

AN INVESTIGATION OF CELL PHONE USE ON THE ACADEMIC
PERFORMANCE OF NAMIBIAN SCHOOL LEARNERS: A CASE STUDY OF THE
CAPRIVI
SENIOR SECONDARY SCHOOL AND KIZITO COLLEGE IN THE ZAMBEZI
REGION

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF ARTS IN MEDIA STUDIES
OF THE UNIVESITY OF NAMIBIA

BY

BERIO N. MBALA

2018177860

NOVEMBER 2019

SUPERVISOR: DR. F. J. MWILIMA

ABSTRACT

The study assessed the impact of cell phone use among Namibian school learners. The researcher used the mixed methods approach of qualitative and quantitative methods to collect and analyse data, integrate the findings and draw inferences to predict the impact of cell phone usage on the academic performance of the Namibian school learners: a case study of the Caprivi Senior Secondary School and Kizito College in the Zambezi region. Caprivi Senior Secondary School and Kizito College are senior secondary schools that offer Grade 8 to Grade 12 and most school learners are aged between 13 to 20 years old. Participants of the study were 188; these were selected using simple random sampling and convenience sampling. Out of the total of 188 respondents, 172 were school learners (118 from Caprivi Senior Secondary School and 54 from Kizito College), six teachers of which three were from Caprivi Senior Secondary School and three were from Kizito College and ten parents. The study used Self-administered Structured Questionnaires (SSQ) for learners; Focus Group Discussion (FGD) for teachers and interview guides with semi-structured questions were used to collect data from parents. The study established that 90 percent of respondents who participated successfully were school learners, while 4% of the participants were teachers from these sampled schools and 6% of the participants were parents of the school learners. The study further established that school learners, teachers and parents use cell phones and are connected to social media sites such as Facebook, WhatsApp, Google and YouTube.

Table of Contents

ABSTRACT.....	i
ACKNOWLEDGEMENTS.....	v
DEDICATION.....	v
DECLARATION.....	v
ABBREVIATIONS AND ACCRONOMYS.....	vi
DIAGRAMS, TABLES AND FIGURES.....	vi
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the study.....	1
1.2 Statement of the Problem.....	2
1.3 Research Objectives.....	2
1.4 Significance of the Study.....	2
1.5 Limitations of the study.....	2
CHAPTER TWO: LITERATURE REVIEW AND THEORETICAL FRAMEWORK.....	4
2.1 Introduction.....	4
2.2 Cell Phone Use and Applications.....	4
2.3 Impact of Cell Phone Use on Academic Performance.....	5
2.4 The benefit of Cell Phone Use on Academic Performance.....	7
2.5 Social Media Applications and Education.....	9
2.5.1 Facebook.....	9
2.5.2 WhatsApp.....	10
2.5.4 Google.....	11
2.6 Technological Determinism as a Theoretical Framework.....	11
2.7 Conclusion.....	12
CHAPTER 3: RESEARCH METHODOLOGY.....	13
3.1 Introduction.....	13
3.2 Research Design.....	13
3.3 Research Method.....	13
3.3.1 Mixed Method Approach.....	14
3.4 Population.....	15
3.5 Sample.....	15
3.6 Research Instruments.....	16

3.7 Data Collection Procedure	17
3.8 Validity and Reliability	18
3.9 Research Ethics	19
3.10 Conclusion	19
CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS	20
4.1 Introduction	20
4.2 Data Analysis	20
4.3 Sample	21
4.3.1 Population Sample	22
4.3.2 Actual Study Participants	23
4.4 Age Demographics	23
4.5 Respondents According to Gender	24
4.6 Respondents' Grade Levels	25
4.7 Cell phones accessibility among learners and teachers	26
4.8 The extent of cell phone use among school learners	27
4.9 Places where school learners have access to their cell phones	28
4.10 The cell phone use pattern and its frequencies	29
4.11 Cell phone usage patterns for educational activities	30
4.12 The effect of mobile phones on school learners	31
4.13 Understanding of social media through use of cell phones	32
4.13.1 The most accessed social media	33
4.13.2 The most useful social media on education/learning	34
4.14 The risks of social media on school learners	35
4.15 How the risks of social media can be prevented among school learners	36
4.16 Conclusion	36
CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS	37
5.1 Introduction	37
5.2 Summary of the Study	37
5.3 Discussions of the Findings	37
5.4 Conclusion of the Study	39
5.5 Recommendations	39
5.6 Suggestion for Further Research	40
6 REFERENCES	42
7 APPENDICES	47

7.1 Appendix A.....	47
7.2 Appendix B.....	51
7.3 Appendix C.....	53
7.4 Appendix D.....	55
7.5 Appendix E.....	60
7.6 Appendix F.....	61
7.7 Appendix G.....	62

ACKNOWLEDGEMENTS

I would like to extend a word of thanks to my Supervisor Dr. Fred Mwilima whose constructive input, guidance, patience and encouragement has made this task possible. I am also at a loss of words to sufficiently thank my editor for encouragement and editing my work. My classmates for their unwavering support and encouragement, to all the respondents in the study, I am greatly indebted for providing me with valuable information and their precious time they took in answering questions. Words alone cannot express my gratitude to my sister Mrs. Ireen Simataa, her Husband Mr. John Simataa for being there for me during my study. I appreciate your understanding and support. Above all, I would like to thank the Lord for seeing me through all the way.

DEDICATION

I dedicate this work to my mother Ms. Angelina Namukolo Mansu and my husband Mr. Davie Matengu Kani for being there for me during my studies. You are the greatest blessing that I would ever cherish. I love you!

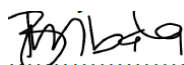
DECLARATION

I, Berio N. Mbala hereby declare that this study is my own work and is a true reflection of my research, and that this work, or any part thereof has not been submitted for a degree at any other institution.

No part of this thesis/dissertation may be reproduced, stored in any retrieval system, or transmitted in any form, or by means (e.g. electronic, mechanical, photocopying, recording or otherwise) without the prior permission of the author, or The University of Namibia in that behalf.

I, Berio N. Mbala grant The University of Namibia the right to reproduce this thesis in whole or in part, in any manner or format, which The University of Namibia may deem fit.

Berio N. Mbala



November 2019

Name of Student

Signature

Date

ABBREVIATIONS AND ACCRONOMYS

SNS	SOCIAL NETWORK SITES
NID	NAMIBIA INTER-CENSAL DEMOGRAPHIC SURVEY
ICT	INFORMATION COMMUNICATION TECHNOLOGY
FGD	FOCUS GROUP DISCUSSIONS
SPSS	STATISTICAL PACKAGE FOR SOCIAL SCIENCES
GPS	GLOBAL POSITIONING SYSTEM
SMS	SHORT-MESSAGING-SERVICES
IM	INSTANT MESSAGING
FLMS	FACEBOOK LEARNING MANAGEMENT SYSTEM
SSQ	SELF- ADMINISTRED STRUCTUREED QUESTIONNAIRES

DIAGRAMS, TABLES AND FIGURES

Figure 1	Population Sample
Figure 2	Actual study participants
Figure 3	Age demographics
Figure 4	Respondents' according to gender
Figure 5	Levels of grades
Figure 6	Cell phone accessibilities
Figure 7	Hours spend using cell phones
Figure 8	Places where mostly school learners use their cell phones
Figure 9	The cell phones use patterns

- Figure 10** **The cell phone usage patterns for educational activities**
- Figure 11** **The effect of mobile phones on school learners**
- Figure 12** **The most accessed social media**
- Figure 13** **The most useful social media on education**
- Figure 14** **Risks of social media**

CHAPTER 1: INTRODUCTION

This chapter provides a concise background of the study and discusses the background of the study, statement of the problem, objectives, significance, limitations and the delimitation of the study.

1.1 Background of the study

Advances in communication technology have significantly transformed the patterns of communication (Jones & Fox, 2009). Social media in particular, has increased both connectivity and participation in all spheres of social life including education. This impact has been observed in learning, research and education in general. “Among the vast variety of online tools which are available for communication, social networking sites (SNS) have become the most modern and attractive tools for connecting people throughout the world”, (Aghazamani, 2010, p. 730). Meanwhile, “cell phones are the main tools used to access social media and they have become an integral part of college life and culture and their use in classroom situations, both overtly and covertly, is on the increase” (Andrew, Jacob, & Karpinski, 2016, p. 1). These tools have the potential to contribute positively to student learning and can improve their academic performance (Mwilima & Hangula, 2017). The two researchers suggest that going online using mobile phones is no longer unfamiliar and strange and that among those susceptible to this change are the youth in tertiary institutions. They also argue that uncontrolled use of these devices can pose a threat and negatively affect students’ academic performance (the extent to which a student, teacher or institution has achieved their short or long-term educational goals) because the adoption of cell phones and transformation of the modes of communication has been observed in Namibia. The 2017 Namibia Inter-censal Demographic Survey Report (NIDS) indicated that the number of people owning cell phones in Namibia has risen from 39 percent in 2014 (Storm & Stoman, 2014) as quoted by Mwilima and Handula (2017) to 79.2 percent in 2016 of the population aged 15 years and above (NIDS, 2017).

This offers an opportunity to assess the impact of social media on school learners through cell phone use. The findings by Mwilima and Hangula (2017) are of particular interest and relevant to this study in the sense that cell phone use can improve academic performance. This study aims to advance their argument by investigating the impact of the use of cell phones on academic performance at two selected schools in the Zambezi Region.

1.2 Statement of the Problem

The use of technology among learners is observed to be on the increase and technological devices such as cellular phones, laptops and other digital devices are now accessed and used by almost everyone including school learners. Research shows that cell phones have a significant impact on young people (Njoroge, 2011) and also on education (Mwilima & Hangula, 2017). This study investigated the impact of cell phones on the academic performance of school learners of the two schools, Caprivi Senior Secondary School and Kizito College in the Zambezi Region. Caprivi Senior Secondary School and Kizito College are the two biggest schools in the Zambezi region that enrol learners from Grade 8 to Grade 12.

1.3 Research Objectives

The objectives of this study were:

- To assess the extent of cell phone use among school learners at the Caprivi Secondary School and Kizito College.
- To determine the usage patterns of cell phones by learners at the two selected schools.
- To investigate the impact of cell phone use on academic performance of school learners.

1.4 Significance of the Study

The research is important for several reasons; no study on this topic has been conducted in the Zambezi region. The study is also significant to the local body of knowledge as it will be the first of its kind to investigate the impact of cell phone use on the academic performance of school learners in the Region. Secondly, exploring the use of cell phones in schools can create awareness on the negative and positive impacts of cell phone use in education. The findings of this study can inform education authorities and decision makers to formulate policies that can be effective in the use of these technological devices in schools.

1.5 Limitations of the study

The study is limited to only two schools out of 10 secondary schools (namely Caprivi Secondary School and Kizito College) in Katima Mulilo, Zambezi Region. The two schools are the biggest schools in the region and were easily accessible and affordable during data collection of this research. Caprivi Secondary School and Kizito College are compatible and both in an urban setting of Katima Mulilo with access to electricity that can be a useful tool to energize technological devices that are being assessed and the findings cannot be generalized

to all schools in the region. Consequently, because of this limitation, the research findings will not paint a complete picture of the impact of cell phone use on academic performance for other schools in the region as the research population was limited only to the two selected schools.

1.6 Delimitation of the study

The research investigated cell phone use on the academic performance of the Namibian school learners. The study excluded Instagram, Myspace, Twitter, Snapchat and LinkedIn and focused on platforms such as Facebook, WhatsApp, YouTube and Google.

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

A wide variety of literature was used to conclude that cell phones have become an integral part of student life and culture. Even a casual observation of students today will reveal that cell phones are being used, both overtly and covertly, in every possible school setting, including the classroom. Cell phones can best be described as portable, handheld communication devices connected to a wireless network that allow users to make voice calls, send text messages and run applications.

Cell phones are often characterized as having different features that are combined to allow users to make voice calls, video calls, access the internet and browse the web, take photos, and upload them to the web, navigate with GPS if the phone has GPS built-in, play music and videos stored on the phone, and connect to a PC to copy media to it, manage contacts and appointments, send emails, and play in-built games, among other features.

This chapter investigated the impact of cell phone use on academic performance among school learners. The research employed technological determinism, focusing on the academic performance of learners in educational environments.

2.2 Cell Phone Use and Applications

Cell phones have become web enabled devices that can be constantly connected to the internet, providing more communication than just phone calls and Short-Messaging-Services (SMS) such as social media and Instant Messaging (IM). Cell phones continue to have a significant impact in Namibia and have transformed the modes of communication from traditional, to communication platforms that are instant and continuous (Jones & Fox, 2009). Tertiary students use cell phones for various reasons including for leisure, social networking, surfing the Internet, watching videos, and playing games. Research also shows that if cell phones are primarily used for leisure, they can disrupt learning within academic settings and can result in poor academic performance (Mwilima & Hangula, 2017). The two researchers concluded that the use of cell phones is imperative in academic setting and that students who have academic rapport with their lecturers through social media interaction perform better than those who do not use this platform. Both scholars and students alike in academic institutions now perceive cell phones as a mobile library. Some educational institutions are now using social network sites to create chat-room forums and groups to discuss and clarify, provide a range of extra support for learning (Njoroge, 2011).

Gross (2004) agrees with this conclusion and opined that there is evidence that the number of students at tertiary institutions using cell phones for learning purposes is increasing. Some schools are using cell phones to enable students to instant-message peers and teachers with questions related to homework and to clarify difficult material. Thus, mobile phones, as Ravichandran (2009) suggests, is a total blessing, as it provides a collection of communication media which add value to the quality of human life. Academics are creating learning communities and communities of practice for sharing and continuing education through the use of educational blogs, e-portfolios, formal and ad hoc communities, chats, discussion threads, and synchronous forums (Njoroge, 2011). Therefore, investigations are critical to best determine ways to integrate cell phones in the educational/learner environment.

2.3 Impact of Cell Phone Use on Academic Performance

A cell phone is a very useful tool for maintaining social contact between family and friends. However, it has impacted some school learners negatively. While in school students are supposed to take on their prescribed roles as students with full concentration on their studies and free from contact with the outside world, instead of concentrating on their classroom work, many students give more emphasis to the use of the cell phone in their classes, dormitory and even on the football field. According to Amin, Mansoor, Hussain and Hashmat (2016), this may be partly attributed to poor teaching methods, lack of teaching materials, lack of supervision by the parents and the teachers, as such this may affect the students' performance or achievement in school as quoted by Jairusi, Upelle, Ogwuche, Thomas, Tyavlum, Ode, Ekpo, Agama, (2017).

Amin et.al, (2016) reiterated that, internet access through use of cell phones, has exposed many adolescents to different kinds of content. In recent years, the availability of different kinds of affordable and inexpensive smart phones made it very easy for adolescents to have access to different types of age-inappropriate web content. The situation is worsened by the ignorance of parents who are often careless of adolescents' needs and challenges. Also, guidance and counselling services are either absent or inactive in most schools and the school teachers are not helping the situation (Taylor & Harper, 2003) as cited by Amin et al, (2016). Rabiou et al. (2016) observed that many youth today are highly influenced and so much affected by what they watch on these social media sites over the internet that one can easily see the consequences in their academic performance and life styles. The continuous downwards spiralling in academic performance, the rise in cases of drop-outs, the increase in

most of the unacceptable, immoral, and antisocial behaviours committed by students in secondary schools today, which include truancy, massive failures, exam malpractices, improper dress codes, indiscriminate sexual relationships with the opposite sex as well as same sex and most violent behaviours, can often be attributed to the influence of mobile phones.

Balakrishnan and Raj (2012) agree that mobile phones are known to be very popular among students, increasing their social inclusion and connectedness as well as providing a sense of security as they can contact others in times of distress or emergency. Although there are benefits of using a mobile phone, there can also be negative effects on the users and environment, for example; teachers are disrupted when cell phones are used at inappropriate times (North, Johnston & Ophoff, 2014).

Research shows that cell phones can lead to negative influences on students due to the focus on texting and other social activities which cause them to leave academic activities aside, resulting in poor academic performance among learners. Other negative consequences of mobile phone use include addiction, manifested as over dependency, which can cause problems such as emotional stress, damaged relationships, and falling literacy levels (Balakrishnan & Raj, 2012) and using a mobile phone whilst driving may lead to an increased risk of an accident (Hong, Chiu, & Huang, 2012; Walsh et al., (2010) as quoted by North, Johnston, and Ophoff (2014). Whilst Ogunyemi (2010) found that African teenagers' cell phone usage was greatly affected by their parents in other ways too, an increased bill from excessive use would lead to scrutiny by their parents therefore forcing the students to use their phones less than they intended.

There is the conflicting priority of young people, parents and teachers in relation to the mobile phone devices, with teachers more concerned about issues such as discipline in the classroom and parents worried about means of contacting their children at every point in time. Schneiderman (n.d) concurs too that in today's world, students are surrounded by a personalized and engaging world outside of the school, but they're unplugging not only their technology, but their minds and their passions too often, when they enter into our schools. This might lead to students being addicted to cell phones causing them to lose focus on their school work.

Another negative factor of cell phones is the cost factor; a cell phone does not come cheap, for a student to own a cell phone, this comes with costs such as air time, data bundle etc. Mwilima and Hangula (2017) indicated that to interact and be socially functional, one needs to have ample money to buy vouchers. Consequently, this has led to student's prioritization

of mobile data purchases over their school related responsibilities. They also indicated that cell phones are still regarded as luxurious goods that only a certain class of people can afford to buy. Li (2010), identified determinants such as the durability of the device, quality, brand name and price as factors which influence purchase decisions.

According to the researcher's observation, studies focusing on the influence of cell phones in contemporary Namibian schools have not been allocated adequate attention. It is against this background that this research was conducted to investigate how cell phone usage influences learners' academic performance.

2.4 The benefit of Cell Phone Use on Academic Performance

Africa's case on mobile infrastructure has expanded rapidly across sub-Saharan Africa and other emerging countries. Africa's mobile phone penetration rate is estimated to be around 67% of the total population (The Guardian, 2015). The widespread penetration of mobile phones across the region has in turn been accompanied by the imposition of various communication regulations and practices such as data retention (Whitley & Hosein, 2005). Meanwhile, according to the 2017 Namibia Inter-Censal Demographic Survey Report (NIDS), the number of people owning cell phones in Namibia has risen from 39 percent in 2014 (Storm & Stoman, 2014 as quoted by Mwilima and Handula (2017) to 79.2 percent in 2016 for the population segment aged 15 years and above (NIDS, 2017). With the increasing popularity of cell phones among students comes the sharply contested debate as to whether or not they should be allowed in classrooms.

There are various benefits for using a cell phone/smart phone within a class room. In the past, cell phones were mostly about making phone calls. They had a number pad, a digital phone book and a pick-up/hang-up button and not much more than it has today.

Smartphones can be used to assist students in accessing information from the web, and also collaborating with students; while also enabling educators to create a more media-rich approach to instruction (Jairusi et al., 2017). Thus, teachers and students can use these devices as tools to improve educational outcomes.

Smart phones organize the purposes of the phone, camera, video, media player and wireless computers into a single gadget. Taber (2005) believes that these functions could supplement science teaching and learning which contains complicated content and scientific processes that are otherwise difficult to teach, as quoted by Jairusi et al., (2017). While there is a valid case to be argued by parents and educators that cell phones are disruptive to the learning environment and can lead to negative behaviours such as cheating in exams, however, cell

phones can certainly enrich and become useful educational tools in supplementing teaching instruction.

According to Bull and McCormick (2012), Tao and Yeh (2013), as cell phone technology continues its rapid development, the device appears capable of contributing to student learning and improved academic performance, for example, smart phones provide students with immediate, portable access to many of the same education-enhancing capabilities as an Internet-connected computer, such as online information retrieval, file sharing, and interacting with professors and fellow students as quoted by (Andrew, Jacob & Karpinski, 2016).

In many countries ICT has enriched the social environment in which learning takes place. Some teachers have developed Facebook applications (and apps on other social media platforms) for personalized learning. They post comments, get reactions from students, set up meetings, and express views about the class. Research conducted at a private liberal arts university and presented in 2010 by Darrell West found that students enrolled in courses set up in this manner averaged an hour per day accessing the Facebook Learning Management System, (West 2015). West (2015) commented that students responded almost immediately to messages about the course and that pupils engaged more in questioning through Facebook messages directed to the instructor than asking them verbally in the face-to-face classroom.

Worldwide, students use mobile devices for learning outside the classroom at primary school, secondary school and university. In developed nations, children start using the internet at an early age, mostly through computers and later mobile devices in schools (Oblinger & Oblinger, 2005), while in the developing world, internet growth is emerging impressively, school learners are only allowed to use mobile devices outside the classroom (Tungaraza, 2015). When using these mobile devices, it allows students to communicate to peers, and relatives using networks they have created. Students view using devices outside the classroom more compatible to using a textbook. The compatibility is not to mean mobile devices replace textbooks, rather impact to life-long learning.

Mobile tools provide a good means for students to learn by trial while using the internet. Rather than allowing circumstances to control students, the student centered learning approach allows students to acquire knowledge before class and discuss during class time (Ciampa, 2014.) In the African context, the approach allows students to switch roles with teachers (Vavrus, 2009). They impact one another as the teacher remains a facilitator. Using mobile devices, complex issues like lack of teaching aids, and shortage of reading materials can be overcome as students use mobile devices outside the classroom to learn. Therefore,

these mobile learning devices need to become a significant part of education. It is about time education sectors come to realize that today's students have these technological devices and it has become central to their lives, so the best thing is to integrate these devices into teaching and learning.

2.5 Social Media Applications and Education

Social media can be defined as forms of electronic communication through which users interact among people in which they create, freely share, exchange and discuss information, ideas, personal messages, and other content about each other and their lives using a multimedia mix of personal words, pictures, videos and audio, utilizing online platforms while they are connected to the Internet (Cox & Rethman, 2011). Social media can be accessed through a laptop, computer, cell phone, iPad, and many other technological devices. However, the mostly used technological device by students to access social media is a mobile phone due to its affordability. Through the use of social media it has become comprehensive and currently, the most popular social media platforms in Namibia are Facebook, WhatsApp, YouTube Google +, Twitter, LinkedIn and Skype. Thanks to the Internet and social media many students increasingly live in a world where information can be readily accessed. Therefore, this research focused on platforms such as Facebook, WhatsApp, YouTube and Google.

2.5.1 Facebook

Namibia has a Facebook penetration rate of 10.7% with 231, 340 Facebook users (Internet World Stats, 2015). According to Amin, Mansoor, Hussain and Hashmat (2016), Facebook user profiles allow the user to communicate information with each other and allow users to build and maintain relationships and encourage others to be a part of a community. The main features include the wall, which is an open space for messages, pictures and videos, photos, where users can upload pictures or whole albums and can tag photos linking to the individuals in the pictures and status which allow users to update friends on what they are doing or what is on their mind (Brown, 2009). Many schools in Namibia have Facebook pages and these pages can be used to announce news and updates, which then drop into the feeds of other Facebook users that have chosen to receive them. However, there are some limitations associated with utilizing Facebook as a promotion tool such as little authority over personalization of a fan page. Above all content available on Facebook is only accessible by registered users.

2.5.2 WhatsApp

WhatsApp messenger was created by Brian Acton and Jan Koum in 2009 to make communication and the distribution of multimedia messaging fast and easy (Yeboah & Ewur, 2014). The main purpose behind this application is to replace SMS with a cross platform mobile messenger that works on an internet data plan. It has unlimited texts, it is still beneficial as it is a convenient way to skip international fees that carriers may charge. Yeboah and Ewur (2014) noted that with WhatsApp messenger, communication through mobile phones has become easier, faster and cheaper. It is less expensive as compared to the normal phone messaging; for example, an individual can chat with friends and family overseas through WhatsApp without having to incur global SMS charges. This means that, the provision and access to learning material anywhere, anytime, and in various formats has the potential to enhance student learning capabilities. In higher education, previous studies have found that class WhatsApp groups are used for communicating with students, nurturing a social atmosphere in class, forming a dialogue and learning collaboration between students. Another benefit of this app is the possibility it gives the teacher to become more familiar with the students and to influence student discourse. Moreover, WhatsApp has academic benefits that avail continuous learning outside the classroom and rapid access to study materials. Nevertheless, there are also disadvantages as not all students have smartphones that enable use of the App. Furthermore, there is a large amount of messages and the need to deal with improper language and finally, students have high expectations that the teacher will answer their questions quickly and effortlessly (Deshen, Buchnik & Brochson, 2014).

2.5.3 YouTube

YouTube was started in 2005 by three former PayPal employees: Steve Chen, Chad Hurley, and Jawed Karim. Their goal was to create a place where users could upload, view and share their videos. As users grew, it developed into the ideal tool for finding specific video material. It was later sold to Google.

According to YouTube statistics (2015), the platform has more than one billion users, processes more than three billion searches in a month, 300 hours of videos are uploaded every minute and top YouTube creators were found to be more popular than mainstream celebrities among U.S teenagers. Brake and Safko, (2009) indicated that YouTube allows users to upload, watch and share videos from all around the world on its platform.

Researchers have realized that YouTube can be very useful for educational purposes because the content is provided in diverse videos, which include TV clips to short films and other types of content, such as video blogging, tutorials and educational videos. Brake et al., (2009) believes that through YouTube users can comment on and share other contents and they can join communities and engage in conversations. During the last few years, YouTube tutorials have become more and more popular and are not a surprising phenomenon since no one knows it all and everybody needs some help once in a while with cooking, makeup or even with learning how to tie a tie. On YouTube it is possible to find tutorials for almost anything and the fastest growing markets for tutorials are the fashion and beauty industries.

2.5.4 Google

Google is a search engine used to access and discover information about someone or something on the Internet. It was originally developed by Larry Page and Sergey Brian in 1997. Its main purpose among school learners is to search for text in publicly accessible documents offered by web servers, as opposed to other data, such as images or data contained in databases. Google has different types of Apps that can be used by learners such as Gmail, Google Maps, Goggle Drive that consists of doc, slides and sheets, Goggle Photos, Google Calendars, Hangouts and Goggle +. Google is designed to scale well to extremely large data sets. It makes efficient use of storage space to store the index. Its data structures are optimized for fast and efficient access. This study also evaluated the effectiveness of using Google search engine in and out-of-class for school learners.

2.6 Technological Determinism as a Theoretical Framework

Technological determinism is defined as a theory that seeks to show technical developments, media, or technology as a whole, as the key mover in history and social change. According to Haeuver (2017) the proponent of technological determinism argues that society is influenced and shaped by technological development. It has to adjust and adapt to new technologies and innovations. Meanwhile, the negative consequences of the technological development are the result of poor use by the people, not of the nature of technology. On the contrary, social determinism argues that social sphere conditions determine technological development. The introduction and use of new technologies is the result of social order. However, proponents of this concept emphasize the bi-directionality of this process in their theory.

Technological innovations are neither good or bad nor neutral, as they are unable to function and bring about any effects without participation from humans. Thus, technology might not necessarily be regarded as an independent variable which completely determines changes in society as itself alone would not be able to determine aspects in society; it is the combination with human activities which give them the power to do so.

This study employed technological determinism as its theoretical framework because it shows that technology is not neutral to the learning environment, that the continuous dynamic development of ICT in education brings new tools and options. This theory shows that technology is a key mover in history and can effect social change. The theory relates to this research because technological determinism promotes the use of technology and is influenced by the user and their surroundings, but also, above all, by the technology itself (Hauver, 2017). This means that technology does not determine human action but rather human action shapes technology. Its effects can be seen on other social factors such as culture, politics and education. Therefore, the academic performance of students is a result of the competition between cell phone participation and academic work. This implies that the amount of time invested participating on interactions could affect the time allocated for studies by students and this could affect their learning outcomes as a result.

2.7 Conclusion

This chapter discussed literature on different varieties of cell phones and their tools. The literature concluded that cell phones have become an integral part of student life and culture. This review investigated cell phone use and its benefits towards academic performance. In terms of social media the review discussed Facebook, WhatsApp, YouTube and Google as the most predominant tools to improve education within the Namibian context. It is established from the existing literature, as well as the vast range of information reviewed that the research employed technology determinism since it was relevant to the research.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter gives an overview of the research methodology. The chapter features explanations of research methods, design used in the study and what prompted their use. The research population has also been specified as well as the data collection procedures undertaken during the research. The validity and reliability test is also explained and the researcher also explains all relevant ethical considerations.

3.2 Research Design

Research methods may be understood as all those methods/techniques used to conduct research. These techniques, as elaborated by Kothari (2004), refer to behaviour and instruments used in conducting research while methods refers to the behaviour and instruments used in selecting and constructing the research technique. Meanwhile, research design is defined as “a set of advance decisions that make up the master plan specifying the methods and procedures for collecting and analysing the needed information” (Burns & Bush 2002, p.120). Appropriate research design is essential as it determines the data types, data collection techniques, sampling methodologies as well as the schedule and the budget (Hair et al., 2003). In other words, it refers to the overall strategy that one chooses to integrate different components of the study in a coherent and logical way. This can ensure that the study will effectively address the research problem. Moreover, it constitutes the blueprint for the collection, measurement and analysis of data. “The purpose of a case study is to understand the case under investigation in its natural setting, while acknowledging its complexity and context” (Maree, 2007, p.83). Caprivi Senior Secondary School and Kizito College learners were the population studied, to investigate the use of cell phone use towards academic performance among these groups of learners.

3.3 Research Method

This study employed a mixed-methods design. According to Kothari (2004) research methods are all those methods/techniques that are used for conducting research, or are methods used in performing research operations; or methods which are used by the researcher during the course of studying the research problem. Thus, the research method is hereby established from the research process formulated from the review of previous literature. This study, *an investigation of cell phone use on the academic performance of the Namibian school*

learners: a case study of the Caprivi Senior Secondary School and Kizito College in the Zambezi region, employed mixed method approach.

3.3.1 Mixed Method Approach

Mixed methods refer to the process whereby the qualitative and quantitative elements are interlinked to produce a more robust account of the research problem (Glogowska, 2011, Zhang & Creswell, 2013). This research employed qualitative and quantitative methods to collect and analyse data, integrate the findings and draw inferences (Tashakkori & Creswell, 2007). This method is described by Creswell (2014) as the integration of the two approaches which can occur at any stage of the research process, but is vital to the consistency of the mixed methods research. This means that this method allows researchers not to rely on more than one data source but offers freedom to use all methods possible to seek multiple perspectives.

3.3.1.1 Quantitative Research Methods

Quantitative research is regarded as a deductive approach towards research or the world as being outside of themselves and that there is “an objective reality independent of any observations” (Rovai, Baker, & Ponton, 2014, p. 4). They contend that by subdividing this reality into smaller, manageable pieces, for the purposes of study, that this reality can be understood. It is within these smaller subdivisions that observations can be made and descriptors are drawn based on observations. In this research, the quantitative methods approach employed descriptive methods. This approach is typified by the researcher putting forward a theory that is exemplified by other researchers following a series of observations and an analysis of data (Rovai et al., 2014). A feature of this approach is that the collection and analysis of information is conducted utilizing “Likert rating scale”. A Likert rating scale is a reliable scale used to measure academic performance. This scale can gauge reliability through the following scales: Strongly Agree (SA), Agree (A), Strongly Disagree (SD) and Disagree (D). This particular research design was appropriate in influencing a stable characteristic such as learners’ perceptions and self-efficacy. Quantitative methods brought objective data to the study, which minimizes the shortcomings, biases or subjectivities qualitative methods may have on the study.

3.3.1.2 Qualitative Research Methods

Qualitative research emphasizes on in-depth interviews, and Focus Group Discussions (FGD). Denzin and Lincoln (2005) describe this approach as gaining a perspective of issues from investigating them in their own context. It focuses upon drawing meaning from the experiences and opinions of participants it pinpoints. Meanwhile, qualitative methods are usually described as inductive, with the underlying assumptions being that reality is a social construct, that variables are difficult to measure and are complex and interwoven, that there is a primacy of subject matter and that the data collected will consist of an insider's viewpoint (Rovai et al., 2014). The researcher focused on the experiences from the participants' perspective. In order to achieve the epic perspective, the researcher became involved and immersed in the study. The rationale for using a qualitative approach in this research was to explore and describe the opinion of school learners on how useful cell phones are in their academic performance. A qualitative approach was appropriate to capture the opinions of school learners, teachers and parents on the use of cell phones on academic performance.

3.4 Population

According to Alvi (2016) the target population are members who meet the particular criterion specified for a research investigation. Hanlon and Larget (2011) describe population as all the individuals or units of interest. Therefore, the research population of this study consisted of all learners at the Caprivi Senior Secondary School and Kizito College; plus teachers at the two schools and the parents of learners at these schools. The main target population were the learners at the two schools, while teachers and parents formed part of the population since they are the support system of the learners in their studies.

3.5 Sample

A sample can be defined as a group of a relatively smaller number of people selected from a population for investigation purposes; while the members of the sample are called participants (Alvi, 2016). A sample is a part of a population. "Sample is a smaller" indicated Alvi (2016), but it still remains a true representative group of the total population. This study used simple random sampling (Questionnaires), convenience sampling (Focus Group Discussion (FDG) and Interviews.

A simple random sample is a random sample selected by a method which ensures that all possible samples of a given size are equally likely to be chosen (Finch & Gordon, 2013). Meanwhile, convenience sampling is a non-probability sampling technique where participants are selected because of their convenient accessibility and proximity to the

researcher. The main advantage of random sampling is that every individual in the population has an equal chance of being selected, (Mathers, Fox & Hunn, 2009).

The researcher chose a sample of 172 school learners, 120 from Caprivi senior secondary school and 52 learners from Kizito College that equally represented a ten percent (10%) from each school. A complete list with a unique number from 01 to 1725 for each school learner from both schools was compiled. Since the total number of all school learners was 1725, each was given a chance of being selected. Every 5th learner on the list stood a chance of being selected randomly. Those selected were informed through their teachers and the distribution of questionnaires was done during class for learners to go and fill in the questionnaires at home, consent by parents was brought back to school the following day. This was done in such a way that there was no violation of the randomly selected procedure because once the list has been compiled and the process of selection has begun, the simple random numbers dictated who was to be selected. The main advantage of random sampling is that every individual in the population has an equal chance of being selected (Mathers, Fox & Hunn, 2009).

Meanwhile, there are eighty one (81) teachers at both schools of which 54 are from Caprivi Secondary School and 27 teachers from Kizito College. The researcher conducted a FGD with 6 teachers of which three (3) were from Caprivi Secondary School and three (3) teachers from Kizito College to gather detailed information and collected a deeper understanding of cell phone usage patterns and its impact from the school. FGD was conducted at Caprivi Senior Secondary School in the afternoon after school in avoidance of disrupting normal classes and most teachers reside in Katima Mulilo town. FGD was moderated by the researcher through reading questions on the scripts and leading group discussions. The researcher also conducted interviews with parents whose children attend school at Caprivi Senior Secondary School and Kizito College. Ten parents with children attending school at Caprivi Secondary School and Kizito College were involved. Parents were linked to the researcher by the school learners during field work.

3.6 Research Instruments

This study used Self-administered Structured Questionnaires (SSQ) for learners, Focus Group Discussions (FGD) for teachers and interview structured questions for parents. Questionnaires for learners, FGD guide and interview questions were prepared by the researcher in line with research objectives as stated in chapter one for primary data collection from participants. Statistical information was collected through a questionnaire that was

distributed to learners in class, filled at home and was collected the next day by their teachers. SSQ were important for learners in order to allow them to express their opinion in their own free time without intimidation. This approach helped in achieving a high response rate from the participants. Detailed information was gathered by the use of Focus Group Discussion (FGD) with teachers, doing so helped to have a deeper understanding of the usage patterns and impact of cell phones use in schools.

Interview guides with semi-structured questions as the data collecting instrument was used for parents at their own convenient time and space. According to Kothali (2004) interview guides follow a rigid procedure and seeks answers to a set of pre-conceived questions through personal interviews. This method of collecting data is usually carried out in a structured way where output depends upon the ability of the interviewer to a large extent. Interview guide as research instrument was used on parents in order for the interviewer to directly communicate with the respondent in accordance with the prepared questionnaire. This method allowed for more in-depth data collection and comprehensive understanding. Body language and facial expressions were more clearly identified and understood. The interviewer could still probe for explanations of responses. Stimulus material and visual aids were used to support the interview.

For primary data collection from participants, the data was scripted on the questionnaires, while FGD and interviews were collected on audiotape using a voice recorder, later on the information was transcribed. Audio recordings of interviews is very useful because it gives accurate information of the interview as all the answers are captured during the interview as well as the comments by the researcher are saved for reference. Therefore, the researcher produced information from selected recorded informants during the interview sessions for analysis.

3.7 Data Collection Procedure

Before field work started, the researcher first requested permission from the officials and target participants. Phone calls and emails were made to the offices of the Regional Director of Education, Ms. Joy Mamili-Mbangu in the Ministry of Education and Culture, the Principals of the Caprivi Senior Secondary School and the Principal of Kizito College. The researcher was then requested to write a letter to the Regional Director of the Ministry of Basic Education and Culture in Zambezi Region, seeking permission. A response was given within a week, there after contacts were made with the Principal of Caprivi Senior Secondary School and Kizito College still seeking for permission to collect data in their schools. The

two Principals further referred the researcher to work with Life Skill teachers. During this time there was a presentation of the research permission letter granted by the University of Namibia to the leaders and participants. Meanwhile, all those arrangements were conducted; the research questions were emailed to the authority to provide a comprehensive understanding on what was to be expected during field work. This was done to confirm the legitimacy of the study to respondents and to seek their permission to participate. Upon being granted permission, the researcher met with the Life Skills school teachers and learners in their classrooms for more explanation on the research.

At the beginning of each interview session, the researcher explained the purpose of the research and assured all respondents of their confidentiality.

The questionnaires were handed to school learners in class by their teachers in order for them fill in during their free time and collected the next day by their school teachers while FGD with teachers were conducted during afternoons on their free time. This was done to avoid disrupting normal lessons and give them ample time to fill in the questionnaires without being intimidated by supervision. Meanwhile, on average, face to face interview sessions with parents took place between 20 minutes and one hour while Focus Group Discussion with teachers was in the afternoon. When all data was collected the researcher made hard and soft copies and stored them safely as a security measure in the case of unforeseen occurrences like fire or theft.

3.8 Validity and Reliability

In order to guarantee validity of the research, the researcher randomly selected a sample population of ten percent that represented the entire population at the two schools. The researcher used a system of unique number utilizing barcode that was allocated to each questionnaire instead of using participant's names to facilitate tracking and reporting system. All steps and the intentions of the research process were explained to the participants and all were given an opportunity to ask questions where they needed clarity. The research findings are reliable as the data was tested and benchmarked against literature presented with correlations being evident. The findings were tested and benchmarked through the act of creating measurable standards set for learning on which students can be measured. This can help to keep students on track for success and can ultimately raise the standards for education in a classroom, grade level, school regional or national level.

3.9 Research Ethics

The researcher sought permission from the University of Namibia and Ministry of Basic Education and Culture to carry out the study. Permission was also sought from principals of the two selected schools, teachers as well as learners and parents. The researcher sought ethical clearance from the University of Namibia and complied with the ethical guidelines of the University of Namibia. All respondents and participants were informed about the research that it was voluntary and that they could withdraw from it at any time with no negative consequences.

All information provided for by students, teachers and parents was kept confidential as they were required to sign a consent form prior to the interview. A system of unique number utilising barcode was allocated to each questionnaire instead of student names to facilitate tracking and reporting system. The data collected is to be used for academic purposes and kept for five years and thereafter destroyed according to UNAM regulations.

3.10 Conclusion

This chapter looked at the overview of the research methodology used. The chapter featured explanations of what research methods, research design, research population, research sample, the validity and reliability and what prompted the choices of usage of research tools. The instruments used to gather data were discussed and the researcher also explained the data collection procedure during the research process. The chapter also looked at why it was important to observe ethics and what ethical considerations the researcher adhered to.

CHAPTER 4: DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter is the presentation and analytical part of the study of an investigation of cell phone use on the academic performance of school learners. Furthermore, the study looked at the effectiveness of using cell phones mobile learning tools and social media (especially Facebook, WhatsApp, Google, and YouTube) and the benefits and disadvantages of these platforms on learners.

The results of the study are presented and discussed in relation to the research objectives outlined in chapter one. The researcher does not only present the research findings but also gives the analysis of the data as obtained through random sampling and convenience sampling. The researcher used a simple random sampling of ten percent from a total population comprised of 1725 school learners aged between 13 to 20 years and convenient sampling for teachers and parents of school learners attending at Caprivi Senior Secondary School and Kizito College.

The chapter illustrates all the major findings as shown by the analysis of collected data using charts, graphical displays and tables and at the same time answering the research questions. In the analysis, data from questionnaires is coded and analysed into quantitative summary reports using the Statistical Package for Social Sciences (SPSS) version 20.

Study results are linked to the theoretical framework (as discussed in chapter 3) using the critical analytical approach in which they are critically justified, supported and contradicted in the process. The researcher worked to ensure that all the findings provided answers to the research questions of the study and that the research objectives were realized.

4.2 Data Analysis

Bihaniand Patil, (2014) defines data analysis as a process of inspecting, cleaning, transforming and modelling data with the goal of highlighting useful information, suggesting conclusions and supporting decision making or is the process of bringing order, structure and meaning to the mass of collected data. According to Shamoo and Resnik (2015) various analytic procedures provide a way of drawing inductive inferences from data and distinguishing the signal (the phenomenon of interest) from the noise (statistical fluctuations) present in the data.

The data in this study were analysed through descriptive statistics through use of SPSS. Descriptive statistics summarizes data from a sample using indexes such as the mean or standard deviation, this to be presented in frequencies and percentages. It entails coding and

sorting the data content into relevant categories (e.g. messages, themes and patterns) that can be developed into theoretical constructs (Brown & Rodgers, 2002). Meanwhile, open coding is the first stage in the process of creating grounded theory (Strauss & Corbin, 1998). Open coding enabled the researcher to classify and categorize data so that patterns can be discovered and conclusions drawn. The researcher made up the codes during data entries. In this way the researcher searched for common dominant themes that appeared in the transcripts of the data. Once codes were awarded to different segments, the researcher grouped and categorized 39 related themes into codes. The category used named codes as a guide. The categories show themes that are used in the discussion of the inquiry. The researcher saturated themes that emerged from the analysis, these themes became a basis for discussion. Content analysis is being presented through use of simplified tables, charts and graphs and this can be easily interpreted by any reader intending to gain insight into the discussion topic.

4.3 Sample

The researcher had selected a sample of 172 respondents which comprised of a ten percent of 1725 school learners of which 118 are from Caprivi Senior Secondary School and 54 from Kizito College, six teachers, ten parents with school learners enrolled at Caprivi Senior Secondary School and Kizito College. Basically, teachers and parents formed part of the research respondents through FGD and interviews to compliment school learners answers since these are the one responsible for the school learners on a day-to-daily basis.

The simple random sampling was preferred due to the large number of the school learners at the school and the selected learners represented the population of the school learners from the school while convenient sampling was preferred for teachers and parents due their availability.

School learners were randomly chosen to ensure a holistic representation of the population from the two schools. Meanwhile, the researcher used convenience sampling for teachers and parents. All 172 school learners targeted agreed to participate in the study but only 152 learners returned the questionnaires distributed. Although six teachers were targeted for Focus Group Discussions, only seven teachers turned up. All ten parents targeted for the interviews managed to participate in the research. Because of the simplicity with which the interview guide was designed, participants did not have any challenges in answering questions. This simplicity and the importance of the research topic explain the high response rate experienced in the study.

4.3.1 Population Sample

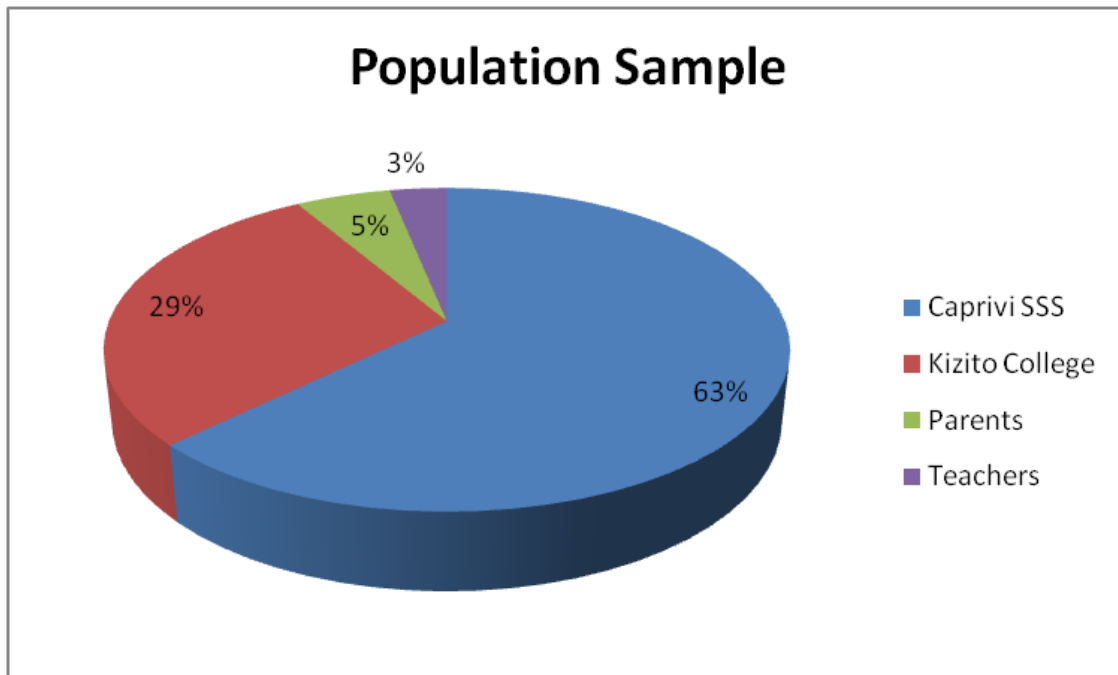


Figure 1 Population Sample

Figure 1, Population sample shows that Caprivi Secondary School has the biggest population sample of ten percent of 118 (63%) compared to Kizito College comprised of 54 (29%). Ten parents targeted for interviews amounted to 5% and six teachers targeted for FGD from both schools led to 3%.

4.3.2 Actual Study Participants

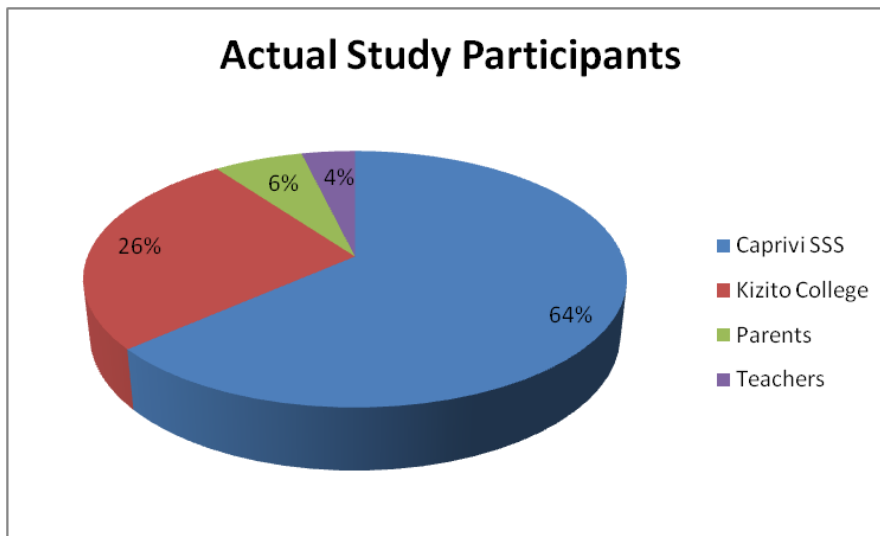


Figure 2 Actual Study Participation

Figure 2 above, stipulates no major variances between the originally selected population sample and the actual respondents who participated in the questionnaires, FGD and interviews. Caprivi Senior Secondary School participants stood at 101 school learners and 4 teachers and that shows a 66% response rate while Kizito College had 43 school learners and 3 teachers participated with a representation of 28% response rate, 10 parents account for 6% response rate. The majority of participants were from the Caprivi Secondary School with Kizito College trailing behind.

4.4 Age Demographics

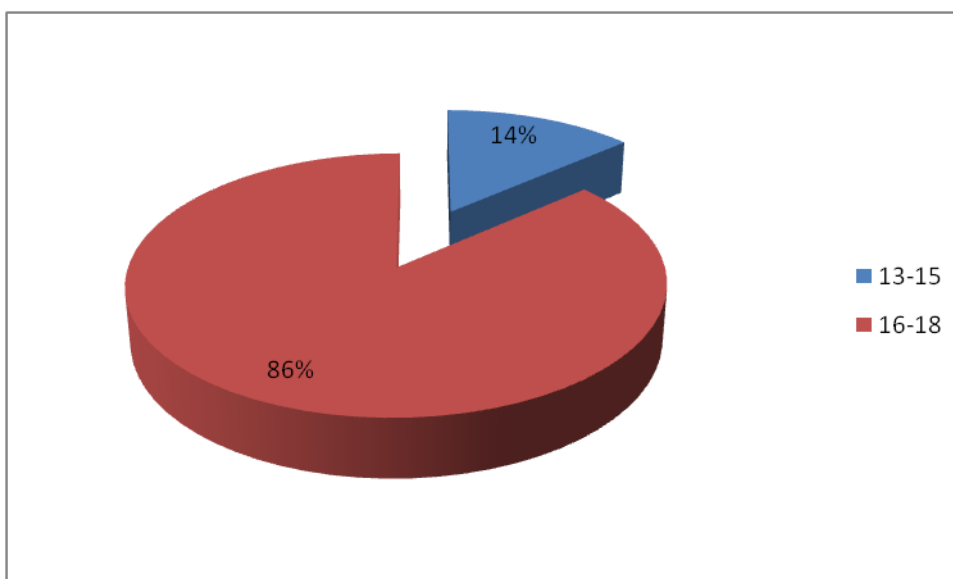


Figure 3 Age Demographics

Out of the 144 school learners that participated in the questionnaire, the results presented in Figure 3 above shows a greater number (86%) of participants to be between 16 to 18 years of age and 14% are between 13 and 15 years of age.

4.5 Respondents According to Gender

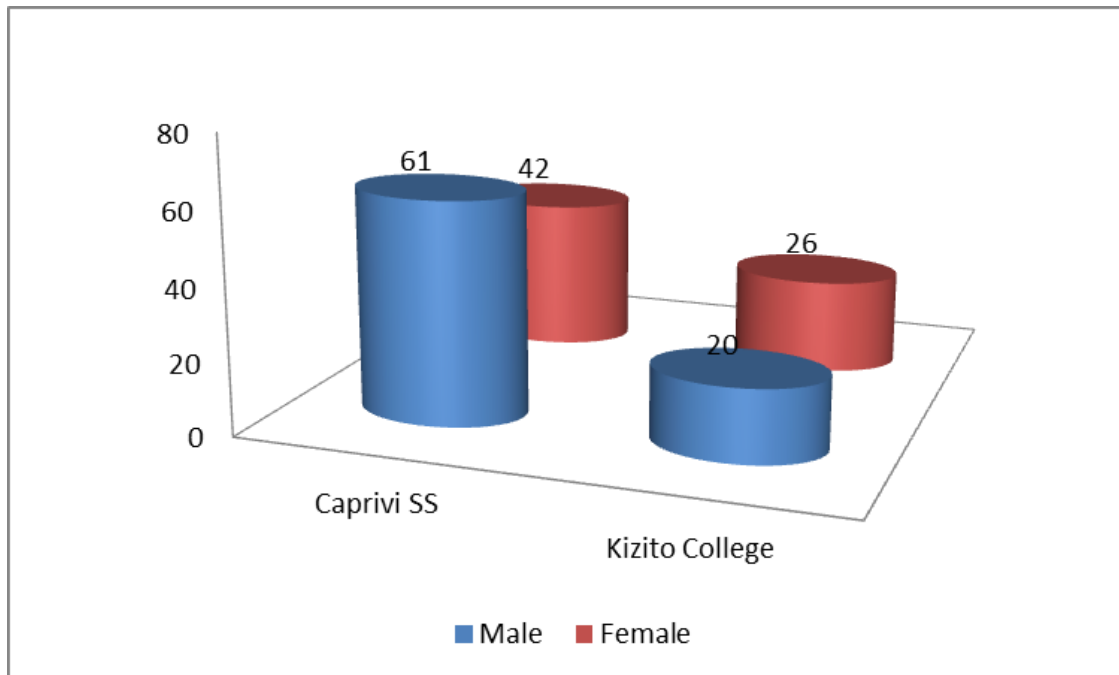


Figure 4 Respondents according to gender

This research sought to know the gender distribution of the participants. From the responses, the majority of participants were males from Caprivi Senior Secondary School with 61 participants and that stood at 76% response rate compared to Kizito College with 20 male participants stood at 24%. In terms of female participants, Caprivi Senior Secondary school still leads with 42 participants and that stood at 61% response rate compared to Kizito College with 26 participants that stood at 39% response rate.

The gender imbalance is not likely to affect the research as the nature of questions asked were not related to gender but more on cell phone use and its effects.

4.6 Respondents' Grade Levels

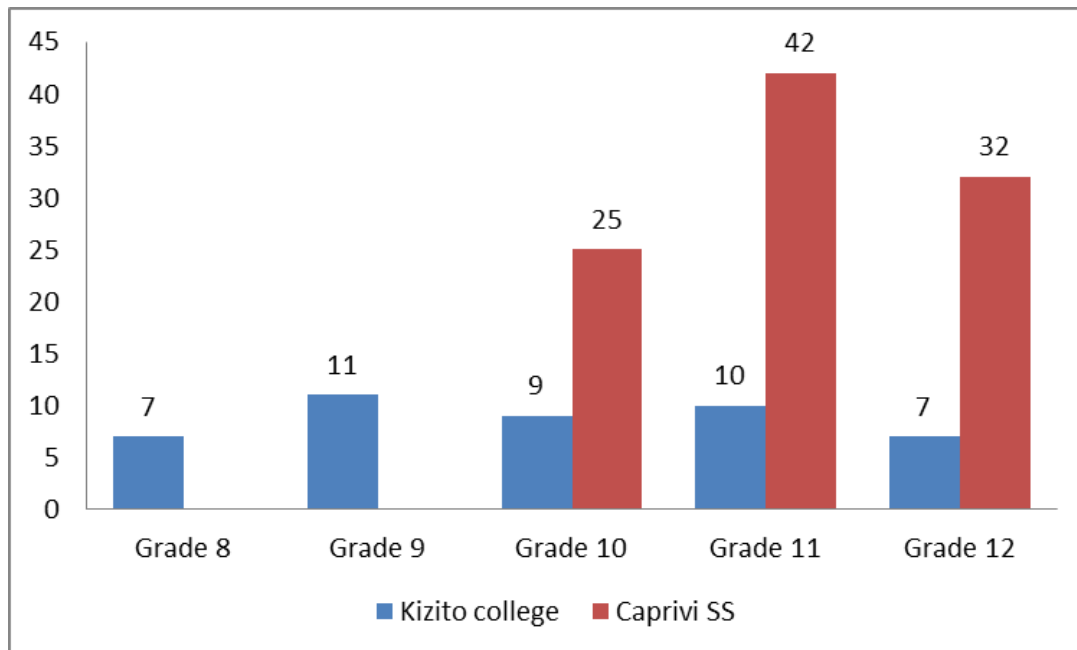


Figure 5 Levels of Grades

The study sought to find out the level of education of the respondents considering that the level of education was likely to have an influence on their capacity to sufficiently respond to the questions asked. In terms of grade level, respondents at Caprivi Senior Secondary school still leads with Grade 11 having 42 respondents and stood at 43% response rate, grade 12 followed with 32 participants and gave 32% response rate and grade 10 with 25 participants and gave 25% response rate, compared to Kizito College with participants from Grade 8 to 12, grade 9 had the highest respondents of 11 and this stood at 25% response rate, followed by Grade 11 with 10 respondents, this gave 23% response rate, Grade 10 with 9 respondents, gave 20% response rate and finally Grade 12 and 8 had an equal number with each having 7 respondents and each gave 16% response rate.

From the proposal stage to the fieldwork, there have been changes that have influenced the outcome of the study. Caprivi Senior Secondary School had Grade 8 to 12, with Grade 8, 9 and 10 designated as the junior secondary phase and Grade 11 and 12 as the senior secondary phase. But since the revised curriculum, the junior secondary phase now consists of Grade 8 and 9, with Grade 10 that moved to the senior secondary phase. This means that as from 2019 Caprivi Senior Secondary School now starts from Grade 10 to 12 and Grade 8 and 9 were removed. This means that from the responses, the majority (40 to 60%) response rates

were from Grade 10 to 12, and 20% of learners used in this research of Grade 8 to 9 are now from Kizito College only. The researcher could not ask the levels of education from teachers and parents because their views were only required to compliment the learner's views since they form part of the support system.

4.7 Cell phones accessibility among learners and teachers

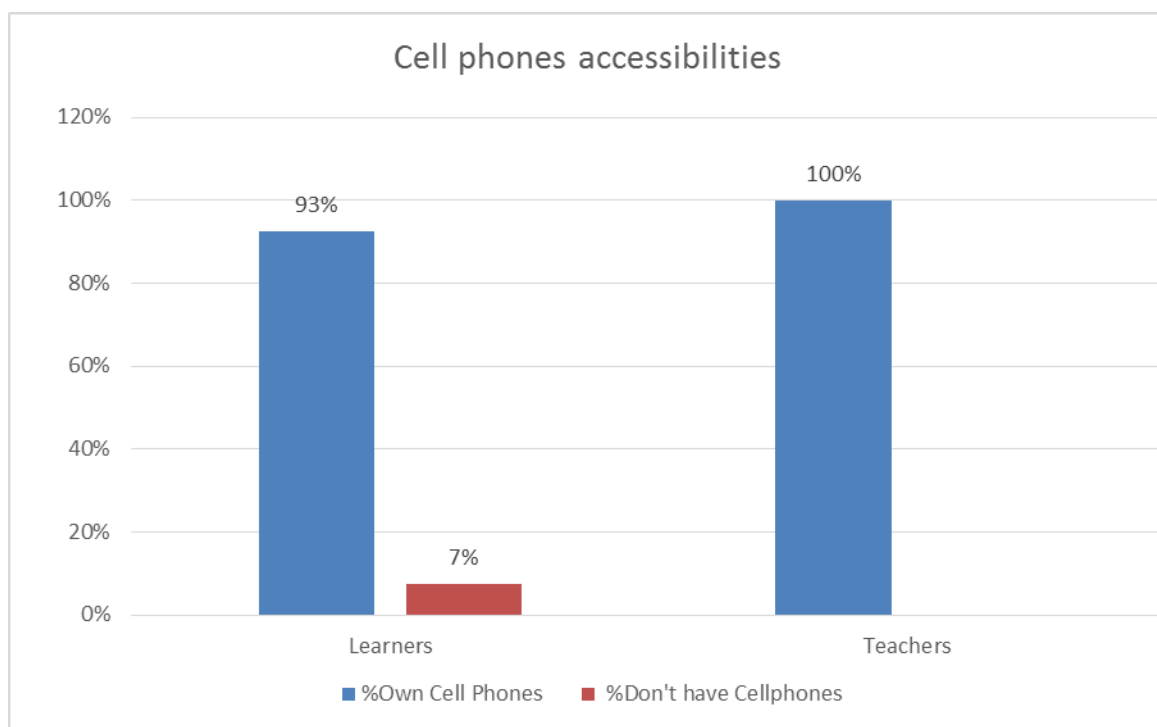


Figure 6 Cell phones accessibilities

The researcher sought to find out how many participants owned a cell phone and how many did not own a cell phone? From the figure above it shows that all teachers had cell phones and the majority of school learners have access to cell phones. It shows that all the 7 (100%) teachers owned a cell phone, meanwhile, only 134 (93%) of school learners have cell phones and only 10 (7%) of school learners did not own a cell phone.

4.8 The extend of cell phone use among school learners

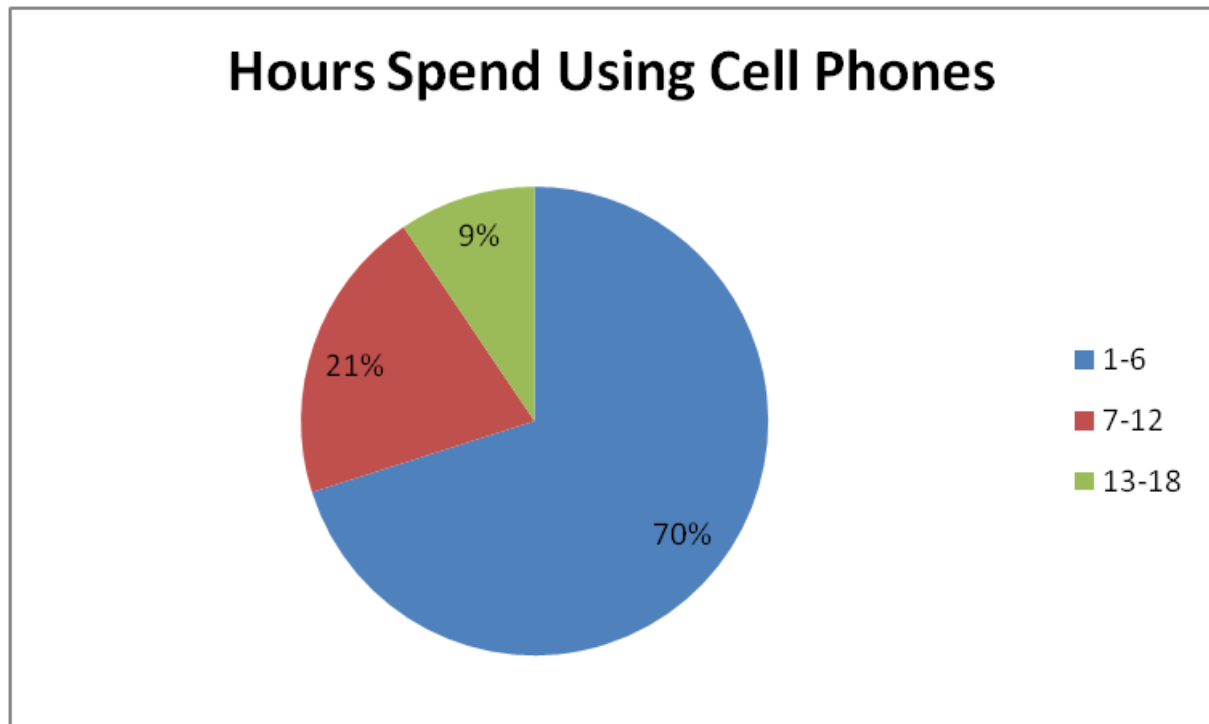


Figure 7 Hours Spend Using Cell Phones

The respondents were asked how many hours they spent on the cell phone on a daily basis. Figure 7 above shows the summary of the findings. Almost 90% of the school learners spent their time using cell phones between 1-6 hours a day, 30% spend 7-13 hours, and 10% use cell phones more than 13 hours. The researcher also asked parents and teachers about the amount of time learners/children spend using cell phones. A total of 100% response rate of teachers and parents agreed that their children use their cell phones between 1-6 hours.

4.9 Places where school learners have access to their cell phones

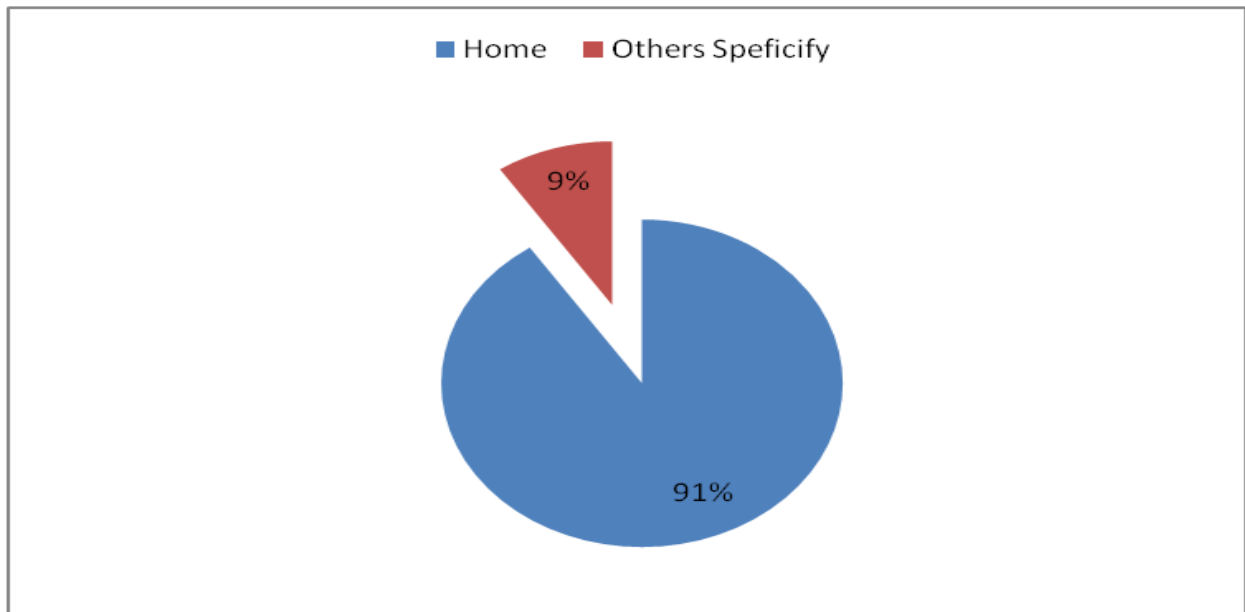


Figure 8 Places where mostly school learners use their cell phones

The researcher asked respondents where they mostly had access to their cell phones. From data in figure 8 above, it shows that 91% of school learners have access to their mobile phones at home, 9% used their cell phones both at school, home/dormitory. Both parents and teachers were in support of school learners using their mobile phone at home, because learners go to school to learn and to deepen interaction. Participants during FGD indicated that once a child is found in possession of a cell phone during school hours, it will be confiscated and kept safe until the end of the term. This mostly discourages children from bringing their phones to school.

4.10 The cell phone use pattern and its frequencies

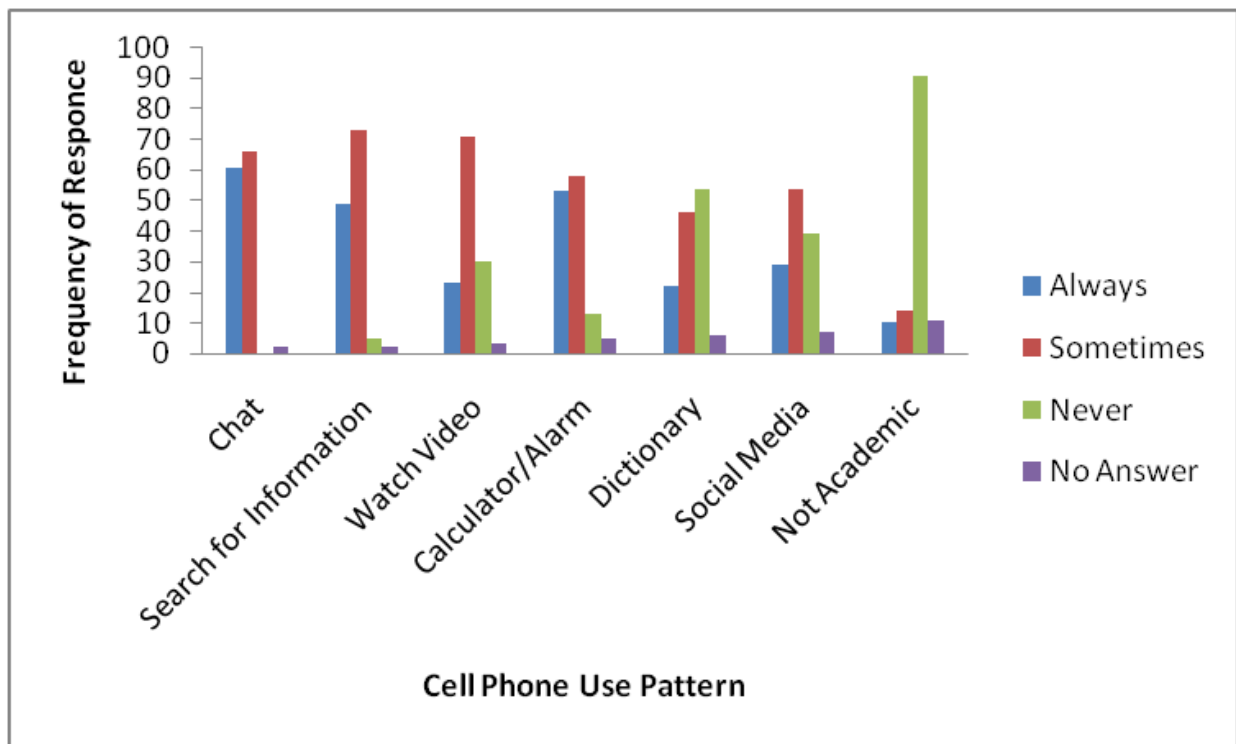


Figure 9 Cell phone use pattern

Figure 9 shows that among a total of 144 school learners, 49 (38.9%) to 61 (47.3%) school learners used their cell phones always, its main purpose was to chat, use as calculator, use the alarm and search for information. Meanwhile, those who used their cell phones sometimes with the same purposes (chatting, use as calculator and alarm, searching for information) stood between 58 (45%) and 73 (56.6%) response rates. A total of 90 (72.2%) school learners never used their cell phones for academic purposes while less than 10 (7.9%) had no cell phones and this resulted in them have nothing to say about cell phones.

4.11 Cell phone usage patterns for educational activities

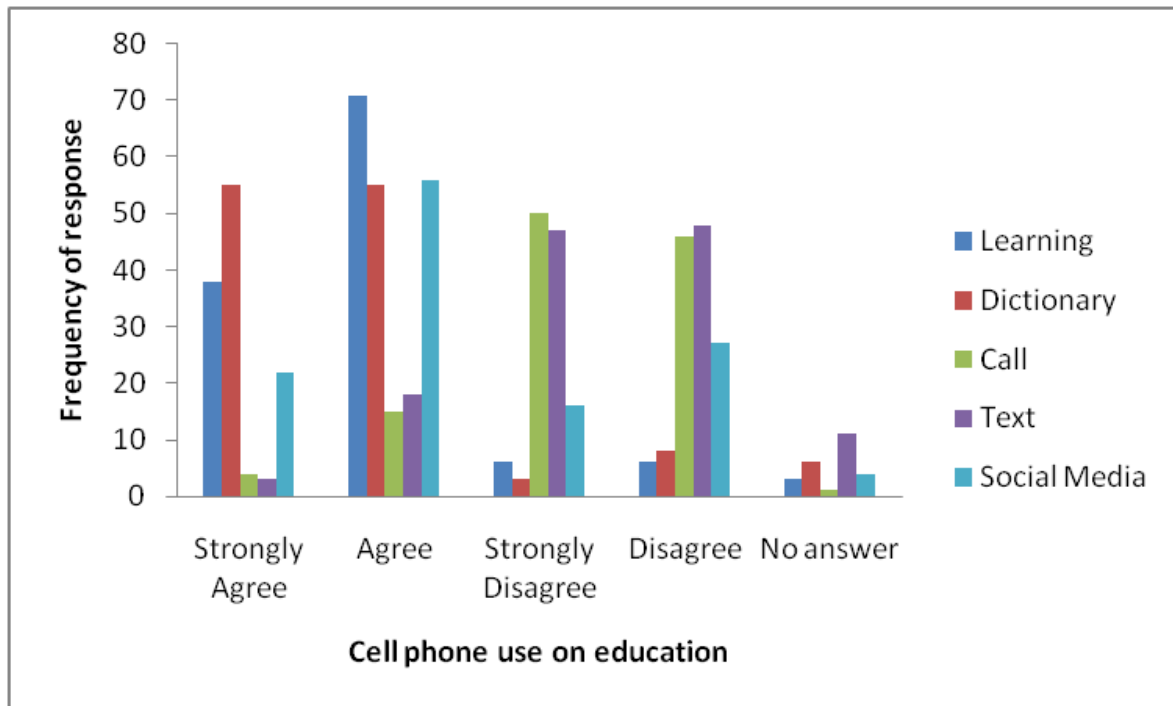


Figure 10 Cell Phone usage patterns on educational activities

This section of the study dealt with cell phone use patterns on educational activities among school learners with the responses ranging from Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD), and No Answer (NA). Figure 10 on cell phone use patterns show that almost 56 (44.8%) to 71 (57.3%) school learners are in agreement that they use their mobile phones for learning, dictionaries and social media. Contrary, 47 (36.5%) to 50 (37.8) school learners disagreed that their cell phones are only used for calling and texting, but believed their cell phones can still be used for other functions e.g. learning, dictionaries, calendars etc. Meanwhile, less than 10 (7%) of the school learners with no cell phones had nothing to say about cell phone use on educational activities. However, although cell phones are not allowed in school, both parents and teachers during interviews and FGD indicated that they still encourage their children/learners to use cell phones for educational activities. Asabere (2013) argues that mobile allows teaching and learning to go beyond the traditional classroom; this provides a wide range of opportunities. One of the principal advantages of using mobile devices for training is availability of security. Mobile devices are tightly integrated within the corporate network of server and many of the technical and security hurdles are already handled by existing applications, infrastructure, such as e-mailing activities. He concurs that mobile learning can occur at any place and at any time and

learning contents can be accessed anywhere. It's learning that is not limited to one particular place; it enhances interaction between teachers and learners.

4.12 The effect of mobile phones on school learners

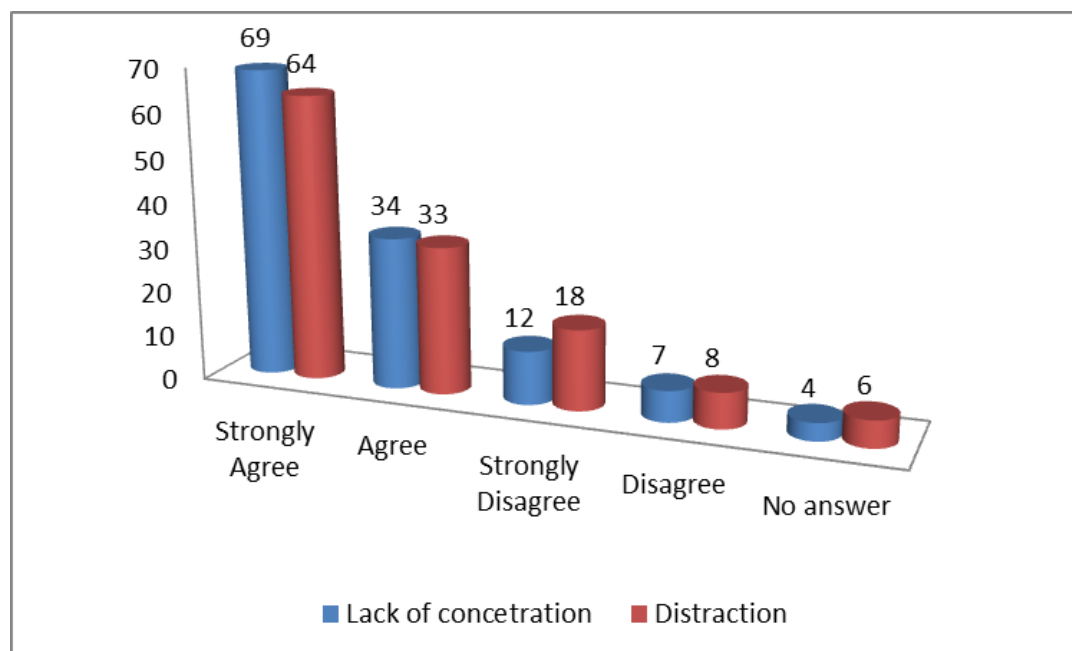


Figure 11 *The effect of mobile phones on school learners*

To further proceed with the assessment, respondents were also asked whether or not they viewed mobile learning as an effective tool for future learning. Figure 11 on the effect of mobile phones on school learners shows that 69 (54.8%) school learners at Caprivi Senior Secondary School and Kizito College felt that using a cell phone in class will cause lack of concentration and 64 (50%) of the learners still believe that using a cell phone in class will cause distraction. Meanwhile, 12 (9.5%) of the respondents strongly disagreed that cell phones would cause lack of concentration and 18 (14.1%) strongly disagreed it would cause distraction. Furthermore, 4 (3.2%) and 6 (4.7%) had nothing to say about the effects of mobile phones. Both parents and teachers were of the same opinion with 6% of parents and 4% of teachers agreeing that cell phones should not be allowed in school because children go to school to learn. They expressed concern that including these gadgets in class might cause a lot of distractions. Asabere (2013) agrees with the participants that mobile learning is accompanied with a lot of negative impacts on some teachers and learners. These negative impacts may give opportunities for learners to cheat if there is not a proper monitoring system in place to check on cheating, create isolation or a feeling of being out of the loop for both teachers and learners who may not always have mobile connectivity. Additionally, cell

phone applications need upgrades all the time, depending on network resources and platforms, some content in mobile learning may be rendered outdated because of rapid upgrades from one session to the next, this might cause more costs for learners who might not have enough data all the time to upgrade their cell phones. Furthermore, most mobile learning cannot augment practice hands-on lessons, such as laboratory experiments for Chemistry learners; it will be meaningless incorporating such tools.

4.13 Understanding of social media through use of cell phones

Through use of cell phones, school learners have great interest in social media. For the purpose of this research, social media was included since it is the main tool that attracts people on cell phone use. In this study social media refers to platforms such as Facebook, WhatsApp, YouTube and Google. Because of their ages and that they are at secondary schools, 95% of school learners and 100% of teachers have exposure to technological advancements. Almost 98% of all participants understood the meaning of the term social media and gave various examples including Facebook, WhatsApp, YouTube, Google, Instagram as well as Twitter. Livingstone (2008) sums it up that social media enables communication among ever-widening circles of contacts, inviting convergence among the hitherto separate activities of email, messaging, website creation, diaries, photo albums and music or video uploading and downloading. From the user's viewpoint, more than ever before, using social media means creating as well as receiving messages, with user control extending far beyond selecting ready-made, mass-produced content, he added.

4.13.1 The most accessed social media

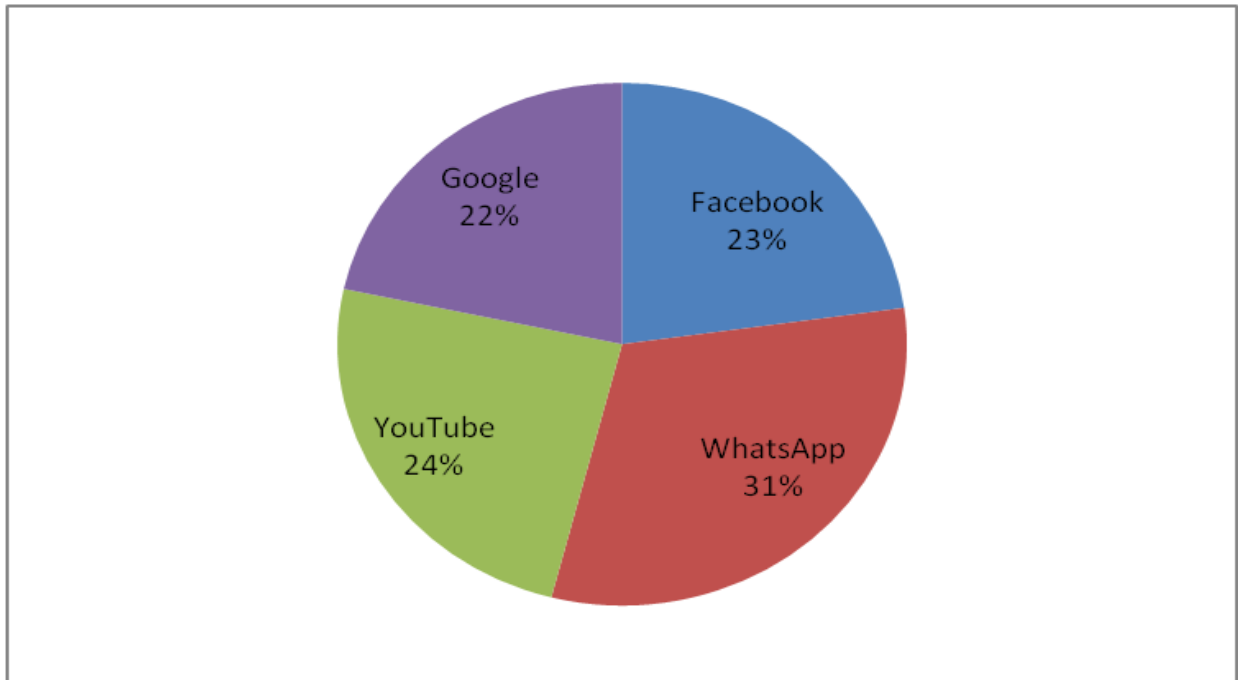


Figure 12 most accessed social media

The respondents were asked about the most accessed social media. Figure 12 shows that the most accessed social media was WhatsApp (31%) followed by YouTube with 24%, and then Facebook 23% and Google was the lowest at 22%.

4.13.2 The most useful social media on education/learning

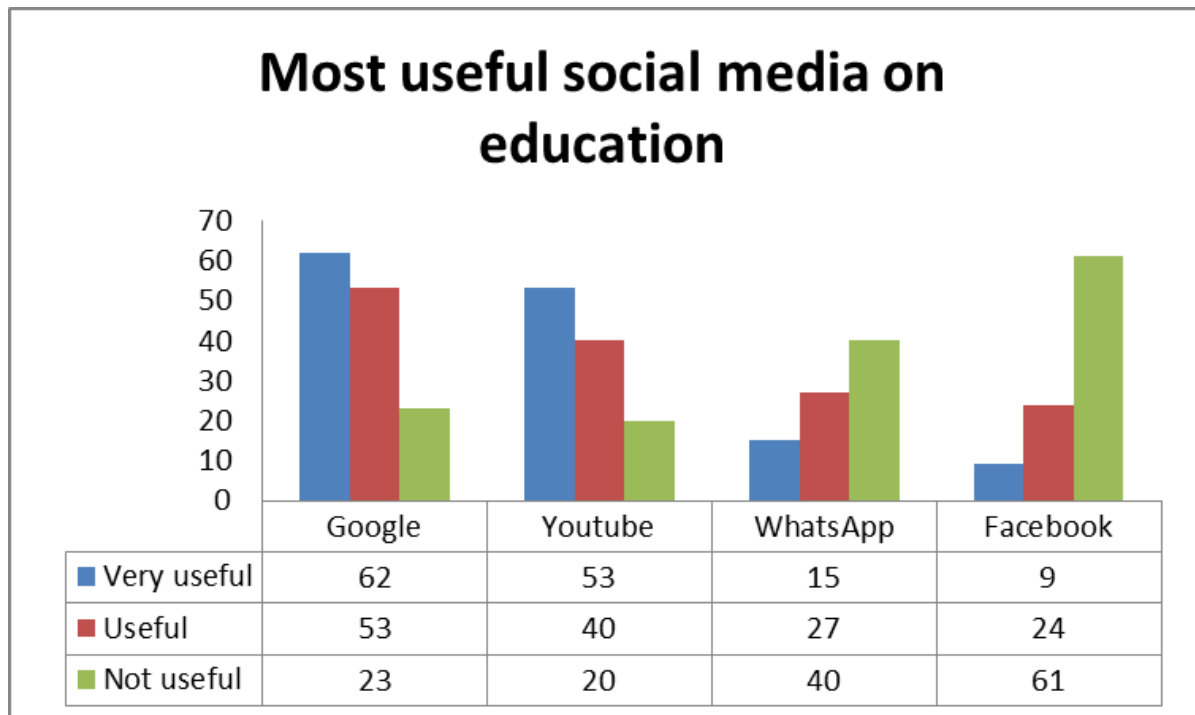


Figure 13 *most useful social media on education*

This section of the research dealt with the most useful social media in education with the responses ranging from very useful, useful and not useful. Google topped the list with almost 62 (45%) to 53 (37%) learners felt it to be very useful and useful social media in education, followed by YouTube with 53 (38%) to 40 (28%) school learners and WhatsApp to be in the third position while social media with 40 (28%) and Facebook 61 (42%) turned to be the least useful social site among school learners in terms of education.

4.14 The risks of social media on school learners

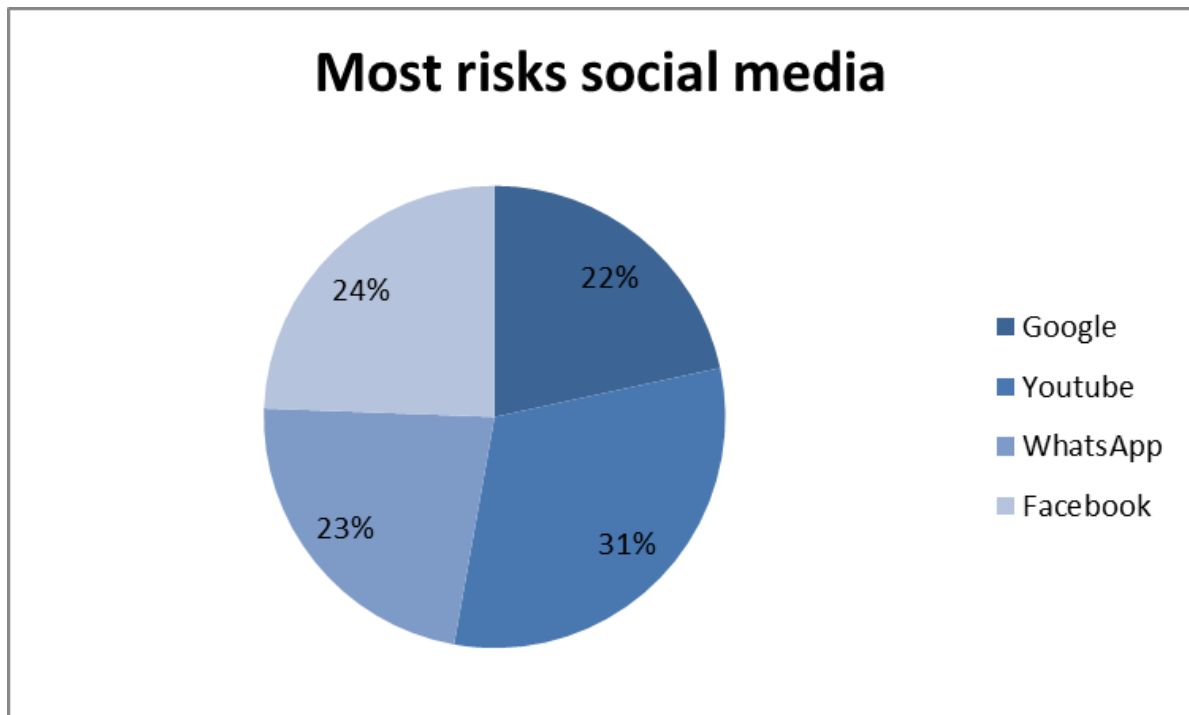


Figure 14 risks of social media

Respondents were asked which social media was the most risky social media ever. Figure 14 shows that YouTube (31%) as the most risky social media ever, followed by Facebook (24%) and WhatsApp on third position with 23% and lastly Google with 22%.

During Focus Group Discussions (FGD) with teachers, a deliberation on risks involved in social media took place, of which all participants were familiar with cybercrime, and explained the activities carried out by means of online internet. One participant gave an example of one particular individual who received a text of winning sixty thousand and to claim this sum, one should provide detailed personal information, including banking details. The participant observed an increase in cyber-crime and that it makes learners potential victims. Participants also discussed issues such as dangerous games that can lead children to commit suicide, an example of MOMO game that recently made a child to take his life in Windhoek, through following the games' instructions. This was indicated as one of the biggest scams, any other child could fall for. Other online risks discussed were: human trafficking, watching online pornography, bullying, harassment, waste of time and hacking. Participants also indicated that the use of cell phones have made young people lazier, because most young people in today's life have become anti-social due to social media. Other risks that came out during the discussion are that many children in this day and age are exposed to

information that makes them engage in early sexual activities due to early exposure from social media. Yeboah and Ewur (2014) found that social media like WhatsApp, distracted learners from completing their homework, negatively affected their language skills such as spelling and grammar and disturbed their concentration when in class. In addition, Sharma and Shukla (2016) also found that students' academic performance was adversely affected by social media. Students faced challenges arising from their frequent use of social media, which included the need to attend to messages immediately, the exposure to false or unregulated information or media content, mobile connectivity and addictive-like behaviours which disturbed their studies (Ahad & Lim, 2014).

4.15 How the risks of social media can be prevented among school learners

During interviews with parents and FGD with teachers, respondents were asked on how the risks of social media can be prevented? The following solutions were proposed: Parents should buy their children phones that can be restricted and limited to friendly social sites; cell phones that can be restricted not to download some application e.g. create restricted profiles on the children's phone or parental control. Other solutions mentioned include advising learners to concentrate on school work rather than waste time on social media. This can improve their school work performance. Learners use internet to look for useful information such as companies advertising for bursaries, university applications for further studies because newspapers reach Katima Mulilo after a day or two, so in order for children to stay on top of their education, they must know what useful information to look for online.

4.16 Conclusion

This chapter presented and analysed data on the investigation of cell phone use on the education activities among school learners and the effectiveness of using cell phones as learning tools. The data analysis revealed that though cell phones are not allowed in schools for learners, both learners and teachers use mobile devices for various purposes, both academic and non-academic. If the adoption of mobile learning in the schools were permitted, it could make life easier for both learners and teachers even outside the classroom.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This study investigated cell phone use on the academic performance of the Namibian school learners: A case study of the Caprivi Secondary School and Kizito College in Zambezi region. This chapter presents a summary of findings of the study, discussion of findings and finally makes possible recommendations for further research. These recommendations are not only for the two schools but the entire country that stand a chance to benefit from cell phone use on academic performance.

5.2 Summary of the Study

As stated above, the study focused on the investigation of cell phone use on the academic performance of the Namibian school learners. Research questions were formulated in line with research objectives. Questionnaires, FGD and interviews were the instruments used during data collection. The research used mixed method approach: Quantitative data collected in this study were coded and then analysed using statistical package for social science (SPSS) and descriptive statistics were produced. The researcher saturated themes that emerged from the analysis, these themes became a basis for discussion. Qualitative data was closely analysed qualitatively and important information extracted from what the participants said. The content analysis is presented in a way that can easily be interpreted by any reader intending to gain insight into the discussion. The level of analysis aimed at extracting important information relevant to make conclusions for this study. Information were disaggregated into demographic characteristics such as gender, age, grade level, cell phone accessibilities, the extend of cell phone use, cell phone use pattern, its effect, social media, risks involved in social media and how those risks can be prevented. Below, are summary and conclusions from the study findings.

5.3 Discussions of the Findings

The study found that all teachers interviewed and majority of school learners had access to cell phones. Figure 6 in this report show that 100% of teachers and 93% of school learners own cell phones. Out of those that use cell phones, figure 7 show almost 90% of the school learners spend their time using cell phones between 1-6 hours a day when they are out of school and figure 8 shows that 91% of school learners had access to their mobile phones at home. Results in Figure 9 shows that the most common activity learners perform on cell phones includes using calculators and alarm, searching for information. There were those that

used cell phones for learning through google search engine and some used them for social media platforms as indicated by Figure 10 with 44.8% to 57.3%.

The study further revealed that, the use of cell phones had various effects among participants. An example can be seen in Figure 10 which displays the statistics on the effect of mobile phones on school learners. Clearly results indicate that 69 (54.8%) school learners felt using a cell phone in class will cause lack of concentrations and 64 (50%) learners still believes using a cell phone in class will cause distraction. Meanwhile, 9.5% of the respondents and 14.1 % strongly disagreed that using cell phones has an effect on school learner's performance and cause lack of concentration respectively.

It's clear that through use of cell phones, school learners have great interest in social media. The study further found out about the most accessed social media. Figure 12 most accessed social media indicated that the majority (31%) were on WhatsApp, followed by YouTube with 24%, then Facebook 23% and Google was the lowest at 22%. WhatsApp messenger became the most accessed social media because its communication through mobile phones has become easier, faster and cheaper. While, YouTube followed because most school learners use it to upload, view and share their videos. Surprisingly is Google because of its search engine to be the lowest accessed social media.

Important to this study was the finding on the most useful social media on education. It is clear that Google topped the list with almost 55.8%, followed by YouTube with 41.5%. Not many learners have used WhatsApp and Facebook on their cell phones as a platform to learn and to educate themselves. Google might have topped the list because of its popularity as search engine commonly used by almost everyone to access and discover information on the Internet. YouTube trails behind Google because mostly learners use it to upload their projects, view, and share videos. As such, WhatsApp and Facebook became the least favourite because it is mostly used for texting and chatting.

The study further revealed that cell phones had various risks on school learners. As Figure 13 shows, YouTube and Facebook had the most risks among social media ever while, Google had the least risks. Thus, YouTube is usually associated with inappropriate contents that are not friendly to children, While Facebook has over the years addicted so many young people and resulted in many spending a lot of their time on Facebook than attending to their school activities. There are also other risks associated with learners spending too much time on Facebook such as; a decrease in communication with people in real life, fewer friends in real-life networks. Teachers and parents also indicated that cybercrime is all over online internet, spreading false information and learners can easily fall for such faults information.

Dangerous games that can lead children to death, they continued mentioned: human trafficking, watching online pornography, bullied, harassment, waste of time and hacking.

5.4 Conclusion of the Study

In view of the above findings, it was evident that cell phones played a major role in school learner's educations. Although cell phones are not allowed in schools, for learners to use, the results show that both learners and teachers use mobile devices for various purposes, both for academic and non-academic. Cell phone has become an integral part of students' lives, and having been born in the era of technology, most learners felt that they need these devices in and outside the school premises. They depended on cell phones for various positive tasks such as research and contacts with friends and family, getting on the loop of what was happening either in their circles, regionally and nationally. However, the use of cell phones by learners also had a negative effect or impact on their school performance. These negative effects can be, for example, some students use their phones to text and play games when they should be doing school work. If a cell phone rings while a teacher is teaching, it will disrupt the flow of the class and definitely disturb other students. "Teachers and parents also indicated that cybercrime is all over online internet, spreading false information and learners can easily fall for such faulty information. They continue to mention dangerous games that can lead children to death such as human trafficking, watching online pornography, bullied, harassment, waste of time and hacking."

5.5 Recommendations

Recommendation is important because it provides critical suggestion to the best action of the situations discussed in each research paper. The population of this research were school learners, teachers and parents. Recommendations from this study can be used by stakeholders in education such as the Ministry of Education and Culture, Ministry of Information and Technology, Telecommunication companies. For considerations the following recommendations are directed to the above stakeholders:

- i. Ministry of Education and Culture to introduce cell phone use in school for learners to easily access internet and search for the information that is critical while still at school other than wait until after school.

ii. To avoid sneaking on cell phone in schools premises, schools should allow learners to use their phones during allocated slots. Once this is implemented, learners can do school activity during those slots and no cell phone confiscation by teachers.

iii. Introduce mobile phones as learning aids in order for learners to access learning materials anywhere and at any time, doing this can make communication easier and enhance interaction between teachers and learners.

iv. Develop a preliminary framework that will facilitate the adoption of mobile learning aids in Namibian schools.

v. Open up a variety of possibilities for the adoption of mobile learning in Namibian schools.

vi. School learners need to be trained on better usage of the social media so as to minimize time wastage on chatting and other irrelevant engagements that are not of major importance to their academic endeavors.

vii. Parents and teachers should monitor activities of young people on social media in order to protect them from dangerous content.

viii. Parents to buy their children phones that can be restricted with unfriendly social sites, cell phones that can be restricted not to download some application e.g. create restricted profiles on children's phones or improve parental control.

ix. Learners to be encouraged to use the internet to look for useful information such as companies advertising for bursaries, university applications for further studies, in order for them to stay abreast with current trends in education.

5.6 Suggestion for Further Research

i. Further research can be done in schools that allow cell phones use for comparison of academic achievements to schools that do not allow cell phones.

ii. While the study recognizes that cell phones have impacts on other age groups at tertiary level, and as such this study limited itself only to secondary schools. Therefore, a similar study can be done on other level of academic studies.

iii. The study focused only on two schools situated in Katima Mulilo, Zambezi region, as opposed to other schools outside the geographical boundary. Similar studies can still be done in schools outside Katima Mulilo Towns.

iv. Furthermore, future researchers could consider replicating this research study in different ways in terms of examining which types of mobile learning tools are mostly useful for school learners to use.

6 REFERENCES

- Aghazamani, A. (2010). How do university students spend their time on facebook?
An exploratory study, Journal of American Science, 6, 730-735. Retrieved from
http://www.jofamericanscience.org/journals/am-sci/am0612/82_3993am0612_730_735.pdf
- Ahad, A. D., & Lim, S. M.A. (2014). Convenience or nuisance? *The 'WhatsApp' dilemma. Procedia-Social and Behavioural Sciences*, 155, 189-196. Retrieved from
<https://pdfs.semanticscholar.org/b79f/abf8a102db5ff9adf175b23ff9a51c4a8d57.pdf>
- Alvi . M. H. (2016). A manual for selecting sampling techniques in research. *University of Karachi and Iqra University*. Retrieved from
https://www.researchgate.net/publication/303941309_A_Manual_for_Selecting_Sampling_Techniques_in_Research
- Andrew, L., Jacob, E. B., & Karpinski, A.C., (2016). The relationship between cell phone use and academic performance in a sample. *Journal Article of US College Students*, January-March 2015, DOI: 10.1177/2158244015573169. Retrieved from
http://www.elegantbrain.com/edu4/classes/common/cell_phone_use.pdf, 1-9
- Amin, Z., Mansoor, A., Hussain, S. R., Hashmat, F. (2016). Impact of social media of student's Academic performance. *International journal of business and management invention*, 2319 – 8028. Retrieved from <http://www.ijbmi.org>.
- Asabere N. Y., (2013).Benefits and Challenges of Mobile Learning Implementation, Story of Developing National: *International Journal of Computer Application (0975-8887) Volume 73-No.1 July 201*. Accra Polytechnic, Accra, Ghana. Retrieved from
<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.402.6690&rep=rep1&type=pdf>
- Bihani, P., & Patil, S, T,. (2014). A Comparative Study of Data Analysis Techniques: *International Journal of Emerging Trends & Technology in Computer Science*, 3(2), 2278-6856.
- Brake, D. & Safko, L. (2009). The Social Media Bible.*Tactics, tools and strategies for business success*, Canada, United States of America. Retrieved from:
<http://msport04.free.fr/Books/The%20Social%20Media%20Bible.pdf>
- Brown, R. (2009). Public relations and the social web: *How to use social media and web 2.0 in communications*. Philadelphia: Kogan Page Limited.
- Brown, J., & Metcalf, D., (2008).Why mobile learning now? *CPS Research International*.

- Brown, J.D. & Rodgers, T.S., (2002), *Doing second language research*, *Oxford University Press*, Oxford. Retrieved from <https://pdfs.semanticscholar.org/deb5/049814a3ff5ea5553b2ea2cc623df4bb8679.pdf>
- Burns, A.C., & Bush, R.F. (2002) *Marketing research: Online research applications* (4th ed), Prentice Hall, New Jersey.
- Ciampa, K., (2014). “*Learning in a mobile age: An investigation of student motivation*”, *Journal Of Computer Assisted Learning*, (30)1, 82-96. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.833.8589&rep=rep1&type=pdf>
- Cox, J. T., & Rethman, K. M. (2011). *Setting expectations: Social networking at work*. Ohio Lawyer, 17-19. Retrieved from <http://www.digitalcommons.fiu.edu/cgi/viewcontent.cgi?article=1205&context=sferc>
- Creswell, J. W. (2014). *Research design: qualitative, quantitative and mixed methods Approaches* (3th ed.). London: Sage Publications Ltd.
- Deshen, M., Buchnik, D., & Brochson, S. (2014). WhatsApp messaging: Achievements and success in scademiadavidivitch nitza1 & yavich roman1, *International journal of higher education*. Vol. 5, No. 4. Retrieved from <http://www.sciedupress.com/ijhe>
- Glogowska, M. (2011) Paradigms, pragmatism and possibilities: Mixed-methods research in speech and language therapy. *International Journal of Language & Communication Disorders*, 46, 251-260.
- Gross, E. (2004). Adolescent internet use: what we expect, what teens report. *Journal of Applied developmental Psychology* 25(6): 633-649. Retrieved from http://www.cdmc.ucla.edu/Research_files/sdarticle.pdf
- Gross, E. F., Juvonen, J., & Gable, S. L. (2002). Internet use and well-being in adolescence. *Journal of Social Issues*, 58, 75-98. Retrieved from http://www.cdmc.ucla.edu/Research_files/gross2002.pdf
- Hanlon, B., Larget, B., (2011) *Samples and Populations*, Department of Statistics University Of Wisconsin Madison. Retrieved from www.stats.wisc.edu/courses/st571-larget/03-samples-2.pdf. Accessed 14 May 2018
- Haeuver, T., (2017). Technological determinism and new media. 2017-03/04, 1-4. Žilina, Slovakia. *International Journal of English, Literature and Social Science (IJELS)* Retrieved from http://ijels.com/upload_document/issue_files/1%20IJELS-MAR-2017-8-T Technological%20determinism%20and%20new%20media.pdf

- Jairusi, E. U., Upelle, U. U., Ogwuche, A. J., Thomas, O. I., Tyavlum, T., Ode, J. E., Ekpo, S. O., Agama, I. A., (2017). Impact of mobile phone usage on students' academic performance among public secondary schools in Ojulocal government area of Benue State, human journal. Vol.:6, Issue: 3. Retrieved from <http://www.ijssrm.humanjournals.com>
- Jones, S., & Fox, S. (2009) Generations online Washington, DC: *Pew Internet & American Life Project; Pew Internet & American Life Project*. [2009-04-08]. Retrieved from <http://www.pewinternet.org/Reports/2009/Generations-Online-in-2009.aspx>.
- Kothali C.R. (2004). Research Methodology, *Methods and Techniques*, 2nd edition, New Age International, New Delhi, India. Retrieved from [https://www.scirp.org/\(S\(lz5mqp453edsnp55rrgict55\)\)/reference/ReferencesPapers.aspx?ReferenceID=1285422](https://www.scirp.org/(S(lz5mqp453edsnp55rrgict55))/reference/ReferencesPapers.aspx?ReferenceID=1285422)
- Livingstone, S. (2008) Taking risky opportunities in youthful content creation: *teenagers' use Of social networking sites for intimacy, privacy and self-expression*. New media & society, 10 (3). pp. 393-411. Retrieved from <http://eprints.lse.ac.uk/27072/>
- Maree, K. (2007). *First steps in research*. Cape Town: Van Schaik. Retrieved from [https://www.scirp.org/\(S\(czeh2tfqyw2orz553k1w0r45\)\)/reference/ReferencesPapers.aspx?ReferenceID=1342045](https://www.scirp.org/(S(czeh2tfqyw2orz553k1w0r45))/reference/ReferencesPapers.aspx?ReferenceID=1342045)
- Mathers, N., Fox N., & Hunn, A. 2009. Surveys and Questionnaires. *The NIHR Research Design Service for Yorkshire & the Humber*. The East Midlands, Yorkshire. Retrieved from <https://docplayer.net/7682095-Surveys-and-questionnaires.html>
- Melhuish, K., & Falloon, G. (2010). "Looking to the future: M-learning with the iPad", *Computers in New Zealand: Learning, Leading, Technology*, (22)3, 1-16. Retrieved from <http://learningfoundation.org.uk/wp-content/uploads/2016/03/Looking-to-the-future-Melhuish-Falloon.pdf>
- Mwilima, F., & Hangula, V., (2017). The Effects of Cell Phone Use on Academic Performance in Tertiary Education. *International Journal of Law, Humanities & Social Science*, 2017-09- 1, (5) 33-38. Windhoek, Namibia. Retrieved from <http://www.ijlhss.com/wp-content/uploads/2017/10/The-Effects-of-Cell-Phone-Use-on-Academic-Performance-in-Tertiary-Education.pdf>.
- Njoroge, B., (2011). Impact of Social Media among the youth behaviour change: *A Case Study of University Students Selected University*. Nairobi, Kenya. Retrieved from https://www.academia.edu/29090877/Njoroge_Impacts_of_social_media_among_the_youth_on_behavior_change

- North, D., Johnston, K., Ophoff, J. (2014). *The use of mobile phones by South African university students: Issues in Informing Science and Information Technology*, 11, 115-138. Retrieved from: <http://iisit.org/Vol11/IISITv11p115-138North0469.pdf>
- Oblinger, D., & Oblinger, J., (2005). "Is it age or IT: First steps toward understanding the net generation", *Educating the net generation*, (2)1–2, 20. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.593.3524&rep=rep1&type=pdf>
- Ravichandran, S, V. (2009) *Mobile phones and Teenagers: Impact, Consequences and Concerns– Parents/caregivers Perspectives*, 1 (2), United Institute of Technology, 20-28. Retrieved from <http://unitec.researchbank.ac.nz/bitstream/handle/10652/1270/fulltext.pdf?sequence=1>
- Rovai, A. P., Baker, J. D., & Ponton, M. K. (2014). *Social Science Research Design and Statistics*. Chesapeake, VA: Water tree Press LLC. Retrieved from https://openlibrary.org/works/OL16810546W/Social_Science_Research_Design_and_Statistics
- Shamoo, A. E., & Resnik, D, B., (2015) *Responsible Conduct of Research. Third Edition*. Oxford, New York: Oxford University Press. 2015; 360p.
- Sharma, A. & Shukla, A.K. (2016). Impact of Social Messengers Especially WhatsApp on Youth: A Sociological study. *International Journal of Advance Research and Innovative Ideas in Education*, 2(5), 367-375. Retrieved from <http://ijariie.com/AdminUploadPdf/IMPACT OF SOCIAL MESSENGERS ESPECIALLY WHATSAPP ON YOUTH A SOCIOLOGICAL STUDY ijariie3111.pdf>
- Strauss, A. & Corbin, J., (1998). *Basics of qualitative research*, second edition. Thousand Oaks, CA: Sage Publications. Retrieved from <https://nsuworks.nova.edu/cgi/viewcontent.cgi?article=2838&context=tqr>
- Tashakkori A. & Creswell, J. W., 2007b. *Editorial: Differing perspective on mixed methods research. Journal of Mixed Methods Research*, 1:303-308. Retrieved from <http://journals.sagepub.com/doi/pdf/10.1177/1558689807306132>
- The Guardian. 2015. "Africa's mobile phone penetration now 67%." Retrieved from: <http://documents.worldbank.org/curated/en/186391513608326487/pdf/WPS8278.pdf>
- Thomas, K., & Bolton, N. (2012). Cell phones in the classroom: educator's perspectives. *proceedings of society for information technology & teacher education international conference*, 2129-2140.

- Tungaraza, F. D., (2015). “*The arduous march toward inclusive education in Tanzania: head teachers' and teachers' perspectives*”, *Africa Today*, (61)2, 108-123. Retrieved from <file:///C:/Users/kanib/Downloads/1504-12994-2-PB.pdf>
- Vavrus, F., (2009). “The cultural politics of constructivist pedagogies: Teacher education reform in the United Republic of Tanzania”, *International Journal of Educational Development*, (29)3, 303-311. Retrieved from https://www.academia.edu/21892546/The_cultural_politics_of_constructivist_pedagogies_Teacher_education_reform_in_the_United_Republic_of_Tanzania
- Yeboah, J., Ewur, G. E., (2014). The impact of WhatsApp messenger usage on students. *Journal of Education and Practice*. Vol.5, No.6. 2222-1735. Takoradi, Ghana. Retrieved from <https://pdfs.semanticscholar.org/5a8d/c1e04e19c5e8744f24123c669c4fea5c56b3.pdf>
- YouTube Statistics, (2015). *YouTube Statistics*. Referred 3.3.2015. Retrieved from: <https://www.youtube.com/yt/press/en-GB/statistics.html>
- Whitley, E. A., Ian H. 2005. “*Policy discourse and data retention: The technology politics of surveillance in the United Kingdom.*” *Telecommunications Policy*, Volume 29, Number 11:857–874. Retrieved from <http://documents.worldbank.org/curated/en/186391513608326487/pdf/WPS8278.pdf>

7 APPENDICES

7.1 Appendix A

QUESTIONNAIRE FOR SCHOOL LEARNERS

An investigation of cell phone use on the academic performance of the Namibian school learners: a case study of the Caprivi Senior Secondary School and Kizito College in the Zambezi region.

Introduction: My name is Berio Ntwala Mbala a Masters of Arts student in Media Studies at the University of Namibia. I am currently doing a research focusing on cell phone use among our Namibian school learners. This study will accord me the opportunity to investigate the impact of cell phone use on the academic performance among the Namibian school learners: a case study of the Caprivi Senior Secondary School and Kizito College in the Zambezi region.

Your real name will not be used in this study, therefore your identity will not be linked to the information that you present. Data collected for this study will be used solely for the purpose of the study. Please find attached the consent form and declaration for elaborative information.

Date: _____

Place: _____

SECTION A (DEMOGRAPHICS)

Your answers will be used as audience research within my research. (Mark with an x in the appropriate box).

1. State your gender

- ☐ Male
- ☐ Female

2. In what grade are you?

- ☐ Grade 8
- ☐ Grade 9
- ☐ Grade 10
- ☐ Grade 11
- ☐ Grade 12

3. Approximately how many hours a day are you on your cell phone?

- ☐ None
- ☐ 1-6 hours
- ☐ 7-12 hours
- ☐ 13-18 hours

SECTION B

Please answer all the following questions: Take note you can tick more than one box, where more than one answer applies. Do not mark or write in the shaded spaces.

1. When do you use your cell phone most?

- ☐ During school hours
- ☐ After school hours
- ☐ Others specify -----

2. Where do you use your cell phone most

- ☐ At school
- ☐ Home
- ☐ Others specify -----

3. **How often do you use a mobile phone?**

A = Always, S = Sometimes, N = Never, NA = No Answer

Statements	A	S	N	NA
I use cell phone to chat with family and friends				
Search or get information about school work				
To watch lesson video				
I use cell phone to use as a calculator and alarm				
Checking the meaning of a difficult word in class				
Check the current update of my friends Facebook, WhatsApp page.				
I use cell phones during class time for the activities which are not related to studies.				

4. **What is your feeling on cell phone usage for education/learning?**

SA =Strongly Agree, A= Agree, Strongly Disagree=SD, D=Disagree, NO=No

Answer

Statements	SA	A	SD	D	NO
Since I started using a cell phone it has assisted my learning process.					
My vocabulary has increased because of my mobile phone dictionary.					
I find the use of cell phones in class causing distraction					
I use my phone to call only					
I use my phone to text sms only					
I use my phone to access social media					
I concentrate in class more without my cell phone					

5. For what do you use cell phones?

- ☐ Calls
- ☐ SMS
- ☐ Learning
- ☐ Social media
- ☐ Playing games
- ☐ None of the above
- ☐ Others specify -----

6. Which are the most accessed social media sites?

Social Network Site	Most visited social network site (mark with X)	Rate between 1 to 5. 1 is very boring 5 is Best (mark with X)				
		1	2	3	4	5
Facebook						
WhatsApp						
YouTube						
Google						

None of the above						
-------------------	--	--	--	--	--	--

7. The table below requires you to fill in the boxes on how helpful are these social network sites to academic learning?

Ratings 1=Very Boring, 2=Boring, 3=Not bad, 4=Nice and 5=best (mark only one number of the numbers).

Social Network Site	Rate between 1 to 5. 1 is very boring 5 is Best (mark with X)				
	1	2	3	4	5
Facebook					
WhatsApp					
YouTube					
Google					

8. Anything that you would like to add on?

.....

Thank you so much for your time!

7.2 Appendix B

FOCUS GROUP DISCUSSION (FGD) GUIDE FOR TEACHERS

My name is Berio Mbala, a Master of arts student in Media Studies at the University of Namibia conducting a research on the “Investigation of cell phone use on the academic performance of the Namibian school learners: a case study of the Caprivi Senior Secondary School and Kizito College in the Zambezi Region.”

The major aim of this study is to establish the usage patterns of cell phones by learners at the Caprivi Senior Secondary School and Kizito College with a view of coming up with recommendations for the improvement of cell phone use by school learners. All research data gathered will be used solely for academic purposes.

I therefore seek for your permission to assist in answering to the best of your ability the questions you will be asked. As part of the University’s ethical requirements, the information you provide will be kept confidential including your identity.

I thank you

Date: _____

Place: _____

SECTION A (DEMOGRAPHICS). Please answer the following questions in the space provided, mark with an X in the appropriate box.

1. Sex

- ☐ Male
- ☐ Female

2. Age: -----

3. What is your highest education?

4. Do your learners own cell phones?

- ☐ Yes
- ☐ No

5. If, yes when are they allowed to use them on school premises?

5. How frequent do your learners use their cell phones at school?

☐ None

☐ 1-6 hours

☐ 7-12 hours

☐ 13-18 hours

6. Do you allow the use of cell phones during class sessions?

7. If your answer is yes/no, state the reasons why?

8. How do you monitor them when allowed to use them?

9. Are you aware of the benefits a school learner can get from using a cell phone? if yes, what are those benefits?

10. How useful is a cell phone to a school learner on educational activities?

Cell phones have a lot of educational application that can help learners grow more knowledge,

11. Is your school having internet connection/wireless? If yes, are the school learners allowed to use it?

12. Are you aware of cell phones mobile tools that might be useful for school learners?

Yes,

13. What are cell phone's mobile learning tools?

14. Are you on social media?

15. Which social media platforms are you participating on?

16. Which social media platforms are your school learners participating on?

17. Are you aware of cybercrime?

18. Is there any of your learners so far, experienced cybercrime, if yes, how did you handle the situation?

19. Do you discuss with your school learners the tips on how to use social media safely? If yes, what are those tips?

20. Is there anything else you would want to say?

Thank you so much for your time!

7.3 Appendix C

INTERVIEW GUIDE FOR PARENTS

My name is Berio Mbala, an Master of Arts student in Media Studies at the University of Namibia conducting a research on the *“Investigation of cell phone use on the academic performance of the Namibian school learners: a case study of the Caprivi Senior Secondary School and Kizito College in the Zambezi Region.”*

The major aim of this study is to establish the usage patterns of cell phones by learners at the Caprivi Senior Secondary School and Kizito College with a view of coming up with recommendations for the improvement of cell phone use by school learners. All research data gathered will be used solely for academic purposes.

I therefore seek for your permission to assist in answering to the best of your ability the questions you will be asked. As part of the University’s ethical requirements, the information you provide will be kept confidential including your identity.

I thank you

Date: _____

Place: _____

1. Is your child male or female?

- ☐ Male
- ☐ Female

2. How old is your child? -----

3. What grade is your child? -----

4. Does your child own a cell phone?

- ☐ Yes
- ☐ No

5. If yes, when is h/she allowed to use it?

6. How frequent does your child use her cell phone at home?

- ☐ None
- ☐ 1-6 hours
- ☐ 7-12 hours
- ☐ 13-18 hours

7. How do you monitor your child's use of cell phone?
8. Are you aware of the benefits a child can get from using a cell phone?
9. How useful is a cell phone to a child on educational activities?
10. Who buys credit or data bundle for your child's cell phone?
11. Are you aware of cell phone's mobile learning tools that might be using for your child's education?
12. What are these benefits?
13. Are you on social media?
14. Which social media platforms are you participating on?
15. Which social media platforms is your child participating on?
16. Are you aware of cybercrime?
17. Do you discuss with your child the tips on how to use social media safely?
18. Is there anything else you would want to say?

Thank you so much for your time!

7.4 Appendix D

PARTICIPANT INFORMATION LEAFLET AND CONSENT FORM

ANNEX 5



TITLE OF THE RESEARCH PROJECT: *An investigation of cell phone use on the academic performance of the Namibian school learners: A Case Study of the Caprivi Senior Secondary School and Kizito College in the Zambezi region*

REFERENCE NUMBER: 21877860

PRINCIPAL INVESTIGATOR: Mrs. Berio Ntwala Mbala

Private Bag 13301, Windhoek, Namibia

CONTACT NUMBER: +264 061 2063061

You are being invited to take part in a research project. Please take some time to read the information presented here, which will explain the details of this project. Please ask the study staff or doctor any questions about any part of this project that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is **entirely voluntary** and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

This study has been approved by the Research Ethics Committee at The University of Namibia and will be conducted according to the ethical guidelines and principles of the international Declaration of Helsinki, South African Guidelines for Good Clinical Practice and Namibian National Research Ethics Guidelines.

1. What is this research study all about?

You have been invited to take part in this research study focusing on cell phone use and the impact it has on the academic performance among school learners.

It is believed that cell phone use among school learners can improve academic performance, the research aims at investigating the impact of the use of cell phones on academic performance in two selected schools in Katima Mulilo, Zambezi region: namely Caprivi Senior Secondary School and Kizito College.

The use of technology among learners is observed to be on the increase and technological devices such as cellular phones, lap tops and other digital devices are now accessed and used by almost everyone including school learners. Research shows that cell phones have significant impact on young people and also on education. The main aim of the study is to assess the extent of cell phone use among school learners at the Caprivi Secondary School and Kizito College, determine the usage patterns of cell phones by learners at the two selected schools, investigate the impact of cell phone use on academic performance of school learners and to recommend on how cell phones can be put to best use for academic purposes by school learners.

The population of this study is composed of 1725 school learners aged between 15 to 20 years plus six teachers from both schools and 10 parents. This study will use simple random sampling (Questionnaires) for learners and convenience sampling (Focus Group Discussion) for teachers and Interview for parents that will participate in the research. The interviews will be conducted through questionnaire distribution during class lesson and to be collected the next day by the teacher/SRC. While detailed information will be gathered by the use of Focus Group Discussion (FGD) with teachers and interview with parents, doing so will help to have a deeper understanding of the usage patterns and impact of cell phones use by the school. The researcher will administer the questionnaire to both participants in order to ensure a higher response.

Participation in this study is in two parts, the first part of the interview is focusing on demographic data. The second part will be a transition into more in- depth questions to find out on how useful cell phones are among our school learners.

For any further information, you may contact me, principal researcher, **Ms. Berio Mbala** at **Tel. +264 61 203 880, Cell No. +264 81 215 6339 or bmbala6@gmail.com or the University of Namibia at +264 61 2063061.**

2. Why have you been invited to participate?

You have been invited to participate because you form part of the research population of this study that consists of ten percent of school learners at the Caprivi Senior Secondary School and Kizito College; plus a sample of teachers at the two schools and the parents of learners at these schools.

3. What will your responsibilities be?

a) If you agree to participate, this is what will happen?

- 1. You will read and sign a consent form, for those that are under 18, the consent form to be signed on their behalf by their parents or guardian.*
- 2. You will be given a questionnaire to go and fill in at home at your own time and bring it back to your teacher the next day,*
- 3. The questionnaires to be collected by your teachers the next morning.*

4. Will you benefit from taking part in this research?

You will not receive any direct benefits by participating in this research. However, you will give the researcher important information that can inform education authorities and decision makers to formulate policies that can be effective in the use of these technological devices in schools.

5. Are there any risks involved in your taking part in this research?

There are no physical risks to you if you agree to participate in this research.

6. If you do not agree to take part, what alternatives do you have?

Your participation in this research is voluntary. If you decide not to participate, it will not affect you in any way. If you have any questions about this study, feel free to contact the Principle Investigator, Ms. Berio Mbala, Masters Student at the University of Namibia on cell phone number: +264 81 215 6339 or +264 85 561 1848 or Email: bmbala6@gmail.com

7. Who will have access to your medical records?

The information collected will be treated as confidential and protected. The data collected will only be used for academic purposes and kept for five years and thereafter destroyed according to UNAM regulations.

8. What will happen in the unlikely event of some form injury occurring as a direct result of your taking part in this research study?

Not applicable.

9. Will you be paid to take part in this study and are there any costs involved?

There is no remuneration involved taking part in this study.

10 Is there anything else that you should know or do?

a) *You can contact Dr F. J. Mwilima at Tel 061 206 3638 or Email: fmwilima@unam.na if you have any further queries or encounter any problems.*

b) *You can contact the Centre for Research and Publications at +264 061 2063061; pclaassen@unam.na if you have any concerns or complaints that have not been adequately addressed by the investigator.*

c) *You will receive a copy of this information and consent form for your own records.*

11. Declaration by participant

By signing below, I agree to take part in a research study entitled (*An investigation of cell phone use on the academic performance of the Namibian school learners: a case study of the Caprivi Senior Secondary School and Kizito College in the Zambezi region*).

I declare that:

- a) I have read or had read to me this information and consent form and it is written in a language with which I am fluent and comfortable.
- b) I have had a chance to ask questions and all my questions have been adequately answered.
- c) I understand that taking part in this study is **voluntary** and I have not been pressurised to take part.

d) I may choose to leave the study at any time and will not be penalised or prejudiced in any way.

e) I may be asked to leave the study before it has finished, if the study doctor or researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at (*place*) on (*date*) 2019.

.....

Signature of participant

.....

Signature of witness

12. Declaration by investigator

I (*name*) declare that:

- I explained the information in this document to
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I did/did not use an interpreter. (*If an interpreter is used then the interpreter must sign the declaration below.*)

Signed at (*place*) on (*date*) 2019.

.....

Signature of investigator

.....

Signature of witness

13. Declaration by interpreter

I (*name*) declare that:

a) I assisted the investigator (*name*)
..... to explain the information in this
document to (*name of participant*)
..... using the language medium of
(Silozi, etc.)

7.5 Appendix E

Ethical Clearance Certificate



ETHICAL CLEARANCE CERTIFICATE

Ethical Clearance Reference Number: FHSS /492/2019 **Date:** 30 September, 2019

This Ethical Clearance Certificate is issued by the University of Namibia Research Ethics Committee (UREC) in accordance with the University of Namibia's Research Ethics Policy and Guidelines. Ethical approval is given in respect of undertakings contained in the Research Project outlined below. This Certificate is issued on the recommendations of the ethical evaluation done by the Faculty/Centre/Campus Research & Publications Committee sitting with the Postgraduate Studies Committee.

Title of Project: Investigation Of Cell Phone Use On The Academic Performance Of The Namibian School Learners: A Case Study Of The Caprivi Senior Secondary School And Kizito College In The Zambezi Region

Student: BERIO MBALA

Student Number: 2018177860

Supervisor(s): *Dr. F. Muilima*

Take note of the following:

- (a) Any significant changes in the conditions or undertakings outlined in the approved Proposal must be communicated to the UREC. An application to make amendments may be necessary.
- (b) Any breaches of ethical undertakings or practices that have an impact on ethical conduct of the research must be reported to the UREC.
- (c) The Principal Researcher must report issues of ethical compliance to the UREC (through the Chairperson of the Faculty/Centre/Campus Research & Publications Committee) at the end of the Project or as may be requested by UREC.
- (d) The UREC retains the right to:
 - (i) Withdraw or amend this Ethical Clearance if any unethical practices (as outlined in the Research Ethics Policy) have been detected or suspected,
 - (ii) Request for an ethical compliance report at any point during the course of the research.

HREC wishes you the best in your research.

Dr. E. de Villiers: HREC Chairperson

A handwritten signature in black ink, appearing to be "E. de Villiers", written over a horizontal line.

Ms. P. Claassen: HREC Secretary

A handwritten signature in black ink, appearing to be "P. Claassen", written over a horizontal line.

7.6 Appendix F

Request to conduct a research study at Caprivi Senior Secondary School and Kizito College.

PO Box 21547

Windhoek

Namibia

07 May 2019

Ms. Joy Mbangu

Director

Directorate of Education, Arts and Culture-
Zambezi Region

Private Bag 5006,

Katima Mulilo, Namibia

REQUEST TO CONDUCT A RESEARCH STUDY AT CAPRIVI SENIOR SECONDARY SCHOOLS AND KIZITO COLLEGE.

I am currently studying for the Masters Degree in Media Studies with the University of Namibia; and I am expected to conduct a research study as a requirement for the degree. May I therefore, request your permission to conduct this study in Zambezi region at the above mentioned schools?



The topic for my research is: "Investigation of cell phone use on the academic performance of the Namibian school learners: a case study of the Caprivi Senior Secondary School and Kizito College in the Zambezi region". This research uses mixed methods approaches of quantitative and qualitative approaches of methodology. Through quantitative, the study involves the use of a structured questionnaire to collect data from school learners, teachers and parents of Caprivi Senior Secondary School and Kizito College.

The main purpose of the study is to assess the extent of cell phone use among school learners at the Caprivi Secondary School and Kizito College and the findings of this study can inform education authorities and decision makers to formulate policies that can be effective in the use these technological devices in schools.

Attached to this letter are the following documents: approved proposal, protocol synopsis, participants information leaflet and consent form, tools to be used in the field such as questionnaires for school learners, teachers and parents.

7.7 Appendix G

Response letter from the Regional Directorate

	REPUBLIC OF NAMIBIA ZAMBEZI REGIONAL COUNCIL	
<i>Tel: +26466261962 Fax: +26466253187 Enquiries: Ms Adrenah K Mukela</i>	<i>Ngoma Road Govt Building Our Ref:</i>	<i>Private Bag 5006 Katima Mulilo, Namibia</i>

PO Box 21547
Windhoek
Namibia

Dear Ms Berio Mbala – Kani

REQUEST TO CONDUCT A RESEARCH STUDY AT CAPRIVI SENIOR SECONDARY SCHOOL AND KIZITO COLLEGE


Your letter to the office of the Regional Director: Zambezi Region dated 07 May 2019 with the caption request for permission to conduct a Research Study at Caprivi Senior Secondary School and Kizito College in Zambezi Region was received.

Kindly be informed that approval is granted to you to conduct a research as requested, but let me draw your attention to the following aspects: **NOTE!**

- The granted approval should not disrupt the normal teaching and learning at those schools you intend visiting.
- You are therefore, requested to share your findings with the Ministry of Education, Arts and Culture.

By copy of this letter Inspector of Education concerned is notified accordingly of your presence to these schools.

I trust and hope you will find this in order.


MS JOY ZAMBO MAMILI
REGIONAL DIRECTOR: EDUCATION, ARTS AND CULTURE

