncertain when real equipment is limited or unavailable, the study findings showed that ICT equipment was available but costly to acquire hence the move by some institutions to hire or buy space via the cloud. Additionally, although some universities may hire space abroad via the cloud system to run and back up their local system, it still remained unreliable as they did not have control over it since was remotely managed by the suppliers.

While as universities had sought ways of cutting costs of virtual management, none of the churches covered had gone as far as investing in such a mode of operation. The General secretaries of the mother bodies simply appealed that there is need to engage stakeholders such as Parliamentarians and ZICTA for cost effective internet data bundles to ease the cost burden. They continued to depend on local service providers with limited band width. The findings are clear that the church had a lot to learn from universities with regard to virtual management.

5.5.10 Alternative Sources of electricity

The study also found that most of the required ICT infrastructure was largely dependent on other factors. University registrars interviewed cited electricity load shedding as a challenge and that many universities (private and public) do not have capacity to buy the required standby generators to effectively operate during such times of power interruptions. Additionally, running a standby generator is limited a number of hours and also costly. Majority of the students indicated that their institution had a standby generator that acted as power back up in the event of electricity load shedding.

The fear of financial losses, closure and failure were vivid from the submissions of some of the administrators of universities as well as Pastors that were interviewed. In that regard, the switch to virtual platforms was not fully embraced but was taken as a temporal measure to avert the spread of covid but more importantly to be compliant with health guidelines imposed the government. It in view of such challenges that Mohr & Shelton (2017:123-140) found that this contemporary environment demands that virtual leaders apply up-to-date leadership and collaboration skills to increasingly complex work environments, such as in the higher education space.

In summary, all universities and churches had embraced virtual management. The universities were ahead in the use of online platforms while churches were gradually adapting to this demand for change though heavily constrained by the cost of ICT infrastructure. Another issue that relates to cost that both faced was that not all students and congregants were able to afford smart updated IT gadgets. The difference in the type of phones that students used was another challenge that made it difficult to consistently follow online sessions.

5.6 Views on virtual management in Zambia in relation to universities and churches

The highest number of respondents indicated that virtual management was growing as stated by the highest number of respondents from both universities and churches. This could be a sign that some positive works are going on in the ICT sector while noting that more needs to be done to maximize the benefits of virtual management**.** According to the findings of the World Bank (2020:13), digital economy diagnostic report on Accelerating Digital Transformation in Zambia, requisite digital and entrepreneurial skills were needed to advance digital entrepreneurship; it is digital entrepreneurs who will derive innovative solutions to public and private sector challenges that can be resolved through the application of technology.

The findings Dhawan (2020:6) are relevant to the above results in that it put some light on the growth of Education Technology Start-ups during the time of pandemic and natural disasters. It includes suggestions for academic institutions of how to deal with challenges associated with online learning but more importantly how to turn them into opportunities. With regard to turning challenges into opportunities, the findings showed that virtual management had given universities a chance to have a global reach and cut down a number of running costs like toiletries and groceries. The universities were also saving on printing lecture notes thereby reducing on consumption of electricity at the institution.

Some Pastors from sampled churches that had embraced change submitted that virtual management had given them an opportunity to reach more members and increase on returns that one may not even be able to quantify in money terms. The preceding finding agrees with the views of Yohannes (2017:1) to the effect that church going may not be the usual term for the future generation since going to a building which we call a church my not be a relevant issue for them. People who claim to have an online Church are nowadays dominating the traditional method of Church function. The cyber church is progressively covering all areas of life in the society in a very rapid manner.

Virtual management has affected the two institutions different ways. For instance, some older students that were not tech savvy struggled and withdrew from online studies. On the hand, it gave an opportunity to church members that were either challenged in their health or susceptible to infections to access church teachings from the comfort of their homes. As Mohr & Shelton (2017:123-140) stated, the popularity of online classes continues to grow, it is important for institutions to support faculty, staff and students in ways that are conducive to their needs. In this contemporary environment, virtual leaders must apply up-to-date leadership and collaboration skills to increasingly complex work environments, such as in the higher education space.

Additionally, some registrars submitted that virtual management only advantaged people that were in urban areas who were able to access the internet on a consistent basis and in that regard negatively affected their long-distance students residing out Lusaka urban. In view of these findings, there is need for all stakeholders in the ICT sector to look at challenges of connectivity so as to avert a scenario where from time to time one goes off air and have to restart. Respondents stated that there was need for a lot of work especially for internet service providers and regulators (ZICTA) to improve internet connectivity.

5.7 University and Church leadership's adaptation to institutional digital transformation.

The second objective of the study sought to explore the university and church leadership's adaptation to institutional digital transformation. In order to address the matter, the researcher adopted to examine some variables which included software applications, effectiveness and quality of virtual leadership as well as what needed to be done to ease virtual management. The adaptive structure theory is critical to analyzing this particular objective. The study sought to examine how leadership was influencing technology and the establishment of the required infrastructure to operate virtually. According to Avolio et al. (2014) it has been shown that leadership and technology influence each other, through the Adaptive Structure Theory (AST). The application of the AST in the interpretation of study findings show the impact leadership has on technology and vice-versa.

The quantitative findings showed that the highest rating for university leadership's adaptation to institutional digital transformation was way above average. Additionally, the mean for all universities covered was slightly lower than that of churches meaning that the latter were more ready. On the contrary, a comparison of the submissions obtained from the interviews with Registrars and Pastors indicated that universities were more ready and had advanced in the implementation of virtual management compared to churches. Some church denominations are opposed to its use as they believe conspiracy theories that the outbreak of the Coronavirus has been triggered by the installation of the 5G network system (Bruns et.al, 2020). Such strong views usually stem from the top leadership of institution and since Maxwell (2007:267) state that everything rises and falls on leadership, it is not possible to apply the Adaptative Structure Theory until leaders in such a church are open minded.

The study findings indicated that the most of the sampled universities have deliberately added a training component which was an admission of the fact that hosting virtual meetings was a challenge to their lecturers especially the older generation. This is obviously because poor virtual leadership can result in student's failure to cope which again underscores the theory (AST) grounding this study.

In like manner, three churches also stated that their leadership has added a component of training online facilitators in their strategic plans to help empower them with knowledge in the use of online applications to ease the challenges of digital adaptation and transformation. This was also a clear admission that unless leaders were empowered, the members and the church would generally continue to lag behind with regard to virtual management.

Furthermore, one Pastor stated that they had even employed two (2) full time IT personnel to help them accelerate the implementation of virtual management as well invested in the required infrastructure that allowed them to create an on online environment that was close to a face-to-face meeting. This was the only church that showed serious attachment to the migration from face-to-face meetings to creating a virtual management environment that was close to physical meetings. The above undertaking is a good example of how the leadership can influence technology and allow humans to create structures that in turn stir the growth of an institution which is shows the linkage of the AST to this study.

This was seen by their investment in actualizing virtual management though it must be stated that they had lowest number of respondents (12) compared to other churches simply because they were not willing to share the questionnaires with the general membership. They only accepted to have it administered to a select group of leaders. As Dunaetz (2020:8) observed, collecting data from a sufficient number in church can be very difficult this means that many studies that we would like to conduct will remain undone because collecting the data is beyond the means of most researchers.

On whether universities are ready for digital transformation and adaptation, the findings indicated that universities were more ready compared to churches and hence adapting to the demands of virtual management though training is necessary to appreciate online platforms. The foregoing statement agreed with the findings of Chitanana et.al (2008) that E-learning is gaining some ground in university education throughout the world. Currently, a large number of universities world–wide support e-learning in different forms.

It was further stated that there was also need to create partnerships for things like an e-library sharing or collaborations required to ease the access to materials. The submissions gathered through interviews further show that although some are relatively young universities, they were at 80% in terms of readiness though they had a knowledge gap especially for the older generation as they were challenged on the use of the PC. Once again, this finding clearly cements the theory that adaptation of people to technology and structure requires a visionary leadership that is willing and open to new ideas.

On the other hand, the findings obtained from representatives of the church mother body as well as some Pastors were skewed towards a score of zero (0) which had the highest numbers of respondents as shown by the quantitative table in the previous chapter. It was observed through interviews that the church was generally not ready for digital transformation or virtual platforms. Their view was that these virtual operations are a passing phase driven by the Coronavirus after which the church management will revert back to the old system. This mindset hampers the development or the transformation to virtual programs for churches. The preceding results does not agree with Yaya & Adeyokun (2011) who found that there is a revolution in information technology that will essentially shatter the effectiveness of traditional, scientific and authoritative methods of management.

The findings show that the revolution has only been fully embraced by universities and churches that have either the financial capacity or leadership that is willing to invest in actualizing virtual management even when it is risky to do

so. As earlier discussed, while as universities are have advanced with regard to digital adaptation, the church is gradually embracing the demand for virtual management even though challenged by among other things doctrinal beliefs and finances.

The study further found that five (5) out of six universities and three (3) out six churches showed that their leadership was visionary enough and had taken the risk of launching into the virtual space even when it is an unchartered territory. This is simply because one cannot take people and institutions into a world that they hardly understand further qualifying the adaptive structure theory that links technological advancement to the kind of leadership in an institution.

AST demands that leaders take the front seat in adapting to Information Communication and Technology. Another point worth noting from these findings is that virtual management left both institutions with no choice, they had to adapt or perish.

The above results are in agreement to Soerens (2020:1) who observed that when the COVID-19 crisis forced houses of worship to close their doors, most churches quickly adapted and pivoted to doing online church. Pastors have had to adjust their preaching style to accommodate moving from a big platform to speaking to their flock on a small screen.

5.8 Software applications

The study also sought to examine the most common software applications used by universities and churches and showed that Zoom was the major software for churches. On the other hand, universities indicated Microsoft Teams, Google meet and Zoom. The findings showed that universities were using more software applications compared to churches meaning that they are offering students a wider choice to connect virtually compared to what churches are offering. It was clear from the findings that E-learning is as Chitanana et.al (2008) observed gaining some ground in university education throughout the world and that a large number of universities world–wide support e-learning in different forms.

This obviously ensures that students and lecturers are not limited to one software package besides increasing the knowledge base which is one of the main aims of educational research. On the other hand, the use of Zoom online platform by most churches may be because it is user-friendly or cost-effective to match their budget. The heavy dependence on one platform by the church is a disadvantage in that any failure or cyber-attack on the software means that the church cannot virtually reach its audience. In view of this limitation by churches in the use of online applications, Miller and Ribble (2010) were right by stating that the use of virtual mode in management demands that staff, students and parents are educated to cope with the use of various software applications.

5.9 Effectiveness and quality of virtual leadership and management system

The results presented in the previous chapter shows that most respondents were satisfied with the quality of virtual leadership at their university. On the other hand, the results show that over 40% of the respondents from churches indicated that they are dissatisfied with the quality of virtual leadership.

The level of dissatisfied members with regard to the quality of leadership offered in the church showed that more needed to be done to change this status. It necessary for churches to apply the findings of Caulat (2006) with regard to the fact that virtual teams are increasingly becoming the life-blood of most institutions as they tend to undertake the most global, strategic and complex projects. They also have the strong advantage of gathering the best people for a specific task independent of their geographical location in a sort of 'Just in time talent' approach.

The findings obtained from questionnaires underscores why most of the sampled churches observed that they had included a component of virtual management training in their strategic plans. This was in order to equip their leaders with the needed skills to ease virtual operations. It must also be noted that ZICTA (2018:6) national survey on access and usage of information and communication technologies by households and individuals, showed that the proportion of households that owned computers country wide stood at 8.1 percent in 2018; less than 2.7 percent of the households accessed internet services through fixed internet services.

The above statistics have a bearing on the quality of virtual leadership across the board as it was not possible for the needed knowledge transfer to be realized when few households owned computers and later on access to fixed internet services. The foregoing state of affairs were not different from Majoni (2014:21) whose study found that there was a lack of access to computer hardware and software in relation to information communication technologies (ICT) assisted teaching and learning.

5.10 Comparison of the effectiveness of virtual management between universities and churches

The assessment of the effectiveness of their virtual management system was further done by looking at the performance of the two institutions with regard to their contact with students/members, standard of active learning; capacity to keep deadlines and consistency in upholding content patterns. It further weighed the effect of virtual management on course/sermon quality; internet access and reliability; clarity of online presentation and quality of services from IT department.

5.11 Internet Access and Reliability

The findings presented in the preceding chapter indicated that the lowest rating for various variables in both institutions was internet access and reliability. The foregoing results spelled out the need for improvement by service providers as well as investment in a robust ICT infrastructure that can handle the demands of clients. The low rating justified the findings of the World Bank report (2020:13) that stated this is an area in which Zambia has made less progress. Although the Seventh National Development Plan implementation aims to have information and communications technologies (ICT) mainstreamed in schools, in practice, however, most schools are not connected

to the internet, they do not have adequate access to devices, and teachers have limited knowledge of how to use ICT in teaching and learning.

The highest score for universities was active learning which was rated as very good. On the other hand, clarity of the Pastor's presentation had the highest score. There is a possibility that this score was subjective due to the members allegiance to their spiritual leaders. Three (3) out of the six (6) university administrators universities did state that they had deliberately taken a decision to seek outside interventions to ensure that their internet services are insulated against challenges faced by local service providers.

The study further showed that universities were more equipped than churches with the required leadership and systems to virtually manage their institutions. It was found that conducting lessons virtually can be very costly especially when not connected to Zambia Research and Education Network (ZAMREN). This platform is good and cost effective for universities. It must be noted that churches do not have such platforms to make their virtual management more cost effective. In that sense, they will continue to lag behind in terms of ICT development unless they deliberately collaborate to seek invention from regulators as submitted by the representatives of church mother bodies to help facilitate for cost effective online platforms similar to ZAMREN. In the absence of virtual church operations, the cyber space will be devoid of the moral compass required to provide checks and balances on society especially in the face of among others, cyber bullying, child trafficking and hate speech. The study results also showed that both institutions had done generally well but were hampered by unreliable internet access.

5.12 What the University and Church require to ease Virtual Management

The quantitative findings to the above questions centered on whether there was need for lecturers and Pastors to build a personal connection with their target audience, motivate and help them to maintain focus; create a sense of community, make discussions meaningful, increase engagement; identify and support struggling students and create shorter content.

A comparison of the responses from both institutions were in agreement that all the above needed more attention. The need to make discussions meaningful and maintaining focus scored higher than all others for universities while the need to create a sense of community and increase engagement stood out for churches. The creation of shorter content at universities and churches received lesser affirmative responses which indicates that the students and church members had no problems with the duration of the lessons/services. The findings agree with Mohr & Shelton (2017:123-140) who stated that the popularity of online classes continues to grow and it is important for institutions to support faculty, staff and students in ways that are conducive to their needs.

Moreover, two representatives of church mother bodies stated that here is need for the clergy to take their elected officials to task over the improvement of the ICT sector specifically internet services. The findings of Stansfield et.al (2010:12) are accurate with the above sentiments; the issues of effectively utilising and harnessing technology

demands that leaders are proactive in getting the technology infrastructure set up, as well as overcoming peoples' initial negative attitudes or sense of uncertainty in relation to the learning technologies underpinning a virtual campus.

Adaptation to virtual platform should be seen as a key component of the daily running of universities and churches rather than a remedial measure. One secretary general from among the three (3) that were interviewed stated that the church must advocate for better services to ensure that there is a thorough review of the status quo and to highlight what is needed to improve service delivery. It is possible that the demands brought about by the outbreak of the Coronavirus such as the need to focus on what is essential could help learning institutions and churches to stream line programs to address the needs of the society in a more robust manner.

The foregoing assertions agreed with the findings of Solarin (2013:1) which showed that advances in information technology have led to far-reaching developments in higher education sector; an example of which is the application of digital information in learning.

5.13 Barriers faced by Universities and Churches

The third objective sought to investigate the barriers faced by students and church members in coping with virtual lessons. The examined barriers were; knowledge of software applications, access to computer hardware and financial income. They also included time management, electricity load shedding, limited access to internet; staying motivated distractions around them emanating from their geographical location.

The findings outlined in chapter four show that electricity loading was the leading barrier or obstacle experienced by students from the sampled universities. On the other hand, limited access to internet was found to be the most common barrier faced by church members. A barrier entails that students and church members do attempt to access virtual programs but are blocked or inhibited by any of the above variables. The World Bank (2020) noted that promoting greater use of digital technologies in the economy through enhanced broadband usage alone contributes significantly to growth and poverty reduction.

It must be noted that electricity loading and limited access to internet were barriers driven by service providers who include the power utility firm, internet providers and ZICTA and were for that reason outside the control of universities and churches. The closest they could come to address these barriers was to purchase standby generators and use the cloud to run their ICT system. In view of the assertions made by the World Bank on how digital technology can help to reduce poverty, it is vital for all universities and churches to advocate for the improvement of service delivery specifically reliable supply of electricity and internet.

A study done by Mulozi (2008) on Rural Access: Options and Challenges for Connectivity and Energy in Zambia showed that minimum and maximum speeds as well as bandwidth allocation will depend on the choice of services. Most of the internet service providers have categorized wireless services according to the needs of their clients. Services range from home users and small enterprises such as Internet cafes to corporate clients such as banks and

mining companies. Therefore, bandwidth allocations and speeds differ from one category to another. The higher the cost, the better the service and the more bandwidth one gets.

The above statement clearly explains why it was much easier for universities to invest in alternative modes of ensuring that virtual management is actualized as their source of income was more guaranteed compared to churches. It can be seen that reliable access to internet connectivity was largely attached to costs, terms and conditions.

All university registrars indicated that one of the common barriers advanced to them by students is limited access to resources due to the cost of data bundle and devices to use. On the other hand, it must be noted that both universities and churches had generally done well in virtual programming considering that the decision was imposed on them by the outbreak of the coronavirus which led to restrictions on physical meetings.

In this the observations of Rajasingham (2011:10) were justified that the challenges of virtual management go beyond innovative ICT implementations to the design and development of a holistic university system that responds to national and global needs, and to the community of demand. It must further be noted that the church has for ages been the hub of schooling from kindergarten to university and can therefore not be left behind as society adapts to digital platforms.

The findings clearly indicate that the cited barriers are affecting the delivery of virtual services to the target audience. While as universities have some access to cost effective internet connectivity such as ZAMREN and Eduroam, the church was to use the same packages available to individuals and corporate firms. In that regard, the cost of internet is also a barrier meaning that the growth of virtual management in church cannot happen at the same pace with universities as latter is subsidized when it comes to internet access. The quantitative data from student submissions validate the qualitative findings as they indicated that funding was a barrier to effective implementation of virtual management for universities and churches. As Bathon and Baker (2013) stated, the funding model that is used for brick-and-mortar schools would be ineffective if applied to virtual schools.

5.14 Socio-economic factors associated with virtual management of universities and churches

The results indicate that most respondents from universities and churches said that virtual management had financial implications as presented in the previous chapter. The submissions from the all Registrars and IT staff showed that there was a cost to virtual management besides that of paying for licenses to use the software applications, including the hosting of the system in the cloud which refers to outsourcing internet access. Some of the costs were beyond monetary value in that they demand that students and church members give away their family time and attention to keep track of online meeting and lessons. Stansfield et.al (2010:12), were right in saying that the issues of effectively utilizing and harnessing technology can present a number of problems both in terms of getting the technology infrastructure set up, as well as overcoming peoples' initial negative attitudes or sense of uncertainty in relation to the learning technologies underpinning a virtual campus.

The findings indicate that virtual management had in that regard converted the home into an office which some registrars stated to be an inconvenience as houses were not built as working spaces hence issues like distractions are common. Another socio-economic factor raised by respondents from both institutions was that some lecturers, Pastors, students and church members had a taken laissez-faire approach due the switch to virtual management and thus production was low. As Richardson et.al (2015:18) noted, leaders indicated that time was a challenge. They discussed juggling many responsibilities, working long hours, and feeling the need to always be virtually available. At times, there are boundary problems because it is not a traditional school where lecturers work from morning to late afternoon.

Mukosa and Mweemba (2019:1) observed, a lack of adequate investment in ICT infrastructure had led to the high cost of internet services and this has impacted on the expansion of eLearning programs. The quality of internet in Zambia was also a huge challenge in delivering eLearning especially that attitudes and cultural issues were still barriers that need to be broken down in order for eLearning to completely succeed.

Another socio-economic factor highlighted by universities and churches was that a good implementation of virtual management had a potential to attract more distance education students and members respectively. This could result to an increase in revenue and influence for both institutions although the initial investment in virtual management is high on the expenditure side. The focus to grow revenue should not ignore Mbirithi (2007:57) who observed that quality assurance in education standards should be assessed from various fronts. This assertion borders on the fact that while virtual management generally eases the burden of travel and delays to arrive in at meeting venues/lecture rooms, it can seriously compromise the standard of the end product namely students and congregants.

In views of Mbirithi's (2007:57) observation it was submitted that blended learning which means that students are not on campus for the whole week had on one hand helped the university to reduce its bills for operational costs like electricity water, flying in guest lecturers and service parts and on the other hand allowing lecturers to have face-to-face access to learners. This saving also applied to churches in that they were able host international speakers virtually in a cost-effective manner especially at the height of the Coronavirus outbreak.

Another observation made by registrars interviewed was that the down side to people learning at home was that the institution lost income that was supposed to come from accommodation of students in their hostels. It means that institutions have to come up with ways of ensuring that they generate income from student hostels so as to get a return on their investment. In the words of Mohr & Shelton (2017:123-140), as the popularity of online classes continues to grow, it is important for institutions to support faculty, staff and students in ways that are conducive to their needs.

On the side of the church, some Pastors indicated that the reduction in physical meetings has robbed them of the manpower (voluntary) required to clean and maintain their auditoriums and lawns. So, while it may be a saving for

the university, it is an added cost to the running of the church as they had to hire labor for that purpose at a time when their income had decreased.

As Aukland (2020) observed, so many people are attending church online—many for the first time, churches need to provide some context for why giving is still important. One (1) General Secretary indicated that they have gone on to push the agenda for their parishes to invest in income generating projects such as schools, farming and any that do not compromise their teachings. This is because they have realized that it is unwise to remain totally depends on offerings from their congregants amidst the challenges such as health pandemics and job losses.

This move is a true application of the adaptive structure theory-leader showing that leadership and technology complement each other. On the side of the church, the findings showed that there is a huge space and crowd out there that can be reached virtually but financial constraints have been a barrier.

Yohannes (2017:1) stated that since the introduction of the internet, organizations and individuals from all over the world and people of different cultures have used cyber for connection, communication and to enhance and simplify their day-to-day lives. In that regard, cyber space gives the churches in Lusaka urban and beyond an opportunity to reach people globally. It is something that should be embraced with a level of urgency just like was done when Covid19 broke out.

A Pastor noted that that some responses to their programs were coming outside the normal scope meaning that it reaching people far and wide. These findings point to the fact that virtual management must be seen as the "new normal." It was also clear that the struggle to adapt to mobile money transfers as a mode of giving required the leaders to apply the Adaptive Structure Theory-leadership influences technology and creation of structures.

The findings also indicated that if well implemented, both institutions may not need to spend a huge part of their income on building bigger auditoriums and lecture theatres to accommodate students and congregants respectively. In the words of Maher and El Bedawy (2015:113-120), the facility created by the virtual work has a major impact on the environment because it relieves traffic, reduce gas consumption and pollution, and improve air quality. Furthermore, the virtual space provides an opportunity for physically challenged prospective students and as well as the aged church members to advance academically and practice their religion within the comfort of their home respectively.

5.15 Effect of Virtual Management on the number of Students and Church Members

The study findings showed that that Virtual Management had negatively affected the number of students in minor terms. The difference between the positive and negative responses was almost zero. The findings from churches stated were similar to that of universities. The above findings show a minor difference in the submissions by students and church members though slightly skewed towards a convergence on negative. This showed that the phenomena were still developing and respondents were still uncertain about its effect on population of students and church members.

As Martin et.al (2019) noted, the phenomenal growth of online learning in higher education institutions has created an indisputable need for guidelines that assist new and continuing online instructors about how best to teach in the online environment. The foregoing observation was justified when related to the findings in that people tend to shy away or display skepticism to any new mode of doing something including virtual learning and services.

The data collected from IT staff and two university registrars interviewed indicated that numbers have reduced because some students are in areas where they cannot access internet services. Another registrar indicated that the drop in student population may not be primarily driven by the switch to virtual management meaning there are other factors at play stemming from the coronavirus outbreak such loss of jobs of some students or sponsors.

On the side of church, it was indicated that they not able to ascertain the numbers via online platforms. This is because some people who log in are outside the known membership. On the other hand, some indicated that the numbers have increased via cyber space. The findings were contrary to Roberts (2009) whose article on the Challenge and Opportunity of Virtual Church observed that the virtual church purports to offer a full church experience that is not dependent on a physical church, but is meant to provide a stand-alone, genuine church experience in a virtual reality world of the Internet. It is clear that the church in Lusaka urban is not a mission to realize those findings.

While this shift may have not happened at all universities, it was noted that the competition among private institutions had led to them designing programs that were user-friendly to keep their student population satisfied. The move to slowly implement virtual management through the introduction of blended learning conform to the study done by Rajasingham (2011:10) on the new challenges facing universities in the Internet-Driven Global Environment and found that internet advances can theoretically support learner-centered and interactive learning.

The foregoing findings were indicative of the fact that the responses on the effect of virtual management on the population of students may not be reflective of the true state of affairs and could therefore be used to make a reliable comparison between the two institutions.

5.16 Impact of virtual management on academic performance and spiritual growth

On the question of how virtual management systems of the church impacting spiritual growth, almost half of the respondents stated that it was positive. A quarter rated the effect to be negative. The findings showed indicated that the switch to virtual platforms had disadvantaged slow learners worsened by the fact that it was done without notice from both fronts (church and university).

This made it challenging to ask questions and the facilitators were preoccupied with covering as much as they could within a certain time frame. Some universities and churches did not prepare or expect the switch to virtual platforms and where for that reason taken aback. It is clear that at first, they had challenges both as IT and students because we did not prepare for it and were forced to switch to virtual platforms. Therein lies the assertion made by Conine (2014) emphasizing the importance of preparing the future leaders for the unexpected complexities that can occur from operating in a global environment.

The switch to virtual management also on one hand affected the mode of examining students and on the other the monitoring of the spiritual growth for congregants of various churches. For students it was not good because some questions were subjective such multiple choice which meant that the process was subject to malpractice. These findings show that the progression criteria remain questionable in that it is not easy to establish probably because it is a new phenomenon for most universities and churches especially in dealing with a response to crisis. This is based upon the lack of face-to-face interactions, the physical proximity, verbal cues and absence of facial expressions. There also comes the challenge of making sense of technology in order to being able to make the most possible use of it (Jawadi et al. 2013).

Furthermore, the results show that universities were better placed to establish ways of examining the students in that the onus is on them to ensure that they learn to practice as compared to churches that are run on voluntary basis. This increases the turnover in terms of members. There is also a likelihood that a drop in attendance from one church may be because their members have logged into the platform of another church which has ICT infrastructure close to a face-to-face experience as shown by the findings in the previous chapter.

The findings from the interviews with Pastors showed that some members have either partially or fully withdrawn due to the challenges of following virtual programs but waiting for Covid19 restrictions to be lifted so they could return to face-to-face meetings. This is contrary to the findings of Yohannes (2017:1) which noted that church going may not be the usual term for the future generation since going to a building which we call a church my not be a relevant issue for them.

Therefore, it can be said that universities are generally doing better by virtue of the fact that students have been left with no choice but to adapt which is obviously a mark of them embracing adaptive virtual leadership further validating the Adaptive Structure Theory.

5.17 Participation and Performance of Students and Church Members during online sessions

The results presented in the previous chapter show that over 50 percent indicated that virtual participation by students was good. The findings from the churches show that a little over 23 percent of the participants stated that virtual participation is very good. It is clear from the above margin between universities and churches that the former was doing better which validates earlier findings discussed in the study that relate to the preparedness of the two institutions. The limitations in the use of software applications, lack of access to cost effective internet connectivity, electricity load shedding and reluctance to adapt to digital platforms due to the fact that it inhibits certain practices are some of the prevailing issues that made it difficult for church members to actively participate in online meetings.

The above scenario shows the churches in Lusaka urban are far from actualizing the findings of Yohannes (2017:1) that stated that church going may not be the usual term for the future generation since going to a building which we call a church may not be a relevant issue for them. People who claim to have an online Church are nowadays

dominating the traditional method of Church function. The latter part of the findings is only possible where all factors that support virtual management are fully accessible to stakeholders.

Another issue that affected participation as observed by some Pastors was that online worship appeals to a certain age group a situation that may also be true about online learning. The highest number of respondents to the questionnaire administered through a smart online survey ranged between 20 and 35. These statistics attest to the submission by the Pastors. For example, it is very difficult to make children to sit down and follow programs and as their concentration levels are low. Additionally, the aged members are not conversant with the use of computers. These challenges limit fellowship or levels of interaction even to the one who is speaking to people. No wonder Soerens (2020:1) states that Pastors have to adjust their preaching style to accommodate moving from a big platform to speaking to their flock on a small screen.

The findings of the study agree with Russell (2016:5) who observed that while the elderly population appreciated the connectivity with the virtual teleconference church and interaction, the virtual church is not necessarily a replacement for brick-and-mortar church.

On the other hand, some university registrars stated that the performance of students had not been affected by the switch from physical to virtual classes since both modes of learning still affect the students differently. It is vital to incorporate blended learning so that it allows for some face-to-face lessons works to identify and help struggling students. Hamad (2017:7) observes that blended learning has reduced the monotony of traditional methods of teaching as well as the disadvantages of absolute online teaching. In a blended-learning course, students attend their classes in the campus as well as complete online components of the course during the off-campus period.

5.18 Summary

Virtual management in this paper refers to the supervision, leadership, and maintenance of virtual teams and includes online classes, school websites and school YouTube channel. It must be noted that this study and others have clearly shown that although challenges exist, virtual management (dependent variable) is critical to the development of universities and churches which were the two independent variables examined by the researcher.

In view of the foregoing findings, it necessary for regulators in the ICT sector to see higher institutions and churches are key partners in realizing United Nations Sustainable Development goal number 4,9 and 11. A robust shift to virtual management will help to ensure quality education, steer industry, innovation, infrastructure thereby build sustainable cities and communities. The study findings show that one of the lessons the global village can pick from outbreak of the coronavirus is that face-to face meetings are unreliable.

The next chapter focuses on the conclusions and recommendations.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.0 Overview

In the first chapter, an introduction to the study was outlined by looking at the background and other important components of the study including best practices with regard to virtual management. The second chapter covered and reviewed various previous studies to offer a deeper understanding of the challenges of virtual management of universities and churches in Lusaka district. Additionally, methodological aspects of the study were presented in the third chapter which among others included the research design, target population and sampling procedures. All the research findings were presented under chapter four in line with research questions, while discussion of findings in light of research objectives was clearly outlined in chapter five. Having established the above background, this chapter makes conclusions and recommendations based on the findings discussed in the previous chapter.

6.1 The Main Research Findings and Conclusions

The foregoing comparative study was looking at leadership challenges in virtual management of selected universities and churches in Lusaka urban. The problem statement driving this research stems from the fact traditional schooling and church service have always been grounded in coming together, as a class or group of learners and believers. The above strongly held views, beliefs and practices came in check with the outbreak of the coronavirus pandemic whereby, the outbreak of the coronavirus resulted in a global call by the World Health Organisation (WHO) for strict adherence to social distancing, and in the worst-case scenario, imposition of restrictions.

The study was based on the following objectives:

6.1.1 Objective 1

- To investigate whether there exist challenges in virtually managing the universities and churches:

The quantitative and qualitative results show that both institutions indicated that failure to cope with virtual lessons and services was their major challenge. Another comparison drawn from the findings was that well as the second major challenge for universities was distractions from learning at home, the second challenge for churches was ICT. Staff capacity was the least challenge for both universities and churches.

Additionally, respondents submitted that internet connectivity is a huge challenge to the actualization of virtual management in both universities and churches. This particular challenge is one that largely depends on internet service providers.

It was also learnt that while there was some initial resistance and withdrawal from virtual learning by students at some universities, the churches on the other hand did not experience resistance but reluctance from members driven by the fact that a switch to virtual platforms affected the culture of worship that they are accustomed to such as the observance of the Sabbath day, confessionary and celebration of the eucharist.

Another challenge presented was that registrars were struggling to monitor both lecturers and students and thus threatening quality assurance in education. On the side of the universities, the concern was about exam administration while the Pastors are struggling with ensuring that the members remain committed which was one of the ways that growth is measured. Furthermore, students and church members indicated that the cost of virtual management was challenging. In that regard, universities had switched to cost effective platforms while churches continued were using the ordinary mode of accessing internet meaning that they are spending more money.

6.1.2 Objective 2

To explore the university and church leadership's adaptation to institutional digital transformation;

The quantitative and qualitative findings showed that the leadership at universities were doing better than that of churches in their adaptation to institutional digital transformation.

The study also sought to examine the most common software applications used by universities and churches as way of measuring their adaptability. It showed that Zoom was the leading software for churches. On the other hand, universities indicated that Microsoft teams, Google meet and Zoom were all being used at nearly the same level. The findings clearly showed that universities were using more software applications compared to churches meaning that they were offering students a wider choice to connect virtually as well as growing in knowledge on their usage.

6.1.3 Objective 3

- To investigate barriers faced by Universities and Churches to cope with virtual meetings.

The study found that electricity loading was the leading barrier experienced by students from all the sampled universities. On the other hand, churches were hindered by a limited access to internet. The findings showed that the lowest rating for both institutions when asked to comment on the effectiveness of virtual management was poor internet access and reliability which cumulatively stood above 60 for universities and above 70 for churches. The foregoing results spelled out the need for improvement by service providers as well as investment in a robust ICT infrastructure that can handle the demands of clients.

Furthermore, the findings showed the examined barriers affected the church more than universities. These included knowledge of software applications, access to computer hardware and financial income.

6.1.4 Objective 4

- To examine the socio-economic factors associated with virtual management of universities and churches.

The quantitative and qualitative results indicated that respondents from universities and churches stated that virtual management had some financial implications.

Some of the respondents were not sure of the effect of virtual management on the population of university students and church members showed the fact that the phenomena were still developing and it was for that reason difficult to ascertain its effect on students and church members. It was found that both institutions had experienced low productivity as some lecturers, Pastors, students and church members had a taken low key approach since the switch to virtual management. It also robbed lecturers, Pastors, students and church members of their family time and attention to keep track of online meeting and lessons. On the positive, if well implemented, virtual management had a potential to attract more distance education students and church members as well ease service delivery.

In as much as universities had a reduction in their operational costs, the down side to people learning at home was that institutions of learning lost income that was supposed to come from accommodation of students in their hostels. On the side of the church, it was indicated that it had robbed them of the manpower (voluntary) required to clean and maintain their auditoriums and lawns. So, while it may be a saving for the university, it was an added cost to the running of the church as they had to hire labor for that purpose at a time when their income had decreased.

Summary

- Overall, the discussion showed that virtual management presents more challenges to the church compared to universities although both indicated failure to cope as their main challenge.
- The leadership of both institutions are ready to adapt to the demands of the time but are limited by issues such as loading shedding and poor network connectivity.
- The study further found that church members were struggling more to cope with virtual sessions compared to university students due to barriers such unreliable access to cost effective internet access like ZAMREN and hence their virtual participation was low.
- The shift to virtual platforms also highlighted a number of socio-economic factors which included the cost of equipment, loss of income for both institutions though universities indicated a gradual increase.
- On other the hand, universities had experienced a minor drop in numbers especially distance students in the old age bracket. The situation was different for the church in that it has given an opportunity to some health challenged members to access teachings from the comfort of their homes.
- While it was on one hand costly, it had helped the universities to reduce its operational costs like electricity water and service parts. For the church, it had negatively affected their income as people were not accustomed to giving through mobile banking besides the loss of jobs by some members triggered by the Coronavirus outbreak.
- The study was underpinned by the adaptive structure theory which holds that leadership influences technology and humans are structure responsible for creating structures. While as both institutions face several challenges in their quest to operate virtually, universities have made a lot of advances compared to the church in many of the variables that were examined.

6.2 Recommendations

The leadership challenges in the virtual management of universities and churches provide a huge opportunity for both institutions to have a global reach and thereby increase their influence. In respect of the above, the following are the recommendations generated from the study findings:

- **For Churches and Universities:** There is also need for leaders in both institutions to carry out awareness programs on the benefits of virtual meetings to overcome resistance and reluctance from students and reluctance and members respectively.
- **For Universities:** The findings show the need for universities that had advanced in virtual management to deliberately share knowledge with upcoming institutions.
- Universities can enhance partnerships to provide broader access to knowledge transfer through sharing costs of ICT infrastructure and establishment of a merged virtual library.
- In order to do away with the costs incurred through payment of license fees for online applications, universities should invest in innovation and creativity to design their own user-friendly applications.
- **For Churches:** Like universities, the church should deliberately ensure that some of their lessons/services are strictly online to facilitate rapid adaptation to digital transformation.
- The church leaders need to engage universities for exchange of knowledge on how to effectively adapt to digital transformative considering that they are doing better though dealing with the same target population.
- In order to overcome the barrier of limited internet access, there is need for the church to learn embrace modern technology create a platform similar to ZAMREN through which they can engage service providers over flat internet rates.
- **For Regulators:** ZICTA and other stakeholders such as internet service providers should ensure virtual access given to the two institutions is eased through cost effective internet bundles or packages as well improve access to the internet by way of investment in ICT infrastructure to avert the challenges of the first objective.
- The Ministry of Technology and Science should find ways of reducing the cost of importing the required ICT infrastructure such as servers that are costly for individual institutions to acquire on their own. Additionally, these institutions can also share the cost of equipment.

6.3 Recommendations for future study

Since the study was conducted during the time of a health pandemic, it is the researcher's considered view that future research targeting students and church members separately would be necessary to compare face to face and online meetings. Additionally, use of focused groups to gather data as opposed to an online survey.

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APPENDICES

APPENDIX 1: INTERVIEW GUIDE FOR UNIVERSITY REGISTRAR/PASTOR

Dear Respondent,

I am a 2nd year student at Mulungushi University pursuing a Master of Arts in Civic Education and Transformative Leadership. In this regard, I am conducting academic research on the **Leadership Challenges in Virtual Management of Universities and Churches: A Comparative Study of Lusaka Urban.** You have been purposely selected to participate in this study. Your responses will be treated with confidentiality and as such will be used for academic purposes only. To ensure anonymity of responses, please do not write your name on this questionnaire.

PART A. ***Challenges of Virtual Management in Universities.***

1) What are some of the challenges that exist in virtual management of universities?

2) How/why these challenges affecting the effective management of your institution?

3) What are some of the ways the institution is using to get feedback from students on how they are coping with virtual lessons?

4) Are they any students who have withdrawn from their studies due to failure to cope with virtual learning?

5) If any, how is the institution responding to the number of drop outs?

6) Briefly share your thoughts on virtual management in relation to universities in Zambia's cyber space?

PART C. Leadership in Institutional Digital Transformation and Adaptation.

1) How would you describe the institutional leadership's readiness for digital transformation and adaptation?

2) Why is digital transformation and adaptation said to be a must for institutions of higher learning?

3) How would you rate the effectiveness of the institution's virtual management system in comparison to physical classes?

4) If you are not satisfied with the quality of virtual leadership offered by the institution, state why?

5) What are some of the measures that the University has put in place to ensure that it virtually operates without interruptions?

6) In view of the previous question, briefly state what the University requires to improve Virtual management?

7) What software applications is the institution using to operate virtually?

PART D. Barriers faced by students in coping with virtual meetings

1) What are some of the barriers experienced by students in coping with virtual lessons?

PART E. Socio-Economic factors associated with virtual management

1) Are there any financial implications to virtually managing the university, if so, kindly share some of them?

2. Has virtual management affected student enrollment or population, if so, state how?

3) How is virtual management impacting the institution's income, staff and lecture time?

4) How would you describe student's participation and performance during virtual classes and exams?

APPENDIX 2: QUESTIONNAIRE FOR STUDENTS

1. Demographic Data

Dear Respondent

I am a 2nd year student at Mulungushi University pursuing a Master of Arts in Civic Education and Transformative Leadership. In this regard, I am conducting academic research on the Leadership Challenges in Virtual Management of Universities and Churches: A Comparative Study of Lusaka Urban. You have been purposely selected to participate in this study. Your responses will be treated with confidentiality and as such will be used for academic purposes only. To ensure anonymity of responses, please do not write your name or any identity on this questionnaire.

1. Sex *

- [ ] Male
- [ ] Female

2. Age *

- [ ] Below 20
- [ ] 20-35 Years
- [ ] 36-45Years
- [ ] 46 and Above

3. Highest Level of Education Reached *

- [ ] 1st Year
- [ ] 2nd Year
- [ ] 3rd Year
- [ ] 4th Year
- [ ] 5th Year
- [ ] College completed

- [ ] University Undergraduate completed
- [ ] University Post-graduate completed

4. Name of Institution *

5. Type of Institution *

- [ ] Public University
- [ ] Private University

3. PART B. Challenges of Virtual Management

6. Does the university provide virtual services to its students? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online classes, School websites, School you tube channel etc.) *

- [ ] Yes
- [ ] No

7. Are there challenges that exist during online lessons? *

- [ ] Yes
- [ ] No

4. PART B. Challenges of Virtual Management _2

8. What are some of the challenges that exist in the virtual management of the university? (Tick all that apply)
(Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online classes, School websites, School you tube channel etc.)

- [ ] a) ICT challenges
- [ ] b) Staff capacity
- [ ] c) Load shedding (power)
- [ ] d) Distractions of learning from home
- [ ] Some Students are left behind in their studies.
- [ ] e) All of the above
- [ ] Other (please specify):

5. PART B. Challenges of Virtual Management_3

9. How many course mates have withdrawn from school due to failure to balance virtual services with their work, family, and social lives?
(Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online classes, School websites, School you tube channel etc.)

- [ ] 0-10
- [ ] 10-20
- [ ] 20-30
- [ ] 30-40
- [ ] 40 and above

10. Which of the following best describes your position on virtual learning/services in Zambia's cyber space?
(Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online classes, School websites, School you tube channel etc.) *

- [ ] Challenging
- [ ] Growing
- [ ] Costly
- [ ] Restrictive
- [ ] Unreliable

11. Briefly state if they are any other virtual learning challenges experienced by students (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online classes, School websites, School you tube channel etc.) *

6. PART C. Leadership in Institutional Digital Transformation and Adaptation.

12. On a scale of 1 – 10, 10 being the perfect score, how would you rate your school's readiness for digital transformation and adaptation?

Rating

13. How would you rate the effectiveness of your institution's virtual management system? *

	Very Good	Good	Poor	Very Poor
Student Faculty Contact	☐	☐	☐	☐
Active Learning	☐	☐	☐	☐

	Very Good	Good	Poor	Very Poor
Deadlines and Consistent Patterns of Course Activities	☐	☐	☐	☐
Course Quality	☐	☐	☐	☐
Internet Access and Reliability	☐	☐	☐	☐
Clarity of Lecturer's Presentation	☐	☐	☐	☐
Quality of services from University IT Department	☐	☐	☐	☐

14. As a student, what does the University require to ease Virtual Management? *

	Strongly agree	Agree	Disagree	Strongly Disagree
Build a personal connection with your students	☐	☐	☐	☐
Motivate your students	☐	☐	☐	☐
Help students maintain focus	☐	☐	☐	☐
create a sense of community	☐	☐	☐	☐
Make discussions meaningful	☐	☐	☐	☐
Increase student engagement	☐	☐	☐	☐
identify and support struggling students	☐	☐	☐	☐
Create shorter course content	☐	☐	☐	☐

15. Are you satisfied with the quality of virtual leadership offered by the School? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online classes, School websites, School you tube channel etc.) *

☐ Very dissatisfied

- [ ] Dissatisfied
- [ ] Satisfied
- [ ] Very satisfied

7. PART C. Leadership in Institutional Digital Transformation and Adaptation_2

16. why are you not satisfied?

8. PART C. Leadership in Institutional Digital Transformation and Adaptation_3

17. Does the University have a standby power generator/source and all required infrastructure to effectively operate virtually? *

- [ ] Yes
- [ ] No

18. What software applications is the institution using to operate virtually? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online classes, School websites, School you tube channel etc.) *

	Always	Often	Sometimes	Not often	Never
Zoom	☐	☐	☐	☐	☐
Google Meet	☐	☐	☐	☐	☐
Webex Meet	☐	☐	☐	☐	☐
Moodle	☐	☐	☐	☐	☐
Microsoft Teams	☐	☐	☐	☐	☐
WebinarJam	☐	☐	☐	☐	☐

	Always	Often	Sometimes	Not often	Never
Google Classroom	☐	☐	☐	☐	☐
Skype for Business	☐	☐	☐	☐	☐

9. PART D. Barriers faced by students in coping with virtual meetings

19. Are there barriers experienced by students in coping with virtual lessons? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online classes, School websites, School you tube channel etc.)

- ☐ Yes
- ☐ No

10. PART D. Barriers faced by church members in coping with virtual meetings_2

20. Which barriers are experienced by students? (Tick all that apply) (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online classes, School websites, School you tube channel etc.)

- ☐ Knowledge of software applications
- ☐ Access to computer hardware
- ☐ Financial income
- ☐ Time management
- ☐ Electricity Load shedding
- ☐ Limited access to internet
- ☐ Staying Motivated
- ☐ Distractions Everywhere
- ☐ Other (please specify):

11. PART E. Socio-Economic factors associated with virtual management

21. Are there any financial implications to virtual management? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online classes, School websites, School you tube channel etc.) *

- [ ] Yes
- [ ] No
- [ ] Not Every time

22. In your opinion, how has virtual management systems affected the number of students at your university?

(Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online classes, School websites, School you tube channel etc.) *

- [ ] Positively
- [ ] Negatively
- [ ] Not sure

23. On a scale of 1 – 10, 10 being positively and 1 being negatively, how are the virtual management systems at your school impacting your academic performance?

Rating

24. How would you rate student's participation during lessons online? *

- [ ] Very Good
- [ ] Good
- [ ] Poor
- [ ] Very Poor

25. Briefly indicate any other socio-economic factors affecting virtual management of universities/colleges?
(Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online classes, School websites, School you tube channel etc.)
*****

APPENDIX 3: INTERVIEW GUIDE FOR UNIVERSITY ICT HEAD

Dear Respondent,

I am a 2nd year student at Mulungushi University pursuing a Master of Arts in Civic Education and Transformative Leadership. In this regard, I am conducting academic research on the **Leadership Challenges in Virtual Management of Universities and Churches: A Comparative Study of Lusaka Urban.** You have been purposely selected to participate in this study. Your responses will be treated with confidentiality and as such will be used for academic purposes only. To ensure anonymity of responses, please do not write your name on this questionnaire.

PART A. ***Challenges of Virtual Management in Universities.***

1) What are some of the challenges that exist in virtual management of universities?

2) How are these challenges affecting the effective management of your institution?

3) Briefly share your thoughts on virtual management in relation to universities in Zambia's cyber space?

PART B. ***Leadership in Institutional Digital Transformation and Adaptation.***

1) How would you describe the institutional leadership's readiness for digital transformation and adaptation?

2) Why is digital transformation and adaptation said to be a must for institutions of higher learning?

3) What are some of the measures that the University has put in place to ensure that it virtually operates without interruptions?

PART C. ***Socio-Economic factors associated with virtual management***

1) Are there any financial implications to virtually managing the university, if so, kindly share some of them?

2. To what extent has virtual management affected student population?

3) How is virtual management impacting the institution's income, staff and lecture time?

4) How would you describe student's participation and performance during virtual classes and exams?

Thank you for your participation

APPENDIX 4: QUESTIONNAIRE FOR CHURCH MEDIA STAFF

APPENDIX 5:

STRUCTURED INTERVIEW GUIDE FOR GENERAL SECTRETARY OF CHURCH MOTHER BODY

Dear Respondent,

I am a 2nd year student at Mulungushi University pursuing a Master of Arts in Civic Education and Transformative Leadership. In this regard, I am conducting academic research on the **Leadership Challenges in Virtual Management of Universities and Churches: A Comparative Study of Lusaka Urban.** You have been purposely selected to participate in this study. Your responses will be treated with confidentiality and as such will be used for academic purposes only. To ensure anonymity of responses, please do not write your name or any identity on this questionnaire.

PART A. Demographic Data

Name of Institution_____

PART B. Mandate of the General Secretary's Office

1. In Brief, what is the mandate of the General Secretary's Office?_____
_____

1. What are some of the challenges that exist in the virtual management of churches in your organization within Lusaka Urban?

2. How would you describe the readiness of the church for digital transformation and adaptation in the wake of social distancing and restrictions of huge gatherings?

3. State some of the barriers faced by the church leadership and congregants in coping with virtual meetings?

4. Are there any financial implications related to virtual management churches? If yes, highlight the common ones experienced by your members.

5. What is your advice to ZICTA with regard to the church and internet use?

6. Highlight some of the positives attached to virtual management of the church.

7. What support if any, have you provided to churches to help them run virtually?

APPENDIX 6: QUESTIONNAIRE FOR CHURCH MEMBERS

1. Demographic Data

Dear Respondent,

I am a 2nd year student at Mulungushi University pursuing a Master of Arts in Civic Education and Transformative Leadership. In this regard, I am conducting academic research on the **Leadership Challenges in Virtual Management of Universities and Churches: A Comparative Study of Lusaka Urban.** You have been purposely selected to participate in this study. Your responses will be treated with confidentiality and as such will be used for academic purposes only. To ensure anonymity of responses, please do not write your name or any identity on this questionnaire.

1. Sex *

- [ ] Male
- [ ] Female

2. Age *

- [ ] Below 20
- [ ] 20-35 Years
- [ ] 36-45Years
- [ ] 46 and Above

3. How long have you been a member your Church? *

- [ ] Less than a year
- [ ] 2 -4 years
- [ ] over 4 years

4. Highest Level of Education Reached *

- [ ] No formal Education
- [ ] Primary School
- [ ] Secondary School
- [ ] College
- [ ] University Undergraduate
- [ ] University Post-graduate

5. Name of Church *

6. Indicate size of the Church (Approx) *

- [ ] Small (Less than 100 members)
- [ ] Medium (Between 101 and 200 Church members)
- [ ] Large (Over 201 Church members)

2. PART B. Challenges of Virtual Management (Online Church, church websites ...)

Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e. Online church services, church websites, church you tube channel etc.

7. Does the church provide virtual/online services to its members? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online church services, church websites, church you tube channel etc.) *

- [ ] Yes
- [ ] No

8. Are there challenges that exist in the virtual management of churches? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online church services, church websites, church you tube channel etc.) *

- [ ] Yes
- [ ] No

9. what are some of the challenges that exist in the virtual management of the church? (Tick all that apply) (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online church services, church websites, church you tube channel etc.)

	Major Challenge	Not a Challenge	Minor Challenge
a) ICT challenges	☐	☐	☐
b) Staff capacity	☐	☐	☐
c) Load shedding (power)	☐	☐	☐

	Major Challenge	Not a Challenge	Minor Challenge
d) Distractions of learning from home	☐	☐	☐
e) Some Students are left behind in their studies.	☐	☐	☐

10. Have there been measures taken by your church to get feedback from members on how they are coping with virtual/online services? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online church services, church websites, church you tube channel etc.) *

- ☐ Yes
- ☐ No
- ☐ Don't Know

11. How progressive is the feedback? *

- ☐ Slightly Progressive
- ☐ Progressive
- ☐ Very Progressive

12. How many members have withdrawn from your church due to failure to balance virtual services with their work, family, and social lives? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online church services, church websites, church you tube channel etc.) *

- ☐ 0-10
- ☐ 10-20
- ☐ 20-30
- ☐ 30-40
- ☐ 40 and above
- ☐ Don't Know

13. Are there any measures/mechanisms to train the members in managing the virtual space? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online church services, church websites, church you tube channel etc.) *

- ☐ Yes
- ☐ No

- [ ] Working in Progress
- [ ] Don't Know

14. What is your view on virtual management in Zambia? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online church services, church websites, church you tube channel etc.) *

- [ ] Challenging
- [ ] Growing
- [ ] Costly
- [ ] Restrictive
- [ ] Unreliable
- [ ] Don't Know

7. PART C. Leadership in Institutional Digital Transformation and Adaptation.

15. On a scale of 1 – 10, 10 being the perfect score, how would you rate your Church's readiness for digital transformation and adaptation?

Rating

16. How would you rate the effectiveness of your Church's virtual management system? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online church services, church websites, church you tube channel etc.) *

	Very Good	Good	Poor	Very Poor	Don't Know
Church Contact	☐	☐	☐	☐	☐
Quality of online church service	☐	☐	☐	☐	☐
Internet Access and Reliability	☐	☐	☐	☐	☐
Clarity of Pastor's Presentation	☐	☐	☐	☐	☐
Quality of services from the Church IT Department	☐	☐	☐	☐	☐

17. As a member, what does the Church require to ease Virtual Management?

	Strongly agree	Agree	Disagree	Strongly disagree	Don't Know
Build a personal connection with church members	☐	☐	☐	☐	☐
Motivate its Church members	☐	☐	☐	☐	☐
Help Church members maintain focus	☐	☐	☐	☐	☐
create a sense of community	☐	☐	☐	☐	☐
Make discussions meaningful	☐	☐	☐	☐	☐
Increase Church member's engagement	☐	☐	☐	☐	☐
identify and support struggling Church members	☐	☐	☐	☐	☐
Create shorter online services	☐	☐	☐	☐	☐

18. Are you satisfied with the quality of virtual leadership offered by your church?

- ☐ Very dissatisfied
- ☐ Dissatisfied
- ☐ Satisfied
- ☐ Very satisfied

19. Does the Church have a standby power generator/source and all required infrastructure to effectively operate virtually? *

- ☐ Yes
- ☐ No
- ☐ Don't Know

20. What software applications is your Church using to operate virtually? (Tick all that apply) (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online church services, church websites, church you tube channel etc.) *

	Always	Often	Sometimes	Not often	Never
Zoom	☐	☐	☐	☐	☐
Google Meet	☐	☐	☐	☐	☐
Webex Meet	☐	☐	☐	☐	☐
Moodle	☐	☐	☐	☐	☐
Microsoft Teams	☐	☐	☐	☐	☐
WebinarJam	☐	☐	☐	☐	☐
Google Classroom	☐	☐	☐	☐	☐
Skype for Business	☐	☐	☐	☐	☐

9. PART D. Barriers faced by students in coping with virtual meetings

21. Are there barriers experienced by Church members in coping with virtual services? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online church services, church websites, church you tube channel etc.) *

- ☐ Yes
- ☐ No
- ☐ Don't Know

22. Which barriers are experienced by Church members? (Tick all that apply) *

- ☐ Knowledge of software applications
- ☐ Access to computer hardware
- ☐ Financial income
- ☐ Time management
- ☐ Electricity Load shedding
- ☐ Limited access to internet
- ☐ Poor connectivity

- [ ] Distractions Everywhere
- [ ] Other (please specify):

11. PART E. Socio-Economic factors associated with virtual management

Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online church services, church websites, church you tube channel etc.

23. Are there any financial implications to virtually managing the church? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online church services, church websites, church you tube channel etc.) *

- [ ] Yes
- [ ] No
- [ ] Not Every time
- [ ] Don't Know

24. Has virtual management negatively affected the number of members serving in church? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online church services, church websites, church you tube channel etc.) *

- [ ] Yes
- [ ] No
- [ ] Not much
- [ ] Don't Know

25. On a scale of 1 – 10, 10 being positively and 1 being negatively, how are virtual management systems of your church impacting your spiritual growth? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online church services, church websites, church you tube channel etc.) *

- [ ] 1 - 4
- [ ] 5 - 7
- [ ] 8 –10
- [ ] Don't Know

26. How would you rate member's participation during virtual services? (Virtual Management - the supervision, leadership, and maintenance of virtual teams. i.e Online church services, church websites, church you tube channel etc.) *

- [ ] Very Good
- [ ] Good
- [ ] Fair
- [ ] Poor
- [ ] Very Poor

APPENDIX 7: TIME FRAME

PERIOD	ACTIVITY	DURATION	RESOURCES REQUIRED
????	Formulation of interview guide and questionnaires	1 week	
????	Printing of survey questionnaires	2 days	5 rims of A4 paper
????	Questionnaire pre testing	2days	One Motor vehicle 70ltrs of petrol (fuel)
????	Collection of secondary data materials	3 weeks	1 rim of A4 paper One motor vehicle 50ltrs petrol (fuel)
If it has no time frame then use	Collection of primary data i.e. Field Sampling and Research.	8 weeks	One motor vehicle. 70ltrs of petrol (fuel)
	Preparation of draft research report Compilation and analysis of field data	2 weeks	1 Laptop Computer
	Editing and final analysis of report	1 week	
	Preparation of final report and submission.	2weeks	