

**INFLUENCE OF INFORMATION AND COMMUNICATION TECHNOLOGY ON
AGGRESSIVE BEHAVIOUR AND ACADEMIC ACHIEVEMENT AMONG SENIOR
SECONDARY SCHOOL STUDENTS IN GIWA EDUCATIONAL ZONE**

BY

**Bulus Gadzama STEPHEN
NCE FCE, B.ED ABU
P13EDPC8003**

**BEING M.ED DISSERTATION SUBMITTED TO THE DEPARTMENT OF
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ZARIA NIGERIA**

OCTOBER, 2016

DECLARATION

The research declare that this Dissertation entitled: Influence of Information and Communication Technology on Aggressive Behavior and Academic Achievement among Secondary School Students in Giwa Educational Zone, of Kaduna state is the result of my research effort and to the best of my knowledge has not been produced and presented for the award of a degree or diploma at this or any other institution. All quotations and citations made in this work have been fully acknowledged in the reference pages.

Sign _____

STEPHEN, Bulus Gadzama

Date

CERTIFICATION

This Dissertation entitled: Influence of Information and Communication Technology on Aggressive Behavior and Academic Achievement among Secondary School Students in Giwa Educational Zone, of Kaduna state meets the requirements governing the award of degree of Masters of Educational Psychology (M.Ed. Educational Psychology) of the Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

Dr. U. Yunusa
Chairman, Supervisory Committee

Date

Dr. A.I. Mohammed
Member, Supervisory Committee

Date

Dr. A. I. Mohammed
Head of Department
Educational psychology and counselling

Date

Prof. K. Bala
Dean, School of Post graduate Studies

Date

DEDICATION

The researcher work is dedicated to my lovely wife Patience Bulus Gadzama and sons Blessed Bulus Gadzama and Bernard Bulus Gadzama

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ABSTRACT

The main objective of the study was to assess the Influence of information and communication technology on aggressive behaviour and academic achievement among secondary school students in Giwa educational zone. To achieve this purpose, four specific objectives with four corresponding research questions and hypotheses were stated, and ex-post-facto design was adopted for this study. Data for the study were collected from 360 respondents. The used of questionnaire on information and communication technology and Aggressive behavior scale were the instruments used for the study. The data collected were sorted and analyzed to test the stated null hypotheses using Pearson correlation and independent sample t-test at $\alpha=.05$ The result of the analyses revealed that information and communication technology was found to have significant relationship in academic achievement among the students ($r=-0.600$, $p=0.000$), information and communication technology have significant relationship on aggressive behaviour among the students ($r=0.584$, $p=0.000$),and gender differences exists between male and female students on information and communication technology in academic achievement ($t=4.654$, $p=0.000$), and also gender difference exists between male and female students on aggressive behavior ($t=1.261$, $p=0.208$). Based on the findings of this study, it was recommended that school psychologists, counselors, teachers and parents should monitor their children and sanction the kinds of negative use of information and communication technology to reduce aggressiveness and enhance academic achievement in school and students should be monitor on the nature of their information and communication technology usage in classroom in respective of gender.

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List of Abbreviations

ICT	Information and Communication Technology
MP 3	Microphone 3
MP 4	Microphone 4
UNESCO	United Nations Educational Scientific and Culture Organization
GSM	Global System for Mobile Technology
G.G.S.S	Government Girls Secondary School
G.S.S	Government Secondary School
ISP	Internet Service Provider
2G	Second Generation
3G	Third Generations
SMS	Short Message Service
MMS	Multimedia Message Service
PDA	Personal Digital Assistant
SCT	Social Cognitive Theory

OPERATIONAL DEFINITION OF TERMS

Operational definition of terms helps to avoid misinterpretation of terms and their meaning, and have a clear understanding and meaning.

Information and Communication Technology: This refers to computers, laptops and handset gadget that have internet web for transmission and retrieval of information.

Aggressive behavior: This refers to fighting and challenging their teachers unnecessarily and attacking their mate in school.

Academic achievement: This refers to the scores earned by students in the two core subject that is English and Mathematics at the end of qualifying mock examination.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

The rate at which some children misbehave is increasing every day. Among the side effect of misbehavior is the disregard for the norms and values of the society. The parents, teachers and society in general are getting concerned with the increase and nature of misbehavior, prevalent especially among the youths and school students. Thus, behavioral problem is serious particularly when it is widespread, amounting to moral decadence. However, aggressive behavior is of the behavioural problem, the influence could either be positive or negative depending on the contents viewed. There are quite members of children's animated television series which are based on superheroes stories involving violence and fighting scenes. This could convey wrong ideas to a child that a problem can be solved through aggression because children tend to imitate what they see and hear, including from television. Violence presented on the screen such as movies or video games could lead to Children's belief that being aggressive is a good way to get what they want (Gabbey, 2013) Viewed aggressive type of behavior as a behavior that causes physical or emotional harm to others, or threatens to. It can range from verbal abuse to the destruction of a victims' personal property. People with aggressive behavior tend to be irritable, impulsive, and restless.

Meanwhile the advent of information and communication technology in society today has brought so many changes that had been unknown in the preceding years, these transformation are in some cases good, while some have had adverse negative effect on youths, which is resulting in sexual immorality, students' aggressive behavior, examination malpractice and use of dirty or

foul language. Adeniyi (2006) observed that, technology is a product of human thought; it is a tool men have to develop, to perform certain tasks. Technology also provides humans with means of determining what is happening in the world as well as a means of changing the world to make it more suitable to our own purpose. Students in senior secondary school most especially in giwa education zone have access to a variety of information through the internet which contains a high degree or level of adult pornography materials that is made available for the general public, with no restriction on age. These have brought some vices among our youth in senior secondary school nowadays. However, academic achievement of the students constitutes all the individual subjects that are taught and score earned at the end of school work, but some student associates themselves with ICT gadgets to involve into examination mal-practice, Meanwhile, Examination malpractice has now taken a new dimension, as students employ the services of GSM and internet to download relevant examination questions and answers which they use during examinations. Some of the students receive answers in the form of text messages before or during examination. While some of these students also develop poor writing skills because they use abbreviations in text messages and adopt similar style of writing in examination. As a matter of behavior, the academic achievement of the students could vary, ranging from low to high score. The researcher carried out the study, in order to find out the influence of Information and Communication Technology on Aggressive Behaviour and Academic Achievement among Secondary School Students in Giwa educational zone.

1.2 Statement of the problem

The influence of Information and Communication Technology cannot be over emphasized because teachers and students spend more time on internet and electronic media for their educational pursuit and accomplishments. But despite the importance offered by ICT through the use of internet, social networking and electronics media some students' take advantage of the technological advancement by misusing the ample opportunities it offers.

Students are often seen fighting or challenging their teachers unnecessarily and attacking their mates in school. Some students pay little or no attention to teachers during classroom instructions because their attention is on their handsets browsing or chatting (2go, facebooking or whatsapping). Moreover, some students abuse the facilities provided by the handsets, through calling their friends or sending answers before or during examinations as text messages, email messages, video clips and even listening to music by the use of Mp3, Mp4 and earphones, some use the information from internet or home video to challenge teachers unnecessarily during teaching instruction or after the instruction, or learn to start unhealthy relationships with opposite sex. The influence of ICT on some students it has resulted to sexual immorality, use of foul language, examination malpractice and student aggressive behavior has brought about poor academic achievement in school work, which is a great concern.

Meanwhile, Examination malpractice has now taken a new dimension, as students employ the services of GSM and internet to download relevant examination questions and answers which they use during examinations. Some of the students receive answers in the form of text messages before or during examination. Hambagda, (2010). Some of these students also develop poor writing skills because they use abbreviations in text messages and adopt similar style of writing

in examination and so on and so forth. The study focused attention on the influence of ICTs gadget exposure on the aggressive behaviour among secondary students in Giwa, SabonGari and Kudan local government area, which all the school are in Giwa educational zone.

1.3 Objectives of the study

The researcher came up with the following objectives.

1. To find out the relationship between information and communication technology and academic achievement among secondary school students in Giwa educational zone.
2. To find out the relationship between information and communication technology and aggressive behavior among secondary school students in Giwa educational zone.
3. To examine gender difference between male and female in academic achievement among secondary school students in Giwa educational zone.
4. To examine gender difference between male and female on aggressive behavior among secondary school students in Giwa educational zone.

1.4 Research Questions

For the purpose of this study the following questions were raised.

1. What is the relationship between information and communication technology and academic achievement among secondary school students in Giwa educational zone?
2. What is the relationship between information and communication technology and aggressive behaviour among secondary school students in Giwa educational zone?
3. What is the gender difference between male and female in academic achievement among secondary school students in Giwa educational zone?

- 4 What is the gender difference between male and female on aggressive behavior among secondary school students in Giwa educational zone?

1.5 Research Hypotheses

For the purpose of this study the following hypotheses were raised.

1. There is no significant relationship between information and communication technology and academic achievement among secondary school students in Giwa educational zone.
2. There is no significant relationship between information and communication technology and aggressive behaviour among secondary school students in Giwa educational zone.
3. There is no significant gender difference between male and female in academic achievement among secondary school students in Giwa educational zone.
4. There is no significant gender difference between male and female on aggressive behaviour among secondary school students in Giwa educational zone

1.6 Basic Assumptions

For the purpose of this study it was assumed that:

1. Information and communication technology associated with academic achievement among secondary school students in Giwa educational zone.
2. Information and communication technology associated with aggressive behaviour among secondary school students in Giwa educational zone.
3. There is gender difference between male and female in academic achievement among secondary school students in Giwa educational zone.
4. There is gender difference between male and female on aggressive behaviour among secondary school students in Giwa educational zone.

1.7 Significance of the study

The findings of the study aimed at assisting Teachers, Parents, Principals, Counselors, Educational Psychologists and Significant others for the enhancement and understanding of the influence of ICT on aggressive behavior particular to those in secondary schools.

The study will assist the teachers to identify the source of aggressive behavior, poor academic achievement; problems manifested by some students and re-strengthen their role in managing and assisting the students to deal with such behavior problems.

The study will also help parents to understand the negative influence of ICT on their children behavior and academic achievement in order to assist them by monitoring the kind of ICT gadgets they use.

It will also assist the heads of schools to manage and assist such students who are aggressive as a result of negative utilization of ICT gadgets by establishing standing rule that whosoever is found with sophisticated ICT gadgets will be seized.

The study will be of great assistance to the counselors in guiding the students towards behavior modification and academic achievement.

The study will be of great impact to the educational psychologists to observe and to render profound solutions to the students who are aggressive and motivate them towards academic achievement.

The study will be of assistance to significant others including the community elders, NGOs in order to sensitize adolescents on the negative influence if ICT gadgets which can lead to aggressive behavior and poor academic achievement in schools.

1.8 Scope and delimitation

The scope of the study was carried out in Giwa educational zone of Kaduna State Ministry of Education which comprised all secondary schools in Giwa, Sabon Gari and Kudan Local Government Areas. There are sixteen (16) senior secondary schools in the educational zone, and also there are a total number of twelve (12) educational zones in Kaduna State including Giwa educational zone. The study focused on only six (6) senior secondary schools, four of which are mixed (boys and girls) while two was only females. The selected senior secondary schools were be those that have SSII qualifying mock result which enabled the researcher to collect data about the students' academic achievement on the two core subjects that is English and Mathematics.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

The chapter examined the following;

Concept of information and communication technology

Different kinds of information and communication technology

Users of information and communication technology

Gender users of internet

Concept of aggressive behaviour

Factors influencing aggression behavior

Aggression in school surrounding

Classification of aggressive behaviour in school

Media influence on aggressive behavior

Concept of examination malpractice

Theoretical framework of behaviour problems

Social Learning theory

Psychoanalytic theory

Personality theory

Scapegoat theory

Social cognitive theory

Review of related studies

Summary

2.2 Concept of Information and Communication Technology

The concept of ICT entailed three terminologies which are Information, Communication and Technology. Yusuf (2007) observed that proper information promotes the resourcefulness and wellbeing of a person or an organization. However, any information which seeks to promote the impetus for development must be produced at the right time for the right purpose. Meanwhile, Ogun, Sola and Abayade (2005) described communication as the process of transmitting and receiving ideas, information and message. Adeniyi (2006) observed that, technology is product of human thought it is tool men have to developed, to perform certain tasks. Technology also provides humans with means of determining what is happening in the world as well as a means of changing the world to make it more suitable to our own purpose.

Major (2011) there seems to be agreement by writers on this subject that data processed, analyzed, interpreted and made meaningful to the recipient of a message constitutes information. At a basic level, technology is conceptualized as the use of information to gain control over nature in order to survive the complexities and challenges caused by a changing environment and further using the same to build a civilized culture for achieving higher standards of living. However, Information and communications technology is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems. Nwizege (2011) Information and communication technology is the study of the technology used in handling information and its concepts that aids communication. It has been identified by many international development institutions as a crucial element in developing the worlds' poorest countries by integrating markets more accessible. Information and communication technology covers any products that information electronically in a digital form. Ugodulunwa and Mastapha, (2005) Says that ICT

facilities could be used to enhance the nature and mode of assessment and its administration, all of which are very important. The scoring, processing and collating of results could also be improved through the use of computers and computer software. The latter could be used to create an exam or assessment that would cover in-depth cognitive, affective and psychomotor domains. These could be then scored and processed electronically. Computer software that computes item-analysis, item difficulty and Discrimination indices could also be adopted. ICT devices makes it easy to use a computerized table of specifications in constructing and setting test items in order to ensure content validity as questions would cover content and hierarchies making the moderation of questions easier. Lastly, ICT tools could be used in administering and monitoring tests and examinations. Scoring could be done on a conference basis to eliminate mutilations, abuse and corruption with the computers. Teacher-student ratios have grown and there is overt competition for limited resources such as halls, equipment, classrooms, seats and the like. These competitions for scarce resources are capable of promoting different dimensions of conflict and misconduct and creating poor learning and a poor learning environment. The provision and use of computers and other election devices can create better learning. E-leaning facilities are capable of enabling individualized learning, and make learning more attractive and motivating. This is because new knowledge and better ways of doing things intrigue learners and generate curiosity. The traditional classroom setting for teaching and learning can be substituted with computer mediated communication (CMC), teamwork, conferencing and discussion. The ICT devices when appropriately adopted can improve the quality of our students and graduates relative to other institutions around the world.

Whitty and McLaughlin (2007) previous studies have been inconclusive about the relation between Internet activity, internet practice, technology acceptance and internet effects especially

in academic setting. Beside, a majority of studies were undertaken in the Western countries. However, less has been researched in countries of Asia-Pacific. In addition, all these studies have a number of weaknesses. They are based upon single institution survey and complete picture of academic adoption cannot therefore be analyzed. In the present study, an attempt is made to cover important variables that might influence Internet effects among youth in academics. Asaolu (2006) Affirmed that ICT encompasses all those technologies, that enable the handling of information and facilitate different forms of communication among human actors, between human beings and electronic systems among, electronic, the use of the MS word to process a document and later sent via electronic mail.

2.2.1 Different Kinds of Information and Communication Technology

The Computer (Internet)

The internet is made up of all networks that operate to form one seamless good for collective users. The internet links millions of computers with each other through the telephone system like spiders web to achieve instant communication. The internet is one of the largest communication networks in the world. The network has rapidly grown to include scientists and researchers in various fields of human endeavor. Schools, business and libraries are not left out in the quest for internet services. However, there are many internet services providers (ISP) in Nigeria today which are promoting internet utilization culture through their services. For instance the Nigeria foremost internet service provider link serve limited which commissioned national VSAT network for the delivery of internet services. Other internet service providers in the country such as Yahoo, Gmail, hotmail, multilink's (UNESCO, 2008).

The use of Computer in Information and Communication Technology

Computers have become an essential part of modern human life. Since the invention of computer they have evolved in terms of increased computing power and decreased size. Owing to the widespread use of computers in every share, life in today's world would be unimaginable without computers. There are many computer uses in different fields of work. Engineers, architects, jewelers and filmmakers, all use computers to design things. Teachers, writers and most office workers use computer for research word processing and emailing. Computers have its dominant use in the educational field which can significantly enhance performance in learning. Even distance learning is made productive and effective through internet and video-based classes. Researchers have massive usage of these computers in their work from the starting to the end of their scholarly work.

- Use of the keyboard and mouse
- Use of productivity tools such as word processing, spreadsheets, data base and graphics programme
- Use of research and collaboration tools such as search engines and email
- Developing an awareness of the social impact of technological change

Global Systems for Mobile Communication (GSM)

Global Mobile Telecommunication press (2007) Explained that GSM is a cellular network, which means that mobile phones connect to it by searching for cells in the immediate vicinity. GSM networks operate in a number of different frequency ranges/separated into GSM frequency ranges from second generation (2G) and UMTs frequency bands for third generation (3G). Most 2G GM networks operate in the 900MHz or 1800MHz bands. Some countries in American (Including Canada & United States) use the 850MHz and 1900MHz bands, because

we're already allocated. Most 3G GSM networks in Europe operate in the 2100MHz frequency bands.

However, in the GSM there are several applications to social networking which are facebook, 2go, whatsapp, opera mini, twitter, eskimi. Information and communication technology through the use of Global system for Mobile Communication (GSM) and email in text message is greatly affecting the writing creativity of youngsters in school. For example; students are in the habit of writing these on the wall; 4k u, u r-2 goo-2, b4gotten, which means fuck you, you are too good to be forgotten. These writing are not only used in text message by students, but they also use them in their notes and in most cases during examination.

Mobile phone

Mobile phone is a portable electronic device used for distant communication. In recent years, mobile phone has evolved from simple communication device into a multi-functional device. Additional functions, such as short text messaging (SMS), electronic mail, Internet access, contact registration, calculator, clock, alarm, recording and photograph displaying, recording and playback of video clips, sending and receiving multimedia messages (MMS), audio recording and playback, etc. has turned the mobile phone into an extremely useful device, whose absence would make active involvement and participation in a modern society not possible.

Smartphone

Smartphone is a device that merges functionality of phones, PDAs, cameras, camcorders and computers. To function properly, Smartphone uses operating system, which is the basis for application development. Some smart phones can be connected to an external screen and keypad, which creates a working environment, similar to that of a laptop or a desktop computer. Some

operating systems for Smartphone are: Google Android, Symbian, Blackberry, Palm Pilot, and Windows Phone.

Personal Digital Assistant (PDA)

Personal digital assistant is a convenient small sized computer. It easily connects to mobile phones and can prove a good solution for less demanding users. As the name suggests, it is a device that fits in the user's palm. Its name directly tells us that this computer is more of an assistant and not a workstation - whose name suggests the superiority in capabilities and computing power, especially in comparison with PDA.

2.2.2 Users of Information and Communication Technology

Children and adolescents are the most frequent users of information and communication technologies (ICT) in the home. For many adolescents, the internet is the main source of information and entertainment, and is an important tool for communication. Public and academic discourse on the relationship between youth and ICT is ambivalent. On the one hand, many commentators are enthusiastic, maintaining that internet applications provide children with new opportunities for creativity and active learning. Moreover, social policy emphasizes the development of skills such as computer literacy because these skills are believed to be necessary for an increasing number of occupations. But others are concerned about the negative effect of the internet on teenagers. Because access can seldom be regulated effectively, youth are at risk of being exposed to inaccurate information and abusive content ((Livingstone & Helsper, 2007).

The existence of a large number of pornographic websites has driven this concern. While sexually explicit material comprises only a small fraction of online content, that fraction is highly visible and accounts for significant web traffic; the industry has shown tremendous growth in the past few years. Furthermore, pornography on the internet is thought to be unique in

form (Buzzel, 2005) sexually explicit materials posted on the net differ from traditional forms of pornographic materials such as magazine and movies in several ways. First, the content is widely available on pay sitter, but also in online forums, peer to peer file sharing, bulletin boards, blogs and email communication. Second materials are presented in multimedia format such as digitized moving images, animated sequences, sexually explicit texts, hot chats, and interactive sexual games that address users' specific tastes. Third, cases are known in which user become producers of pornographic materials, taking movies or photos of themselves or others and circulating them on the net (Greenfield, 2004).

However, as the internet has created an unprecedented opportunity for individuals to have “anonymous” access to a virtually unlimited range of websites, the perception are that x-rated materials are free available, and used by anyone. Hence concern is expressed that children and young adolescents can be exposed by chance, and that such exposure can have detrimental effects on sexual attitudes and behavior (Livingstone & Halspes, 2007). The internet has been portrayed as conducive to deviant behaviour because of its use in isolation from others, as opposed to consumption of other media, which is in the presence and even with the collaboration with others. The relative anonymity of the medium may be conducive to activities that an individual's does not usually engage in when he/she is part of a group and therefore conforms to mainstream norms of behaviour. It is reasonable to assume that opportunity does not adequately explain deliberate pornographic consumption. An important observation from the uses and gratification theory is that media consumers are active in their choices of media content. The web is an excellent of a medium that people actively use, and they not exposed by chance but because they select specific sites. Navigating the web involves actively choosing a point to and click on links that appear on most pages. Certainly users have different social and psychological needs

that motivate their choices. These needs compel people to seek information or enter into communication, and they have expectations about what they will gain from such activities. Due to these motives and expectations people select particular media channels, sources and content. Different people will use the same channels, sources and content for quite diverse reasons and with contrasting expectations (Larose, Lange, Love, & Wu, 2005).

2.2.3 Gender Users of Internet

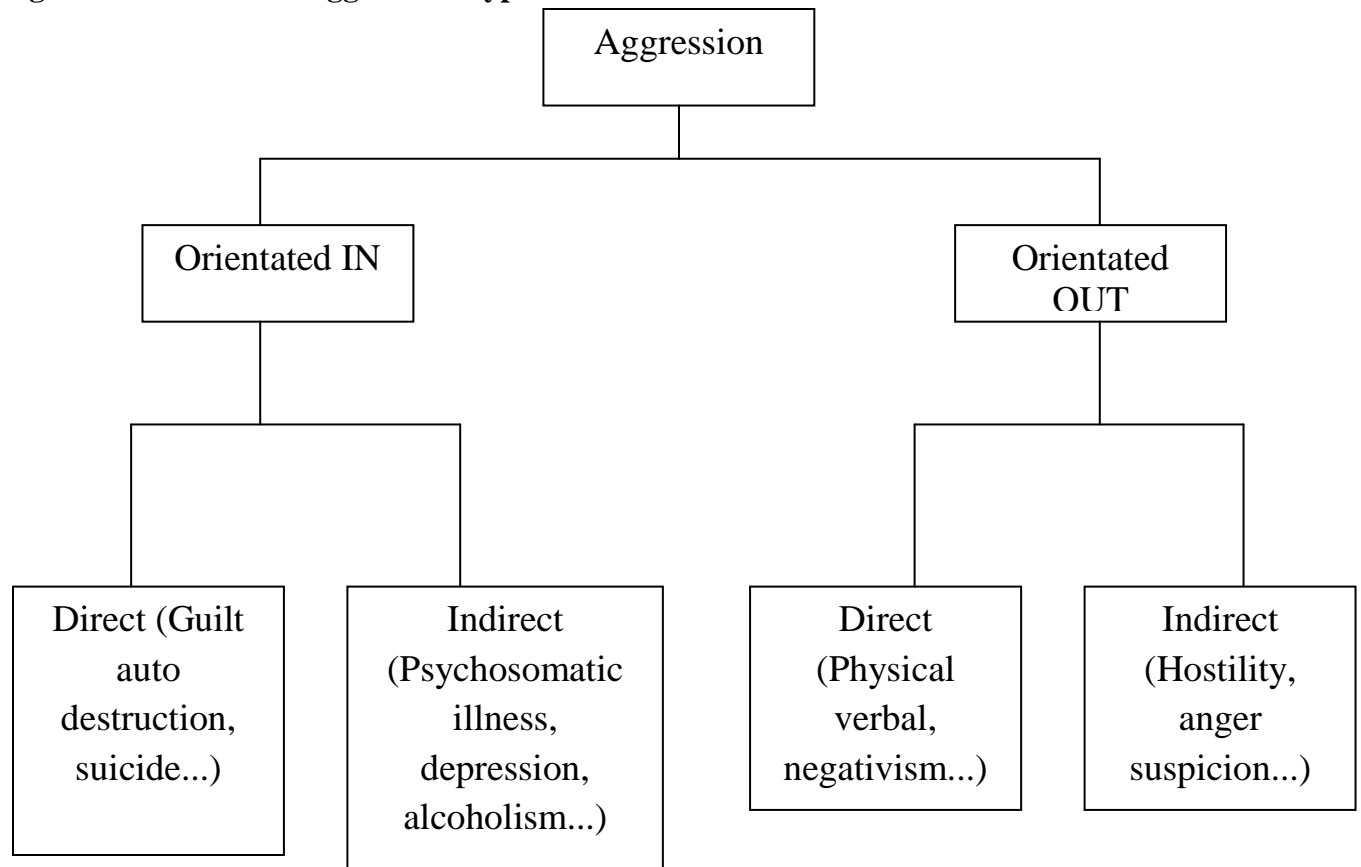
Gender is a variable that affects internet use in general and pornography search in particular. Studies have shown that males are more likely to search for instrumental information such as getting news, seeking financial information and engaging in online commerce. Women are more likely to seek health and religious information and to communicate with family and friends (Howard, Rainer, & Jones, 2001) Differential internet use according to gender was reported by Ferguson and Perse (2000) who found that gender was the most consistent predictor of types of web sites visited. This difference also found to hold for pornographic consumption, as a much higher percentage of females expressed negative attitudes, and reported less exposure to pornographic content on the internet than males (Troeen, 2002). Accordingly controlling for the strength of bonds to parents school and society, boys will report more frequent search for x-rated materials than girls. However, studies on deviance have reported a relationship between religiosity and deviant behaviour in general and pornography in particular. A firm link has found between religiosity and condemnation of pornography. To the extent that attitudes predict behaviour it can be assumed that condemnation of pornography, which is so common among religious individuals, leads to abstaining from searching for pornography. Furthermore, adolescents attending religious schools might be under closer surveillance in their behaviour than those attending secular schools, and in that case seeking online x-rated materials may sever the

bonds that the religions students to their schools (Stack, 2004). Thus, the negative effect of religiosity on online x-rated material seeking might be the result of belonging to a community in which deviant behaviour is condemned, and individuals retrain from participation in such behaviours to avoid informal and formal social sanctions. Accordingly, religiosity will be negatively related to frequent search for x-rated material on the internet and positively related to positive users of the technology.

2.3 Concept of Aggressive Behaviour

Aggressive behavior, as a way of coping with stress evolves on the basis of unsuccessful conflict solving and is, therefore, a result of coexistence of individuals and environmental factors. When a conflict appears, the first to follow is the evaluation of importance of the conflict for an individual involved. This evaluation is followed by a decision, regarding the conflict solving strategy. When certain conflict is evaluated as an important one and when strategies for solving the conflict are limited, the probability of aggressive behaviour increases (Krall, 2003). Krall (2003) also says aggressive behaviour put different emphasis on different aspects such as characteristics of individual (temperament, learnt behaviour, experiences of aggressive behaviour, physical illness), characteristics of the environment (Frustration, threats, stress, social dynamics). Institutions (school work, bad working conditions) and cultural influence (social understanding of aggressive behaviour, diametrical expectations, structural unemployment, and poverty).

Figure 2.3.1 Different Aggression Types



Source: Lamovec, 1988. Different Aggression Types retrieved 2015.

2.3.1 Factors Influencing Aggression Behaviour

- i. **Biochemical Factors:** Which includes testosterone; male gender, low cholesterol, low nitro oxide, low serotonin, dysfunctionary amygdala, frontal lobe lesions.
- ii. **Psychological Factors:** Which includes low arousal, brain dysfunctions, anxiety, hyperactivity, early childhood aggression, early antisocial behaviour, positive attitudes towards aggressive behaviour and low IQ are found to be associated with higher aggression.

- iii. **Chemical Factors:** Which includes ethanol, methamphetamine, alcohol, cocaine, marihuana, lead, apomorphin, fluoxetine and caffeine?
- iv. **Sociological Factors:** Which includes transformation of sex roles in females, competition, other's aggressive behaviour, failure, parental criminality, neglect, abuse, indulged or strict discipline, inconsistent punishment, low parental involvement, poor family bonding, and parent's support of punishment, frequent residential moves, parent-child separation, educational failure, low bonding to school and dropping out of school?

2.3.2 Aggression in School Surrounding

According to Popp (2003) Opined that most common types of aggression observed in school setting are physical, verbal and psychological aggression.

However, these types are commonly observed, especially physical aggression, due to the ease of spotting. The most frequent aggression found in school surroundings is physical and verb aggression. By verbal aggression which includes different forms of calling names, nicknames, and spreading rumours that lead to social stigmatism and exclusion. While physical aggression in school involves vandalism, fights, blackmailing.

2.3.3 Classification of aggressive behaviour in school

There are of course all kinds of aggression found in the school surroundings but physical and verbal aggression are most common and nevertheless, easier to observe. A variety of different forms of aggression found in schools was show in the table below.

Figure 2.3.3 Classification of aggressive behaviour in school.

Latent Aggression		Manifest aggression
Being angry, threatening, taking things...	Towards classmates	Torture, blackmail, attacking, attacking with weapons, robbing.
Yelling at, damaging clothes, skipping classes	Towards teachers	Attacking, hurting, threats with knife, stocking, phone aggression, threatening letters...
Spraying, sketching, destroying flowers, throwing bottles, slamming doors, damaging.	Towards objects	Destroying furniture, windows, eliciting fire, damaging car.
Verbal and physical Harassments	Sexual aggression	Rape
Pulling hair out, scratching face	Auto aggression	Suicide

Source: Adopted (Krall, 2003).

2.3.4 Media Influence on Aggressive Behaviour

Frey and Fisher (2004) some programme have been reported to have negative values such as violence, aggressive behaviours and disrespect to parents or adults, teachers and others, which has to a certain extent influenced behaviours of our young generation today.

The influence could either be positive or negative depending on the contents viewed. There are quite members of children's animated television series which are based on superheroes stories involving violence and fighting scenes. This could convey wrong ideas to a child that a problem can be solved through aggression because children tend to imitate what they see and hear, including from television. Violence presented on the screen such as movies or video games could lead to Children's belief that being aggressive is a good way to get what they want (Center on Media and Child Health, 2008).

Okan (2003) information and communication technology (ICT) which is available today, various resources could be accessed via the internet and CD-ROMs with a combination of text,

audio, graphics and animation, computer technology enriches education in a way that traditional teaching media such as books, video, role-plays and so forth might look irrelevant and tedious, Children are now increasingly using media at schools, with family or friends. Research has also found that playing game is the most common way of user's ages 2 to 18 years old using computers. Nonetheless, it is not the medium (media) itself that affects children's perceptions, attitudes or awareness but the content with which they carry out activities with specific conditions and goods. A commonly shared belief strongly influenced by frequent media reporting is that aggressive behaviour in schools is increasing.

2.4 Concept of Examination Malpractice

Hambagda (2010) Examination malpractice is therefore, a situation where students, candidates and teachers engage in acts which do not conform with laid down examination procedures and practices and therefore not acceptable to set standards of behavior. Examination malpractice has continued to be a serious matter of concern in our educational institution has continued to attract public attention. It has moved from simple act of copying suspected answers on thighs, palms, and pieces of papers, to a clear situation where question papers are put on sale days before the actual date of examination. Situation exists where candidates come out of ongoing examination hall to obtain worked out answers and leisurely return to the examination hall. There are GSM and others, some very sophisticated and others not so sophisticated. In extreme cases, however, culprits have taken it upon themselves to brutalize arrest or even murder invigilators who refuse to compromise. Oredein (2012) Viewed examination malpractice as any form of illegal and unauthorized assistance given to a candidate or student in an examination. In other word, it is an illegal behaviour by a candidate before, during or after the examination, so that he /she can easily or cheaply attain success.

2.5 Theories of Behaviour Problems

There are number of theories used by psychologist and psychiatrists to explain the issues surrounding behaviour problems manifested by some individuals. For the purpose of this research, few theories were discussed.

2.5.1 Social Learning Theory

In social learning theory Bandura (1977) states behavior is learned from the environment through the process of observational learning. He believes that humans are active information processors and think about the relationship between their behavior and its consequences. Observational learning could not occur unless cognitive processes were at work. Children observe the people around them behaving in various ways. Individuals that are observed are called models. In society children are surrounded by many influential models, such as parents within the family, characters on children's TV, friends within their peer group and teachers at school. These models provide examples of behavior to observe and imitate, masculine and feminine, pro and anti-social etc. Children pay attention to some of these people (models) and encode their behavior. At a later time they may imitate the behavior they have observed. They may do this regardless of whether the behavior is 'gender appropriate' or not but there are a number of processes that make it more likely that a child will reproduce the behavior that its society deems appropriate for its sex.

First, the child is more likely to attend to and imitate those people it perceives as similar to itself. Consequently, it is more likely to imitate behavior modeled by people of the same sex.

Second, the people around the child will respond to the behavior it imitates with either reinforcement or punishment. If a child imitates a model's behavior and the consequences are

rewarding, the child is likely to continue performing the behavior. If parent sees a little girl consoling her teddy bear and says “what a kind girl you are”, this is rewarding for the child and makes it more likely that she will repeat the behavior. Her behavior has been reinforced (strengthened). Reinforcement can be external or internal and can be positive or negative. If a child wants approval from parents or peers, this approval is an external reinforcement, but feeling happy about being approved of is an internal reinforcement. A child will behave in a way which it believes will earn approval because it desires approval. Positive (or negative) reinforcement will have little impact if the reinforcement offered externally does not match with an individual's needs. Reinforcement can be positive or negative, but the important factor is that it will usually lead to a change in a person's behavior.

Third, the child will also take into account of what happens to other people when deciding whether or not to copy someone's actions. This is known as vicarious reinforcement. This relates to attachment to specific models that possess qualities seen as rewarding. Children will have a number of models with whom they identify. These may be people in their immediate world, such as parents or elder siblings, or could be fantasy characters or people in the media. The motivation to identify with a particular model is that they have a quality which the individual would like to possess. Identification occurs with another person (the model) and involves taking on (or adopting) observed behaviors, values, beliefs and attitudes of the person with whom you are identifying. The term identification as used by Social Learning Theory is similar to the Freudian term related to the Oedipus complex; they both involve internalizing or adopting another person's behavior. However, during the Oedipus complex the child can only identify with the same sex parent, whereas with Social Learning Theory the person (child or adult) can potentially identify with any other person. Identification is different to imitation as it

may involve a number of behaviors being adopted whereas imitation usually involves copying a single behavior. Siegal (1992) Explained that Bandura believed that aggression is learned through a process called behavior modeling, that individuals do not actually inherit violence.

2.5.2 The Psychoanalytic Theory

Sigmund, F. (1916) (as cited in Mukherjee, 2002) Sigmund Freud, who is the father of psychoanalytic theory, maintained that early experiences influence behaviour later in life. The psychoanalytic writers are of the view that much of the adults behaviour are due to certain instinctive drives and to early reactions of parents and siblings. They stressed the important role of early life experiences in determining certain drives, like the need for food, love and security are gratified during every interactions, a child would live infancy with certain degree of conflict with the resultant problem behaviour. The psychoanalysts maintain that the development process consist of fixed stages through which every child passes in sequential order and that the experiences that occurred at each stage of development could affect individuals character traits for life. Many children from high income homes may be exposed to experiences and reactions that favour cognitive development (abundance of toys exposure to different types of intellectual stimulating situations, parent who have the time to engage them in frequent conversations), which may in one way or the other affect their behaviour and cognitive life.

2.5.3 The Lewin's Teld Theory of Personality

Kurt Lewin (1890) (as cited in Foschi, R. & Lombardo, G.P (2006) a German – American psychologist developed a field of personality theory, popularly referred to as Lewin's Teld theory of personality. Lewins viewed child behaviour by plotting the behaviour visually as a map of the child's life space. The life space according to Lewins includes all the different forces influencing the child making a decision about how to act. These forces include pertinent

memories of the past that the child brings to bear on the incidences, the child physical state at the time (such as the degree of hunger or fatigue) and whatever the child perceives at the moment in the environment. Some of these forces push the child to act in one way or the other. The Lewinian view point is adopted in the present research because a child's behavioural problem would be viewed with reference to himself, his physical and psychological environment.

2.5.4 The Scapegoat Theory

Mukherjee (2002) pointed out the scapegoat theory, which was developed (as cited in Dollard, 1962) frustration aggressions, which states that aggression is a natural and inheritable consequence of frustration. (Bandura & Walters, 1977) postulate that when a frustrating agent is feared, aggression will take place outside the home, directed towards some less fearful agents (scapegoats), which explains why some minorities of population are continually being harassed by the majority of the same. A scapegoat is a person or category of people typically with less power whom people unfairly blame for their own trouble. When problems occur people do not like to blame themselves, they thus actively seek scapegoat onto which they can display their aggression. Scape-goating increases when people are frustrated and are seeking an outlet which is anti-social and unethical for their anger. In an experiment performed with hungry rat from laboratories, showed that subjects manifest aggressive behaviour after some frustrating experience in finding no food instead a small doll which they grieved at in another instance they fight one another.

2.5.5 Social Cognitive Theory (SCT)

According to Bandura (1977) Social cognitive theory (SCT) refers to a psychological model of behavior that emerged primarily, Initially developed with an emphasis on the acquisition of social behaviors, SCT continues to emphasize that learning occurs in a social

context and that much of what is learned is gained through observation. SCT has been applied broadly to such diverse areas of human functioning as career choice, organizational behavior, athletics, and mental and physical health. SCT also has been applied extensively by those interested in understanding classroom motivation, learning, and achievement.

Social Cognitive Theory is a learning theory based on the idea that people learn by observing others. These learned behaviors can be central to one's personality. While social psychologists agree that environment in which one grows up contributes to behavior, the individual person (and therefore cognition) is just as important. People learn by observing others, with the environment, behavior, and cognition all as the chief factors in influencing development in a reciprocal triadic relationship, each behavior witnessed can change a person's way of thinking (cognition). Similarly, the environment one is raised in may influence later behaviors, just as a father's mindset (also cognition) will determine the environment in which his children are raised.

The core concepts of this theory can be explained by Bandura's schematization of triadic reciprocal causation in his book chapter, the schema shows how the reproduction of an observed behavior is influenced by the interaction of the following three determinants: first, Personal: Whether the individual has high or low self-efficacy toward the behavior (Get the learner to believe in his or her personal abilities to correctly complete a behavior). Secondly, Behavioral: The response an individual receives after they perform a behavior (Provide chances for the learner to experience successful learning as a result of performing the behavior correctly). Thirdly, Environmental: Aspects of the environment or setting that influence the individual's

ability to successfully complete a behavior (Make environmental conditions conducive for improved self-efficacy by providing appropriate support and materials).

Social cognitive theory revolves around the process of knowledge acquisition or learning directly correlated to the observation of models. The models can be those of an interpersonal imitation or media sources. Effective modeling teaches general rules and strategies for dealing with different situations.

To illustrate that people learn from watching others, Albert Bandura and his colleagues constructed a series of experiments using a Bobo doll. In the first experiment, children were exposed to either an aggressive or non-aggressive model of either the same sex or opposite sex as the child. There was also a control group. The aggressive models played with the Bobo doll in an aggressive manner, while the non-aggressive models played with other toys. They found that children who were exposed to the aggressive models performed more aggressive actions toward the Bobo doll afterward, and that boys were more likely to do so than girls.

Following that study, in order to test whether the same was true for models presented through media, Bandura constructed an experiment entitled "Bobo Doll Behavior: A Study of Aggression." In this experiment Bandura exposed a group of children to video featuring violent and aggressive actions. After the video he then placed the children in a room with a Bobo doll to see how they behaved with it. Through this experiment, Bandura discovered that children who had watched the violent video subjected the dolls to more aggressive and violent behavior, while children not exposed to the video did not. This experiment displays the social cognitive theory because it depicts how people reenact behaviors they see in the media. In this case, the children in this experiment reenacted the model of violence they directly learned from the video.

Observations should include: Attention, which is when observers selectively give attention to specific social behavior depending on the accessibility, relevance, complexity, functional value of the behavior, or some observer's personal attributes such as cognitive capability, value preference, preconceptions. Retention, which is being able to observe a behavior and subsequent consequences, then converting that observation to a symbol that can be accessed for future reenactments of the behavior. Note: When a "positive behavior" is shown a positive reinforcement should follow, this parallel is similar for "negative behavior". Production is when the symbolic representation of the original behavior is translated into action through reproduction of the observed behavior in seemingly appropriate contexts. During reproduction of the behavior a person will receive feedback from others and can adjust their representation for future references. Motivational Process, is when a behavior will be reenacted depending on the responses and consequences the observer receives when reenacting the behavior.

Modeling does not limit to only live demonstrations but also verbal and written behaviour can act as indirect forms of modeling. Modeling not only allows students' to learn behaviour that they should repeat but also to inhibit certain behaviours. For instance, if a teacher glares at one student who is talking out of turn, other students may suppress this behavior to avoid a similar reaction. Teachers model both material objectives and underlying curriculum of virtuous living. Teachers should also be dedicated to the building of highself-efficacylevels in their students by recognizing their accomplishments.

2.6 Review of related studies

Studies were carried out at different time and levels on ICT with a view of finding out the extent to which it relates to the variables. Igbo, Egbe-Okpenge and Awopetu (2013) The study

investigated the influence of information and communication technology on behavior problems of Nigerian youths. A self-administered survey was conducted with 550 convenience samples of undergraduates in their universities in Benue state, Nigeria. Four research questions and four hypotheses guided the study. Descriptive statistics, mean, standard deviation and multiple regression statistics were used to analyze the data. The empirical results indicate that there is a joint significant influence of ICT, school, sex and age on cybercrime, aggressive behavior, truancy and sex crimes among youths. However while ICT remained constant and significant, none of the other variables contributed significantly independently. The study recommends that guidance counselors and clinical psychologists at both post primary and tertiary institutions should use appropriate skills and techniques to assist in curbing the identified behavior problems.

Buzzell, (2005) Carried out a study using the GSS in the US explored the link between technology and pornography consumption and found that adult consumption of pornography has decreased through time. While 31 percent reported going to the movies to watch an X-rated movie in the 1970s, and 32 percent watched an X-rated VCR in the 1980s, only 25 percent visited pornographic sites in 2000. In all the cases pornographic use was associated with demographic characteristics such as gender and socio-economic status, indicating that consumption of X-rated material is not random. In Israel, Internet use is rapidly expanding. In 1998 only 11% of Israeli Households reported having access to the Internet; the figure had risen to 58% by 2004. Adolescents' use of the Internet has expanded even faster. While in 2001 only 35% of the adolescent population had access to the Internet, by 2004 65% had access to it. As to purpose, the overwhelming majority of adolescent Internet users reported that it was mainly for social purposes. Almost 20% of these respondents said that they met new people through the net

Mesch and Talmud,(2006) In Israel, as elsewhere, adolescents represent a significant proportion of Internet users and thus call for special attention.

Williams and Skoric (2005) conducted a one-month longitudinal study of a violent “massively multi-player online role-playing game” (MMORPG), and found no strong effect associated with aggression caused by the game. Baldaro (2004) evaluated the short-term effect of playing a violent computer game on physiological and psychological indicators with a sample of 22 male participants. They discovered that participants who played a violent computer game exhibited higher anxiety and increased systolic blood pressure yet no greater hostility compared to participants who played a non-violent computer game. In addition, a study conducted by Huesmann and Taylor (2006) failed to document a meaningful long-term effect, even though they were able to demonstrate short-term increases in aggression. Salman and Oyeniya(2012) conducted a study on information and communication technology provides Nigeria a new threshold for greater economic, social and cultural renaissance. It highlights how the internet, information and communication technology can positively affect an established evolving native culture. Emphasis was equally laid on degree of accessibility and use of this revolutionary trend in enhancing social competence of individual for nation building. Despite the shortcomings of utilizing this emerging trend, empirical study was carried out using a particular sample size of 206 out of 406 populations. The result shows that more than 60% of group sampled sizes were incapacitated in accessing information and communication technology. Hence, six strong recommendations were made in improving the usage of information and communication technology for National Development.

Fashion, Gentile, Lynch, Linder, and Walsh (2004) investigated and supported the significant effects of violent games on adolescents’ hostility, aggressive behavior, and school

performance. Anderson and Murphy (2003) especially examined the impacts of exposure to violent computer games on young women, and found that even brief exposure to a violent game increased aggressive behavior. In addition, they suggested that the effects of violent games on aggression might be greater when game characters played by game users are of the same gender. Bartholow and Anderson (2002) investigated sex differences in the effects of violent games on aggressive behavior and found greater effects for men than for women. A similar result was found in a German context. Krahe and Möller (2004) uncovered that there were significant gender differences in usage and attraction to violent games, which ultimately influenced the acceptance of norms condoning physical aggression. Some studies have focused on the desensitization effect of violent games. Desensitization, which refers to the attenuation or elimination of cognitive, emotional, and behavioral responses to a stimulus Rule and Ferguson,(1986), is a strong mechanism that helps reduce psychological and/or physiological reactivity to real violence. In an experiment that measured heart rate (HR) and galvanic skin response (GSR), Carnagey, Anderson, and Bushman (2007) found that participants who played a violent game had lower HR and GSR while viewing filmed real violence compared to participants who played a non-violent game, indicating a physiological desensitization to violence. Funk, Baldacci, Pasold, and Baumgardner (2004) claimed with a more moderate tone that exposure to computer game violence was associated with lower empathy and stronger pro-violence attitudes, yet they could not identify strong relationships between exposure to real-life violence and measures of desensitization, found the desensitization effect only for men with a sample of college students.

There have been a series of attempts to synthesize the existing literature, although they discovered somewhat contrasting findings. Anderson,(2004) updated the effects of playing

violent computer games with a meta-analysis based on 46 studies, and argued that more studies of violent games corroborate significant, though not large, effects of computer game violence on aggression. According to the study, the effect sizes of exposure to violent games on aggressive behavior, cognition, affect, pro-social behavior, and physical arousal were, both in experimental and correlational studies, about 0.20 in absolute value, confirming his and others' previous studies. The claim of the significant effects of violent games on aggression does not come without criticisms. These criticisms are mainly centered on methodological issues. Some studies listed the following as the main problems of the existing studies on computer game violence. First, the definitions of aggression are not clear-cut. For instance, in the worst case, the terms, "aggression" and "violence" are used interchangeably, making it almost impossible to distinguish independent and dependent variables from each other. Second, there are few standardized, reliable, and valid measures of aggression and exposure to violent games. Many studies that examined the negative effect of violent games have been conducted in isolation. In other words, studies employed either different type of games or different amount of game exposure time for experiments. Moreover, in many experimental studies participants played the game in a single-player mode in isolation contrary to reality in which users routinely play games with their friends or other associates Olson, (2004) As a consequence of the lack of appropriate measures and realistic study settings, a general synthesis of existing studies is hard to achieve. Third, the causal relationship between violent games and aggression in real life is not as straightforward as experimental conditions. It means that, it is not easy to take into account all possible mediating variables such as gender, age, personality, and so forth, and a relationship of the opposite direction aggressive people seek out violent computer games, or a two way relationship reinforcing or reciprocal, is also plausible. Fourth, many studies have been

conducted with small, non-random, or non-representative samples. Accordingly, the statistical effect size from these studies is relatively too small for physical aggression, and moderate at best for aggressive thinking. Finally, as Anderson (2004) lamented, there is still a paucity of longitudinal studies which could confirm the effect of violent games on a long-term basis. Given that the study of computer games is relatively an emerging field compared to the established research tradition of TV violence, deficiency of serious longitudinal studies is understandable. Yet, without longitudinal studies, it is hard to not only prove the effect of violent games but also triangulate the existing findings (Williams & Skoric, 2005) In addition to these methodological problems, some argue that, regardless of increase in the number and availability of violent computer games, violence crime has been decreasing in reality (Olson, 2004) and thus the claim that violent games cause aggression is simply misleading. Oketunji (2001) shares the view about the world being a “global village’ with the revolutionary convergence of the computer and communication technologies. This is the indication that the world has been revolutionalized with the advent of these technologies. The big question then is, with this revolution, how have the less developed nations availed themselves the opportunity of the new trends to upgrade their social competence for national development? In his own submission, Adedeji (2001) expresses the view that “the emerging global trend in information technology and the concomitant impact on the provision of information services coupled with a compelling need for a continuing education on the state of the art, make it more imperative for libraries and information centers to continually assess its relevance within a dynamic environment as ours”. This indicates that for libraries and information centers to be socially relevant in the technological age, they have to be more dynamic and reject conservatism. Oketunji (2001) stresses the function of the internet as providing a way for researchers to have better access to each other and to tools that facilitate their researches. He maintains that internet could provide much more for educational institutions and offers the capability to conduct remote classes; provides access to a tremendous variety of information, allows access to remote libraries, and creates an environment where students can have innovative

cooperative learning experiences. So, the opportunity exists for it to revolutionize education. Oketunji (2000) wrote that information technology as a term encompasses the notion of the application of the ICT for the handling, generation, storage, processing, retrieval, and dissemination of information. This definition implies that it is restricted to system-dependent upon a micro-electronic based combination of computing and telecommunication technologies.

The above implies that information technology has to do with the handling of information and application of technologies from the generation stage to dissemination. Dike (2000) considers a situation whereby information and computer technologies are seen as synonymous to be tempting and perhaps shortsighted. In keeping the full range of media in view however, it will be desirable to understand the specific purposes and situations in the application of information technology in three areas: namely.

- a. Preservation of Information
- b. Documentation; access to information; and
- c. Resources for learning.

Thus, an understanding of information technology could come in the forms of three divisions, namely; as an enabler of innovation, as a support for information processing tasks and as a “co lapses” of time and space. On the other hand, the trend in communication technology today is info-mobility. This has to do with the recent communication technologies such as wireless, mobile phone and so on, which do not require for traditional phone or communication systems. There are other communication technologies that could facilitate social integration such as fax-machine, e-mail, and telephone. It is important to understand that the nature, quality or quantity of information to a greater extent, determines the degree at which communication takes place.

Lanfranco (1997) in a response to an interview question commented on the need and success of ICT programmes in Africa thus: They were important for the strengthening of Civil Society Organizations under apartheid (in South Africa). They are becoming increasingly important for education and training. In Francophone Africa, there is a network of AIDS education research sites where each researcher; and epidemiologist has an ordinary notebook computer. They dial-up e-mail and they file their reports, they coordinate the information and they do their data analysis-all electronically.

Deaney, Ruthven and Hennessy(2003)conducted a study that explored pupils' views of the use of information and communication technology (ICT) within subject teaching and learning. Members of three year cohorts (Years 8, 10 and 12) in six English secondary schools took part in focus group interviews during the first half of 2000. The views elicited in the course of the 27 interviews are summarized in terms of six themes. Pupils saw computer-based tools and resources as helping not just to affect tasks and improve presentation, but also to refine work and trial options. They associated the use of such tools and resources with changes in working ambience and classroom relations, as well as with raised interest and increased motivation on their part. Finally, while pupils welcomed opportunities for independent working mediated by ICT in which they could engage more directly with appropriately challenging tasks, they were concerned that this reshaping of learning might be displacing valuable teaching.

Novo, Pereira and Matos (2014). Carried a research on information and communication technology (ICT) leads to a greater social visibility of phenomena related to aggression in cyberspace. This research aims to study the dark side of online interpersonal communication among adolescents, in particular, the frequency of perpetration of aggression in cyberspace (cyber-stalking), the overlap between victimization and offending and the dynamics of parental

supervision and/or involvement. The study was conducted on 627. Portuguese adolescents (12-16 years old) and 586 parents, the results reflect a worrisome frequency of attacks in cyberspace that reinforces the trend found in previous international studies. The findings also show a high overlap between victims and offenders and the influence that parents can have on the aggressive behaviour of their adolescent learners in the virtual environment.

Weatherbee (2009) Conducted a study on the misuse of information and communications technology (ICTs) in the workplace is a growing problem that is expected to continue to trend upward. The consequences of this form of behaviour range from minor outcomes with little impact, to more serious outcomes with significant negative impacts to individuals, groups, and even for entire organizations. There is a major concern around the increasing gap between the current use of technologies for teaching and learning in schools and the daily experiences that pupils have with technologies outside of school. Attwell (2007). Expresses this most starkly when he warns that schools may become simply irrelevant to the day to day social life of young people. Christopher, (2007) says: “While many kids’ social life hinges on digital social networks, many schools have not figured out how to tap into their power. Instead students code switch, they use their MySpace, Face book, and del.icio.us accounts for their personal life and drop them in their school life.”

IpsosMORI’s Great Expectations study (2008) confirmed this dislocation between the ways students used online software in their social and learning lives. Much has also been written about how education should respond to these new ways of using technology. Of particular interest and relevance is Helen Beetham, Lou McGill and Alison Littlejohn’s study on ‘Thriving in the 21st Century: Learning Literacies for the Digital Age’ (2009). The report is part of a major study in English and Scottish Higher Education and Further Education on behalf of JISC. This

study found that technology is integral to learners' lives. Given that for them all learning is potentially supported by technology, the term 'e-learning' is meaningless.

The UK National Union of Students has recently completed a major report for the Higher Education Funding Council entitled 'Student perspectives on technology – demand, perceptions and training needs (2010). A survey undertaken as part of the research found: 72.8 per cent of respondents used ICT for both fun and for their studies, and 43.3 per cent preferred to use a combination of both printed and electronic resources for their work. 90.1 per cent agreed that the internet has benefited their studies. As to whether ICT has improved their learning experiences, 77.7 per cent agree versus only 5.2 per cent in disagreement. ICT skills – 81 per cent agreed that their ICT skills were self-taught, with 88.6 per cent agreeing that they were effective online researchers. Opinion was divided over whether mobile phones or PDAs should be used to assist learning 37.3 per cent agree, 35.4 per cent disagree and 27.4 per cent remain neutral 42.9 per cent would like academics and teachers to use ICT more. There was a common request for more skills training, particularly around how to effectively research and reference reliable online resources. Students seem concerned about a perceived lack of formal research skills instruction, which maybe suggests broader concerns with education and accountability beyond the ICT sphere. Training in specific programs is also commonly desired; however, primarily the skills required are not technological, but academic. From the viewpoint of teaching and learning, the report found that students are concerned about the ICT competency of lecturers and academic staff. The report says there are varying levels of ICT competence on the part of lecturers and staff and, whilst some are clearly skilled or at least able to function in an IT setting, others lack even the most rudimentary IT skills; 21 per cent of students thought their lecturers needed additional training. The report also found opinions to be fundamentally divided over e-learning,

especially taking into consideration course type and exposure to ICT and both significant advantages and disadvantages were raised in all of the qualitative research with the students. The reality may be that different learners may use technologies in different ways. Beetham et al (2009). Report that learners want meaningful choices about how they learn, with and without ICT, and that many learners use technology to multi-task while some find being online a distraction from study. But within institutions, students' use of technology is largely led by tutor recommendations and course requirements and this may be at odds with the way they use it socially.

Whitty and McLaughlin, (2007). Found that personal blogging is a minority activity but one which an increasing number of institutions are demanding. Amongst other findings, Beetham, (2009). Report that learners want meaningful choices about how they learn, with and without ICT, and that many learners use technology to multi-task while some find being online a distraction from study. They found that technology is important to learners at a personal level.

“Learners are attached to their technologies, emotionally and in terms of personal organisation and practice: they benefit from being able to use personal technologies and access personalized services in institutional contexts. Learners are creating their own learning spaces, blending virtual with face-to-face, and formal with social. Informal collaboration is widespread, often facilitated by technology that is under learners' ownership and control. Landow (2006) as sources, claim that “new ways of sharing content online are blurring the boundaries between creative production and consumption, through practices such as commenting, reviewing, re-purposing, re-tweeting, media meshing. Education needs to respond by focusing on creative collaboration. Whilst Beetham, McGill and Littlejohn (2009) found some learners are agile adopters and explorers of technology, they also found that “among novice learners at least, only a small

minority actively explore and investigate the potential of software or technologies. This failure to explore and critically appraise internet sources is a widespread concern in the research.(Enochsson and Rizza, 2009) report that one in three Nordic teachers think that pupils are less critical of content they find on the internet than from other sources. Hargital, Fullerton and Muenchen-Trevino (2010) found that students trust ‘brands’ such as Google, Yahoo and Wikipedia. They place a massive reliance on search engines with a tendency to trust the first hit that comes up and in most cases did not evaluate the credibility of result.

Ofcom’s Media Literacy Audit (2008) also found that enthusiastic take up of new media by young people was not necessarily accompanied by an understanding of how new media content is produced, that is by a capacity to read it critically, or play a role in collaborative co-creation. They go on to say that young people’s confidence in using the internet is not complemented by reflective thinking or appropriate care in use of web sites, potentially exposing them to risks related to accessing unsuitable material or abuse of their personal information. These issues will be explored further in the next section on digital literacy.

Smith, Mahdavi, Carvalho, Fisher, and Russell (2008). describe cyberbullying as an “aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself.” The definition contains all relevant aspects of traditional bullying, supplemented by the performance of the behavior via electronic communication technologies. This implies a similarity of traditional bullying and cyberbullying an assumption shared by many scientists dealing with this object of research Raskauskas and Stoltz, (2007). Therefore, it also can be assumed that peer influence mechanisms are very much the same for bullying and cyber bullying. While in theory, cyber bullying bridges the gap between near field communication and public communication,

most researchers treat it as ‘bullying on the Internet’. Following that logic, there are next to no studies dealing with social structures and bullying in cyberspace.

Television and movie violence are the most extensively researched forms of media violence. Studies using all three major research designs have all reached the same conclusion exposure to television and movie violence increases aggression and violence. Experimental studies have shown that even a single exposure increases aggression in the immediate situation. Randomly assigned one group of five- to six-year-old Finnish children to watch violent movies, another to watch nonviolent ones. Raters who did not know which type of movie the children had seen then observed them playing together in a room. Children who had just watched the violent movie were rated much higher on physical assault and other types of aggression. Other experiments have shown that exposure to media violence can increase aggressive thinking, aggressive emotions, and tolerance for aggression, all known risk factors for later aggressive and violent behavior. Many cross-sectional studies have examined whether people who view many violent TV shows and movies also tend to behave more aggressively. Such studies generally find significant positive correlations. One group of researchers studied the links between “aggressive behavioral delinquency,” such as fighting and hitting, and TV violence viewing in samples of Wisconsin and Maryland high school and junior high school students. They found significant positive links between TV violence exposure and aggression for both boys and girls. Another research team reported 49 percent more violent acts in the past six months by heavy viewers of TV violence than by light viewers. Using time periods that range from less than one year to fifteen years. One research team studied a group of six- to ten-year-olds over fifteen years. They found that both boys and girls who viewed television violence committed more aggression (physical, verbal, and indirect) during young adulthood. The study found the same link when the

outcome examined was outright physical violence, such as punching, beating, choking, threatening, or attacking with a knife or gun. This media violence study is one of the few to include measures of violent crime. Because it is a well-conducted longitudinal study, it lends considerable strength to the view of media violence as a causal risk factor for aggression, violence, and violent crime. Interestingly, although frequent exposure to TV violence during childhood was linked to high levels of adulthood aggression, high aggressiveness during childhood did not lead to frequent viewing of television violence in adulthood. The most popular video games played by youth contain violence. Even children's games (as designated by the industry sponsored Entertainment Software Ratings Board) are likely to contain violence. More than 30 percent of games rated "E" (suitable for everyone) contain a violence descriptor; more than 90 percent of age 10 and above (suitable for those ten years and older) contain a violence descriptor. About 70 percent of fourth to twelfth graders report playing "Mature"-rated games (suitable for those seventeen and older), which contain the most graphic violence of all. Research on video game violence is less extensive than that on TV and film violence, but the findings are essentially the same. Experimental studies in field and laboratory settings generally find that brief exposure to violent video games increases aggressive thoughts, feelings, and behavior. For example, one laboratory study assigned children and college students randomly to play either a children's video game that involved shooting cartoon-like characters or a nonviolent children's video game. Later, all participants completed a standard laboratory task that measures physical aggression. Those who had played the violent children's game displayed a 40 percent higher aggression rate than those who had played a nonviolent game. The effect was the same for both elementary school children and college students. In a field experiment, children were randomly assigned to play either a violent or nonviolent video game and then were observed by trained

coders during a free-play period. The children who had played the violent game displayed significantly more physical aggression than those who had played a nonviolent game. To date, the only published longitudinal study that clearly delineates the possible influence of violent video games used a relatively short time span of six months. The researchers conducting the study assessed the media habits and aggressive tendencies of elementary school children, as well as a host of control variables, twice within a school year. The children who were heavily exposed to video game violence early in the school year became relatively more physically aggressive by the end of the year, as measured by peers, teachers, and self-reports. Cross-sectional studies have also found positive correlations between exposure to violent video games and various forms of aggression, including violent behavior and violent crimes. All three types of studies have also linked violent video games to a host of additional aggression-related cognitive, emotional, and behavioral outcomes. Outcomes include more positive attitudes toward violence, increased use of aggressive words or solutions to hypothetical problems, quicker recognition of facial anger, increased self-perception as being aggressive, increased feelings of anger and revenge motives, decreased sensitivity to scenes and images of real violence, and changes in brain function associated with lower executive control and heightened emotion. Mustaffa, Ahmad, and Ishak(2012). Conducted a studies on the usage of technologies within an organization has placed tremendous result in business process transition and increased benefits. The usage of technologies could also be applied in the academic setting in order to enhance universities and institutions' performance and accomplishment. However, research on the issue was scanty. Therefore, this study aimed to investigate the Internet Effect among academic community via empirical technique. Independent constructs were information seeking behavior, technology acceptance and internet practice meanwhile dependent construct of the study was the internet

effect. The study adopted quantitative survey method and simple random sampling approach. Respondents were of 250 university academic staff members; which represented 80% of the response rate. Necessary reliability and validity analysis were performed and achieved. Results revealed model fitted the respondents after modification. The revised structural model demonstrated significant and positive direct relationships between all constructs of the study. Internet technology has brought a radical change in humans' lives; that was originally created as universal instrument of communication by academics and for academics. Over the last several years, information resources and usage via internet has increased considerably. Today, information is gathered easily, effectively and efficiently through the World Wide Web. Nevertheless, the emergence of the World Wide Web, regardless of the advantages, has brought new challenges and problems. The impact of internet is also experienced by the academics. In order to find the extension of internet effect on the academics, it is crucial to look at various factors that influenced the internet effects; which were the internet activity of academics, their information seeking behavior and technology acceptance. Academics generally have three aspects to their daily work: administration, teaching and research. This research concentrates on the latter two aspects, combined with an emphasis on the use of the Internet and electronic resources. Although much research has been conducted on Internet adoption in business environments (Teo & Pian, 2004), only a small number of researchers have examined the adoption of the Internet within the academic environment. Formerly, educational institutions, specifically colleges and universities, are trying to take advantage on delivering course content over the Internet due to the slighter costs compared to delivering course over other medium (Valentine, 2002). In previous research, Lundgren and Nantz (2003) revealed approximately 500,000 courses were available on the Internet in 2003. Nevertheless, prior to commencing a

project of this nature, educational institutions need to understand factors that motivate and determine Internet usage among students and faculty members. This study intends to address this research gap through focusing on establishing the factors that influence Internet usage by faculty members in Malaysian university. The Internet's impact on the use of other media is related to earlier research in media studies that examines the substitutability of the mass media or their ability to stimulate each other (Atkin, 2001). Many commentators hypothesized that the Internet would displace TV or, at least, would reduce its dominance in the American household, much as TV viewing did to listening to the radio, reading magazines, or going to the movies. As Robinson and DeHaan (2006) noted, according to a functional displacement hypothesis, one technology would displace another to the extent that the new technology could be used for similar functions as the old, while offering new opportunities or reduced costs. Comparatively, less research was facilitated on the adoption, diffusion and impact of the Internet among educational setting. Therefore, this study made several contributions to the literature. Firstly, a detailed model that examined the antecedents of Internet effect, consisted of internet activity, internet practice and technology acceptance was presented. Such a model examining the entire chain would enable researchers to test the complete net that lead to theoretical extensions and enhancements Zhu and Kraemer, (2005). Without a doubt, the internet permeated professional life and is promoted as the future way of information transfer. Obviously, therefore, universities and academic institutions are deemed to be the forefronts on the applications of new technologies at present and in future.

Ipsos (2008). Quantitative research was a study that aimed to quantify attitudes or behavioural patterns, measured their underlying variables, compared responses and highlighted correlation. It was achieved via facilitating survey method. Survey method often involved

questioning sample populations that were representative, so that results could be extrapolated to the entire population studied. In this study, the quantitative survey method was deemed more appropriate considering its' incomparable ability to obtain exact information from respondents in time. The study applied a questionnaire-based survey design for data collection. This technique was deemed appropriate technique especially for scattered population since it consumed less amount of time and it was less costly. This method was also chosen due to its expediency when dealing with academics by the use of questionnaires. According to Creswell (2004), a survey design provided a quantitative or numeric description of some fraction of the population. It allowed the researcher to determine the values and relation of variables and constructs as well as provided responses that could be generalized to other members of the population studied and often to other similar population. Other strengths of the survey were replication and its objective ways of comparing responses over different groups, times and places. It also allowed theoretical propositions to be tested in an objective fashion. Moreover, this method through questionnaires would reduce bias given that the researcher's opinion would not influence respondents to answer questions in a certain manner, since there were no verbal or visual clues to influence them. More important, quantitative surveys through questionnaires were easy to analyze. Data entry and tabulation for nearly all surveys could be easily performed via many computer software packages.

In considering these advantages, therefore, this study chose quantitative research via survey method where questionnaires were distributed to the sample of population.

Thomas, Elizabeth, Ewan, Thomas, and James (2012).Examined a literature on computer games and serious games in regard to the potential positive impacts of gaming on users aged 14 years or above, especially with respect to learning, skill enhancement and engagement. Search terms

identified 129 papers reporting empirical evidence about the impacts and outcomes of computer games and serious games with respect to learning and engagement and a multidimensional approach to categorizing games was developed. The findings revealed that playing computer games is linked to a range of perceptual, cognitive, behavioural, affective and motivational impacts and outcomes. The most frequently occurring outcomes and impacts were knowledge acquisition/content understanding and affective and motivational outcomes. The range of indicators and measures used in the included papers are discussed, together with methodological limitations and recommendations for further work in this area. Terrance (2009). Investigated the misuse of information and communications technology (ICTs) in the workplace is a growing problem that is expected to continue to trend upward. The consequences of this form of behaviour range from minor outcomes with little impact, to more serious outcomes with significant negative impacts to individuals, groups, and even for entire organizations. Research into technologically mediated counterproductive behaviour has lagged behind the phenomena, remains limited in scope, and is conducted in disciplinary and theoretical isolation. Conceptual clarity and theoretical synthesis are viewed as critical steps for enabling a strong program of research into this new counterproductive domain. This article proposes a potential approach for fostering conceptual clarity and identifies the necessity for a theoretical model to facilitate future investigation.

Fábio, Filipa, and Marlene (2014). Investigated the increasing diffusion of information and communication technology leads to a greater social visibility of phenomena related to aggression in cyberspace. This research aims to study the dark side of online interpersonal communication among adolescents, in particular, the frequency of perpetration of aggression in cyberspace (cyber-stalking), the overlap between victimization and offending and the dynamics

of parental supervision and/or involvement. The study was conducted on 627 Portuguese adolescents (12-16 years old) and 586 parents. The results reflect a worrisome frequency of attacks in cyberspace that reinforces the trend found in previous international studies. The findings also show a high overlap between victims and offenders and the influence that parents can have on the aggressive behaviour of their adolescent learners in the virtual environment.

The researcher observed that despite the power and importance of the information and communication technology, it has unfolded too much challenges both teachers and students, and because previous researchers concentrated on behavioural problems and that is why the researcher is conducting a research on the influence of information and communication technology on aggressive behavior and academic achievement among secondary school students in Giwa educational zone of Kaduna state.

2.7 Summary

This chapter examined the overview of the content of the whole chapter. The researcher explained the meaning of information and communication technology and aggressive behavior, where the researcher highlighted on the influence of internet and global system for mobile communication (GSM). The researcher analyzed theories that explained the behavior problems like aggressive behavior. From the related studies reviewed in this chapter, evidences beyond reasonable doubt were established that use of information and communication technology was associated with of poor academic achievement among students in Giwa educational zone. Even though, similar researches have being carried out on the same variable in different places and time. But this research was unique because the work focused on the aggressive behavior and the subjects of the research were drawn from level other than that of the previous researchers.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The study presented the methodology that were used under the following; the research design, population of the study, sample and sampling technique, instrumentation, validity of the instruments, reliability of the instruments, procedure for data collection and statistical methods for data analysis.

3.2 Research Design

The researcher adopted the ex-post-facto design. Kalinger (1973) defined ex-post-facto design as a systematic empirical inquiry in which the scientists do not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulatable. Inferences about relations among variables are made without direct intervention from concomitant of independent and dependent variables. This design was chosen because the researcher has little or no control over the variables of the research. The pre-occupation of the researcher was to study the influence of information and communication technology on aggressive behaviour among secondary students in Giwa educational zone. Hence the ex-post-facto research design was the most suitable for this study.

3.3 Population

The population of this study comprised both senior and junior students in secondary schools, Giwa educational zone. There are a total number of thirty three (33) secondary schools both senior and junior in Giwa educational zone, sixteen (16) have senior secondary school

classes, seventeen (17) out of the thirty three (33) schools have junior secondary school classes. These sixteen senior secondary schools have a total number of seven thousand five hundred and seventy one (7,571) students admitted only females students while the remaining fourteen (14) schools admitted both males and females or mixed.

3.4 Sample and Sampling Technique

The sample for study was drawn from six (6) senior secondary schools within the three local government areas which comprised Giwa, Kudan and Sabon Gari LGA of Kaduna State. The selected schools are as follows; Government Secondary School Bomo, Dr. Shehu Lawal Government Girls Secondary School, Government Secondary School Basawa, Government Girl Secondary School Samaru, Government Secondary School Jama'a and Government Secondary School Hunkuyi. In selecting sample size from seven thousand five hundred and seven one (7,571), the researcher adopted Krejcie and Morgan (1970) table for determining sample size for a given population which states that in every population of 7,571 the appropriate sample size is 360. However, in sampling the respondents and the schools, a purposive and simple random technique was used because the students and schools are not evenly distributed in the three local government areas, under the educational zone and that allowed the researcher to manipulate the existing population, furthermore, the schools were selected based on the availability of computer gadgets, internet services and other information and communication facilities in the schools.

Table 3.1: Showing sampled schools and sampled size by gender.

S/N	Name Of Schools	Population	Sample	Male	Female	Total
1	Govt. Sec. Sch. Bomo	968	60	30	30	60
2	Dr. Shehu Lawal Giwa GGSS	460	60	Nil	60	60
3	Govt. Sec. Sch. Basawa	522	60	30	30	60
4	Govt. Girls Sec. Sch. Samaru	762	60	Nil	60	60
5	Govt. Sec. Sch. Jama'a	524	60	30	30	60
6	Govt. Sec. Sch. Hunkuyi	715	60	30	30	60
	TOTAL	3951	360	120	240	360

Source; *Giwa educational zone Ministry of education Kaduna state (2015).*

3.5 Instrumentation

The instruments for data collection used was adopted the first, questionnaire on the use of information and communication technology (Alharbi, 2014) was questions for students to answer on the usage of information and communication technology in school with four scale which had Never, Several times, At least once and Every day.

The second instrument was adopted which was Aggressive Questionnaire Scale by Buss and Perry (1992), which determined the aggressive behavior among secondary school students with five linker scale which had Strongly Agree, Agree, Undecided, Strongly Disagree and Disagree. While for academic achievement of the students was adopted from Education Resource Centre (ERC) Kaduna State (2015). Each of the instruments is presented in its complete form and has scoring scale; the questionnaire is in three(3) sections (ABC): section A forms the Bio data, followed by section B To measure the use of information and communication

technology among secondary school students, and section C Also to measure the aggressive behavior of students. Section A consists of 3 items, section B has 15 items, section C is made up of 30 items, which consists of 48 items.

3.6 Validity of the Instruments

The adopted instruments were given to lecturers in the department of Educational Psychology and Counselling, Ahmadu Bello University, Zaria were provided with copies of the adopted instruments in order to assess and authenticate each item of the questionnaire. Thus, Nworgu (1991) suggested that validating instruments requires the services of experts who ensure that the items correspond with the purpose of the study, research questions as well as hypotheses to be tested.

3.7 Reliability of the Instruments

The reliability of Aggressive Questionnaire (LA) was determined by using Spearman Brown's prophecy Co-efficient Formula and an internal consistency of 0.76 was adequate for the study. Questionnaire on ICT reliability was assured by the same formula which yielded reliability co-efficient of 0.69. It therefore, indicates sufficient reliability of the questionnaire.

3.8 Procedure for Data Collection

The researcher collected a letter from the department of educational psychology and counseling that introduced him to the schools where data were collected, and the researcher visited the six secondary schools in Giwa Educational Zone and established a cordial relationship with the management, teachers and students before administration of the questionnaire.

The questionnaires were distributed to students during the second visit with the help of some teachers in the schools. Though the distribution and collection of the questionnaires, the researcher used two weeks for the exercise.

3.9 Methods for Data Analysis

The collected data for the study were analyzed using descriptive statistics, mean, standard deviation for demography and Pearson product moment correlation coefficient was used to test the relationship on the first and second hypotheses while the independent sample t-test was to test the gender difference between male and female on hypotheses three and four. The null hypotheses were tested at alpha 0.05 level of significant. The statistical package for social science (SPSS) 20.0 versions was also used to analyze the data.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presented the analyses and interpretations of findings, the influence of information and communication technology (ICT) on aggressive behavior and academic achievement among secondary school students in Giwa Educational Zone. To achieve this objective, a total of 360 students were sampled for this study, whose response and academic achievement were recorded for the data analysis. The first section comprised the bio data analysis in frequencies and percentages of sex, ageas well as the students' name of schools. The second section answers the research questions using item frequencies, means and standard deviations. The third section test and interprets the four null researches at 0.05 alpha level of significant. The fourth section presented the summary of major findings. The last section presented the discussion of findings.

4.2 Distribution of respondents according to their Bio data variables

Table 4.1 Distribution of Respondents by Gender

Sex	Frequency	Percent
Male	240	66.7
Female	120	33.3
Total	360	100.0

The inclusion of sex as one of the demographic characteristics is to ensure gender balanced in the assessment on influence of information and communication technology on aggressive behaviour and academic achievement among secondary school students. In the table above showed that 240 representing 66.7% were male students and the remaining120 of the

students representing 33.3% were females. This means that the opinions of male and female students were considered in the assessment.

Table 4.2 Distribution of Respondents by Age

Age	Frequency	Percent
12-15	98	27.2
16-19	248	68.9
20-25	14	3.9
Total	360	100.0

The inclusion of age also as another demographic characteristic is to ensure aged in the assessment on influence of information and communication technology on aggressive behaviour and academic achievement among secondary school students. In the table the student sample age, 98 of them representing 27.2% were between 12 – 15 years, while 248 representing 68.9% were between 16 and 19 years and the rest 14 representing 3.9% were between 20 to 25 years.

Influence of information and communication technology on aggressive behavior and academic achievement among secondary school students.

The objectives of the study were the identification of the academic achievement and aggressive behaviour of students who are exposed negatively to information and communication technology gadgets. This objective was guided with the following research question:

Table 4.3 showed the relationship between information and communication technology and academic achievement among secondary school students in Giwa educational zone.

Variables	N	Mean	Std. Dev.
Use of ICT Gadgets	360	34.7	7.2
Academic Achievement	360	10.2	2.1

The table revealed that the mean of 34.7 and standard deviation of 7.2 of students were exposed to the use of ICT gadgets and also mean of 10.2, standard deviation of 2.1 of students' academic achievement were affected. This may suggest a negative association between Academic Achievement and use of information and communication technology gadgets. The higher the use of ICT in term of face book, 2go and whatsapp by students while teaching instruction is on the process the lower their academic Achievement thereafter.

Table 4.4 showed the relationship between information and communication technology and aggressive behavior among secondary school students in Giwa educational zone.

Variables	N	Mean	Std. Dev.
Use of ICT Gadgets	360	34.7	7.2
Aggressive Behaviour	360	65.7	17.0

The table above revealed that the mean of 34.7 and standard deviation of 7.2 of students were exposed to the use of ICT gadgets and also mean of 65.7, standard deviation of 17.0 of students aggressive behaviour. This also may suggest a negative association between the Aggressive behavior and the use of information and communication technology gadgets.

Table 4.5 showed independent sample t-test on gender difference between male and female in academic achievement among secondary school students in Giwa educational zone.

Gender	N	Mean	Std. Dev.
Male	240	37.1	5.4
Female	120	33.4	7.8

The table revealed that the gender was proportionately distributed between male and female. The male mean was 37.1 while the standard deviation was 5.4 and the female mean was

33.4 while the standard deviation was 7.8. This showed the gender difference between male and female in academic achievement and use of information and communication technology among secondary school students in Giwa educational zone.

Table 4.6 showed independent sample t-test on gender difference between male and female on aggressive behaviour among secondary school students in Giwa educational zone.

Gender	N	Mean	Std. Dev
Male	240	96.7	20.2
Female	120	93.9	19.3

The table revealed that the gender was proportionately distributed between male and female. The male mean was 96.7 while the standard deviation was 20.2 and the female mean was 93.9 while the standard deviation was 19.3. This showed the gender difference between male and female on aggressive behavior as a result of information and communication technology usage of gadgets among secondary school students in Giwa educational zone.

4.3 Hypotheses Testing

A number of null hypotheses were formulated to give statistical backing to the solutions proffered to the research questions in the study. The hypotheses were tested as follows.

Hypothesis 1: There is no significant relationship between information and communication technology and academic achievement among secondary school students in Giwa educational zone.

In the test of this hypothesis, the score students were summed up along the four scales and five Linker scales and compared using Pearson Product Moment Correlation statistics on the

relationship between information and communication technology and academic achievement among secondary school students. The result was summarized in table 4.7.

Table 4.7 Showed Pearson Product Moment Correlation statistics on the relationship between information and communication technology and academic achievement among secondary school students in Giwa educational zone.

Variables	N	Mean	Std. Dev	r	p
Use of ICT Gadgets	360	34.7	7.2		
Academic Achievement	360	10.2	2.1	-0.600**	0.000

** . Correlation is significant at the 0.05 level (2-tailed).

The result in the table revealed that secondary school students' poor academic achievement was associated with the use of information and communication technology gadgets in school. The observed correlation index r value was -0.600**. The p value level of significance obtained was 0.000 ($p < 0.05$). This means that the information and communication technology gadgets associated with the academic achievement of the students who were highly exposed to it than those who have less exposure to it. The null hypothesis was therefore rejected.

Hypothesis 2 There is no significant relationship between information and communication technology and aggressive behavior among secondary school students in Giwa educational zone.

This hypothesis was tested with the students score and compared using Pearson Product Moment Correlation statistics on the relationship between information and communication technology and aggressive behaviour among secondary school students. The result was summarized in table 4.8.

Table 4.8 Showed Pearson Product Moment Correlation statistics on the relationship between information and communication technology and aggressive behavior among secondary school students in Giwa educational zone.

Variables	N	Mean	Std. Dev	R	p
Use of ICT Gadgets	360	34.7	7.2	0.584**	
Aggressive Behaviour	360	65.7	17.0		0.000

** . Correlation is significant at the 0.05 level (2-tailed).

The result of the test revealed that the students who were highly exposed to the use of information and communication technology were significantly associated with the prone to be aggressive than those who were less exposed to ICT gadgets. The observed correlation index r level was 0.584 at degree of freedom was 358 and the (p) value level of significance obtained was 0.000 ($p < 0.05$). By observation, the null hypothesis stated that there is no significance relationship between information and communication technology on aggressive behaviour among secondary school students in Giwa educational zone is hereby rejected.

Hypothesis Three: There is no significant gender difference between male and female in academic achievement among secondary school students in Giwa educational zone.

This hypothesis was tested with the score of students in academic achievement as significant difference between male and female, as a result of information and communication technology gadgets usage. The independent sample t-test was used because of the gender difference between male and female. The result of the test was summarized in table 4.9.

Table 4.9 Showed Independent sample t-test statistics on gender difference between male and female in academic achievement among secondary school students in Giwa educational zone.

Gender	N	Mean	Std.dev	df	t	p
Male	240	33.4	7.8	358	4.656	0.000
Female	120	37.1	5.4			

P < 0.05, t > 1.96

The result of the test as revealed the outcome of the independent t-test statistics on gender difference between male and female. From the observed (t) value of 4.656 at 358 degree of freedom-critical 1.96 and (p) value level of significant of 0.000 ($p < 0.05$). From these observations, it could be concluded that there was no significant gender difference between male and female in academic achievement among secondary school students. This means that the null hypothesis that stated there is no significant gender difference between male and female in academic achievement among secondary school students is hereby rejected.

Hypothesis 4: There is no significant gender difference between male and female on aggressive behaviour among secondary school students in Giwa educational zone.

This hypothesis was tested with the score of students on aggressive behaviour resulted significant difference between male and female by the use of information and communication technology gadgets. The independent sample t-test was used because of the gender difference between male and female. The result of the test was summarized in table 4.10.

Table 4.10 Showed Independent sample t-test statistics on gender difference between male and female on aggressive behaviour among secondary school students in Giwa educational zone.

Gender	N	Mean	Std.dev	df	t	p
Male	240	96.7	20.2			0.208
Female	120	93.9	19.3	358	1.261	

P > 0.05, t < 1.96

The result of the test as revealed the outcome of the independent t-test statistics on gender difference between male and female. From the observed (t) value of 1.261 at 358 degree of freedom, t-critical 1.96 and (p) value level of significant of 0.208 ($p > 0.05$). From these observations, it could be concluded that there was no significant gender difference between male and female on aggressive behavior among secondary school students. This means that the null hypothesis that stated there is no significant gender difference between male and female on aggressive behavior among secondary school students is hereby accepted and retained.

4.4 Summary of major findings

The major findings from the data analysis and test of hypotheses are summarized as follows:

1. There was negative association between poor academic achievement and use of information and communication technology among secondary school students. The students who have high exposure to ICT gadgets have significantly higher tendencies of poor academic achievement than those less exposed. ($r = -0.600^{**}$, $p = 0.000$).
2. There was a significant relationship that existed between aggressive behavior and use of information and communication technology among the secondary school students in Giwa

educational zone. Students who were exposed to negative use of ICT gadgets has significant tendencies of being aggressive than those less exposed. ($r=0.584$, $p=0.000$).

3. The negative exposure to information and communication technology gadgets has significant gender difference between Male and Female students in academic achievement among secondary school students in Giwa educational zone. Those who are highly exposed to ICT gadgets have significantly high tendencies in poor academic achievement than those less exposed. ($t=4.656$, $p=0.000$).

4. That negative exposure to information and communication technology gadgets has significant gender difference between Male and Female students on aggressive behaviour among secondary school students in Giwa educational zone. Those who are highly exposed to ICT gadgets have significantly high tendencies on aggressiveness than those less exposed. ($t=1.261$, $p=0.208$).

4.5 Discussion of the findings

Based on the finding the study investigated the information and communication technology, aggressive behaviour and academic achievement of students. Aggressive behaviour of the students was assessed in relation to the negative influence of ICT. These were face book, 2go and whatsapp had impact on aggressive behaviour of students, impact of GSM on students' involvement in examination malpractice and pornography site. In the analysis gender sensitivity were considered in respect to aggressiveness and academic achievement.

The first hypothesis of the study tested the relationship between information and communication technology and academic achievement in schools. The Pearson Moment Correlation procedure was used in test the result revealed that the relationship between the two

variables was statistically significant. The hypothesis was therefore rejected. The finding here agrees with Social Cognitive Theory by Bandura (1977). Social Cognitive Theory is a learning theory based on the idea that people learn by observing others. Similarly, the environment one is raised in may influence later behaviors, just as a father's mindset (also cognition) will determine the environment in which his children are raised. Social cognitive theory revolves around the process of knowledge acquisition or learning directly correlated to the observation of models. The models can be those of an interpersonal imitation or media sources. Effective modeling teaches general rules and strategies for dealing with different situations. To illustrate that people learn from watching others, Albert Bandura and his colleagues constructed a series of experiments using a Bobo doll.

In the test of the second hypothesis, where the relationship between information and communication technology correlated with the aggressive behaviour of the students in schools using Pearson Moment Correlation procedure, the result revealed significant relationship between the two variables. The null hypothesis was therefore rejected. This finding is consistent with the report of Igbo, Egbe-Okpenge and Awopetu (2013). Investigated the influence of information and communication technology on behavior problems of Nigerian youths. A self-administered survey was conducted with 550 convenience samples of undergraduates in three universities in Benue state, Nigeria. Four research questions and four hypotheses guided the study. Descriptive statistics, mean, standard deviation and multiple regression statistics were used to analyze the data. The empirical results indicate that there is a joint significant influence of ICT, school, sex and age on cybercrime, aggressive behavior, truancy and sex crimes among youths. However while ICT remained constant and significant, none of the other variables contributed significantly independently. The study recommended that guidance counselors and

clinical psychologists at both post primary and tertiary institutions should use appropriate skills and techniques to assist in curbing the identified behavior problems.

The test for significant difference in the academic achievement between male and female in the school was tested in hypothesis III. The two independent sample t-tests were used in the test. The result revealed no significant difference between the male and female in their academic achievement in schools. The null hypothesis was therefore rejected. The finding agrees with Lungren and Nantz (2003) revealed approximately 500,000 causes were available on the internet in 2003. Nevertheless, prior to commencing a project of the nature, educational institutions need to stand factors that motivate and determine internet usage among students and faculty members. This study intends to address this research gap through focusing on establishing the factors that influence internet usage by faculty members in Malaysian university. The internet's impart on the use of other media is related to earlier research in media studies that examines the substitutability of the mass media or their ability to stimulate each other. And also with psychoanalytic Theory by Sigmund Freud(1916) which maintained that early experiences influence behaviour later in life. The psychoanalytic writers are of the view that much of the adults behaviour are due to certain instinctive drives and to early reactions of parents and siblings. They stressed the important role of early life experiences in determining certain drives, like the need for food, love and security are gratified during every interactions, a child would live infancy with certain degree of conflict with the resultant problem behaviour. The psychoanalysts maintain that the development process consist of fixed stages through which every child passes in sequential order and that the experiences that occurred at each stage of development could affect individuals character traits for life. The implication here was that the excessive negative

use of information and communication technology among secondary school students has the potential of increasing aggressiveness and lead to poor academic achievement.

In the test of hypothesis IV, significant difference between male and female students' aggressive behaviour in the schools. The result of the two independent sample t-test procedures used in the test revealed that female students aggressiveness were significantly different from male students in using information and communication technology gadgets. The null hypothesis was therefore retained. This finding contradicts Bartholow and Andrew (2002) who investigated sex differences in the effects of violent games on aggressive behaviour and found greater for men than for women.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the summary of the investigation into the influence of Information Communication Technology on Aggressive behavior and Academic Achievement among secondary school students in Giwa educational zone is presented along with the major findings from the test of hypotheses. The chapter presents the summary, conclusion and recommendations.

5.2 Summary

This study investigated the influence of Information and Communication Technology on Aggressive Behaviour and Academic Achievement among secondary school students in Giwa educational zone of Kaduna state. The total of three hundred and sixty students selected from public school Giwa educational zone of Kaduna state was involved in the study. The ex-post-facto research design was used as it involved the use of questionnaire to solicit for data from the respondents. The selection of the students was carried out with aid of the stratified random sampling procedure. Towards achieving the purpose of the study the data were subjected to statistical analysis using the statistical package for social sciences (SPSS 20th Edition).

The study was partitioned into five chapters. Chapter one mentioned the background to the study, the statement of the problem, objectives of the study and hypotheses. Others sections included in the chapter were: significance of the study and scope and delimitation of the study. In chapter two, the related literatures were reviewed. These consisted of the concept of information and communication technology and aggression. Others topic reviewed in the study

were examination mal-practice, theories of social learning and behaviour problems manifestation of misbehavior resulting from exposure to information and communication technology and review of empirical studies.

Chapter three was made up of the methodology used for the study. These included the research design; population; sample and sampling techniques, procedure for data collection and methods adopted for data analysis were presented in chapter four. Within the chapter, four null hypotheses were raised and tested in the study.

The first hypothesis tested for significant relationship between information and communication technology and academic achievement among secondary school students who were exposed to ICT gadgets. The Pearson Moment Correlation procedure was used in the test. The result revealed that secondary school students' poor academic achievement was associated with the use of information and communication technology gadgets in school. This hypothesis was therefore rejected.

The second hypothesis tested for significant relationship between information and communication technology and aggressive behaviour among secondary school students who were also exposed to ICT gadgets. The Pearson Moment Correlation procedure was used in the test. The result revealed that the students who were highly exposed to the negative use of information and communication technology were significantly associated with prone to be aggressive than those who were less exposed to ICT gadgets. The hypothesis was therefore rejected.

The third hypothesis tested for significant gender difference between male and female students who were highly exposed to ICT gadgets. Independent sample t-test was used for the hypothesis. The result revealed that there was no significant gender difference of information and

communication technology on academic achievement among secondary school students. The hypothesis was therefore rejected.

The fourth hypothesis tested for significant gender difference between male and female students who were highly exposed to ICT gadgets. Independent sample t-test was used for the hypothesis. The result revealed that there was no significant gender difference between male and female on aggressive behaviour among secondary school students. The hypothesis was therefore accepted and retained.

5.3 Contribution to knowledge

This study has gone a long way in expanding the frontier of knowledge and understanding in the area of information and communication Technology, aggressive behavior and academic achievement among students. The contribution of this research to knowledge was based on the empirical findings that the negative use of information and communication technology has effect on students in academic achievement, those who are highly exposed to information and communication technology gadgets have significantly high tendencies in poor academic achievements than those less exposed, and also the male students who are highly exposed to information and communication technology gadgets have significantly high tendencies on aggressiveness than those less exposed which are female counterparts. The outcomes of the research serve as contribution to knowledge and also bases for further studies or research.

5.4 Conclusion

Base on the findings of the study. It was concluded that there was negative association between poor academic achievement and aggressive behavior on the use of information and communication technology among secondary school students. The students who have high exposure to ICT gadgets have significantly higher tendencies of poor academic achievement than

those less exposed. However, there was significant gender difference between male and female students in academic achievement among secondary school students in Giwa educational zone. Those who are highly exposed to ICT gadgets have significantly high tendencies in poor academic achievement than those less exposed. There was also negative significant gender difference between Male and Female students on aggressive behaviour as a result of information and communication technology gadgets usage among secondary school students negate in Giwa educational zone. Those who are highly exposed to ICT gadgets have significantly high tendencies on aggressiveness than those less exposed. Finally the findings revealed that male students use information and communication technology than their female counterpart in Giwa Educational Zone.

5.5 Recommendations

Based on the findings from the analyzed data, the researcher recommended the following:

1. School Psychologists, Counselors, Teachers and Parents should monitor their children and sanction the kinds of negative use of Information Communication technology to reduce aggressiveness and enhance academic achievement in the school.
2. There should be regular intervention of parents and school administrators on the negative effect of internet on students so as to reduce immoral use of verbal aggression among secondary school students in school.
3. Parents or Guidance should help the children in developing positive attitudes at early stage so as to curb aggressive behaviour among secondary school students in school for the betterment of academic achievement.

4. Students, Parents, teachers and general public should be enlighten and sensitize on the negative effect of information and communication technology usage in school or classroom irrespective of gender.

5.4 Suggestions for further studies

This study is by no means exhaustive or over flogged, suggestions are therefore made here for further studies in the relevant fields. These suggestions are:

1. Influence of information and communication technology on aggressive behavior and academic achievement among tertiary institutions in Kaduna state.
2. Influence of information and communication technology on aggressive behavior and academic achievement among secondary school students in another educational zone, Kaduna state.

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Appendices

SECTION A: BIODATA

Instruction

Please do not write your name on the questionnaire, you are required to tick (√) in the column that expresses your opinion. Kindly supply the following information about yourself.

Gender: Male () Female ()

Age range: 12-15 () 16-19 () 20-25 () 26 and above ()

SECTION B: The use of information and communication technology (ICT) among secondary school students

Key: 4- Never 3- Several times 2-At least once 1-Every day

	Items	4	3	2	1
1	How often do you use laptops, tablet PC, net book or notebook computer with internet access?				
2	How often do you use mobile phone with internet access?				
3	How often do you use portable music or video players, MP3/MP4 players?				
4	How often do you take part in sending and reading email?				
5	How often do you take part in searching online for practical information?				
6	How often do you take part in playing-multi player online games?				
7	How often do you take part in browsing the internet for fun?				
8	How often do you take part in watching video clips, downloading music, games, software from the internet?				
9	How often do you use other online tools, instant messenger, facebook, and you tube?				
10	How often do you use internet at school?				
11	How often do you use interactive whiteboard?				
12	How often do you post your work on the school website?				
13	How often do you use digital books and textbooks?				
14	How often do you install software on your mobile phones or computer?				
15	How often do you participate in social networks and use most of their features?				

Source: Adopted from Alharbi, E. (2014). *Information and Communication Technology Students Questionnaire*.

SECTION C: AGGRESSION QUESTIONNAIRE

Key: 5- Strongly Agree (SA) 4- Agree (A) 3- Undecided (UD) 2- Strongly Disagree (SD) 1- Disagree (D)

	Items	SA 5	A 4	UD 3	SD 2	D 1
1	Once in a while, I can't control the urge to strike another person.					
2	Given enough provocation, I may hit another person.					
3	If someone hits me, I hit back.					
4	I get into fights a little more than the average person.					
5	If I have to resort to violence to protect my rights, I will.					
6	There are people who pushed me so far that we came to blows.					
7	I can think of no good reason for ever hitting a person.					
9	I have threatened people I know.					
10	I have become so mad that I have broken things.					
11	I tell my friends openly when I disagree with them.					
12	I often find myself disagreeing with people.					
13	When people annoy me, I may tell them what I think of them.					
14	I can't help getting into arguments when people disagree with me.					
15	My friends say that I'm somewhat argumentative.					
16	I flare up quickly but get over it quickly.					
17	When frustrated, I let my irritation show.					
18	I sometimes feel like a powder keg ready to explode.					
19	I am an even-tempered person.					
20	Some of my friends think I'm a hothead.					
21	Sometimes I fly off the handle for no good reason.					
22	I have trouble controlling my temper.					
23	I am sometimes eaten up with jealousy.					
24	At times I feel I have gotten a raw deal out of life.					

25	Other people always seem to get the breaks.					
26	I wonder why sometimes I feel so bitter about things.					
27	I know that “friends” talk about me behind my back.					
28	I am suspicious of overly friendly strangers.					
29	I sometimes feel that people are laughing at me behind my back.					
30	When people are especially nice, I wonder what they want.					

Source: Adopted from Buss & Perry Aggressive Questionnaire (1992).

MINISTRY OF EDUCATION KADUNA STATE, GIWA ZONAL INSPECTORATE DIVISION.

LIST OF GOVERNMENT SECONDARY SCHOOLS WITH THE POPULATION OF STUDENTS ENROLMENT FROM SSI –SSIII

S/N	Name Of School(s)	POP	SSI M	F	SSII M	F	SSIII M	F
1	Government Secondary School Giwa	456	119	49	113	27	129	19
2	Dr. Shehu Lawal Government Girls Secondary School	460	-	130	-	146	-	184
3	Government Secondary School Gangara	106	45	5	40	Nil	14	2
4	Government Secondary School Yakawada	240	67	16	65	11	73	8
5	Government Secondary School Fatika	392	110	30	96	25	103	28
6	Government Secondary School Kaya	114	30	14	23	12	23	12
7	Government Secondary School Shika	520	101	49	152	63	102	53
8	Government Secondary School Bomo	968	245	55	270	48	230	120
9	Government Girls Secondary School Samaru	762	-	227	-	285	-	250
10	Government Secondary School Kwangila	612	100	32	100	117	113	150
11	Government Secondary School Jama'a	524	112	47	133	62	125	45
12	Government Secondary School Basawa	522	89	61	120	54	131	67
13	Government Secondary School Hunkuyi	715	149	90	152	95	149	80
14	Government Secondary School Kudan	615	149	36	167	33	206	24
15	Government Secondary School Sakadadi	80	21	3	15	Nil	35	6
16	Government Secondary School Kauran-Wali	485	64	10	160	30	205	16
	TOTAL	7571	1401	854	1606	1008	1638	1064

Source; *Giwa educational zone Ministry of education Kaduna state (2015).*

Frequency Table

GENDER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MALE	240	66.7	66.7	66.7
	FEMALE	120	33.3	33.3	100.0
	Total	360	100.0	100.0	

AGE RANGE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	12-15	98	27.2	27.2	27.2
	16-19	248	68.9	68.9	96.1
	20-25	14	3.9	3.9	100.0
	Total	360	100.0	100.0	

Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
Use_of_ICT	34.7	7.2	360
Academic_Achievement	10.2	2.1	360

Correlations

		Use_of_ICT	Academic_Achievement
Use_of_ICT	Pearson Correlation	1	-.600**
	Sig. (2-tailed)		.000
	N	360	360
Academic_Achievement	Pearson Correlation	-.600**	1
	Sig. (2-tailed)	.000	
	N	360	360

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

Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
Use_of_ICT	34.7	7.2	360
Aggressive_Behavior	65.7	17.0	360

Correlations

		Use_of_ICT	Aggressive_Behavior
Use_of_ICT	Pearson Correlation	1	.584**
	Sig. (2-tailed)		.000
	N	360	360
Aggressive_Behavior	Pearson Correlation	.584**	1
	Sig. (2-tailed)	.000	
	N	360	360

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

T-Test

Group Statistics

GENDER	N	Mean	Std. Deviation	Std. Error Mean
MALE	240	37.1	5.4	.49488
FEMALE	120	33.4	7.8	.50288

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Use_of_ICT	Equal variances assumed	37.380	.000	4.656	358	.000	3.7	.79284	2.13246	5.25087
	Equal variances not assumed			5.232	321.144	.000	3.7	.70555	2.30359	5.07974

T-Test

Group Statistics

GENDER	N	Mean	Std. Deviation	Std. Error Mean
MALE	240	96.7	20.2	1.3
FEMALE	120	93.9	19.3	1.8

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
Aggressive_Behavior	.070	.792	Equal variances assumed	-1.261	358	.208	-2.9	2.2	-7.18837	1.57170
			Equal variances not assumed	-1.280	248.062	.202	-2.9	2.1	-7.12835	1.51169