ASHESI UNIVERSITY COLLEGE

THE INTERNET USAGE AMONG SECONDARY SCHOOL STUDENTS:

A CASE STUDY ON LABONE SECONDARY SCHOOL

By

OLUWATIMILEHIN SAMSON AKIN-ADARAMOLA

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Declaration

I hereby declare that this dissertation is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature:………………………………………………………………………………………….

Candidate's Name:…….……………………………………………………………………………………….

Date:………………………………………..

SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by Ashesi University College.

Supervisor's Signature……………………………………………

Supervisor's Name:………………………………………..

Date:……………………………………………………….

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ABSTRACT

Ghana which is considered as one of the fastest developing country in Africa is also considered as one of the fastest growing countries in West Africa in terms of internet usage. This study is conducted to understand the internet usage among secondary school students. The internet is becoming a platform for various activities and secondary school students are beginning to access the internet for various types of information from various parts of the world and as a means of communication to other people in different place. However, it is not being used to achieve an optimum result that can reflect in the lives of students.

The internet has extremely increased the amount of information it provides and it has also developed to serve as a platform for various activities for all age groups in the society. The use of the internet keeps on advancing and improving to suit the needs of various individuals; adolescents, teenagers, youths, the elderly. Various research on developed countries have shown that teenagers go online to find various types information. Notwithstanding, a small amount of research has been done on the online practices of secondary school students. Students use the internet to entertain and educate themselves, nevertheless, this study will explore and provide current information on the internet access among secondary students from a senior high school that is situated in Accra, Ghana.

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CHAPTER ONE

INTRODUCTION

1.1   BACKGROUND

It is considered by some as a blessing or a curse, a distraction or a solution, a savior and a disease. The Internet is known for being an important aspect in the lives of both the young and the old. Besides, the ability to use the Internet for various purposes tends to make it a strong resource in achieving different goals. The Internet has been around for almost 5 decades and each decade produces an improved version of what the previous era had to offer to the world.

The Internet has proved to be a substantial resource that humans need in order to improve and develop themselves as well as the society where they are settled in. Societies and the standard of living have been modernized, the communication process between beings (human and animals) has been elevated, the learning process in societies have increased, the dispersal of information has become easier and faster while new creations have been established by using the Internet.

The rapid development of the Internet has been recognized as one of the most successful investment that research has provided to the entire world. Research shows that there has been a 566.4% growth in the usage of the Internet from the year 2000 – 2012 and in Africa, 15.3% of the total world population (7,017,846,922) use the Internet (Internet Usage Statistics for Africa, 2013). It has become known that the Internet has become very influential in the way people live their lives. It has helped people in different ways and it has also caused a great deal of damage

to people in different ways and some have considered it to be a weapon that is more powerful than a nuclear bomb (Reinhard, 2013). It has become evident that teenagers are spending a large amount of time accessing data on the Internet with the use of mobile phones, tablets, computers, laptops and game consoles. The new technologies such as the smart phones, tablets and computers/laptops require the Internet to perform some functions. Due to this, teenagers seem to use the Internet for various purposes such as using WhatsApp, Instagram and Youtube.

This study analyzes how students in senior secondary schools use the Internet and the social impact it has on the students. The study would not only help the secondary school students to know how the Internet is affecting them academically and socially, but it would also help the students to know how much time is spent on the internet and their dependency on it. It would equally help both parents and teachers to know what devices and methods students use to access the Internet and how it influences the secondary school students in Ghana.

First of all, the research would study how secondary school students make use of the Internet and what they understand when it comes to surfing the net for information. Also, how the internet is used during a student's leisure would be studied. After which an assessment of the type of websites the students visit will be evaluated.

Previous research and studies have explained that the Internet is increasing the opportunity for students around the world to interact with different people, thereby expanding the scope of social interaction on an international level (Young B. , 2006). This would make students have access to foreign materials and more knowledge.

In the United States of America, a survey was carried out about the effect of the Internet on individuals. Statistics showed a positive effect when it involved individuals socializing. There was an increased participation in social activities and communication had improved to a significant level (Young B. , 2006).

A research in Pakistan was conducted in order to determine the effect the Internet has on an individual's academic performance, societal life and outdoor activities of College pupils in Pakistan. The research was aimed at being beneficial for the University pupils, the lecturers, as well as the syllabus developers. The study showed the correlation of the Internet's use and academic performance and this was helpful to both the students and the lecturers (Asdaque, Khan, & Rizvi, 2010).

Research done has shown that in Africa, most institutions usually practice the traditional method of teaching (teaching that was centered on the teacher e.g. dictation by the teacher). This can be linked to the low level of technological infrastructures as well as a poor knowledge of how to operate the IT facilities. The African countries are considered to be in their infant stage when it comes to e-learning and this is because of the low usage and application of the Internet in the educational sector (Oye, A.Iahad, Madar, & Ab.Rahim, 2012). There are concerns about the implications e-learning would have on students and also the fear of using the new innovation to improve education might cause a structural shift in the educational sector (Hollow & ICWE, 2009).

This research seeks to investigate how secondary school students in Ghana use the internet. Due to the rapid rise and advancement of the Internet, education can be enhanced by fully utilizing the Internet and the large amount of information that can be derived from it. Moreover, the research would help students, lecturers

and other people to know how the Internet influences the learning process of secondary school pupils. With this, measures can be taken to correct and improve the academics of the students.

1.2   OBJECTIVE OF STUDY

The main objective of this research is to find out how students use the internet and to what extent the Internet helps them in various aspects of their lives.

1.3   PROBLEM STATEMENT

Within the Ghanaian society, the internet is becoming a platform for a lot of activities and presently, students in various institutions are using the internet to perform various activities (e.g. online chatting, inquiry and gaming) and the lecturers use the Internet to do other activities as well. Although the Internet is a useful resource in this present era, there is a problem about the way the secondary school students use this resource to make a change in their life. Another issue is the way lecturers and adults in the society use the information provided by the Internet to help the students (their social life or their education)

1.4   RESEARCH QUESTION

The core objective of this study is to identify how secondary school students in Ghana use the internet. This study will precisely look into:

- How the secondary school students (SSS) use the internet in various aspects of their lives.

- Studying using the internet as compared to studying with physical books.

- The student's dependency on the internet for any type of information.

- How often the secondary school students make use of the internet.

- What device the students prefer to access the internet.

1.5   SIGNIFICANCE OF THE STUDY

The main significance of the study would be to provide teachers, parents and students in any educational institution (Primary, Secondary and Tertiary) with an insight on how the Internet can help the students in their social life and other aspects of their life (e.g. education). This will also help the students to know how much influence (positive/negative) the Internet has on them and how they can go about to improve their lives with the use of the internet.

1.6   ORGANIZATION OF THE STUDY

This research paper will be divided into 5 main chapters (Chapter One - Chapter Five).

Chapter One will introduce the reader to the research topic which will also give a general outline of the study, the objective, the problem and the significance of the study.

Chapter Two will go on to provide existing literature review that's related to the topic which will also be discussed. The chapter will also provide a theoretical framework that would cover areas such as; socialization, e-learning, Internet in classrooms, academics and gadgets used in accessing the internet.

Chapter Three will specifically deal with the methodology of the research which can be used by the reader to see the procedures that were involved during the research process as well as the research process and the instrumentation used for the research.

Chapter Four will analyze and summarize the findings of the collected data as well as the statistical mechanics used in this research.

Chapter Five will be used to summarize the research; the major findings, limitations of the research, conclusion and finally the recommendations.

CHAPTER TWO

LITERATURE REVIEW

The previous chapter (Chapter One) introduced the thesis topic which also gave an insight of the background, the reason for studying the topic, the significance of the research topic and also the research questions that would be used throughout the research. Likewise, chapter two would provide previous literature done in correspondence to my research topic which will also be analyzed.

The internet has been rapidly increasing and transforming since mid-1990s and as the years go by, there has been an increase in the chances of both adults and children to improve their social life, educational knowledge and other aspects of their life (Large, Children, teenagers, and the Web, 2006). The internet is rapidly penetrating into the lives of young people in the society. Individuals like teenagers use the internet for education purposes and socialization. ICT skills have become a critical advantage to an individual's performance and achievement in school and their place of work. Besides, young people who are deprived or lacking these ICT skills and access are said to experience a setback when trying to make the most out of their education or career opportunities (Lim, 2009).

Socially, teens and youths are constantly communicating and interacting through social networks (Twitter, Facebook, hi5) on different technological platforms such as phablets, game consoles, smart phones and computers. All the devices and applications used in communicating require the internet to function. Moreover, some of the social networks have in-built instant messengers that can allow the parties communicating to interact with each other e.g. Facebook. Due to the advancement in mobile devices and technological gadgets, instant messengers (WhatsApp, BBM,

Yahoo Messenger, Google Messenger) have been created on mobile platforms such as Android and RIM. Presently, some instant messengers can be used by having a face-to-face conversation or a voice messaging e.g. Apple's FaceTime, Skype, Viber. Nevertheless, there have been critiques and arguments about the way students use the internet. Some have based their argument about the addiction level of students when using the internet while some others have criticized the dependency level of students when accessing the internet.

2.1   INTERNET

The Internet, which is also known as the *Net* for short began as an idea in 1962 and it can be described as "a network of networks linked by several layers of protocols" (INTERNET, 2003) while some others such as Kevin Hill define the Internet as a developing universe with millions of computers which are connected together by one common network protocol and user interface (Hill, 2010). In 1969, the word Internet made its way into computing when Transmission Control Protocol/Internet Protocol was introduced to allow interactions of computer networks. This led to the domain name system (DNS) and also the accessibility of data and programs in the Internet through file transfer protocol (FTP) system. The Internet can be referred to as many things simultaneously and this is because it can be used for a large variety of things which can all be processed at the same time.

Over the years, the Internet has expanded to make accommodation for new applications that would be able to run using the Internet. From the early 1990's to date, the most prevalent and definitely the most evident application is the e-mail. The Simple Mail Transport Protocol (SMTP) which runs over TCP/IP is considered to

be very dependable due to the fact that information is transferred asynchronously in a "store and forward" manner between mail servers. If the server isn't working, the message will be lined up for later delivery. Also, Internet service providers (ISP) have the opportunity of providing instant messaging (IM) among users who use their services. Although IM is not e-mail, it provides a similar function of providing the users with immediate message delivery (INTERNET, 2003).

In some countries, researchers have done studies to know about the accessibility of internet by young people. In the United States of America, The Pew survey (Lenhart, Rainie, & Lewis, 2001) found in the year 2000 that the majority of the American teenagers (87%) accessed the internet from several locations (which included their houses, libraries and institutes). UCLA's Center for Communication Policy (2003) survey stated that among the children who fall below the age of 18 that went online, 73% accessed the internet from their house, 73% from school and 605 from other places (no specific place but it was assumed that these other places were libraries).

There have been studies and research in relation to the addiction of people to the internet as well as their dependency.

2.2   SOCIAL NETWORKING

Previous research has focused mostly on educational uses of the internet but it is clear from previous studies that the young people in the society consider the internet to be much more than an educational tool (Large, Children, Teenagers, and the Web, 2006). The term social networking is an act of engagement which can be described as the practice of expanding the number of business/social contacts of an

individual by making connections through other individuals (Rouse, 2006). Also, social network sites are known as web based services that permit individuals to setup a public or semi-public profile within a restricted system, articulate a list of other users with whom they share a connection and view their list of networks and those made by others within the network system (Boyd & Ellison, 2007).

Although social networking has been around for a while, the internet has provided a platform that can help people to fully utilize the facility to increase their network (Rouse, 2006). Moreover, some social networks (LinkedIn, Youtube) have not given people the opportunity to fully recognize and exploit the benefits the social networking websites provide. Regardless of the amount of social network sites available on the internet, millions of users have assimilated some social network sites (Facebook, Twitter and LinkedIn) into their daily lives. This helps them to keep updated about the activities of their social network. Although the key technological concepts and attributes are equally similar, the cultures that escalate around social network sites are diverse; not all the social networks provide the same resources and options available on other social networks. Within the young individuals in the society, social networking is proving to be growing globally and it's now considered as a vital communication and innovative activity, especially in this new era where it's becoming increasingly substantial in communication.

Apart from using the social networks for socializing with friends, relatives and expanding an individual's network, the young people in the society also use such websites to get information for school assignments and projects (Twitter). Also, the social networks are used for getting music (Facebook, Twitter), pictures (Instagram) and videos (Youtube) for entertainment as well.

2.2   E-LEARNING

E-learning can be described as a new tool which uses electronic devices and information and communication technologies (ICT) to help people enhance/support their learning by enabling access to a wide variety of resources, materials and services. It has become a very vital tool in the educational sector due to its rapid advancement and the level at which it reinforces the learning system to attain its objectives (Itmazi). It also offers people the option of learning anywhere and anytime through a connected network. Some researchers have asked critical questions in relation to E-learning. Windschitl asked a critical question which said "in what contexts is the Web useful as an inquiry tool, and how are students learning in these contexts?" (Windschitl, 1998). He came to a conclusion which suggested that it was the responsibility of researchers to explore and save the changes that occur from E-learning when using the Internet.

E-learning is well known for providing flexibility, convenience and accessibility. With the new advancement in technology, studying materials can be accessed easily and quickly at any location and anytime. Updates for learning materials can be made instantly which makes editing of learning materials easy. Also, it is believed to provide a stronger sense of understanding and retention when it comes to learning materials and this is due to the many elements that exist within e-learning (online interaction, multimedia, etc.). Moreover, it provides the ability to replay or retry learning exercises continuously.

On the other hand, some others do not support e-learning because it requires technology to function. In some underdeveloped countries where technology is not as advanced as the developed countries, there may be difficulty in using e-learning due to lack or outdated technology. Also, there is a problem of low bandwidth or slow Internet connection (especially in underdeveloped/developing countries). The slow connection of the Internet can hinder the learning process from going smoothly, which could also make important information to be omitted during the learning process. Also, not all courses can be taught by e-learning. It is believed that some courses need a personal touch with the learners. Furthermore, e-learning requires the learner to have a basic understanding of technology before proceeding to learn using the technology (Itmazi). In societies that have low literacy levels, e-learning will become a problem. Also, the tendency to distract an individual from learning is possible due to the wide variety of applications that new technologies provide.

E-learning comprises of 2 models which are synchronous e-learning and asynchronous e-learning. Synchronous e-learning has to do with students and teachers/instructors being logged on at the same time and using the same schedule. Then both students and teachers communicate live and directly with one another virtually. Some examples of synchronous e-learning include; chat-rooms and web-casts. For the asynchronous e-learning, communication between the parties involved does not need to occur at the same time (simultaneously), which makes the schedules different. The learning material is provided on the Internet and it can be delivered to the individual on demand (such as streaming or downloading it). Examples of asynchronous e-learning include; partaking in self-paced course, posting of messages to discussion groups, etc.

The Internet has been identified as a communication tool between friends, families and strangers. Research has shown that electronic mail and World Wide Web browsers are the most often-used Internet applications.

Research on the relationship between the e-learning and the academics of students have been examined from variety of angles. There have been debates about the use of e-learning to improve performance. Some people believe that the use of technology to educate helps improve the ability of an individual to learn. Some other people believe an individual can easily learn if the instructions on what the person is trying to learn are well designed. For a while now, people have realized that the use of technology to transmit knowledge provides effective and quicker access to a wide variety of resources. According to Clark (Clark, Reconsidering Research on Learning from Media, 1983), he strongly claims that the use of technology is a medium through which guidelines and information are delivered. Clark supports his claims by adding that technologies that transfer educational knowledge do not have an effect on student's performance. Also, Schramm (Schramm, 1977) believed that the performance in the education of an individual is not influenced by the kind of technology/equipment that is used to transmit the information, but it is rather motivated by the type of strategy used in learning as well as the content of the material that is being studied. From both arguments, e-learning is seen strictly as a way of transmitting knowledge, but not as a way of affecting performance.

While some people feel that the e-learning has nothing to do with affecting the learning ability of an individual, some other people object to such beliefs. Kozma (Clark, 2001) claims that technological devices such as the computer have special

features that brings real-life models and simulations to an individual that is learning. Although it is not the electronic device that makes the student to learn, the real-life models and simulation that the student interacts with has an effect on the way they learn.

Other researchers such as Young (Young K. , 1996) looked into the concept of "Internet addiction" and how it can affect other aspect of an individual's life. He went further by doing a survey which showed that out of 496 respondents, 396 people qualified as Internet dependent and this went on to show 79.83% of her respondents were addicted to the Internet. This made Young to conclude that the obsessive use of the Internet can also create room for academic consequences. Also, research has showed that some student's dismissal for academic failure is linked to excessive Internet usage. At Alfred University, 50% of the pupils questioned after dismissal for academic failure recorded extreme Internet use as one major reason for their problems (On Line, 1996).

Research was carried out in Canada by the Media Awareness Network to show how students make use of the internet. From the survey that was conducted, students within the age of 9 to 17 were used and after the research was concluded, playing and downloading music was the most popular activity, which was accompanied by e-mail, then surfing the net for fun, playing and downloading games came after, then instant messaging, chat rooms, and lastly, assignments (Environics Research Group, 2001).

CHAPTER THREE

METHODOLOGY

This chapter will help the reader to have an in-depth knowledge of the methods and procedures that were carried out in order to get information (primary data) for this research. Within this chapter, the population research tools and the methods that will be used in acquiring the data will be elaborated upon.

3.1 INTRODUCTION

The methodology will assess the way the students in secondary schools use the internet and this would involve knowing what websites the students often go to as well as their dependency on the internet.

3.2 SAMPLING TECHNIQUES

Sampling involves the selection of a subset or group of individuals from a population that will be used to represent the population. With regards to the topic of this research, a sample was analyzed and the findings that were derived from the research were used as a representation of the population the sample was obtained from.

During the process of this study, a stratified (proportional or quota) random sampling was used. This type of probability sampling method divides my population into homogenous subgroups. The homogenous subgroup has to comprise of members that are relatively similar (due to the type of research I'm doing, it would be based on the student's gender group), therefore it includes boys in one group

and girls in another, group. Also, a simple random sample was used to determine the 15 boys and 15 girls that were taken from the strata to form new subsamples.

These methods were chosen because the population includes students from different year groups. Moreover, the boys and girls were equally chosen to balance the number of respondents, therefore creating an assurance that the researcher would be able to represent not only the overall population, but also key subgroups of the population, especially from small minority groups. Moreover, the stratified random sampling has a more statistical precision. A representative diagram in Appendix 1 and 2 explains the sampling process that was used.

3.3   PRIMARY DATA COLLECTION

A senior secondary school in Accra was used to conduct the research. The investigator/researcher used both stratified random sampling as well as simple random sampling in order to select 15 boys and 15 girls from each year group/class (SS1, SS2, and SS3). This added up to a total of 30 students from each year group and a total of 90 students from the senior secondary school. Questionnaires as well as interviews were used for the respondents which comprised of both boys and girls. The questionnaires asked questions that prompted 2 types of response from the respondents. It included a dichotomous response format (YES/NO, TRUE/FALSE) and contingency questions (the questions were asked to know if the respondent was capable of answering the following question). Although some of the questions in the questionnaire were open ended questions, some other questions were closed ended. Due to the two different formats that the questions were asked, structured and

unstructured response formats were required. Data was collected throughout the month of March.

3.4 RESEARCH INSTRUMENTS

In order to carry out a successful research, some research tools/instruments were used to gather information.

Firstly, a notebook that had 30 leaves was used to acquire information as well as take notes of the research while the respondents were filling out the questionnaires. The notebook was also used to take down any other information that was provided by the respondents.

Secondly, the questionnaires that the respondents would use to provide information were provided. The questionnaires were 120 in total and the questionnaire was group-administered questionnaires. Although there were 90 students that partook in the research as respondents, 30 extra questionnaires were added to the 90 questionnaires. This was done as a precaution for any unforeseen circumstance in relation to the questionnaires that were being filled. Some of the students made some mistakes and they wanted to re-answer some questions while some other students made lots of mistakes which made their initial questionnaire rough and disorganized. Questionnaires were used due to the large number of students that participated in the study and also the low cost of distribution involved. The questionnaire helped the researcher to gain accurate responses from the students about the research. Also, the researcher can judge the quality of the respondent's response and the answered questions can be explained easily by the researcher.

Thirdly, an official identification (in this case, my student identification number) was used as a proof or validation of my true identity as the researcher. Also, a phone number that the respondents could contact me with was provided in case any of them decided to change their minds concerning the questionnaire. In addition to the ID card and the phone number that I provided, I also brought along the cover letter.

3.5 DATA COLLECTION

Data was gotten came mainly from primary sources. The primary data that was collected was strictly from a secondary school called Labone Senior High School which is situated in Accra. The type of data collected was mostly quantitative but a few qualitative data were acquired (Trochim, 2005).

For the researcher to get both qualitative and quantitative data, group administered questionnaires were administered to the sample respondents that were chosen from each year group. Each student was given a questionnaire which was answered individually.

To acquire the quantitative data from the questionnaires, scaling will be used. Scaling can be used for measuring and it encompasses the creation of an instrument that links qualitative constructs with quantitative metric units (Trochim, 2005). Dichotomous response scale was used for some questions which had answers that required the respondents to choose from either YES/NO. Unlike the interval response scale, the dichotomous response scale was easy to understand by the students and it made the data collection stress-free.

3.6   VALIDITY AND RELIABILITY

The information and data that was collected is considered to be reliable. This is based on the fact that the research carried out with the help of the respondents did not identify/disclose the people involved in this research. Respondents were given assurance and the benefit of doubt that no matter the information that was provided by any individual/respondent, the data would be treated with extreme discretion. This tremendously decreased the tension of the respondents who weren't willing to participate in the research, thereby encouraging more respondents to willingly offer to partake in the research.

Also, the provision of incentives (money) to the students encouraged them to truthfully respond to questions which provided an accurate and dependable analysis on the data collected.

3.7   DATA ANALYSIS

Data was collected from the information that the respondents provided. This involved the data preparation; inputting of the data into the researcher's laptop and backing it up using an external hard drive and online storage facilities (4shared and Dropbox), checking of data accuracy and finally transforming the data that was acquired into variables that can provide usable and understandable interpretations.

A descriptive statistics of the analysis was provided and this helped the researcher to describe the basic features (which are summaries about the sample and the measures used) of the data in this research. The graphical representation (bar charts, pie charts) of the data is also a virtual illustration of the quantitative analysis of the data acquired.

Furthermore, a statistical analysis (inferential statistics) was used and this was due to the experimental design that was being used to test the researcher's hypotheses for this study. By doing this analysis, the researcher was able to identify how secondary school students use the internet.

Additionally, the tools that were used in the analysis of the descriptive statistics and the statistical analysis were Microsoft Excel, IBM's SPSS 12.0.

CHAPTER FOUR

ANALYSIS OF DATA AND PRESENTATION

The main purpose of this chapter is to summarize the collected data and the statistical analysis gotten from the respondents. Discussion on the results will also occur within this chapter.

4.1   INTRODUCTION

From the 1st chapter, the main aim of this research was to know and identify the way secondary school students within the Ghanaian society make use of the internet.

4.2   INTERNET ACCESS

One of the main purposes of this research is to know what kind of activities secondary school students do with the internet and how much of their time is spent on the internet. 30 respondents from each year group were given questionnaire to fill and from each year group, 15 boys and 15 girls were randomly selected to fill the questionnaire.

From the data collected, out of the 90 students, 42 male students and 44 female students confirmed that they have accessed the internet. From this data, 51.7% (15 girls) of the 30 students in Form 1 chose yes. In Form 2, 48.3 % (14 girls) of the 30 students answered yes while in form 3, 53.6 % (15 girls) chose yes. Table 1 shows a table with the total amount of students who have accessed the internet.

FIGURE 1

Year Group * Gender * Have You Ever Accessed The Internet

Crosstabulation

Have You Ever Accessed The Internet				Gender		
				Female	Male	Total
Yes	Year Group	Form 1	Count	15	14	29
			% within Year Group	51.7%	48.3%	100.0%
		Form 2	Count	14	15	29
			% within Year Group	48.3%	51.7%	100.0%
		Form 3	Count	15	13	28
			% within Year Group	53.6%	46.4%	100.0%
	Total		Count	44	42	86
			% within Year Group	51.2%	48.8%	100.0%
No	Year Group	Form 1	Count	0	1	1
			% within Year Group	.0%	100.0%	100.0%
		Form 2	Count	1	0	1

	% within Year Group	100.0%	.0%	100.0%
Form 3	Count	0	2	2
	% within Year Group	.0%	100.0%	100.0%
Total	Count	1	3	4
	% within Year Group	25.0%	75.0%	100.0%

The analysis also looked at the amount of students who still access the internet. Figure 2 shows the total number of students who still have access to the internet. As shown in Figure 2, 41 girls (93.2%) and 39 boys (86.7%) out of the total 90 students chose yes. 15 boys and 15 girls from Form 1chose yes. In Form 2, 12 girls (48%) and 13 boys (52%) chose yes while 14 girls (56%) and 11 boys (44%) in Form 3 chose yes.

FIGURE 2

Year Group * Gender * Do You Still Have Access

Crosstabulation

Do You Still Have Access				Gender		Total
				Female	Male	
Yes	Year Group	Form 1	Count	15	15	30
			% within Year Group	50.0%	50.0%	100.0%
		Form 2	Count	12	13	25
			% within Year Group	48.0%	52.0%	100.0%
		Form 3	Count	14	11	25
			% within Year Group	56.0%	44.0%	100.0%
	Total		Count	41	39	80
			% within Year Group	51.2%	48.8%	100.0%
No	Year Group	Form 2	Count	2	2	4
			% within Year Group	50.0%	50.0%	100.0%
		Form 3	Count	1	4	5

	% within Year Group	20.0%	80.0%	100.0%
Total	Count	3	6	9
	% within Year Group	33.3%	66.7%	100.0%

FIGURE 3

DEVICES USED TO ACCESS THE INTERNET

73.3 — Laptop/Desktop
65.6 — Smart Phone
22.2 — Feature Phone
4.4 — Game Console
18.9 — Tablets
5.6 — TV

Legend:
- Laptop/Desktop
- Smart Phone
- TV
- Tablets
- Game Console
- Feature Phone
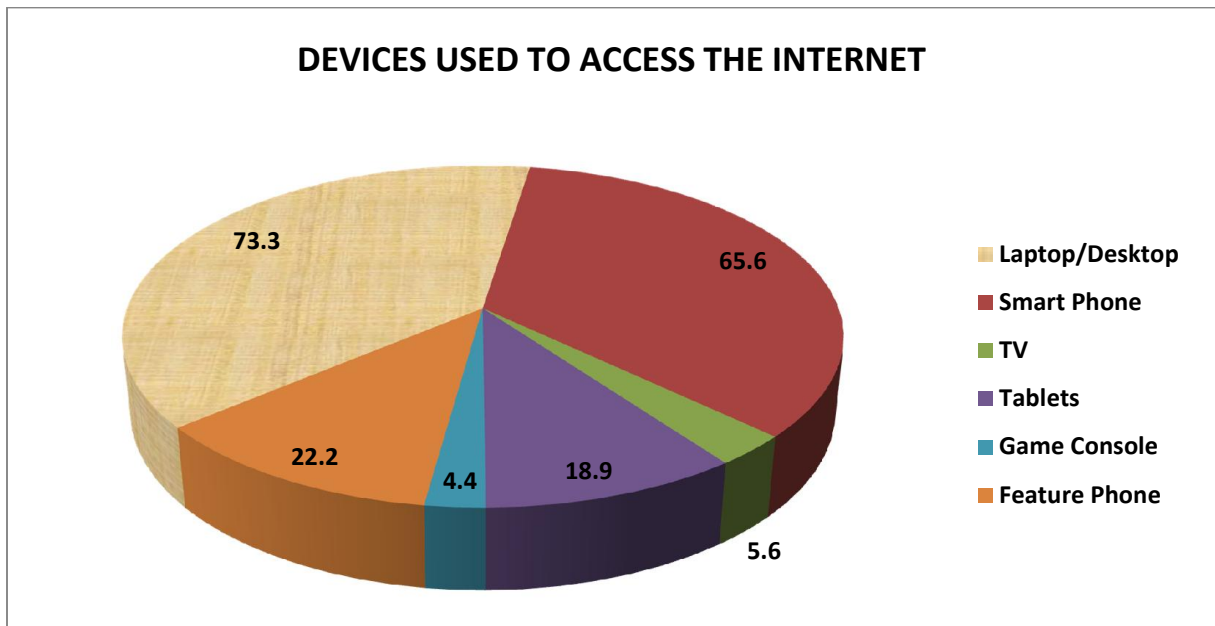
The students in the secondary school use various devices to access the internet. Multiple devices could be selected by each individual. In the above pie chart, 73.3% (66 students) of the total 90 students chose laptops/desktops as the device that they usually use to access the internet. The second highest device used is the smart phone and 65.6% (59) of the 90 students stated that they usually use smart phones to access the internet. For other devices, 20 students chose feature phones, 17 students chose tablets, 5 chose televisions while 4 students chose game console.

From the 66 students that chose laptops/desktops, 21 students from Form 1 (12 girls, 9 boys) chose laptops/desktop. From Form 2, 18 students (11 girls, 7 boys) chose laptops/desktops while 27 students (15 boys, 12 girls) from Form 3 chose laptops/desktops. The smart phone option was chosen by 10 boys and 13 girls in Form 1. In Form 2, the option was chosen by 7 boys and 10 girls. While in Form 3, 8 boys and 11 girls chose smart phones. For the feature phone option, a total of 20 students (2 boys, 3 girls) from Form 1 access the internet from a feature phone. From the Form 2 students, 10 students (5 boys, 5 girls) chose feature phones while 5 students (2 boys, 3 girls) in Form 3. The tablet option was chosen by 17 students (4 boys, 2 girls) in Form 1. In Form 2, the option was chosen by a total 4 students (2 boys, 2 girls) while in Form 3, 7 students (5 boys, 2 girls) chose tablets. There were 5 students who chose the Television as a device they used to access the internet. Among the 5 students, 2 were male students and 1 female student from Form 1, 1 male student from Form 2 and 1 female student from Form 3. A total of 4 students from all 3 year groups chose game consoles. This includes 2 girls from Form 1, 1 girl from Form 2 and 1 girl from Form 3.

The study also looked at the locations where internet is assessed and 6 major locations were used identified; home, on the go (street), classroom, library, internet café and computer lab.

FIGURE 4

LOCATION OF INTERNET ACCESS
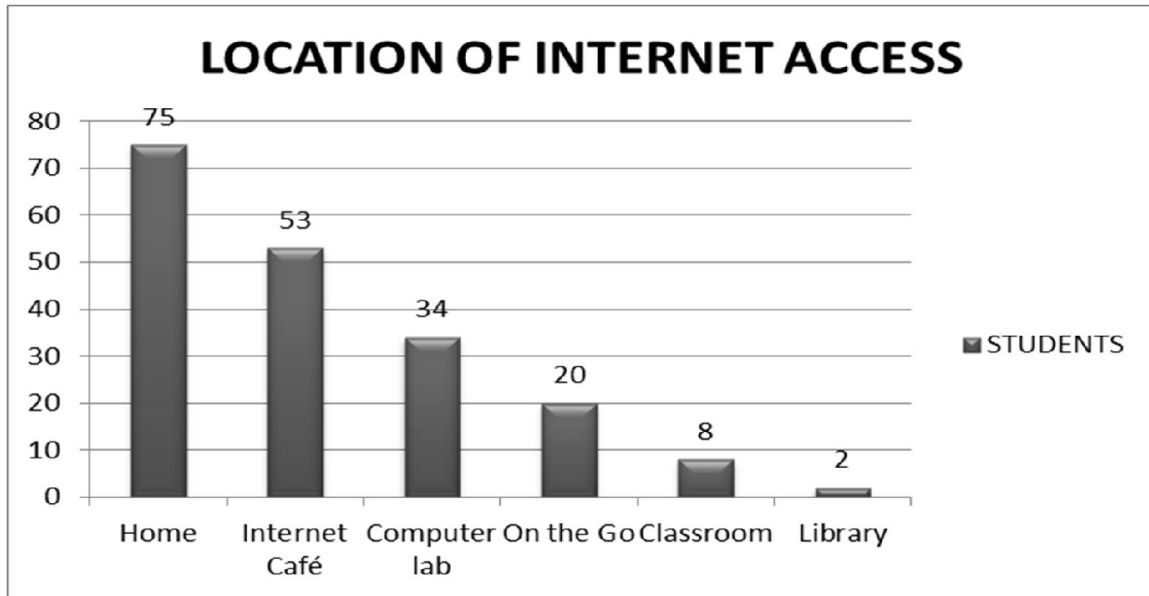
Majority of the students from Form 1, 2 and 3 selected home as the main location where they access the internet. The second highest location was the internet café which was followed by the computer lab. The last 3 locations include on the go (street), the classroom and the library. Out of the total 90 students from the 3 year groups, 83.3% of the students chose home, 58.9% chose internet café, 37.8% chose computer lab, 22.2% chose on the go (street), 8.9% chose classroom while 2.2% chose library. Figure 4 shows the amount of students that chose the different locations.

FIGURE 5

INTERNET USE AT HOME
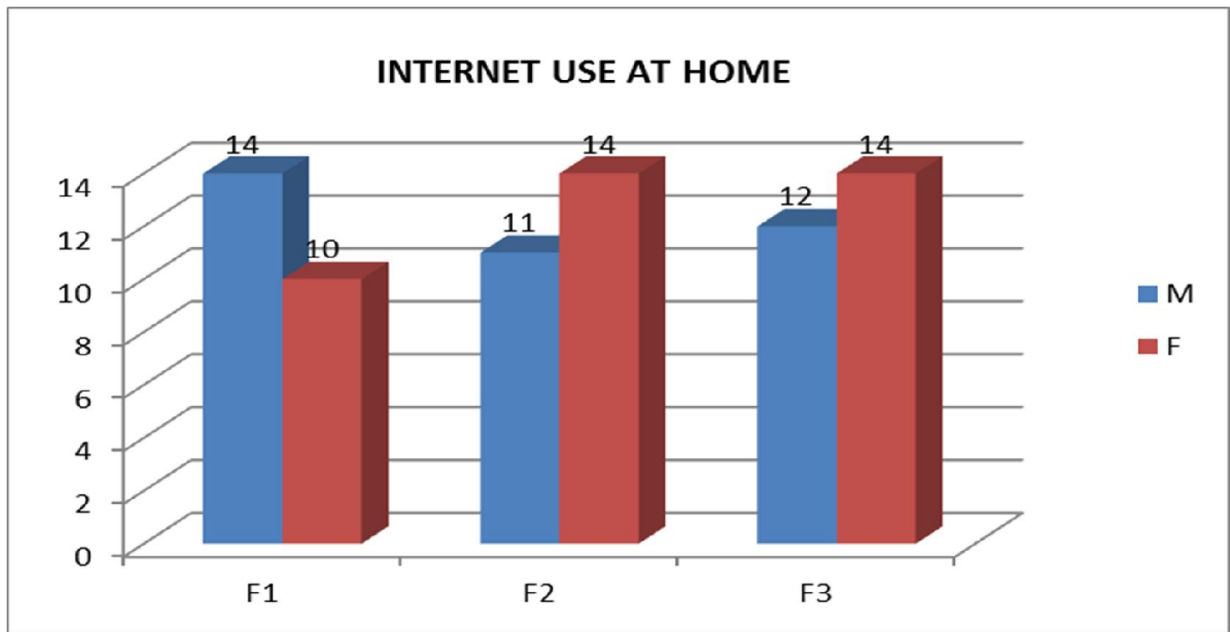
From the data collected, 14 boys and 10 girls in Form 1 access the internet at home. As seen in Figure 5, 11 boys and 14 girls chose home from Form 2 while in Form 3, 12 boys and 14 girls chose the option. The second top location which was the internet café was selected by 18 students in Form 1 (9 boys, 9 girls), 18 students (10 boys, 8 girls) in Form 2 and 17 students (9 boys, 8 girls) in Form 3. The bar chart in Figure 6 shows a graphical analysis of the internet usage of students at a café. The third most used location which was the computer lab was selected by 9 students in Form 1 (3 boys, 6 girls), 15 students (6 boys, 9 girls) in Form 2 and 10 students (6 boys, 4 girls) in Form 3.

FIGURE 6

INTERNET USE AT INTERNET CAFE
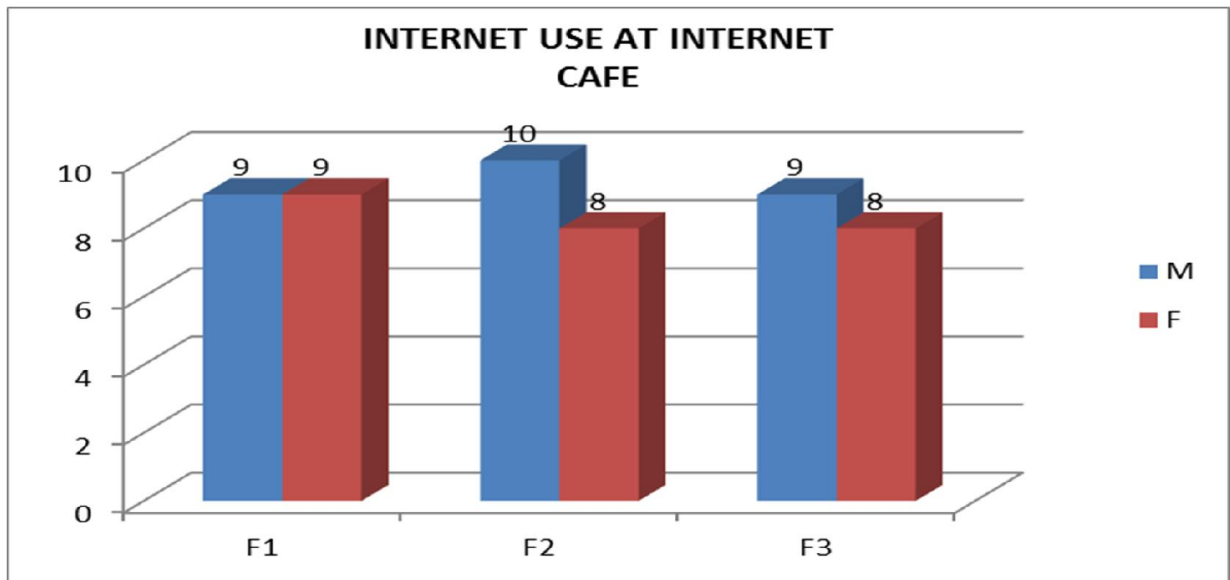
For the least used location, none of the male students from each year group access the internet in the library. The same goes for the girls in Form 1. None of them access the internet in the library. In Form 2, only1 girl chose the library and in Form 3, only 1 girl chose the library too.

FIGURE 7

INTERNET USE IN THE LIBRARY
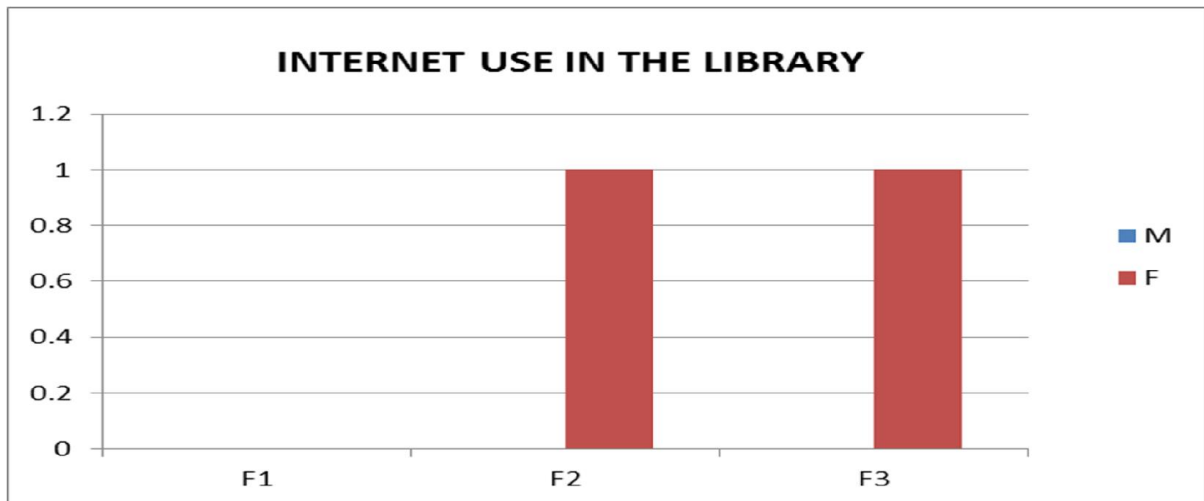
INTERNET ACTIVITIES

The activities and the amount of time spent on each activity is another aspect of this research. From the questionnaire in Appendix 2, a question about the number of times they spend on an activity was asked. From the data collected, 24 students do not have access to their email accounts. Nevertheless, 16 other students access their email accounts several times a day as shown in Figure 8.

FIGURE 8

Access to Email
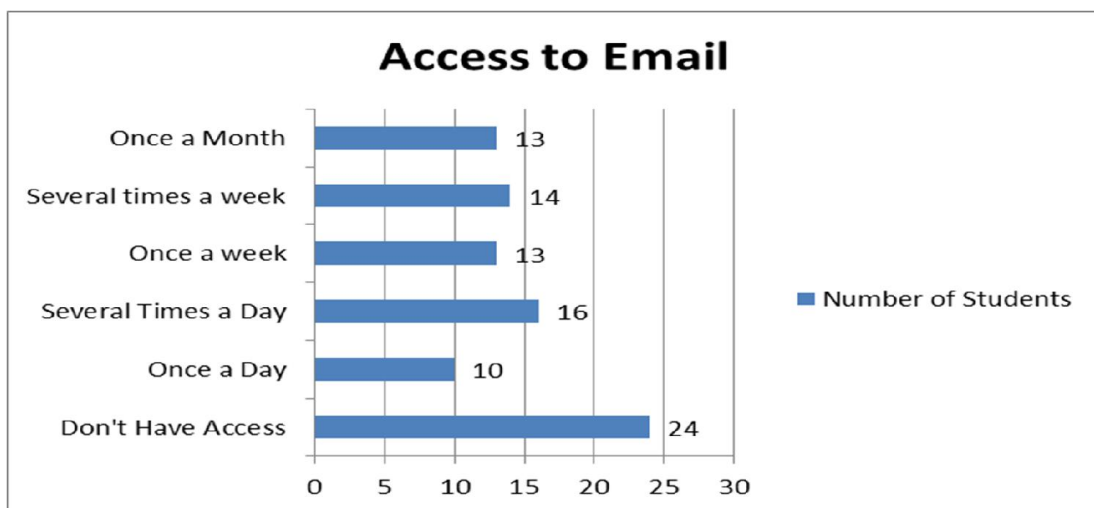
Students that use the internet to download also use the internet a lot. From the data collected, 17 students don't have access to download but 30 students download several times a day as indicated in the bar chart in Figure 9.

FIGURE 9
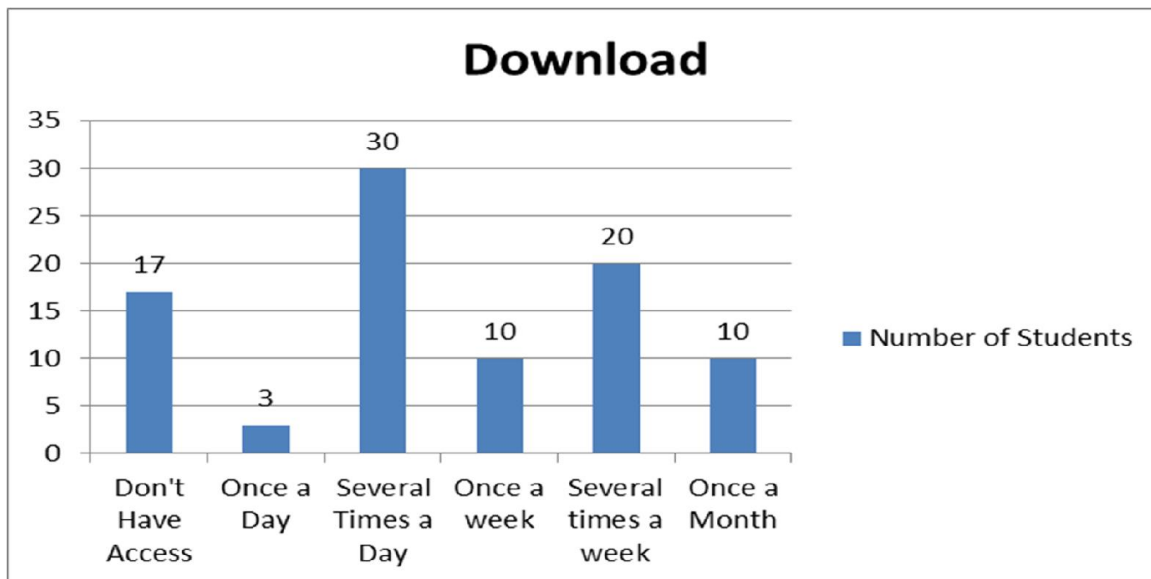
Chatting is another activity that students also participated in. From the data that was acquired, most students spend a lot of their time chatting. From the graph in Figure 10, most students spend lots of their time chatting several times a day.

FIGURE 10
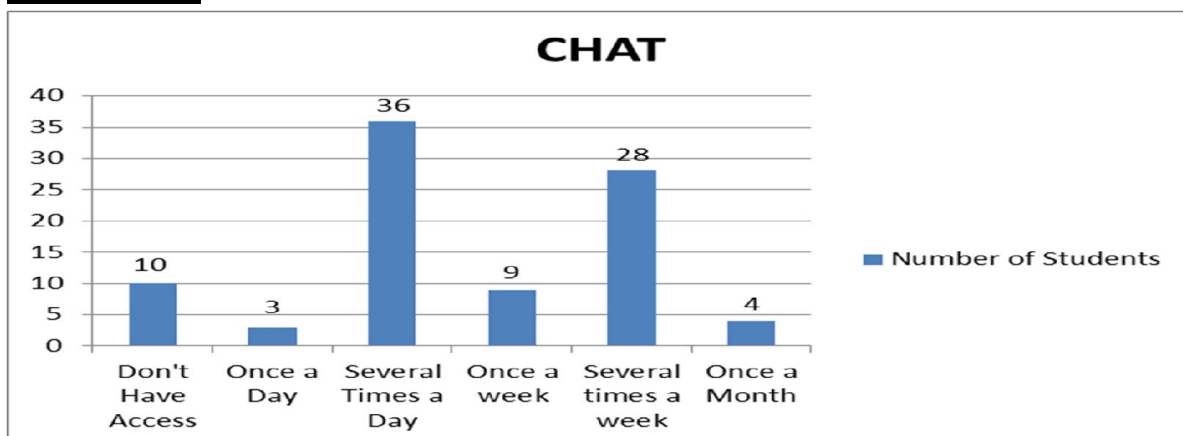
Figure 11 show's the amount of students that performed each activity several times a day. The top most performed activities include chatting which was selected by 36 students out of the 90 students that filled the questionnaire. 30 out of the 90 students used the internet to doewnload. While the least performed activity in a day was online shopping and this was selected by 4 students from the entire 90 students that were sampled.

FIGURE 11
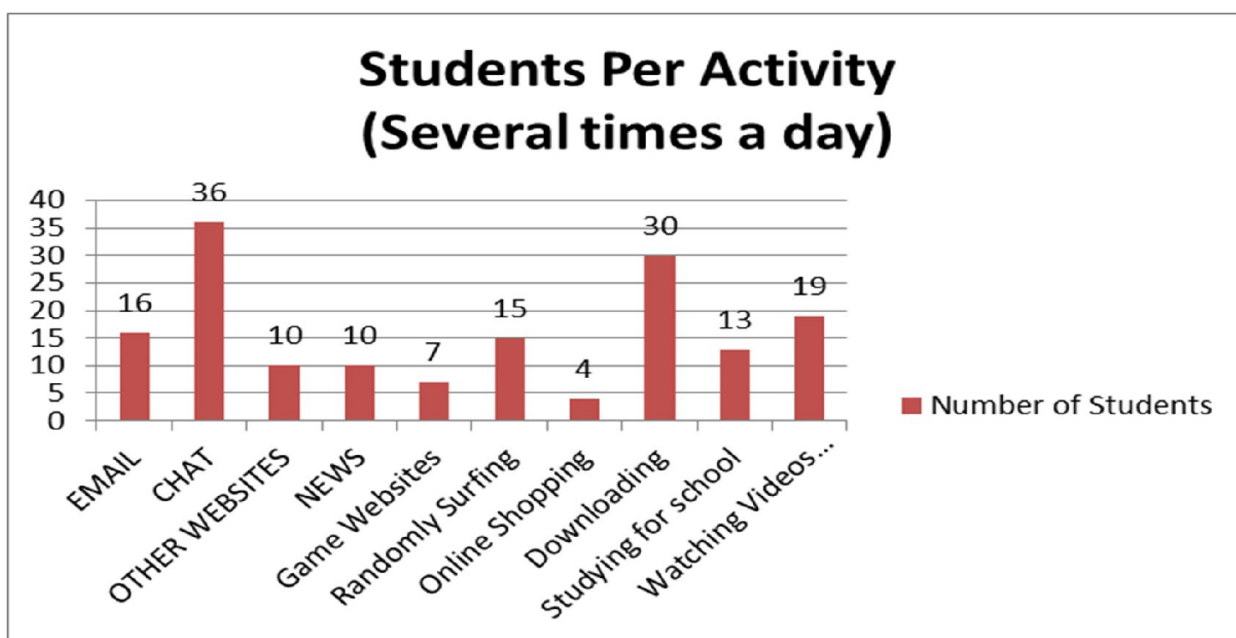
From the data in Figure 11, majority of the secondary school students spend most of their time chatting and downloading.

FIGURE 12

Hours Per Day Spent on an Activity (More than 8 Hours)
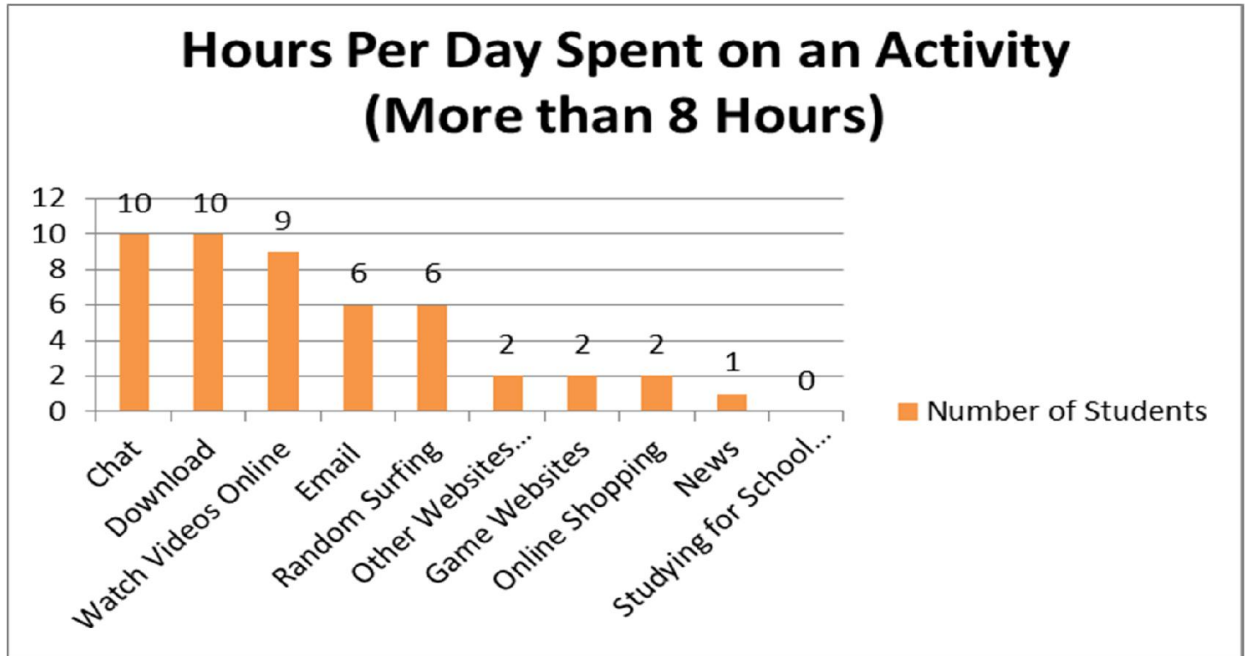
From the data that was gathered, Figure 12 displays the amount of students who spend more than 8 hours per day on each activity; this illustrates how much time is spent on important activities that would benefit the individual. There was a similarity between the amount of students that spent more than 8 hours on chatting and downloading. 10 students out of the total 90 students chose the option which said they spend more than 8 hours chatting. The 10 students comprised of 3 girls and 10boys. The same goes for downloads. 10 students out of the total 90 students chose the option which said they spend more than 8 hours chatting. The 10 students included 4 girls and 6 boys. The next top activity that the students partake in is watching videos online and it was selected by 4 females and 5 males.

FIGURE 13

Students and the time spent studying for school
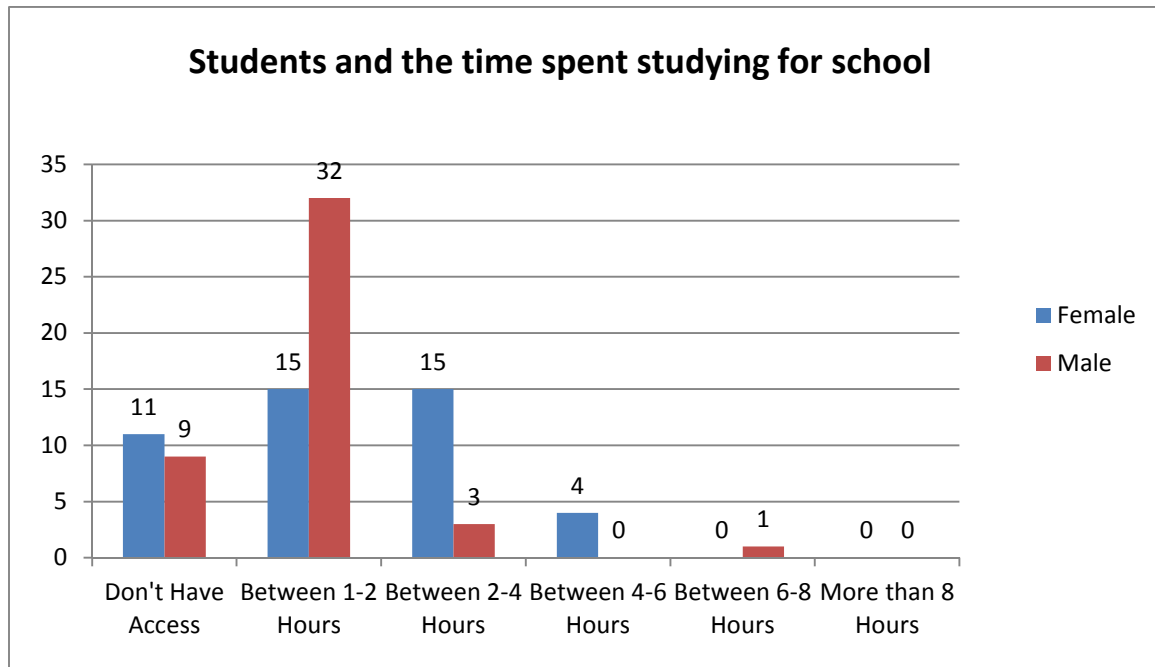
A total of 47 students chose the option that asked if they study between 1-2 hours. From the bar chart in Figure 13, majority of the students who chose the option of studying between 1-2 hours were boys. From the analysis, the boys spend more time studying for school work using the internet than the girls. Out of the 90 students that were sampled, the girls who study for school work with the internet are 34 in total while the boys are 36 in total.

To get a more precise data on the amount of students that use the internet to study for their school work and assignments, question 20 in the questionnaire (Appendix 2) asked both boys and girls in Form 1, 2 and 3 if they use the internet to study for school work. A further question was asked to know how often they use the internet. Figure

14 shows the amount of female students who said they study using the internet from Form 1 to Form 3.

Figure 15 shows the amount of male students who said they study using the internet from Form 1 to Form 3. From the analysis of both genders, all the boys in Form 1 said yes to the option of using the internet to study while only 11 females chose the option yes. From the bar chart in Figure 14 and 15, the female students use the internet to study more than the boys.

FIGURE 14

FIGURE 15

Students that study using the internet (Male)
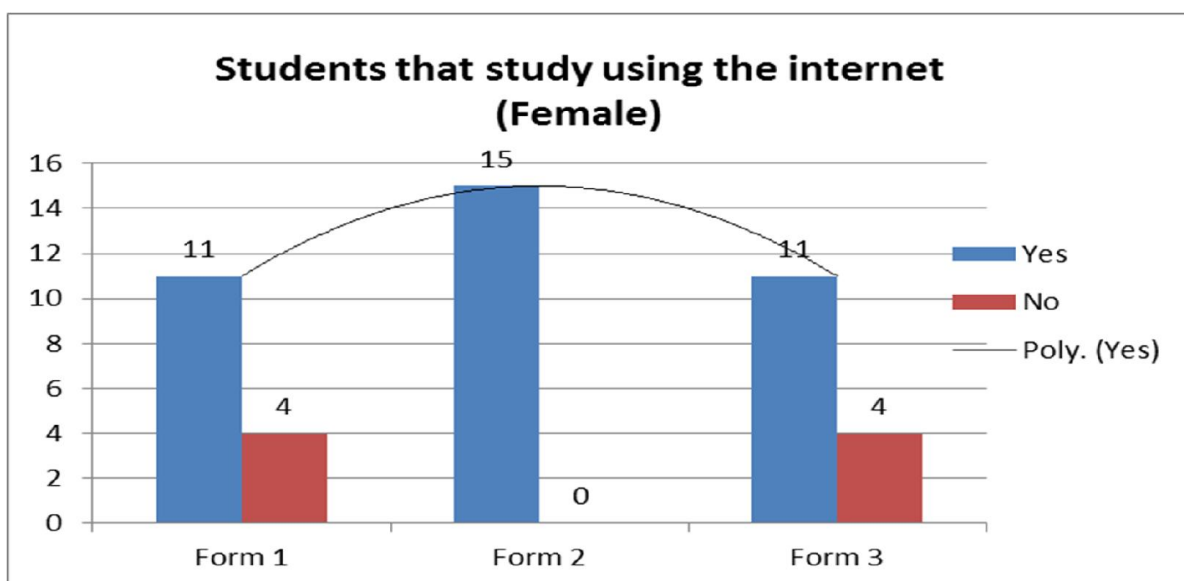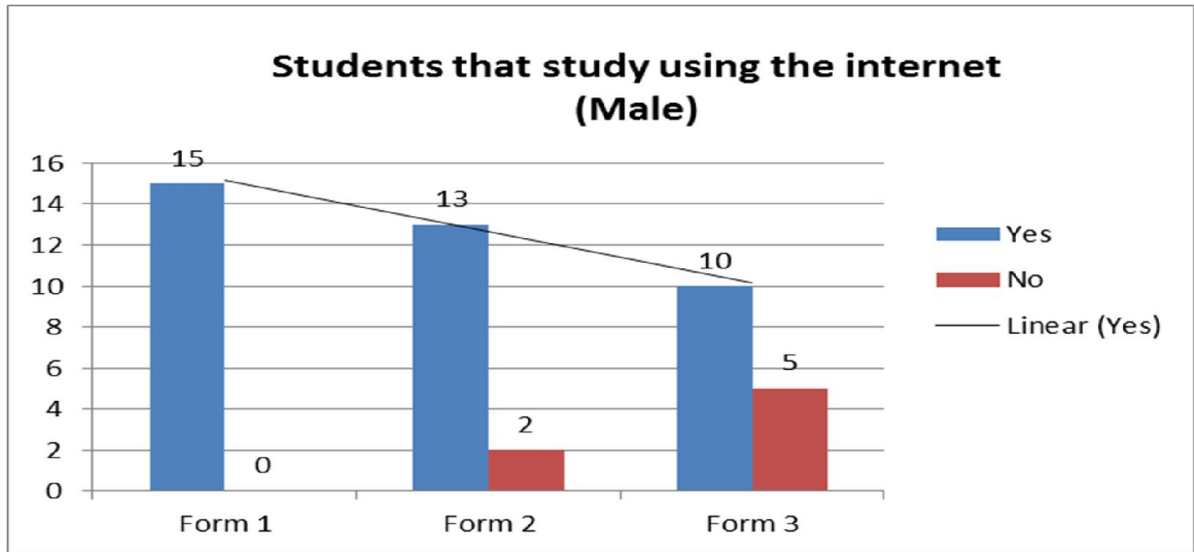
Comparing the results from Q18 and Q20, it is evident that the girls in the secondary school spend more time using the internet to study than the boys do. This is evident from the analyses of the graph in FIGURE 16 and 17. The total amount of male students who have access to the internet and use it to study equates to 35 students out of the total 45 male students. Nevertheless, there are 37 girls who have access to the internet and use it to study. The figures were gotten by calculating the total students that use the internet to study then subtracting it from those that do not have access.

FIGURE 16

USE THE INTERNET TO STUDY (FEMALE)

- Don't have access
- Once a day
- Several times a day
- Once a week
- Several times a week
- Once a month

FIGURE 17

USE THE INTERNET TO STUDY (MALE)

- Don't have access
- Once a day
- Several times a day
- Once a week
- Several times a week
- Once a month
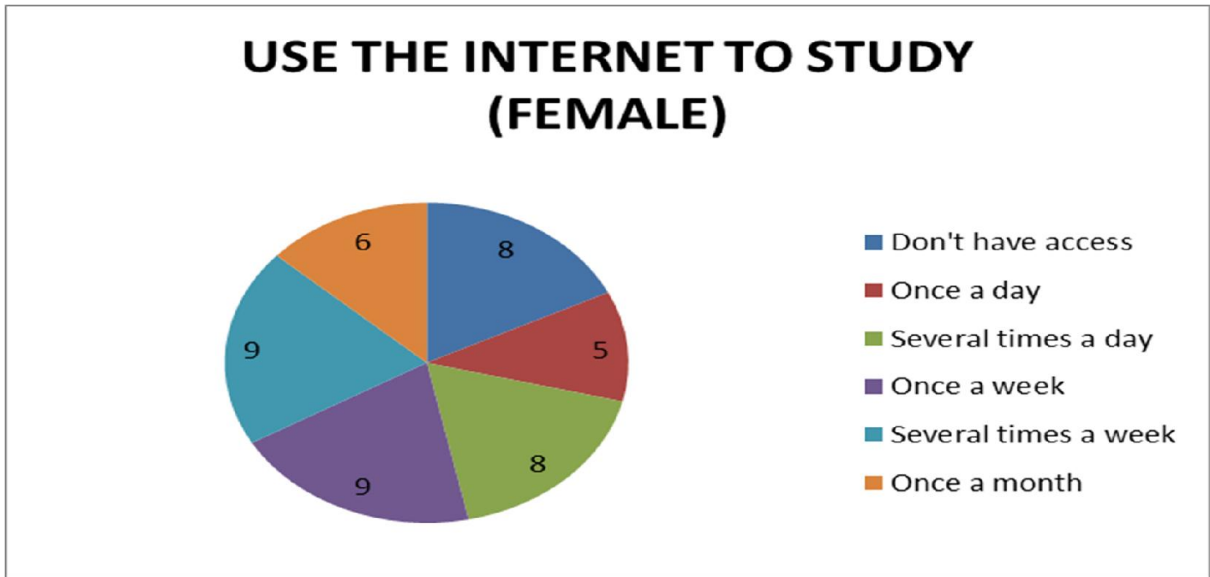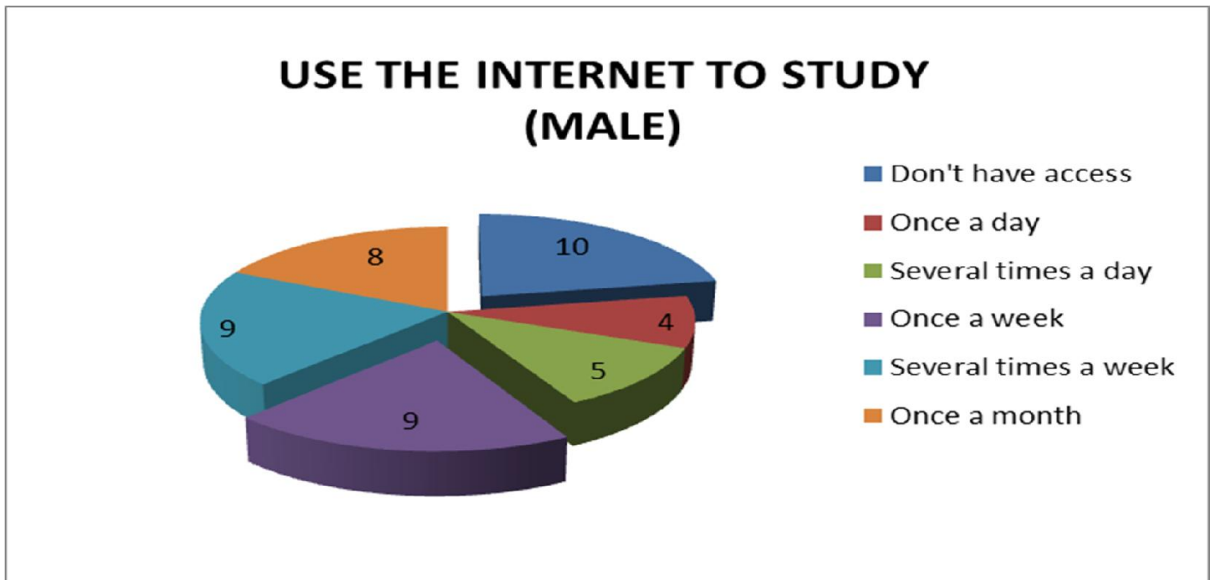
The research also seeks to identify the relationship between the gender of students and the amount of hours spent when studying using the internet. A chi-square was used to confirm this hypothesis and according to the data in Figure 18, there is a

positive value but the significance value (Asymp. Sig.) gave a very high significance value which means that the two variables are highly likely to be independent.

Figure 18

Gender * Do You Use The Internet For Studying Crosstabulation

Count				
		Do You Use The Internet For Studying		
		Yes	No	Total
Gender	Female	37	8	45
	Male	38	7	45
Total		75	15	90

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.080[a]	1	.777		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.080	1	.777		
Fisher's Exact Test				1.000	.500
Linear-by-Linear Association	.079	1	.779		
N of Valid Cases[b]	90				

CHAPTER FIVE

FINDINGS, RECOMMENDATIONS AND CONCLUSION

The results from the data gathered in the previous chapter shed a little bit of light on the internet usage among secondary school students in Ghana, by focusing on Labone High School. In this chapter, the findings from the research would be stated, and then recommendations would be provided which would help to resolve any of the problems stated within the research. Lastly, a conclusion to sum up the research would be presented.

5.1   Findings of the study

5.1.1 Internet Access

The data indicated that both boys and girls have used the internet but when compared, most girls have used the internet as compared to most boys. It is also the same when it comes to accessing the internet till date. The girls and boys still access the internet but the ratio of the girls to boys is higher when it comes to accessing the internet till today.

The top most device that were used to access the internet were computers (laptops/desktops) which was followed by smartphones, feature phones then tablets.

The most preferred location where the secondary school students access the internet is at home. In Canada, a nationwide survey that was conducted in March 2000 on behalf of the Government found that children accessed the internet primarily from home. Nevertheless, the library had the least amount of students who access the internet at that location. The same goes for this research which shows that the library is also the location where students barely use the internet.

5.1.2 <u>Internet Activities</u>

My findings indicated that 98.9% of my sample data are internet users. Just like the reports in UCLA Center for Communication Policy (2003) reported in 2002 that 97% of teenagers are internet users. (Large)

Data showed that access to personal e-mail accounts is not done regularly. Although quite a large number of students access their accounts several times a day, a larger amount of students don't have access to their e-mail accounts. The rate at which students download (music, videos) is higher than their access to their e-mail accounts.

The topmost activity done by the secondary school students is chatting, followed by downloading, watching videos online, checking their e-mail accounts, randomly surfing the web, using the internet to study for school work, looking at other websites such as sports websites, reading new online, game websites and lastly online shopping.

Majority of their time is spent on chatting with friends. This is done mostly with Facebook, followed by Twitter and Instagram. Then followed by downloading after which watching video online comes next.

From the data, the modal amount of time students spend on studying for their school work by using the internet falls between 1-2 hours which is mostly done by boys. Majority of the girls study between 2-4 hours but the number of girls who study for their school work by using the internet is higher than the number of boys. Moreover, majority of the girls who study between 2-4 hours come from Form 2. Surprisingly, the boys who use the internet to study are mostly from Form 1.

The girls who study using the internet mostly study approximately once a week or several times a week. For the boys, they study with the internet approximately once

a week or several times a week. It is rare to see them studying several times a day with the internet.

Also, there's a high level of dependency when it comes to communicating between the secondary school students.

5.2   Recommendations

From the findings of this study, the internet is used by lots students in secondary schools and in order to get the best out of the students, schools should encourage students to partake in online courses and acquire academic resources and games that are linked to the course or subject that is being taught in class. An example of such academic website that can provide such resources is Khan Academy that specializes mainly in mathematics.

Also, Ghana should make the effort of providing internet in schools, especially in this modern era where technology is developing very fast and information on how problems can be solved are available online for anyone with access to the internet. This is based on the fact that the internet within the school premises is limited to only the computer lab.

Furthermore, there should be more research and studies on this topic in order to get more specific reasons and figures in relation to this topic. Presently, there is a shortage of research on this topic but if more research is done in relation to this topic, it would help researchers to easily identify where the internet can make improvements and increase productivity (no matter the economic sector).

The government should invest in providing technological devices in schools. This would help students to have easy access to the internet for resources that can be used for social and academic purposes as well.

Lastly, there should be seminars, clubs and even lectures on how to use the internet and make the best out of it. There's a vast amount of information online for individuals to tap into and get information. How to access that information is a problem (students have limited understanding of the vast knowledge the internet has to provide) that has been identified in this research and I would recommend that clubs and events that would educate students, teachers and even parents on how to access more information online (more resources to access) which can benefit both the students and adults at the same time should be created.

5.3   Conclusion

This study used both a quantitative and qualitative survey to investigate the internet usage among Senior High Schools students in Labone High School, Accra, Ghana. Questions about the activities performed by secondary school students, the devices used for accessing the internet and the amount of time spent on various activities in relation to the internet were asked. The findings from this research have been presented and discussed above. One of the research objectives was to identify what the internet is regularly used for and according to data gathered, 40% of the population spends most of their time chatting using the internet several times daily. Meanwhile, 14.4% of the sample uses the internet for academic purposes daily.

Ghana should develop its internet connectivity to help students in developing their life as well as encouraging the students to learn more about optimizing the vast

resources and capabilities of the internet so as to make an impact in the life of the individual; career, hobbies, academics and social network.

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APPENDIX 1

Sampling method used for the research

```
                    ┌──────────────────────┐
                    │ LIST OF SS1 STUDENTS │
                    └──────────────────────┘

   ┌──────────────┐                        ┌──────────────┐
   │     BOYS     │       (STRATA)         │    GIRLS     │
   └──────────────┘                        └──────────────┘

              ┌──────────────────────────────────┐
              │          15 Boys, 15 Girls        │
              └──────────────────────────────────┘
                    (RANDOM SUBSAMPLES)


                    ┌──────────────────────┐
                    │ LIST OF SS2 STUDENTS │
                    └──────────────────────┘

   ┌──────────────┐                        ┌──────────────┐
   │     BOYS     │       (STRATA)         │    GIRLS     │
   └──────────────┘                        └──────────────┘

              ┌──────────────────────────────────┐
              │          15 Boys, 15 Girls        │
              └──────────────────────────────────┘
                    (RANDOM SUBSAMPLES)
```

```
                    ┌─────────────────────────┐
                    │  LIST OF SS3 STUDENTS    │
                    └─────────────────────────┘
                      ↙                   ↘
        ┌──────────────┐              ┌──────────────┐
        │    BOYS      │   (STRATA)   │    GIRLS     │
        └──────────────┘              └──────────────┘
                      ↘                   ↙
          ┌──────────────────────────────────────────┐
          │            15 Boys, 15 Girls             │
          └──────────────────────────────────────────┘
                     (RANDOM SUBSAMPLES)
```
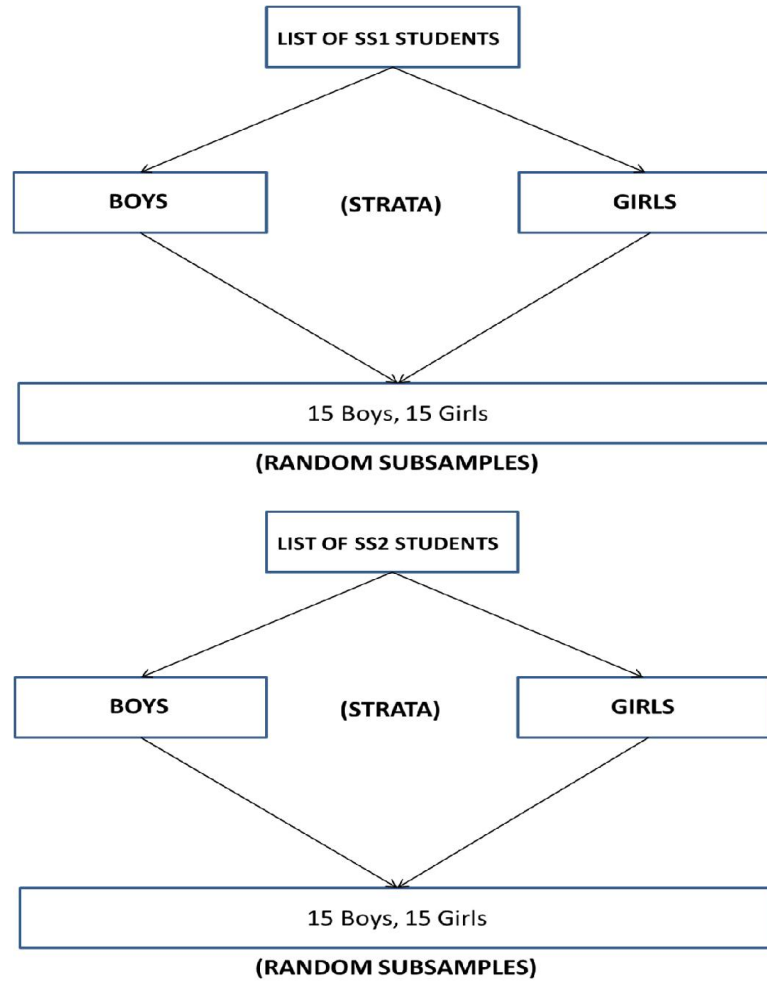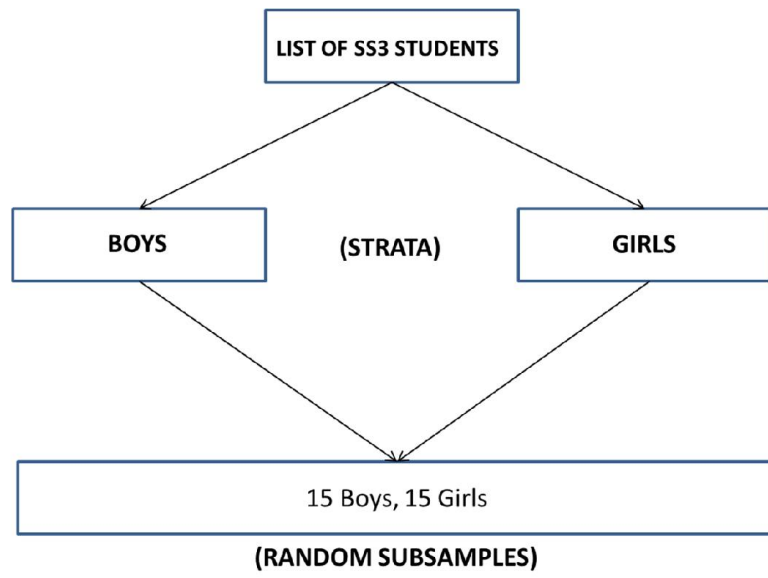
APPENDIX 2

QUESTIONNAIRE FOR INTERNET USAGE

This questionnaire is part of a study of Internet use. Your participation in this study is voluntary, and your answers will form part of a statistical study and will not identify you as an individual.

1) Gender:
    a) Male   b) Female

2) Year Group:
    a) 1   b) 2   c) 3

3) Age:
    a) Below 18 years old   b) 18 years old and above

4) Have you ever accessed/used the internet?
    a) Yes   b) No

5) Do you still access/use the internet?
    a) Yes   b) No

6) Which device(s) do you use to access the internet? (You can select more than one device)
    a) Desktop/Laptop b) Television c) Feature Phone d) Tablet   e) Smart Phone   f) Game console

7) Other Device(s)

   _____   _____   _____
   _____   _____

8) Do you have an e-mail address? (E.g. Yahoo mail, Gmail, Hotmail, etc.)
    a) Yes   b) No

9) Do you have your own personal web page? (E.g. Blog)
    a) Yes   b) No

10) Are you registered on any social network? (E.g. Facebook, Twitter, Instagram)
    a) Yes   b) No

11) What social network(s) are you registered on? (You can select more than one)
    a) Facebook b) Twitter   c)Tumblr   d) LinkedIn e) Instagram f)MySpace g)GooglePlus+

12) Other social network(s)

_____   _____   _____
_____   _____   _____

13) Which of your social network account(s) do you use often?

_____
_____

14) What do you regularly/often do on your social network?

_____
_____

_____
_____

_____
_____

15) What location(s) do you access the internet from? (You can select more than one location)
a) Home   b) On the Go   c) Classroom   d) Library   e) Internet Café
f) Computer Lab

16) Other Locations where you access the internet?

_____
_____

17) How often do you use the internet?
a) Once a day   b) Several times a day   c) Once a week   d) Several times a
week e) Once a month

18) Please" **TICK**" (√) the estimated number of times you performed the following activities. If you did not have access to these activities, you can leave it empty.

	ACTIVITIES	Don't have access	Once a day	Several times a day	Once a week	Several times a week	Once a month
a)	**E-mail**						

b)	**Chat (e.g. Facebook, Skype)**					
c)	**Newsgroups/Discussion Groups (Blogs, Newspapers)**					
d)	**Game Web Sites**					
e)	**Other specialist Web Sites (e.g. Sports web sites, TV web sites etc.)**					
f)	**Randomly surfing the web**					
g)	**Online Shopping**					
h)	**Downloading (e.g. Pictures, Games, Music, Videos, Animation, Books)**					
i)	**Studying for school work and assignments online**					
j)	**Watching videos online, Listening to music online**					

19) Please" **TICK**" (√) the estimated number of times you performed the following activities.

If you did not have access to these applications, you can leave it empty.

	ACTIVITIES	Don't have access	Between 1 – 2 Hours	Between 2 – 4 Hours	Between 4 – 6 Hours	Between 6 – 8 Hours	More than 8 Hours
a)	**E-mail**						

b)	**Chat (e.g. Facebook, Skype)**						
c)	**Newsgroups/Discussion Groups (Blogs, Newspapers)**						
d)	**Game Web Sites**						
e)	**Other specialist Web Sites (e.g. Sports web sites, TV web sites etc.)**						
f)	**Surfing the web**						
g)	**Online Shopping**						
h)	**Downloading (e.g. Pictures, Games, Music, Videos, Animation, Books)**						
i)	**Studying for school work and assignments online**						
j)	**Watching videos online, Listening to music online**						

20) Do you use the internet to study for your school assignments and school exercises?
 a) Yes   b) No

21) How often do you use the internet to study for school assignments and exercises?
   a) Once a day   b) Several times a day c) Once a week   d) Several times a
   week e) Once a month

22) List some educational websites that you usually use to help you study

_____

_____

_____

Thank you for completing this questionnaire about your use of the Internet. I appreciate your views.

APPENDIX 3