



Addis Ababa University
College Of Education and Behavioral Studies
Department Of Educational Planning And Management

**Students' Usage of Communication Technologies in
Secondary Schools in Burao District of Somaliland.**

By
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August, 2021

ADDIS ABABA, ETHIOPIA

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Schools in Burao District of Somaliland.**

**A Thesis Submitted To Addis Ababa University In Partial Fulfillment of The
Requirements for The Degree of Masters of Arts In Educational Planning And
Management.**

August, 2021

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Declaration

I, **Said Mohamed Ismail**, hereby declare that this thesis titled “**Students’ Usage of Communication Technologies in Secondary Schools in Burao District of Somaliland**” is the outcome of my own effort and all sources of materials used for the study have been duly acknowledged. I have carried out the present study independently with the guidance and support of the research advisor, **Dr. Yekunoamlak Alemu**. Moreover, this study has not been submitted for any degree in this university or any other university.

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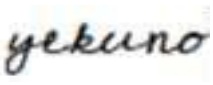
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Approval Sheet

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This is to certify that the thesis prepared by **Said Mohamed Ismail**: titled “**Students’ Usage of Communication Technologies in Secondary Schools in Burao District of Somaliland.**”and submitted in partial fulfillment of the requirements for the degree of Masters of Arts (MA) in Educational Planning and Management corresponds with the regulation of the University and meets the accepted standards for the originality and quality.

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Acronyms and Abbreviations

AU	African Union
CD-ROM	Compact disc ‘Read Only Memory’
DV	Dependent Variable
DVDs	Digital Video Discs
EDPM	Educational Planning & Management
ESA	Education Sector Analysis
IV	Independent Variable
MLA	Measuring Learning Achievement
MP3s	MPEG Audio Layer-3
PDA s	Personal Digital Assistants
SNS s	Social Networking Sites
SPSS	Statistical Package for Social Science
TV s	Televisions
U.S	United States
VCR s	Video Cassette Recorders

Abstract

The purpose of this research was to investigate the usage of communication technologies of secondary school students in Burao district. The descriptive survey design was used; also Stratified random sampling was employed in sampling the respondents. Responses were elicited from students in two secondary schools one public secondary school and one private secondary school was the target population. The target students were five hundred (500) students from the two secondary schools. The study sample was two hundred twenty two (222) students. Also, the interview was conducted through face to face interactions among fifteen of the school principals and teachers including thirteen teachers and two principles selected purposively. Frequency, percentages, mean and standard deviations were used in the analysis of data. To achieve the objectives of the research, the study used a mixed method approach which involved the survey of student's responses on the influence of modern technology on the student's academic performance. The study revealed that a great number of students in Burao district use most frequently Smart phones but other technologies such as laptops, desktops and tablets were also used. As the research results revealed most of the secondary school students in Burao district used these modern technologies for their learning purposes and academic issues as well as social media. Since they used these technologies including the social media for more than two hours daily, it influences their academic performance. Hence, students should be thought to better manage their study time; students should create a balance between using the technology for seeking knowledge from the internet and usage of social media, also teachers should ensure that students use modern technology as a tool to improve their academic performances. In addition schools should enact rules and regulations to protect students from misusing the modern technology.

CHAPTER ONE: INTRODUCTION

1.1. Background of the Study

The youth are curious for information and entertainment. They are fast enough to adapt to new situation, new pieces of information, new technologies, etc.(Hertz & David-Ferdon, 2008) Observe way technology and adolescents are drawn to one other, and how both are fast-paced and always evolving.. They claim that in previous generations, teens readily embraced new technologies, such as record players, TVs, cassette players, computers, and VCRs, but the past two decades have witnessed a virtual explosion in new technology, including Smart phones, iPods, MP3s, DVDs, and PDAs (personal digital assistants).

Many jobs that did not require the use of technology in previous years now do. Computers are in far more homes than in previous years, and a rising number of people know how to use them. Web surfing, texting, social networking, interactive games, and other forms of technology are utilized by children and adults on a daily basis. We live in an ever-evolving technological civilization that has become reliant on it in many ways. Thus, the use of technology and teaching students have to use it has become a high priority in the secondary schoolsTechnology comes in a variety of shapes and sizes. From a simple four-function calculator or graphing calculator to assistive technology for students with learning difficulties, there is something for everyone.

"Technology is a major catalyst for increasing learning"(Iserhagen: 30) There has been a lot of discussion about how to use technology to boost student achievement. In our schools, a number of new technologies are emerging to support and enhance learning. Many of these technologies are utilized as simple strategies to enhance student teaching rather than replacing established teaching methods. (Riley et al., 2004).

Internationally the past two decades, digital technology has become pervasive, impacting virtually every aspect of the daily lives. New technologies are having an impact on society at an unprecedented rate. Information distribution is now instant, unfiltered and free. Ubiquitous Internet access has radically changed notions of knowledge, expertise and access to information. (Kolikant, 2009)Points out that "the school system – unlike other cultural institutions such as

banks, hospitals, the entertainment world, and the press – has not re-thought ... goals and practices ... in the digital age” (p. 132).

Prensky(2001) the younger generation was dubbed "digital natives" because they were "all "native speakers" of the digital language of computers, video games, and the Internet, as opposed to the "digital immigrants" who "spoke an outmoded language." (that of the pre-digital age)” (p. 2). Prensky(2001)claimed that this gap was a tremendous challenge to the existing structures of school, because “students have changed radically. Today’s students are no longer the people our educational system was designed to teach. ... They think and process information fundamentally differently from their predecessors” (p. 1). Schools were losing relevance, as digital immigrant teachers failed to connect with their digital native students. Thus, “Teachers must learn to speak in their students' language and style.” (p. 4).

The U.S. Department of Education (2010) contends that technology must be successfully integrated into the content and structure of education in order to adequately prepare students to live and act in the world in which they are growing up. While there has been a lot published in the popular press on the transformative impact of digital learning on society and education, many of these articles are based on passion rather than fact. There is a need for rigorous academic research that identifies how digital education might be used to positively improve teaching and learning in a variety of topic areas.

In the modern information era, A wide range of gadgets can be used to access the vast amount of information available on the internet. Technology that was once expensive and limited to only the privileged few has now advanced and become far cheaper(Edwards, 2009). Teachers must adapt to this new lifestyle because students have grown up with technology all around them. Teachers who are adjusting to this new way of life must discover ways to incorporate and use these new kinds of technology in the classroom, not just for motivational purposes, but also for instructional purposes.

More than one billion people are expected to live in Africa, with % of them being young. The median age of this population group is 17.6 years. Members of the African Union have decided to invest in youth and provide opportunities for them. “purposeful efforts to speed up social development with a focus on youth empowerment and development.” (Klavert, 2011).

The African Union (AU: 2006b) has specifically stated in its Youth Charter that every young person shall have the freedom to seek, receive, and disseminate information and ideas of all kinds, whether orally, in writing, in print, in the form of art, or through any technology media of the young person's choice, subject to the restrictions imposed by law. This liberty is extremely important in the lives of today's youth who are immersed in technology. This freedom, combined with the growing movement of media producers aimed at youth, fuels the need for these kids to grasp current technology items and their implications.

Because technology is such an important part of people's lives, it is critical that children learn how to use it at a young age. When children use digital tools in elementary and secondary schools, they develop a sense of confidence and proficiency in their computer skills. Many children today have access to a lot of technology at home; as a result of this access, pupils will be more comfortable utilizing technology at school. Teachers that use and demonstrate various forms of technology effectively engage their pupils and create a vibrant work environment. (Kenney, 2011).

Somaliland education system has four main levels: pre-primary, primary/alternative, secondary/vocational, and higher education. Pre-primary (early childhood) is not (yet) fully integrated into formal education, but in some private facilities and Quranic school systems that stays, up to three years. Primary schooling lasts for eight years and is divided into a four year-elementary or lower primary cycle and a four-year intermediate or upper primary cycle. Secondary education and Vocational Training (as per design) also run for four years. The exception is the Arabic medium schools, which have 9 years of primary/intermediate schooling and 3 years of secondary education. The tertiary level for both systems has a minimum of two years with many running for four (Plan, 2017).

The distribution of teachers between urban and rural areas is highly skewed, with 64% of all teachers stationed in urban schools, compared to only 36% in rural areas. This is skewed as some 52% of the school going children are found in urban areas compared to close to 45% in rural areas (rural and pastoral/nomadic communities combined). Teaching hours according to the National Education Policy, students at primary school level are required to learn 8 subjects for a total of 36 periods, comprising 27 teaching hours every week. For student's performance the only data available for use in the (Education Sector Analysis) ESA 2012-16 for performance

scores revealed that at Grade 12 level, the average score in a Measuring Learning Achievement (MLA), based on a cross sampling was 23% for mathematics. This is alarmingly low as the competencies assessed were at a very low level. The equivalent scores for literacy at grade 12 were a little better with approximately 45% able to operate at the simple sentence level in terms of understanding and responding appropriately (Plan, 2017).

Therefore, the purpose of this study was to assess the usage of communication technologies in secondary school students. More specifically, the areas of inquiry was included the positive and negative effects on student achievement and the various types of modern technology that can increase or decrease a student's ability to do work in the classroom.

1.2.Statement of the Problem

When choosing a study problem, they recommend considering interest, concept measurement, relevance, scale, data availability, and ethical considerations. (Bhaskar & Manjuladevi ,2016) .

When used to improve students' participation in meaningful and intellectually authentic curriculum, technology may be a tremendous learning tool. Technology is merely a means to an end. It should be chosen when it is the most effective learning tool for kids. Technology can be a particularly useful tool for students with impairments, allowing them to participate more fully. As part of their academic program, primary school students should begin to use known digital tools.(Courville, 2011).

Many studies have demonstrated the benefits of adopting modern technology in the classroom. Technology may be utilized to create meaningful projects that encourage children to think critically and solve problems. Technology can be utilized to restructure and rebuild the classroom in order to create an atmosphere that encourages students to acquire higher-order thinking skills. (Kurt, 2010).

Secondary school age students spend much time in exploring new electronic modern technologies; they explore updates on modern technology; they are interested to discover newer forms of media applications. They spend much time on the internet visiting a number of sites and contents, communicate via the electronic applications, and share electronic contents with one another. While they do these, they have the possibilities to be distracted from their educational

priorities, to behave the same way they have observed in the media and may be influenced so much so that they relate to others depending on the amount of time they spend and the types of the electronic media content they have encountered. These influences may have adverse effects on the personal behavior, relational life and the teaching-learning process of high schools and hence needs attention.

The development, production, and sale of equally advanced cellular phones and other technologies has complicated the situation, as students no longer require the use of a cybercafé to send and receive messages on their current smart phones.

The focus has switched from visible to unseen friends, affecting vital endeavors or activities such as study, learning, and writing. Many people who believe in the acquisition of information and skills are concerned about this phenomena.

In Somaliland, there is no study focusing on the usage of communication technologies of secondary school students, there seems to be recognize or noticeable swift deviation, distraction and divided attention between modern technology activities and academic work of some students. Therefore, this study aims the determination of the usage of communication technologies more specially the positive and negative effect on the academic performance of secondary school students in Burao, Somaliland.

1.3 Research Questions

Research questions are the specific questions which guide the details of the research efforts including the development of concepts, operational definitions and measurement of device. Research questions are formulated from objectives of research (Krishnaswami & Ranganatham, 1900). So, this study has specifically attempted to find answers to the following research questions:

- I. What type of communication technology do secondary school students mostly use?
- II. What is the level of use of modern electronic technology among the students?
- III. What are the purpose of usage of communication technology of secondary school students of Burao District-Somaliland?

1.4 Objectives of the Study

Kumar (2018) asserts that research objectives refer to what researcher studies for. The research objectives are categorized into two categories that are the main or general objective and sub objectives or specific objectives. Main objectives are what the researcher has pushed to conduct research while sub objectives identify the specific issues researcher proposes to examine or to assess. The objectives are clear stated the main aim of the researcher that conduct the research as well as specific issue.

1.4.1 General Objective

The general objective was to examine the usage of communication technologies in secondary schools of Burao District of Somaliland.

1.4.2 Specific Objectives

1. To identify the types of modern technology that secondary school students frequently use.
2. To examine the level or status and the purpose of usage of modern technology among secondary school students.
3. To assess the usage of communication technologies of secondary school students.

1.5 Significance of the Study

The findings of this study are significant to the teachers, parents and students. This study will help the teachers of the schools to know the influence that modern technology has on their students, so as to assist them to enlighten and create awareness to the students on the possible influence it has on them. The study is significant to parents in the sense that they will know the possible effect of modern technology usage has on their children, so as to serve as watch-dog to their children on the usage of the different types of modern technology. The study will always enable secondary school students to know how best to use the modern technology as tool for integrating themselves in the globalized world without negatively influencing their academic performance. Also the findings are useful for ministry of education of Somaliland, school principals and other stakeholders to understand if there is any influence of the usage of the different technologies on

the academic performance of secondary school students in Burao District and how they may adopt to use it in advantaged way.

This study also discovered some information about influence of modern technology on academic performance of secondary school students as well as it pointed out strategic areas to how schools and other relevant constituents may model productive modern technology use by students for quality academic performance, and also gives an opportunity to explore and gain new knowledge. Furthermore, it may help the researchers to conduct more comprehensive research in the area of the usage of communication technologies by the students.

1.6. Delimitation of the Study

Geographically this study was delimited to two selected secondary schools in Burao district-Somaliland which was originally contains fourteen secondary schools.

Conceptually, the study was limited to only on variables of using communication technology that the researcher assumed has influences on respondents' academic performance. These variables are respondent's access to the different of modern technologies, kind of the technology and their frequency of usage, and purpose of using it.

1.7. Limitations of the study

All efforts were made to perform the present study in a systematic and logical manner. However, the following limitations were faced during the actual work of the study: as usual, challenge for anyone conducting a study in Somaliland is the limited availability of data and publications and this case brought lack of local research and well documented materials to serve as a baseline. Limitation of time and the distance between the researcher's study area and the university is also was the limitation of the study. Also there some other limitations caused by the outbreak of COVID19 pandemic, the lock down rule from the government in order to prevent the spread of the disease cause to minimize the number of students attend in a class at once, they were broke into shifts that brought long duration for data collection.

1.8. Organization of the study

The study was structured into five chapters. The first chapter presented information about the introductory part while the second chapter was the review of the related literature and the third chapter also presented research design and approach including: background of the study, statement of the problem, objectives of the study, significant of the study, delimitation of the study, limitation of the study. Also it includes the description of the study area, data collection and analysis and ethical consideration. Chapter four shows presentation of the study analysis and interpretations of the data. The final chapter includes summary, conclusion and recommendation of the study.

CHAPTER TWO: LITERATURE REVIEW

2.1: Introduction

A literature review is a written summary of important works and other materials on a certain subject. Scholarly journal articles, books, government reports, Web sites, and other sources may be used in the review. Each source is described, summarized, and evaluated in the literature review. It is typically included as a separate portion of a graduate thesis or dissertation..

2.2: Empirical literature review

According to Ahmed, as quoted by Brubaker (2013), communicating technologies are integrated with Internet networks that offer an online community for users to interact in a quick and convenient manner. Users can create profiles, share information, and read other users' comments on social media networks.

Camilia, Ibrahim, and Dalhatu (2013) discuss the history of SNSs dating back to the late 1990s, implying that they are not as new as they appear. With the rise of social networking sites (SNSs) SNS usage has exploded to the point where they are now regarded a global consumer phenomenon, thanks to sites like Facebook, Twitter, and LinkedIn. Users can build a public or private profile and connect with people in their networks on social networking sites, which are the most modern online communication tool.

Students are enticed to forego homework and reading time in favor of conversing online with friends because there are so many social networking sites available on the internet. Many youngsters are now addicted to social media sites like Facebook and Twitter. Face book accounts are being used by the majority of teenagers and students. It's probable that your child's poor academic achievement is not unusual. While it's easy to blame poor teaching quality, if you haven't heard of the Facebook craze, you'll have to think even harder.

Students nowadays are absorbed in technology and social media to the point where they are online nearly 24 hours a day. Some students have been observed ping; duties related, or Web browsing while lectures are taking place in classrooms and lecture halls.. Miah and Omar (2012)

The impulse to meet new people online and spend time discussing minor issues has squandered time that could have been spent studying, undertaking academic research, and innovating. As a result of social media distraction, most kids' academic performance worsens. Students' usage of English and grammar is influenced by their use of these websites, according to research. Students are used to write words in short forms in chat rooms, but frequently forget to do so in the classroom. They utilize words like 4 instead of for, U instead of you, D instead of the, and so on, which could have an impact on their grade.. (2013) (Camilia, Ibrahim, and Dalhatu)

Miah, Omar, and Golding (2012) cited Fodeman and Monroe, focusing on technologies as a social network and why students should avoid using it. The authors backed up their claim with eight grounds. Excessive use of time, a false sense of privacy, teen scams, a lack of awareness of how they are being marketed, a lack of social interaction, and unethical behavior are just a few examples. These indications should be of tremendous worry to parents of adolescent children who use social media, even if they are not properly measured. Because Facebook is accessible 24 hours a day, seven days a week, young teens with few or no obligations may be unable to keep track of their time spent on social networking sites, which may have an impact on their studies and grades.

The authors also express concern about how young pupils are being targeted without their awareness. They are vulnerable to receiving often irreversible infections on computer systems due to their lack of knowledge with Internet sites. A key part of this allegation is the lack of privacy awareness among young individuals.

Miah, Omar, and Golding(2012), (Facebook, the social media symbol, has forever affected our culture.) all highlight youth resources used in communicating technology like (Facebook, the social media icon, has forever altered our culture. Face book has been a terrific method to not only connect and stay connected since its birth in 2004, but also to squander substantial amounts of time clicking from page to page, picture to picture.

Boyd &Ellison(2013). Young adults use their technology to access social networking websites for a variety of reasons as they try to communicate within their social structure. The primary reason provided was that they wanted to maintain contact with existing acquaintances in their social network. Although there are exceptions, the majority of people who use social networking

sites do so to maintain and strengthen existing social relationships rather than to meet new people.

According to Miah, Omar, and Golding (2012), According to Lenhart, Purcell, Smith, and Zickuhr, about 57 percent of social network users are between the ages of 18 and 29, and have multiple social media profiles. According to Junco (2011), the quantity of time spent everyday on social networking sites varies substantially, according to a study conducted by Pempek, Yermolayeva, and Calvert. However, data analysis found that the majority of participants spent roughly 30 minutes per day socializing, with the majority of this time occurring between 9 p.m. and 12 a.m. On average, students spend 47 minutes per day on Face book.

Junco cites Tufekci (2011). Each person who uses technology and joins a social networking site has the option of building their own homepage or "profile," which is designed to reflect their personality. By employing this personal profile, according to Boyd and Ellison, as referenced by Camilia, Ibrahim, and Dalhatu (2013), one can establish an entire social network based on his or her own particular preferences..

Adenubi, Olalekan, and Opeoluwa (2013) cited Ellison, Steinfeld, and Lampe; and Miah, Omar, and Golding cited Lenhart, Purcell, Smith, and Zickuhr (2012). Like any other kind of media, social media isn't inherently good or evil. The type and frequency with which social media is used determines its influence. Adolescents who use social media have both benefits and risks, according to media stories and study. The risk that social media will influence health behaviors is one of these worries. Adolescents are in an especially susceptible position when it comes to the consequences of social media. They are early users of new technologies and are quickly swayed by their colleagues.

Lavy and Sand cite Alexander and Salas (2012). Many adults and professionals, including teachers and school personnel, advocate for the use of current technologies such as social media because they enable kids to communicate with one another and discuss school-related topics. Teens can use social media to plan projects, conduct group conversations about class topics, or stay in touch when a student is away and needs to be kept up to date on current academic facts.

Srivastava cites Bryant, Sanders-Jackson, and Smallwood (2012), Since the early days of the popularity of communication devices, research have been done to see how this technology

affects youngsters. While some experts anticipated that these sites would have a negative impact on adolescent communication, others argued that electronic communication would aid many teenagers who struggled to express their thoughts and feelings in person. Despite the fact that the debate is constantly being researched and investigated, many researchers are still hunting for answers. Examining the most popular social networking gadgets might lead to several conclusions about why these social tools are popular with young adults.

According to Brubaker (2013), one of the most significant disadvantages of using social networking websites in communication technologies is that most individuals are ignorant of the hazards they face when they disclose personal information on these sites. Strangers, stalkers, and hackers may misuse a person's personal information. For instance, hackers can post a link on Facebook that displays information that a user could find intriguing. Personal information may be compromised if the user clicks on the hacker's link, making the user's networking equipment open to spam, viruses, and worms. One of the primary causes of identity theft is hacking. Passwords, credit cards, and personal information should never be stored on a computer.

2.2 Modern Technology and Communication Media

Although new technologies have numerous social and educational benefits, parents, caregivers, and educators have expressed worries about the hazards that these devices can expose young people to. To address this issue, (Hertz & David-Ferdon, 2008) point out that some states and school districts have implemented laws prohibiting cell phone use on school grounds and policies prohibiting access to particular websites on school computers. They also point out that many instructors and caregivers in various countries have taken individual action by doing spot checks on websites frequented by teenagers.

According to Ahmad (2013) Internet networks that provide an online community for users to communicate in a quick and easy manner are referred to as social media. Newspapers, magazines, television, radio, billboards, direct mail, telephone, fax, and the internet are examples of broadcasting and narrow casting media. Mass media is defined as a kind of communication that serves a larger society. Print media, broadcast media, and the internet are examples of organized technologies that enable mass communication. They can also be classed as conventional media and new media. The communication functions of electronic media are

especially popular among adolescents as (Subrahmanyam et al., 2004) emphasize that teens are heavy users of new communication forms such as instant messaging, e-mail, and text messaging, as well as communication-oriented internet sites such as blogs, social networking, photo and video sharing sites like YouTube, and interactive video games that are made possible by technology. They are also convinced that concerns have been raised about how such online communication affects teenagers' social development, particularly their relationships with classmates, romantic partners, and strangers, as well as their identity development, which is a critical adolescent developmental task.

2.3 Electronic Media Environment

Generally, media may be divided into subsections and may deal with screen media (TV, videos/DVDs -both self-recorded and commercially produced, and movies), print media (books, magazines, and newspapers), audio media (radio, tapes, CDs, and MP3s), and interactive (digital) media (computers and video games). Electronic media environment, according to (Roberts et al., 2005) can be divided into the physical media environment and the social media environment. What types of media young people can access in their homes is determined by their physical environment. Family norms, rules, and general household orientation toward various media are all part of the social environment (especially TV). Electronic media, according to the Business Dictionary, refers to broadcast or storage media that make use of electronic technology. Television, radio, the Internet, fax, CD-ROMs, DVDs, and any other medium requiring energy or digital encoding of data are examples. Radio, television (TV), movies, video games, cell phones, and computer networks have all taken on increasingly important roles in the lives of today's youth.

In poor nations like Somaliland, secondary students' access to the media environment may be broader than expected, but based on my observations, a significant proportion of high school students in Somaliland have at least access to television, radio, mobile phones, and laptop computers. The way we watch television has changed because to modern technology, which now broadcasts high-definition news and entertainment all across the world..(Setzer, 2001) argues that the television has the most negative point with relation to education in that the latter demands the student's attention and activity, mainly when one considers that education should have as one of its main goals of the development of the capacities of imagining and of mental

creation. According to Setzer, television has the exact opposite effect: the constant barrage of millions of pictures causes viewers to lose their imagination and inventiveness. This is especially troubling for toddlers and teenagers, who are still acquiring those skills (in an adult that already has them, their partial loss may be regrettable, but much worse is never being able to develop them). According to Setzer, television may be used to condition people but not to educate them. Television, in his opinion, is the polar opposite of education in many ways.. It should only be used in education for illustration purposes, with videos of short duration, so that the teacher can repeat images and discuss with her students what they watched, preferably only at high school or college.

2.4 Modern Technology and Education

As society relies more on technology, students must be able to use technology for problem solving, learning in higher education, succeeding in their future careers, and living their daily lives (Bench, 2018). To answer the demands of society, Government mandates, common curriculum standards, and standards-based testing are affecting education and demanding the use of technology (Berry & Ritz, 2004).

As technology has developed and education has embraced technological tools, special education has also adapted to incorporate new strategies (Burdette et al., 2013).

In education, web-based instruction and practices have grown in popularity, allowing students with a range of disabilities to participate in online learning (Burdette et al, 2013). Students can also conduct relevant, organized, and simple research on their own using the internet. 2007 (Bouck et al.) Web-based technologies assist students in the development of a variety of abilities, including reading, writing, and comprehension in language arts, as well as problem solving in mathematics. There a positive relation between students access to the modern technology and their academic performance compared to those who have no access to the technology, as (Attwell, 1999) investigated the relationship between having a home computer and school's performance, their results suggest that students, who have access to a computer at home for educational purposes, have improved and hihger scores in reading and math.

2.5 Technology and Academic motivation

When technology is used appropriately, it can influence academic motivation.

(Grisham & Wolsey, 2006) state that technology empowers students providing them with an opportunity to shape their own learning. However (Jacobs, 2012), claims that technology itself does not necessitate academic motivation. Research shows that teachers must employ technological opportunities that provide access to a larger community or goal in order to improve a student's academic motivation (Jacobs, 2012). According to additional research, children with lower test scores place a larger importance on technological instruction and assignment aids than their higher-performing peers (Leong & Alexander, 2013). According to Leong and Alexander, this is due to the fact that technology delivers quick feedback as well as instructional aid. Teachers might expect higher motivation from their pupils if technology is made relevant and beneficial, especially for students with special needs who demand extra attention from their teachers.

2.6 Common Technologies Used in Classrooms

2.6.1 Mobile technologies (portable technologies)

2.6.1.1 Laptops

At home many everyday chores, such as paying bills online, emailing friends, family, or business contacts, and making vacation arrangements, require computers or computer skills. Employers and university teachers expect specific abilities and ways of thinking that are suited for the difficulties of the twenty-first century, and nearly all occupations now require a basic understanding of computer hardware and software, particularly word processing, spreadsheets, and email. To prepare students for a successful adult life beyond high school and to enable them to compete internationally, schools must alter to match the demands of higher education communities and the job market. (Bassett, 2005) .

2.6.1.2. Smart Phones

Users of mobile phones may make wireless phone calls, send and receive emails, send and receive basic text messages, take pictures, and record videos. With the use of a small, one-sided headset, Bluetooth technology has boosted the communicative value of cell phones by allowing talkers to carry on their discussions hands-free.

2.6.1.3. Interactive whiteboard and projectors

Microsoft Word, Excel, PowerPoint, and Access appear to be the most often utilized software in high school courses. Most school computers have these apps installed, and students and teachers have most likely been exposed to them for years. PowerPoint is particularly popular, according to (R. Young, 2008): "In less than a decade, it has altered the worlds of business, education, research, and communications, fast becoming the standard for just about anybody who wants to teach just about anything to just about anybody else" (p. 30). If utilized appropriately, PowerPoint can be a fantastic tool for students and teachers to disseminate knowledge.

A PowerPoint presentation used on an interactive whiteboard can be especially interesting since students and teachers can manipulate information with a simple touch to the screen.

According to Young(2004) ,"PowerPoint is one of the most common technologies used amongst teachers and also the most criticized software programs used by teachers" (p. 29).

2.6.2 Electronic Technology Media

2.6.2.1 Electronic Mail

Electronic media communication methods can take many different shapes, depending on the situation (Jacobsen & Forste, 2011). These modes of communication are electronic media that allow media consumers to obtain and exchange information, enjoy entertainment, communicate with others, and so on. Electronic Email was the initial mode of Internet communication, according to Jennifer (Geho & Dangelo, 2012), and it is still the most common. Users can use a variety of free email services, such as Yahoo, Google Mail, and Hotmail, and their Internet provider may occasionally supply an address that uses their domain name.

Email offers usually instantaneous delivery of messages to their recipient, a single or list of other email users. Attachments can be made to emails to share photos, document files or audio files, though there is usually a limit to the size of these attachments. (Wondimu, 2015)Emphasizes that, there are innovative ways of accessing this tool remotely and without the usage of a computer.

2.6.3 Social Networking

The process of “expanding knowledge by forming relationships with people who share similar interests” is referred to as social networking (Hudson et al., 2012). Users of social networking sites like Facebook, Twitter, Instagram, and LinkedIn can produce and share digital content publicly or privately with those with whom they are linked, as well as converse secretly using messaging tools.

2.6.3.1 The Internet

On the internet, students engage in a variety of activities some of which may be potentially addictive (Griffiths & Kuss, 2017). The mass appeal of social media on the internet could be a cause for concern, particularly when attending to the gradually increasing amount of time students spend online. Students spend more time on Face book, Twitter and other social media through smart phones and other modern technologies that are now in abundance among these youths. Many students cannot go for two-three hours without checking and updating their profiles on these social networks even at the detriment of other activities such as educational and career pursuit.(Morahan-Martin & Schumacher, 2000) Explain social media addiction as the excessive use of the internet and the failure to control this usage which seriously harms a person’s life(Çam& Isbulan, 2012).

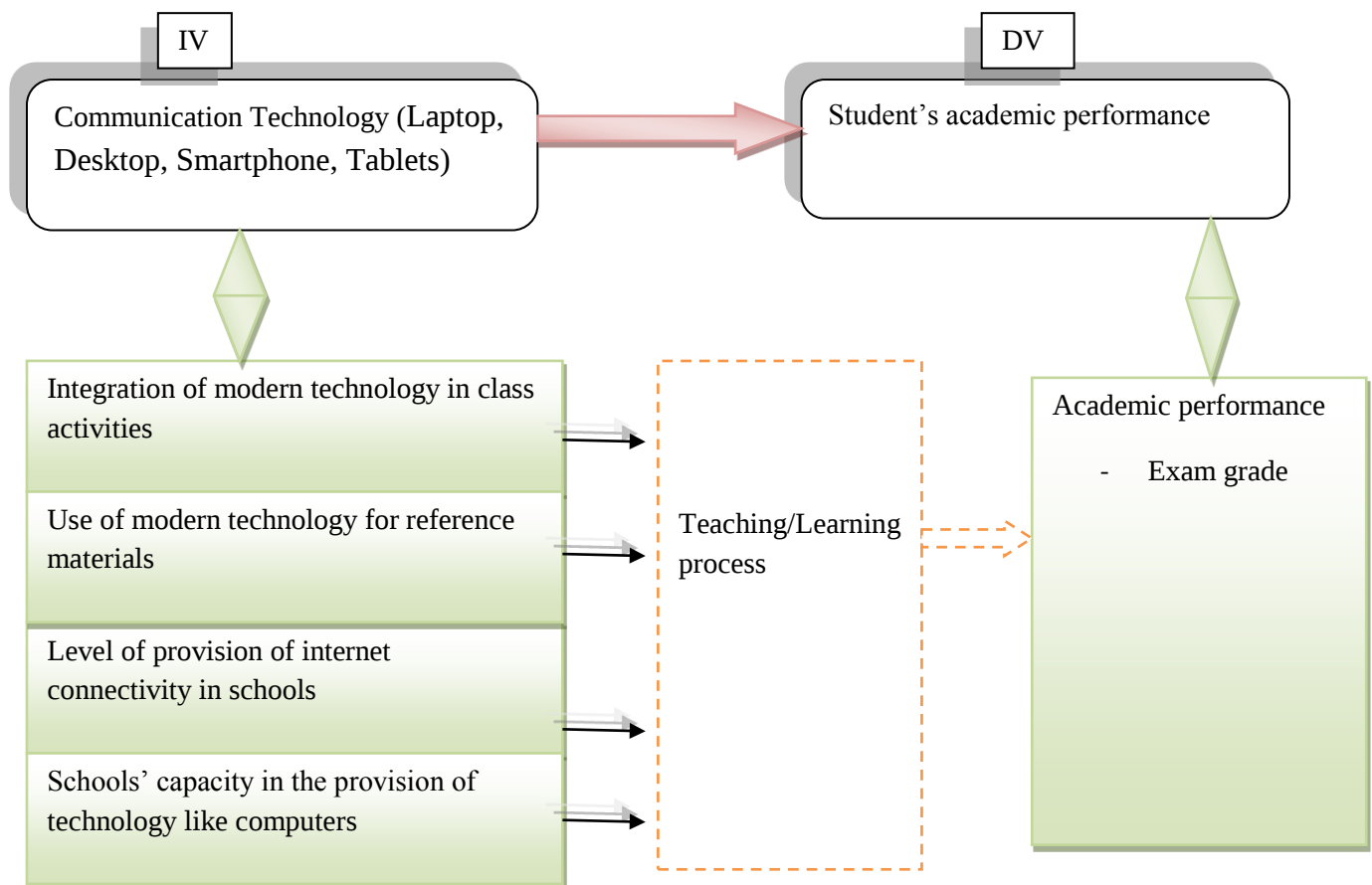
2.6.3.2 Web Conferencing

Web-conferencing software provides a virtual meeting space where users login simultaneously and communicate about a given topic. While each software application is unique, many share similar features such as audio, video, or instant messaging options for real-time communication; screen sharing, whiteboards, and digital pens for presentations and demonstrations; polls and quizzes for gauging comprehension or eliciting feedback; and breakout rooms for small group

work (Bower, 2011),(Hudson et al., 2012), (Martin et al., 2012)&(McBrien et al., 2009). Of the technologies included in this literature review, web-conferencing software most closely mimics the face-to-face classroom environment, providing a space where instructors and students can hear and see each other in real-time as typical classroom activities (i.e., delivering lectures, discussing course content, asking/answering questions) are carried out (Francescucci & Foster, 2013), (Hudson et al., 2012).

2.7. Conceptual Framework

Figure 1.1: *Relationship between variables of communication technologies that student's use to their academic performance.*



The conceptual framework of this study (**Figure 1.1**) has developed from after reviewing similar related different literatures in the literature review, about the influence of modern technology on student's academic performance at secondary schools. This study showed the interaction between modern technology which is the Independent variable of the study and academic performance which is the dependent variable as well as student's class room activities.

The above red arrow (**Figure 1.1**) represents the processes from the independent variable in its corresponding dependent variable producing the outcome.

Integration of modern technologies in class room activities such as lesson presentations and practices are a way that modern technology affects the student's performance.

The other contents of modern technology including the purpose of using of modern technology, provision of internet connectivity as well as school's capacity in modern technology have significant relations to the outcomes once each one has been carried out to learning results in students and the respective skills and practices in the student's academic performance.

CHAPTER THREE: RESEARCH DESIGN AND METHODS

3.1 Research Design

The objective of this study was to examine the Influence of Modern technology to secondary school students in their academic performance in Burao district. The research design opted in this research is descriptive survey, This type of research shows the state of affairs as it exists Kothari(2004), and used multiple methods approach in which both quantitative and qualitative approaches are employed. Teddlie and Tashakkori(2003) Argue that multiple methods are useful if they provide better opportunities to answer research questions and where they allow the opportunity to better evaluate the extent to which the research findings can be trusted and inferences are made from them.

In the study, there was a generalization of the level of modern technology use of students, the amount of time they spend and the number and types of technology contents they are exposed to. On the other hand, a description of the influences of the technology on the individual behavior, their relationship with others and the media influence on their academic performance are also considered as a relevant aim of the study.

3.2. Research Approach

In the research it was employed a mixed methods to collect both quantitative and qualitative data. According to (Creswell & Creswell, 2017), “a mixed method is a procedure for collecting, analyzing, and mixing both quantitative and qualitative methods in a single study or a series of studies to understand a research problem” (p. 535). Moreover, according to (Creswell & Creswell, 2017), “The rationale for this approach is that the quantitative data and results will provide a general picture of the research problem; more analysis, specifically through qualitative data collection, is needed to refine, extend, or explain the general picture.” Mowafy(2018:543). Following the explanatory sequential method, quantitative and qualitative data were used to collect sequentially, using a survey questionnaire, as well as an interview of students from the research sample. Both data sets analyzed separately and the qualitative findings helped for explaining and elaborating on the quantitative results. “This method also captures the best of both quantitative and qualitative data to obtain

quantitative results from a population in the first phase, and then it was refined or elaborated these findings through an in-depth qualitative exploration in the second phase” (Creswell & Creswell, 2017)

3.3.Source of Data

In this study, the research employed both primary and secondary data types as a main source of information. The primary data were collected by means of administering questionnaire and interview, the questionnaire is collected from the two sampled secondary schools while the interview was collected from the selected principles and school teachers. It is the first hand information received by the researcher from the respondents. The secondary data were gathered from books, journals (articles), internet resource and other printed materials.

3.4. Population and Sampling of the Study

Population refers to an entire group of persons or elements that have at least one thing in common (Kombo & Tromp, 2006) Thus, population refers to a large group from which the sample is taken.

The population of this study consist secondary school students, teachers as well as principals. There were about FOURTEEN secondary schools in Burao District (of which, TEN were private schools while the other FOUR are public schools).Among these secondary schools, two of them were selected using stratified random Sampling technique which are Sheikh Ibrahim Secondary School and DAYAXA Secondary School. So, in these secondary schools there were about 500 students (190 are Females and 310 Males) .The population is chosen because of the representativeness of these students to other students in Burao who uses the modern Technology.

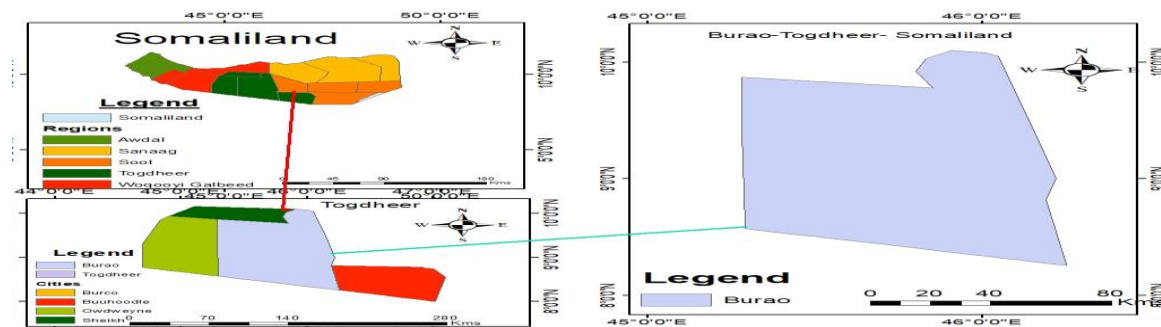


Figure1.2: Study Area.

3.5. Sampling and Sampling Technique

In the research it is used Slovin's **Formula** in order to find the sample size of the students in the two secondary schools. $n = \frac{N}{1 + N(e^2)}$ Where e = sample error, n = sample, N = the total population at 95% confidence level and 5% margin error and $P = 0.005$.

$n = \frac{N}{1 + N(e^2)}$ $n = \frac{500}{1 + (500)(0.05)^2}$ $n = \frac{500}{1 + 1.25}$ $n = 222$. In order to get the sample of each school the research use proportionate stratified random sampling. Hence, 280 students were selected from Sheikh Ibrahim Secondary School which is public and 220 students were selected from DAYAXA Secondary School which is private and those schools were represent all secondary students in Buroa District.

As Kombo and Tromp(2006), state that stratified random sampling involves dividing your population in to homogeneous subgroups and then taking a sample random sample in each subgroup (Muindi, 2004; Mugenda & Mugenda, 2009) The sample was selected in such a way to ensure that certain subgroups in a population were represented in sample in proportion to the number of population.

The researcher made sure that each school was having equal representatives like other schools that were taken equal representative number of students from two schools according to number of entirely population. Therefore, the researcher took as sample of 124 students a school which had large numbers of students and 98 students a school which had small number of students; this was done to minimize possibility of sampling errors.

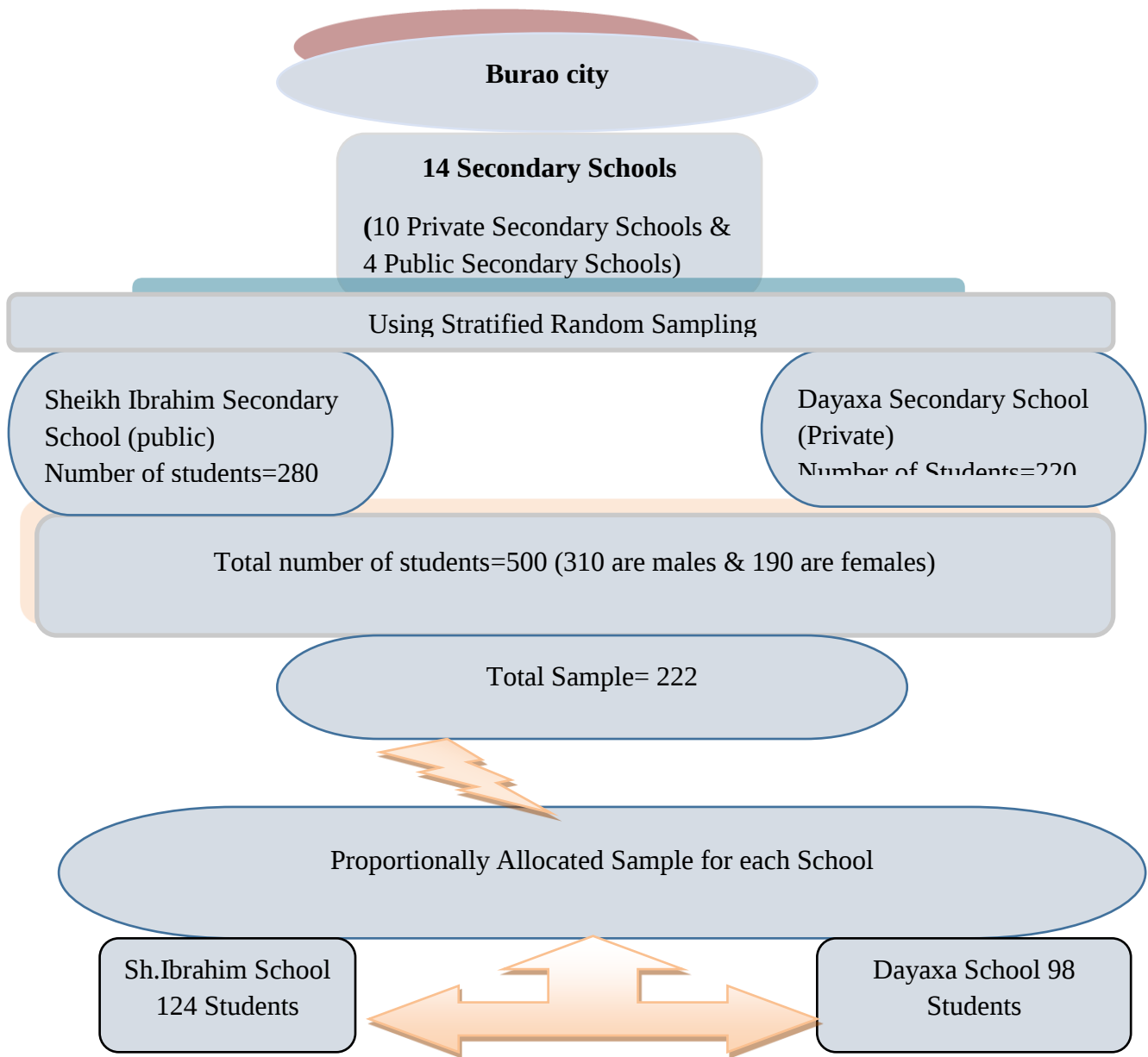


Figure1.3: Schematic representation of sampling techniques on the Influence of modern technology in student's performance at secondary schools in Burao-Somaliland, 2021.

Table3.1: *Population and sampling table*

No	Participants	Total Population	Samples	Sampling technique
1	Sh.Ibrahim secondary School	290	124	Proportional Allocation Sample
2	Dayaxa Secondary School	210	98	Proportional Allocation Sample
	Total	500	222	

3.6. Data Collection Instruments

In order to obtain important and reliable information for the study, questionnaire and semi-structured interview were used as data collection instruments. As indicated by Lokesh(1984), questionnaire and interview jointly could make the finding of a study more meaningful, precise and representative. In the study, the questionnaire and the interview were used as the main instrument. This is because the number of information which was required and the form of analysis to be conducted.

3.6.1. Questionnaire

According to Vittadini et al.(2012), a questionnaire is widely used to collect data from large groups of subjects with a short period of time and easy to administer to a number of subjects in one place at a time. It is a tool containing several questions to gather information from the students. The survey questionnaire was containing clear and simple questions that enabled the respondents to provide accurate information. Each item in the survey questionnaires was intend to answer the research sub problems. The questionnaire was divided into two sections (A and B). Section A consists of 4 questions and elicits demographic information. Section B consists of 1- 5likert-scale questions that were elicited information about the students' usage of Modern Technology: Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D) and Strongly Disagree (SD) (PETER, 2015)and also 2 Open-ended items for students. Before developing the questionnaire, however, the relevant and related literature was thoroughly examined, selected and revised. Based on the information obtained from literature and considering the locality of study. First the questionnaire was prepared in English language then it was translated into

Somali language in order to understand by the students. The researcher has distributed questionnaires to students who were selected as a sample in the two schools.

3.6.2. Semi-Structured Interview

To supplement information that was obtained through questionnaires, the researcher was adopted a semi-structured interview because they are well suited for the exploration of the perceptions and opinions of respondents regarding complex and sometimes sensitive issues and enable probing for more information and clarification of answers. Kothari(2004) has argued that the wording and sequence of all the questions in a standardized interview are exactly the same for each respondent so that: we can be sure that any differences in the answers are due to differences among the respondents rather than in the questions asked.

There are 8 open ended questions. The interview was conducted through face to face interactions among fifteen of the school principals and teachers including thirteen teachers and two principles selected purposively. The points were raised during the interview basically based on those in the questionnaire but extended to include more open ended questions.

3.7. Validity of the Instruments

According to Omona(2013), validity is the degree to which results obtained from the analysis of data actually represent the phenomena under study.

Ahmad(2011), to ensure validity of instruments, the instruments was developed under the guidance of the advisor. After the researcher developed the questionnaire the researcher was tested to 36 students as a pretest test. The pretesting was to clarify of the final instruments for the actual data collection. That will help to identify ambiguous questions in the instruments and will be able to readjust them to the objectives.

3.8. Reliability checks

Reliability is the extent to which the measuring instruments were produced consistent scores when the same groups of individuals were repeatedly measured under same conditions Kimberlin and Winterstein(2008). To test the reliability of the instruments, Cronbach's alpha

correlation was utilized using SPSS version 21. According to Koweru et al. (2015), a correlation coefficient of about 0.79 is high enough to judge the instruments as reliable for the study.

The researcher calculated the reliability of the tools by using the Cronbach's alpha formula,

The reliability statistics of the data obtained from the research's questionnaire was 0.814. Therefore, the reliability statistics 0.814 is greater than 0.79. This result implies that the data was acceptable.

Table 3.2: *Cronbach's Alpha Reliability Coefficients.*

Cronbach's Alpha	N of Items
.814	21

3.9. Data Collection Procedures

In order to make the data collection process more effective and to have maximum of return rate, firstly, the researcher contacted Addis Ababa university Educational Planning and Management department office in order to get a support letter to collect data in the sample of schools. Following this, Burao District educational office was contacted in order to get the list of schools of secondary school students in Burao District and also the permission letter of the study. Finally when the permission for elicitation was given it also distributed and collected questionnaires via the secondary school students. And also two persons will be employed and first it was given them a training for the procedure of making data and the ethical process in order to help to collect data. In this procedure the study was addressed the result in the total response (100%) which is highly satisfactory for the research purposes.

3.10. Data Analysis

After completing the data collection process, it was checked for completeness of the questionnaire before embarking on compiling and coding data. Quantitative data was tabulated and analyzed by using frequencies and percentages.

The frequencies, tabulations, mean, standard deviations and percentages were used to analyze both the demographic questions and the questions concerns with status of the Modern Technology usage of secondary schools and also it was analyzed the questions concerns with the extent of these technologies usage influences to the academic performance of students.

The Qualitative data from open ended questions were organized into themes and presented for discussion. Descriptive statistics such as frequencies, tables, mean and percentages were used in to profile sample characteristics and major patterns emerging from the data which were presented in tables.

3.11. Ethical Consideration

According to Shamoo and Resnik (2009), it is very important for the researcher to observe and obey to ethical norms in conducting their research due to the following reasons; Norms promote the aims of the research, ethical standards promote the values that are essential to cooperative work, ensure that researchers are held accountable to the public, help to build public support for research, promote a variety of other important moral and social values.

The researcher in this study observed the voluntariness of the respondents and not forced them to obtain information, respect of privacy, respect of anonymity and confidentiality, was not deceived respondents and the researcher adhered the principle of justice by being fair in selecting respondents and not to harm the marginalized groups.

CHAPTER FOUR: PRESENTATION AND ANALYSIS OF THE DATA

4.1. Introduction

The study attempts to examine the influence of modern technology on student's academic performance at secondary schools in Burao district. Therefore presentation, analysis and interpretation of the data findings were presented. The quantitative data presented in this chapter were processed using Statistical Package for Social Sciences (SPSS). All themes discussing the same research questions are presented and analyzed together.

4.2 .Questionnaire return rate

Questionnaire return rate is the proportion of the questionnaires then are returned after they have been issued to the respondents. Out of the 222 secondary students sampled during the study, all 222 students were filled and returned the questionnaires.

4.3. Demographic data of the respondents

This section presents the demographic data of the students that were sampled.

Table4.1: Distribution of the respondents by gender and age

Items (Age)	Frequency (222)	Percentage (%)	Items (Gender)	Items (222)	Percentage (%)
15-19	204	91.9%	Male	158	71%
20-25	18	8.1%	Female	64	29%
26-Above	0	0%	Total	222	100%
Total	222	100%			

Table 4.1 shows that the most of the students who participated in the study were male at 71%. The data shows that most of the schools were dominated by male students. Also, the table shows that respondents ranging from 15_19 years old were 204 (91.9%), while respondents ranging from 20_25 were 18 (8.1%).The above results showed that male students are abundant in secondary schools than female, while most of the student's age is below 20 years.

Table4.2: Technology usage in schools

Items	Frequency	Percentage (%)	Mean	SD
Laptop				
Strongly disagree	0	0	2.13	.7227
Disagree	139	62%		
Neutral	57	26%		
Agree	3	1%		
Strongly agree	23	11%		
Total	222	100%		
Desktop				
Strongly disagree	12	5%	2.32	.5172
Disagree	161	73%		
Neutral	12	5%		
Agree	38	17%		
Strongly agree	0	0		
Total	222	100%		
Smartphone				
Strongly disagree	0	0	4.3	.7121
Disagree	8	4%		
Neutral	10	5%		
Agree	85	38%		
Strongly agree	119	53%		
Total	222	100%		
Tablets				
Strongly disagree	10	5%	2.41	.6349
Disagree	164	73%		
Neutral	43	20%		
Agree	5	2%		
Strongly agree	0	0		
Total	222	100%		
Interactive whiteboard & Projectors				
Strongly disagree	46	21%	2.11	.6433
Disagree	137	61%		
Neutral	0	0		
Agree	39	18%		
Strongly agree	0	0		
Total	222	100%		

According to Moidunny (2009), mean score values are classified into five levels of ranges. (1.00-1.80) is very low mean score, (1.81-2.60) is low mean score, (2.61-3.20) is medium mean score, (3.21-4.20) is high mean score, and (4.21-5.00) is very high mean score.

The above table 4.2 shows that 139 (62%) of the students involved in the study disagreed that laptop is the most frequently used modern technology at secondary schools, 57(26%) undecided or neutral, while small fraction of the students of (12%) agreed. It is also observed that Laptop has a mean score values of 2.13 with SD of 0.7227. The mean score value of the laptop usage falls within the low range. This indicates that secondary students don't use frequently laptop. The table also indicates that a majority 173 (78%) of the students involved in the study disagreed that desktop is the most frequently used modern technology at secondary schools, 38(17%) agree, while 12(5%) of the students were neutral.

In addition, the table also presented that a vast majority 204 (91%) of the students strongly agreed that smart phone is the most frequently used modern technology at secondary schools, 10(5%) of the students were neutral and small amount of 8 (4%) disagreed. This shows that smart phones are the most dominant modern technology used among secondary school students at Burao district. It is displayed that smart phone has a mean score values of 4.3 with SD of 0.7121. The mean score value of the smart phone found within the very high range. This implies that secondary students use frequently for smart phone. Furthermore, The same result were found from the interview question item 1 which shows that most interviewee mentioned Smartphone are most frequently used modern technology among the students. All of the fifteen interviewee including principals and teachers were told that the most frequently used modern technology among students is Smartphone. One of the interviewed teachers has said the following:

The most used technology among student is Smartphone, because it is cheaper than the others like laptops and it is portable. (T1, June 10, 2021).

Most of the interviewees responded that the reason they use Smartphone, because of affordability and availability of Smartphone compared to the other technologies. One of the interviewee has said the following in interview item2:

Most of secondary students prefer Smartphone, because it is affordable in cost and they can access it anywhere. (T2, June 10, 2021).

The result in item 2 shows that most interviewed teachers and principals mentioned that students prefer Smartphone, because most of the Smart phones are cheaper than the other technologies and it is portable and easily accessed in anywhere.

Also the data presented in the table shows that 174 (78%) of the students disagreed that tablets is the most frequently used modern technology, 43(20%) were neutral, while Five (2%) of the students agreed. Furthermore, the table revealed that most of the respondents of secondary students don't use interactive white boards and projectors since 183(82%) answered disagree, while 39(18%) agreed. We understood from this result that most of the secondary schools in Burao district use the traditional tools for teaching like blackboards; projectors are not common in secondary schools more special in public schools due to reasons mainly raised from insufficiency of skills as well as governments' budget. In the last decades it's common in the developed world for students' involvement to the learning tools like projectors and interactive boards. According to Young,(2008), PowerPoint is especially popular: "*In less than a decade, it has revolutionized the worlds of education, science and communications, swiftly becoming the standard for just about anybody who wants to explain just about anything to just about anybody else*" (p. 30).

Table4.3: Purpose of Educational Technology

Items	Frequency	Percentages	Mean	SD
Entertainment				
Strongly disagree	0	0	1.19	.7725
Disagree	108	49%		
Neutral	68	31%		
Agree	32	14%		
Strongly agree	14	6%		
Total	222	100%		
Academic usage				
Strongly disagree	22	10%	4.20	.7139
Disagree	20	9%		
Neutral	9	4%		
Agree	131	59%		
Strongly agree	40	18%		
Total	222	100%		
Personal assignment				
Strongly disagree	20	9%	3.76	.6206
Disagree	24	11%		
Neutral	35	16%		
Agree	114	51%		
Strongly agree	29	13%		
Total	222	100%		
Social networking				
Strongly disagree	29	13%	3.91	.7767
Disagree	36	17%		
Neutral	14	6%		
Agree	129	58%		
Strongly agree	14	6%		
Total	222	100%		

Table 4.3 shows that majority of the students 108 (49%) disagreed that they spend most of their time on entertainment in the technology rather than reading their books, 68 (31%) not decided or neutral, while small percentage 46 (20%) agreed.

The mean score of the entertainment laid in the values of 1.19 with SD of 0.7725. The mean score value of the entertainment found within the low range. The result shows that secondary students don't use modern technology for entertainment.

The table also shows that majority of the students 171 (77%) agreed that they use modern technology for an academic issues, 42 (19%) of the respondents disagreed, while others responded neutral. This finding shows that most secondary school students in Burao use technology to seek knowledge on academic issues. On the other side, the result item3 in the interview shows that most interviewee said; students do not spend too much time on entertainment than academics.

The majority of the interviewee teachers and principals responded that at schools, students do not spend too much time on entertainment on modern technology than academic issues. One of the interviewee principal has said:

Students at school they use modern technology to help their learning issues, they use only some times during their class by searching academic websites, calculations, as well as preparing their exercises and assignments (P1, June10, 2021).

In addition, most of the students 143 (64%) agreed that they use modern technology to do their personal assignments as shown in the above Table4.3, 35 (16%) were neutral, while 44 (20%) disagreed. The table also indicates that the majority of the students 143 (64%) use modern technology for social networking since they responded agree, 65 (30%) of the students disagreed that they use technology for social media, while 14 (6%) of the students were found to be neutral.

The social media networking has a mean score value of 3.91 with SD of 0.7767. This values lies within the high level of score range. This mean score illustrated that secondary school student's use modern technology for social media. This result shows that most of the secondary school students in Burao district who use modern technology also utilize for social media. The purpose they use social media may varies although the most common reason is for communication. But addiction of social media may harm students performance as Çam and Isbulan,(2012)explain that social media addiction as the excessive use of the internet and the failure to control this usage which seriously harms a person's life.In the African context, social media is one of the most powerful transformational tools. As Selwyn (2011) growing number of educators are beginning to consider the possibilities social media's significance and potential implications for educational practice and provision, particularly in higher education.

Table 4.4: Frequency of student's usage status of modern technology

Items	Frequency	Percentages	Mean	SD
Students' use technology				
Strongly disagree	12	5%	4.331	.7132
Disagree	9	4%		
Neutral	17	8%		
Agree	124	56%		
Strongly agree	60	27%		
Total	222	100%		
Students' use technology more than two hours				
Strongly disagree	13	6%	4.111	.7432
Disagree	24	11%		
Neutral	16	7%		
Agree	66	30%		
Strongly agree	103	46%		
Total	222	100%		
Students' poorly perform when they spent more time on technology				
Strongly disagree	12	7%	1.911	.6711
Disagree	148	65%		
Neutral	43	19%		
Agree	9	4%		
Strongly agree	10	5%		
Total	222	100%		
Positive influence of modern technology on students' performance				
Strongly disagree	11	5%	4.174	.8021
Disagree	25	11%		
Neutral	5	2%		
Agree	133	60%		
Strongly agree	48	22%		
Total	222	100%		
Students' motivation when teachers use modern technology				
Strongly disagree	13	6%	4.158	.7553
Disagree	11	5%		
Neutral	16	7%		
Agree	79	36%		
Strongly agree	103	46%		
Total	222	100%		

The above Table 4.4 indicates that majority of the students 184 (83%) agreed that they use modern technology for different purposes, 17(8%) of the students were not decided or neutral, while 12(5%) disagreed. The result shows the greatness of the status of modern technology usage among secondary school students in Burao district for different purposes since most of the students agree that they use modern technology.

The mean score of the student's technology usage laid in the values of 4.331 with SD of 0.7132. The mean score value of the technology usage found within the very high range. The result implies that secondary students at Burao district use the modern technology. The same result were found from the interview question item 5, which shows that a vast majority of the interviewee mentioned; that students at secondary schools have an access to the modern technology by utilizing it, such their assignments, one of the interviewed teachers urges:

Although it is not mandatory for secondary school students to use homework for their technologies, most of the students utilize their technologies to prepare their assignments. (T3, June 10, 2021).

The table also showed that most secondary school students use the modern technology more than two hours daily since most of the secondary students 169(76%) agreed that they use modern technology more than two hours ,16(7%) not decided or neutral while 27(17%) disagreed. This result indicates that majority of secondary school students use modern technology for a time more than 2 hours daily. The student's usage of modern technology more than 2 hours has the mean score of 4.111 with SD of 0.7432. The mean score of the student's technology usage more than 2 hours found the high level range according to Moidunny, (2009).

Although students use modern technology more than 2hrs, they don't stay up late on modern technology usage as result in the interview item 7 reveals. One of the interviewed teachers has said the following:

No, they always do not stay up late on modern technology for many times. (T4, June 10, 2021).

As the result item 7 shows that most interviewee teachers and principals declared that secondary students are on time in their school and do not stay up late on modern technology many times.

The result supports the arguments of (Morahan-Martin & Schumacher, 2000)

Many students cannot go for two-three hours without checking and updating their profiles on these social networks even at the detriment of other activities such as educational and career pursuit.

The table also presented that majority of the students 160(72%) disagreed that they poorly perform their academic performance if they spent more time on modern technology than those who do not, 43(19%) not decided or neutral, while small portion of 19(9%) agreed.

The mean score of the student's poor performance if they spent more time on technology laid in the values of 1.911 with SD of 0.6711. The mean score value of the student's performance lay within the low range. The result indicates that students use modern technology do not poorly perform for their academic achievements.

The results in the interview item 8 shows the same, the majority of the interviewee teachers and principals expressed that secondary school students do not ignore their responsibility like at home or chores because of modern technology so that they don't perform poorly compared to those do not use technologies. One of the interviewee said the following:

Modern technology did not affect student's responsibility to do their home works and learning activities. (P2, June10, 2021).

As the result item 8 shows that most interviewed participants expressed that, secondary school students do not ignore their responsibilities at home like chores because of modern technology.

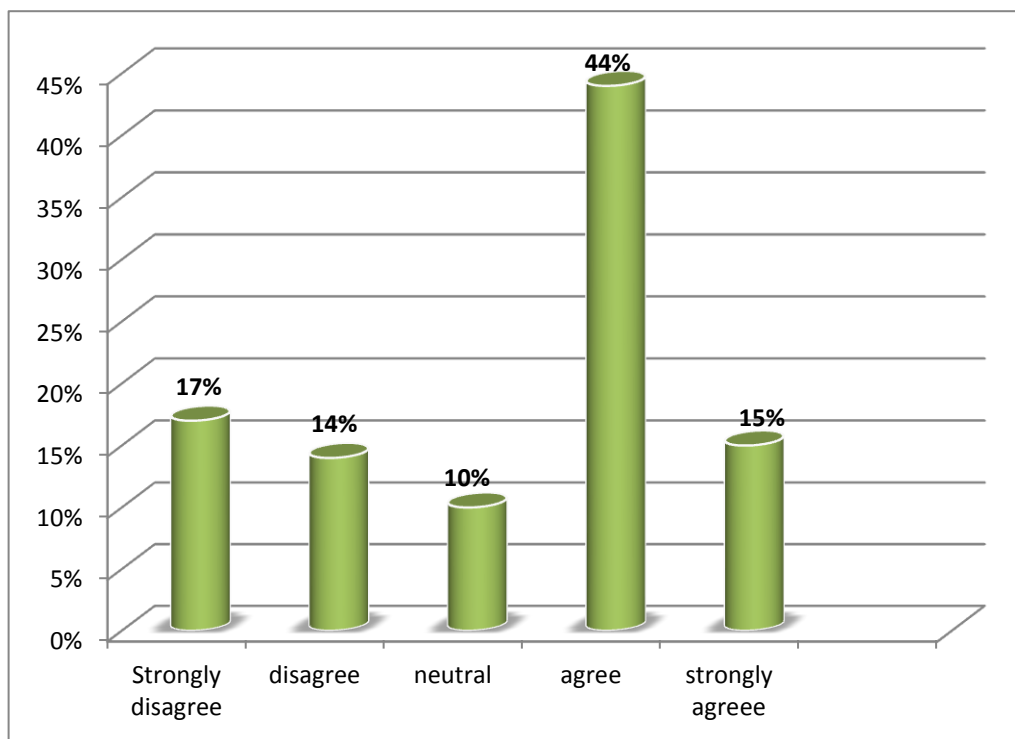
The data presented in the table also shows that most of the students 181(82%) agreed that technology has a positive influence on their academic performance, 36 (16%) disagreed, while Five (2%) were neutral. As the results revealed technology helps students to improve their academic performance, it also motivates their learning process. Kurt,(2010) argues that technology can be used to restructure and redesign the classroom to produce an environment that promotes the development of higher-order thinking skills. Other researches have shown the positive relations between technology and students academic achievements. As Attwell (1999) investigated the relationship between having a home computer and school performance; their findings indicate that students who have access to a computer at home for educational purposes have higher reading and math scores. The same result was found from the interview question item 1for the students, which shows that a vast majority of the interviewee mentioned; modern technology improves their learning, one of the interviewee students urges:

Yes, modern technology improves my learning as I use it in the class because it helps me about my assignments and exercises. (Source: field data 2021).

The table also shows that majority of the students 182(82%) agreed that they become motivated if their teachers use their presentations for modern technology, 16(7%) not decided or neutral, while 24(11%) disagreed.

This result shows that secondary school students in Burao district become motivated when their teachers use modern technology like presentations. When school teachers use and model different forms of technologies, they actively engage their students and create a stimulating work environment (Kenney, 2011).

Figure 3.1 distribution of grade improvement (increase) after technology engagement



The above Figure 4.7 shows that majority of the students (59%) agreed that their grade improves when they engage for modern technology, and (31%) disagreed while (10%) did not decide.

The results interview results from item 6 reveals the same, only three of the fifteen interviewee teachers and principals admitted that student's grade decreased after they engaged the modern

technology others said “there were no change in their grades”. One of the interviewed teachers has said the following:

*Yes student’s grade decreased after they used the modern technology.
But before, they used to score A grade, but now most of them scored C
grade. (T5, June 10, 2021).*

As the result item 6 shows that most of interviewee teachers and principals declared that the student’s grade did not change after engaged modern technology. This supports the arguments of Grisham and Wolsey,(2006) who stated that technology empowers students providing them with an opportunity to shape their own learning, participants in the study report, say that this is because technology provides instant feedback with instructional assistance.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary of the study, conclusions, recommendations and suggestions for further research.

5.1. Introduction to the findings

The purpose of the study was to find out the influence of modern technology on secondary school student's academic performance in Burao. Three research questions were formulated to guide the study.

1. To identify the types of modern technology that secondary school students use.
2. To examine the level or status and the purpose of usage of modern technology among secondary school students.
3. To assess the influences of modern technology on student's performance.

The research questions were used to guide investigations into the objectives. The research question one sought to establish what type of technology do secondary school students involved? What is the level of use of modern electronic technology among the students? What are the effects of modern technology on student's achievements at secondary level?

The research design employed in the study was descriptive survey. The population for this study was consisted about 14 secondary schools in Burao district which were selected two of them which consisted of 500 secondary students. The target population is therefore 500 respondents; stratified random sampling technique is used to select the 2 schools from the 14 schools in Burao district and 15 teachers and principals. Questionnaires and interview were used to gather data from teachers and students. Data were analyzed using both qualitative and quantitative techniques. Descriptive statistics was done using SPSS. Data were presented as frequency tables and figures.

5.2. Summary of the findings

Data revealed that majority 71% of the students were male and 29% of the students were female; about 92% of the secondary school students were aged between 15 and 19 years ;Majority 78% of the students were in grade12 while 14% of the students were grade 11.

The findings were anchor on the research questions that were formulated from the research objectives of the study.Students in secondary schools in Burao were found that the type of modern technology which majority of secondary school students use were smart phone.

The study found that 204 (91%) of the students agreed that smart phone is the most frequently used modern technology at secondary schools while also 8(4%) disagreed, this large number indicates that the majority of student use smart phones with mean 4.3 and SD .7121.

Findings on the level or status of usage of modern technology among secondary school students

Showed that the majority of the students use modern technology; since majority 184(83%) of the students agree and 12(5%) disagree that they use modern technology for different purposes with mean of 4.331 and SD of 0.7132. this shows that the level of usage of technology among students is very high. In addition, the researcher observed that the majority the majority of the students who mostly use and integrate with communication technologies where those from private schools.

Also the findings presented that majority of the students use more than 2 hours for the modern technology.Finding on the interview item 5 showed that the purpose of students to use modern technology is to utilize for their home work activities like assignments as most of the interviewee teachers and principals mentioned. Also in Table 4.3 it is implied that the majority of the secondary students 171(77%) agreed and (19%)disagreed that students use modern technology to seek knowledge on academic issues with mean score 4.20 and SD 0.7139. the results in both interview and questionnaire showed that secondary school students in Burao district use modern technology for their academic and learning activities.

Findings on student's response if there is an influence on their achievement showed that majority of the students 181(82%) agreedwhile 36(16) disagreed that technology has a positive influence on their academic achievements with score mean ranging 4.174 and SD of 0.8021,

furthermore, in figure 3.1 majority of the (59%) agreed that their grade improves when they engage for modern technology.

The findings on the interview item 6 showed that most of the teachers and principals responded that the student's grade didn't change after they engaged the use of modern technology.

The results in the both interview and questionnaire showed that modern technology did not influence negatively student's academic performance this because modern technology did not decrease student's grade after they engaged it.

5.3. Conclusions

The rise of different types of modern technology has increased dramatically in recent years, causing questions as to how young adolescent students are adjusting to this shift and means of technologies, since it is the norm for their generation.

The respondents were sampled using Stratified Random Sampling as well as the descriptive survey design. Students from two secondary schools were polled for their opinions. The target demographic consisted of one public secondary school and one private secondary school. Five hundred (500) students from the two secondary schools were the target audience. A total of 222 students were included in the study. In addition, the interview was performed in person with fifteen school principals and instructors, including thirteen teachers and two principals who were purposefully chosen. The data was analyzed using frequency, percentages, mean, and standard deviations. The study used a mixed method approach to fulfill the research's goals, which included a survey of student answers on the impact of modern technology on academic achievement.

The result from the findings of this study showed that, most secondary school students use modern technology more specially the majority of the students use the smart phones since it is portable technology and make easy to access in anywhere as well as it cheaper compared to the other technologies. They use more than two hours and that resulted to help them to engage educational websites and to prepare and seek knowledge on their academic issues.

The study also concluded that the majority of the students participated in the research reported that there is no negative influence of modern technology on students academic performance

since there is no decrease in their academic grade after their engagement on the modern technology.

5.5. Recommendations

Based on the findings of this research, the study recommends that:-

1. Teachers should ensure that students use modern technology as a tool to improve their academic performances.
2. The Ministry of Education of Somaliland may add curriculum pedagogical models on how to use modern technology for learning which some students have pointed main obstacle was lack of pedagogical models of how to use modern technology.
3. Students in secondary schools in Burao should be given courses on modern technology use in education.
4. Also parents and school committee should make sure that they keep an eye on their children concerning educational matters and the use of the technologies.

5.6. Suggestions for further studies

While considering the result of this study, the researcher feels that there is still need for further investigation the usage of modern technology and its influence on academic performance of students in secondary school students. Similar studies should be conducted in other regions of Somaliland so as to improve the academic performance of students through the use of modern technologies to avoid distractions that makes the students to deviate from their academic works and so suggests that:-

1. Study on challenges of modern technology's misuse on the quality of education in secondary schools in Burao.
2. Study on influence of social media networks on student's performance in secondary schools in Burao.

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ANNEXES

Addis Ababa University

Department of Educational Planning and Management

Questionnaire for secondary students

RE: Research on The Influence of Modern Technology on Student's Performance at Secondary Schools in Burao-Somaliland

I am a member of research team from Addis Ababa University. We are conducting a study about on the Influence of modern technology in student's performance at secondary schools. Dear Respondent you are chosen by chance to participate in the study. We need to collect data about ensuring generalizations of the level of modern technology use of students, the amount of time they spend and the number and types of technology contents they are exposed to; I want to assure you that all of your answers will be strictly confidential. You have the right to participate or not, to stop the interview at any time or to skip any questions that you don't want to answer. Your participation is completely voluntary but your experiences could be very helpful to design better conducting study about the Influence of modern technology in student's performance at secondary schools in the town. The interview may take approximately 15 minutes to complete.

Contact person: If you want to know more information, have any question, you can contact the researcher's address below.

Principal investigator: Said Mohamed.

Mob.+25263-4525983/ +251936609264.

Email= saeedtawakal11@gmail.com

Part one

1. Demographic information

Direction 1: please respond to the following items by putting a tick mark (↗) in the boxes next to each alternative.

Instruction

Please tick (↗) in the appropriate box to indicate your response

SECTION A

Demographic profile

1. Name _____ of _____ School _____

2. Gender Male ☐ Female ☐

3. Age between 15-19 ☐ 20-25 ☐ 26- above ☐

4. Level of studentG9 ☐ G11 ☐ G12 ☐ ☐

SECTION B

Direction2: below are items (statements) which have been designed to assess the influence of Modern Technology usage on the academic performance of secondary school students.

Read each statement carefully and show your choice that best represent your perception of differentiated instruction by putting tick mark (↗) in one of the five scaled alternatives.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly disagree
SA- strongly agree, A-agree, N- neutral, D-disagree, SD- strongly agree

Research question one: what are the most frequently used technology (Laptop , Desktop ,Smartphone ,Tablets,Others) in secondary school students of Burao district?

S/N	ITEM S	SD	D	N	A	SA
1.	The most frequently used Technology at secondary school students in Burao district is Laptop					
2.	The most frequently used Technology at secondary school students in Burao district is Desktop					
3.	The most frequently us ed Technology at secondary school students in Burao district is Smartphone					
4.	The most frequently used Technology at secondary students in Burao district is other tablets					
5.	The most frequently used Technology at secondary students in Burao district is Interactive whiteboard and projectors					

Research question two: for what purpose do you use for Technology (Laptop, Desktop, Smartphone, Tablets, Others)?

S/N	ITEMS	SD	D	N	A	SA
1.	Secondary school students spend more time on entertainment like game playing and watching TV rather than reading their books					
2.	Secondary school students use Technology to seek knowledge on academic issues					
3.	Secondary school students use technology to do their personal assignments					
4.	Secondary school students use technology to do the for social networking					

Research question three: what is the status of Modern technology usage among secondary students in Burao district? (i) How much time do students invest in using Modern technology?

S/N	ITEMS	SD	D	N	A	SA
1.	Most secondary school students use the modern technology for different purposes					
2.	Most secondary school students don't use the modern technology					
3.	Most secondary school students use the modern technology more than two hours daily					

Research question four: To what extent students' engagement on modern technology usage influences their academic performance?

S/N	ITEMS	SD	D	N	A	SA
1.	There is negative influence of modern technology usage on the academic performance of the students					
2.	Students who spend more time on modern technology usage are likely to perform poorly in their academic activities than those who don't					
3.	There is positive influence of modern technology usage on the academic performance					
4.	Students become motivated when teachers use technology in the class room like presentations					
5.	Student's grade increase after engaging m.technology					
6.	Student's grade decrease after engaging m.technology					

1.Do you think that the use of technology in the classroom improves your learning?

2.Have you get any obstacles you faced in learning activities because of lack of technologies?

Part2:

Interview Questions for principals and teachers

RE: Research on the Influence of Modern Technology on Student's Performance at Secondary Schools in Burao-Somaliland.

1.Which modern technology (Laptop, Desktop, Smartphone, Tablets, or Others) do students use mostly?

2.What are the reasons that push them to use that modern technology?

3.Do you think students are spending on technology too much time on entertainment than academic issues?

4.Have students ever faced any problem at learning because of teacher's using modern technology?

5.How often do students utilize the modern technology for homework and school related activities?

6.Is there any difference in student's grade after they engaged in modern technology?

7.Have they stayed up late to spend more time on modern technology?

8.Have the students ignored their responsibility like home work or chores because of modern technology?

Thank You so much.