

**SOCIAL NETWORKING SITES' USAGE AND STUDENTS' ATTITUDES
TOWARDS SOCIAL BEHAVIORS AND ACADEMIC ADJUSTMENT IN
NORTHERN NIGERIAN UNIVERSITIES**

**A Thesis Submitted to the UUM College of Arts and Sciences in Fulfillment of the
Requirements for the degree of Doctor of Philosophy
Universiti Utara Malaysia**

**By
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ATTESTATION OF THESIS WORK

I do attest that this humble thesis work was carried out by my humble self as the prime author. Other areas discussed and reviewed were acknowledged with the sources.

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DEDICATION

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ABSTRACT

The present study examines the extent to which social networking sites (SNSs) usage, students' social behaviors (SSB) and students' academic adjustment (SAA) among university students in Northern Nigeria. It investigated relationship among the SNS usage, SSB, and SAA. The variance in the extent of SNSs usage in relation to gender, age, faculty, ethnicity, socioeconomic background and religion was also investigated. The moderating effect of attitude towards SNS usage was examined. Four hundred participants were sampled and they completed the questionnaires. In addition, 24 volunteered participants from six universities were interviewed at six level focus groups on the constructs related to SNSs usage, SSB and SAA. This study employed a mixed-method model as interviews and questionnaires were employed. The data were qualitatively and quantitatively collected, sorted, analyzed and reported separately at significantly equal weight. The thematic qualitative analyses and the quantitative descriptive results suggested that the extent of SNSs usage, the SSB and SAA is high among the university students in northern Nigeria. One way analysis of variance (ANOVA) also revealed that there were no significant differences in the extent of SNSs usage in terms of age, faculty, socio economic background and the level of study. However, significant differences exist among ethnicity and religion. The independent sample t-tests revealed no gender differences in the extent of SNSs usage. Similarly the present findings show significantly positive inter-relationships among the SNSs usage, SSB and SAA. The findings also found attitude to be a strong predictor and moderator of the relationship between the SNSs and both the students' social behaviors and students' academic adjustment.

ABSTRAK

Kajian ini mengenal pasti tahap penggunaan halaman rangkaian sosial (SNS), perilaku sosial pelajar (SSB) dan penyesuaian akademik pelajar (SAA) dalam kalangan pelajar di Nigeria Utara. Hubungan antara penggunaan SNS, SSB dan SAA juga dikenal pasti. Penyelidikan dijalankan mengenai. Perbezaan dalam tahap penggunaan SNS berdasarkan jantina, umur, fakulti, etnik, agama dan latar belakang sosial ekonomi (SEB) diselidiki. Pengaruh penyederhanaan sikap terhadap penggunaan SNS juga dikaji. Empat ratus peserta telah dipilih untuk mengisi borang soal selidik. Selain itu, 24 peserta sukarela daripada enam universiti ditemubual dalam kumpulan tumpuan enam peringkat mengenai konstruk yang berkaitan dengan penggunaan SNS, SSB dan SAA. Penelitian ini menggunakan model kaedah gabungan kerana. Temubual dan soal selidik digunakan. Data kualitatif dan kuantitatif dikumpulkan, ditapis, dianalisis dan dilaporkan secara berasingan pada wajaran yang sama. Analisis kualitatif tematik dan hasil deskriptif kuantitatif menunjukkan bahawa tahap penggunaan laman rangkaian sosial, perilaku sosial dan penyesuaian akademik adalah tinggi dalam kalangan pelajar universiti di Nigeria Utara. Analisis varians (ANOVA) mendedahkan bahawa tidak ada perbezaan tahap penggunaan SNS berdasarkan usia, fakulti, latar belakang sosial ekonomi dan tahap pengajian. Sementara itu terdapat perbezaan yang signifikan berdasarkan etnik dan agama. Ujian T sampel bebas menunjukkan tidak terdapat perbezaan yang signifikan berdasarkan jantina dalam penggunaan SNS. Dapatan kajian mendapati hubungan antara penggunaan SNS, perilaku sosial pelajar dan penyesuaian akademik pelajar adalah signifikan dan positif. Dapatan kajian juga mendapati sikap menjadi prediktor dan moderator yang kuat ke atas hubungan antara penggunaan halaman rangkaian sosial dengan perilaku sosial pelajar dan penyesuaian akademik pelajar.

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List of Abbreviations

DV:	Dependent variable
FGN:	Federal Government of Nigeria
IV:	Independent variable
MV:	Moderating variable
NUC:	National University Commission
OFCOM:	Ofcom is the communications regulator
PDA:	Personal Digital Assistant
QQ:	Chinese form of Instant Messaging
RSS:	Really simple syndication
SAA:	Students academic adjustment
SATT:	Student attitude towards SNS
SEB:	Socioeconomic background
SNS:	Social networking site
SNSU:	Social networking site usage
SSB:	Students social behavior
TLD:	Top level domain
TCP/IP:	Tranmission control protocol /Internet protocol
HTTP:	Hypert text transfer protocol

CHAPTER ONE: INTRODUCTION

1.1 Introduction

The social networking sites (SNSs) are now a publicly buzzing idea. SNSs can be comprehended more through the concept of Web 2.0. Much has been written about Web 2.0 and to an extent it is still a fuzzy concept as it connotes different definitions. However, Web 2.0 is characterized by a number of factors that differentiate it with current web. It is also seen as a form of post modernistic philosophy (Anderson, 2007).

Tools geared to facilitate easy communication and sharing of ideas and resources and working collaboratively are associated with the concept of Web 2.0 (Ford, 2008). Rapid rise of blogs, SNSs, wikis, webinar, social tag, and podcast to mention a few enabled users communicated in form of a community like system. It is often referred to the two way Peer to Peer (P2P) activity for power of collective intelligence through collective constructive contributions of different people across the global network. The social networking sites (SNSs) proliferation has created a social phenomenon yet to be understood (Hosio, Kukka, & Riekk, 2008). SNSs have now integrated into the per diem event of millions of people mainly students (Boyd & Ellison 2007).

With the socialization on the Internet technology via Web 2.0, it impliedly and obviously means that we are interacting, sharing, collaborating and exchanging ideas especially using the SNSs like Facebook, MySpace, YouTube, Twitter, Second Life, NigeriaDotCom, Hi5, Orkut, and thousand of others. They appeared in such ways that were not dreamed of in few years ago. SNS connotes to represent relationships and flows of interaction among people (Aïmeur, Gambs & Ho, 2010).

So many Internet-based services such as blogs, SNSs, communication tools, wikis, and folksonomies (social tagging) let people collaborate and share information online in ways which previously were unavailable if not impossible. Internet in this twenty first century proves to be the most intriguing and flout technology that touches the lives of every living individual in one way or another especially in the interest of information dissemination across the globe. Kord (2008) believes that “SNSs served as a social hub where information is shared through profiles”. Karagiannidis et al. (2010) view that Web 2.0 now goes beyond the initially defined term by O’ Reilly (2005). It means that SNS now encompasses other tendencies manifested from other virtual communities. O’ Reilly pioneered Web 2.0 and believed it to be a set of social economic and technology trends based on user openness, participation and effects on network. However, the SNSs emergence seems a spontaneous and unplanned phenomenon.

Internet provided a way for the world developing nations to increase their developmental growth. A society that is short of adequate facilities for information gathering is said to be living in ignorance (Hargittai, 2008). Such society will in no doubt lag behind in technology and other fields of human endeavors. Life in that society will be dominated with ignorance, fear, poverty and superstition.

As the Internet has so far revolutionized communications practices worldwide, it has been integrated into everything that humans engage which include all kinds of social relations. It provides instantaneous access at all times (Sum, 2008). This ubiquitous presence may appear innocent at the surface. However there may be some sinister or evil characteristics within this medium that required further study. One of the issues that exist may be the relationship of the Internet usage and students social behavior. This is

specifically in the area of sociability and anti social attitudes of university students. Pritchard (2008) argues that at least one third of students' Internet visits are intended to surf sexually oriented websites, chatrooms, and news groups. It is also observed that some students use emails (Fogel, 2004) and social networking websites (Pritchard, 2008) to post kind of distasteful comments about their faculty members and sometimes to harass peers and for gossips.

The present research deals with SNSs usage as it relates to social behaviors and academic adjustment as well as moderating effect of attitude on these relationships. It also deals with the differences on the SNSs usage in terms of gender, ethnicity and other variables. For the past few years, the Internet has consolidated into a cohesive entity and amalgamated itself as a very powerful platform that has changed the way people do business, or deal and perhaps the way people communicate and educate. This has been possible through the use of social networking sites (SNSs). As such the SNSs cannot be underestimated or jettison because no other communication medium, has given an international or, a globalized audience and dimension to the world like it. We have seen how some electronic and printed media houses like Aljazeera, BBC, CNN, Times Magazine and DailyTrust newspaper have linkages with Twitter, Facebook, Myspace, and YouTube. Each of these SNSs plays a vital role on communication during the 2008 American election as reported by Canadian Broadcasting Corporation (CBC) news, (2009), Iranian 2009 elections (Aljazeera, 2009) and Israel/Palestinian 2009 conflict, Tunisia revolution saga 2011 and etc. Online SNSs have become the universal source of information and interaction for many millions of people, at homes, at businesses, at schools, places of work or universities. It is done in the school computer laboratories,

libraries, cafes and on mobile phones and PDAs. Gil-Pechuan, Albarracin-Guillem, Palmer-Gato, and Marta (2009) stated that 81.6% proportion of teenagers used mobile phones to stay in touch with friends or loved ones.

Now it is clearly established that even politicians, influential people, corporate managers, security agencies, lecturers, school administrators and children are using SNSs (Waters, 2008). In Nigeria many have their presence on SNSs. Even the current president is on Facebook just like the Malaysian prime minister and the US president.

This Day newspaper reports on 7th June, 2010 that it is now a fact that Nigerian President Jonathan Goodluck joined Facebook. This is to allow him to interact with his Nigerians fellow citizens on issues related to governance. The 28th June, marked the day the President stated that he was to fulfill his promise at the University of Port Harcourt's 26th convocation in May 2010. He said "I have created a Facebook fan page to interact with Nigerians." He urges the Nigerians especially youth to communicate through that medium to give him the privilege of interacting with them out of despair of the office trappings. The profile instantly within a week attracted 78,000 fans. Many Nigerians now have the opportunity to directly interact with their president. The SNS is continuing to be seen as an avenue to get enduring relationships, instant recognition, and benefit from resources.

In other countries SNSs are used for espionage (Aljazeera, 2009). OFCOM report, (2009) suggests that around 19% of all UK youngsters have a presence on SNSs. Waters, (2008) on BBC editorial asserts that such social networking sites are very important part on how people live their lives as such they have impact on the people's lives. Information on SNSs flows like a virus pandemic. This is evident in the way both parties use Twitter

during Gaza /Israel aggression and conflict which took place from December 2008 to January 2009 (Aljazeera, 2009). Such real-time method also exploded during the Mumbai bombings in India and the earthquake in China and very recently in Haiti and Chile. YouTube remains a liberal gateway for down loading sensitive video clips. On MySpace and Facebook users interact with each other and chat on various persisting issues, gossips and real situations freely. Although there's a large learning curve for everyone involved in using SNS; there is a problem with the information reliability on it.

Internet in general and SNS in particular is actually the most democratic of all the mass media, because anyone can have a webpage on the Internet and blog or profile on SNSs. Almost anyone who can write and read can then have access to the web can also upload or download pictures, video, and comments from SNSs for himself / herself or even manage it for their pets. Former US president Clinton Bill (nd) stated that “when I took office, only high energy physicists had ever heard of what is called the World Wide Web. Now even my cat has its own page” (White House 1996).

The Internet has made distances shorter and the entire world smaller. However, the great divider or challenge that stands in the way of a truly anticipated global society is the fact that there are many different languages spoken on our planet Earth. Nonetheless, over the net now all users can access sites in various languages. The SNSs’ designers considered multi-lingual nature and background of the users and so continued developing and building more virtual techno-communities compatible with various languages. For example, Myspace, Secondlife, QQ, Orkut, Bebo, Facebook, all are multi-lingual support. This is a remarkable move in making online social network processes a reality (Plotnic, White and Plummer, 2009).

1.2. Background of the Study

This research was conducted in Northern Nigeria as being the scope area to the research. Northern Nigeria in the context of the long evolution of Nigeria's new national policy on education, it takes part of larger transformation of Nigerian state (Umar, 2010). In realizing the importance of education, Nigeria has numerous federal, state and privately funded universities numbered to about 96 (27 federal, 35 state and, 34 private) (FGN/NUC, 2009; Wikipedia, 2009), (appendix 1). From the total number, only 12 were federal universities in the northern part (Table: 1.2), (Wikipedia 2009).

The rapid growth of distance education made schools captured the attention of today's education administrators who realizes that they need to be more competitive. This prompted them to have a greater sensitivity on the rapidly changing educational landscape. This also warrants the federal government vested into and established Open University system in Nigeria.

Just like the industrial revolution the information revolution had changed information gathering and storage from the traditional way to a more sophisticated electronic network like the whole Cyberspace and many SNSs like YouTube and Second Life. It also provides facilities such as e-mail, games and chat, information retrieval, File Transfer Protocol (FTP), e-commerce, e-learning, news, and many more to the user. This researcher in particular felt that it is of much importance if this new era of revolution is examined with keen interest on the academia because that is the profession or career of the researcher.

Internet however, has long continued to accelerate the dissemination and exchange of information between nations more importantly between or among users

(Yusuf & Onasanya, 2004). It facilitates the search for solutions to national problems such as education, health, security, environment, and so forth and stimulates the developmental challenges of a nation especially the developing nations like Nigeria (Ahiakwo, 2008).

Nevertheless, the growth of Internet literacy and competency in Nigeria has been very slow. The usage rate is as low as 23,982,200 Internet users as of December 2009 (World Statistics 2010). This means merely 16% of the total population. As of the time of this report Nigerian Internet users raised to 43,982,200 (World Statistics 2010) which is almost 40% of the African internet users. This coverage is very small bearing that Nigeria population of over 152.2 million (World Statistics, 2010; CIA World factbook Nigeria, 2009). The cause factors are traceable to lack of technical know-how, telecommunication infrastructure, awareness, finance and competitive regulatory policies.

This is not a surprise tracing the history of the Internet in Nigeria. The first attempt at introducing Internet in Nigeria was made through the UNESCO sponsored Regional Informatics Network for Africa (RINAF) project, in 1995 (NITDA, 2009). There were several workshops that were held to propagate the idea of the Internet. At such workshops Nigeria Internet Group (NIG) was formed as a non-profit and non-governmental organization with the primary aim and objective of promoting and facilitating access to the Internet in Nigeria. The Information Technology (IT) revolution started in Nigeria after shifted to democratic rule in 1999. Since then, several Internet service providers (ISPs) existed in Nigeria amongst were: Starcoms, MTN, Linkserve, Cyberspace, Hyperia, Infoweb, PINET, Skannet, Steineng, Visaphone, IPNX and lots more.

The national information technology development agency (NITDA) (2009) reported in March 2001 Nigeria approved the national policy on IT. In April same year the NITDA (which is IT supervising body) was established to implement that policy. In 2006 under the Board of the NCC (Nigerian Communications Commission) approved a proposal to partly fund the setting-up of Internet Exchange Points (IXPs) in Nigeria, with collaboration between NCC and Internet Service Providers Association of Nigeria (ISPAN). It is operating from Lagos as its main location; with sub-locations at Victoria Island, Ikeja, Ibadan, Port Harcourt, Abuja, Enugu, Kano & Maiduguri (Figure 1.1). It was said to be successful in the voice of the former Nigerian President Olusegun Obasanjo that the year 2006 marked the birth of Nigeria's IXP which is called the Internet Exchange Point of Nigeria (IXPN). He added that however, the journey started since last five years at last, Nigeria succeeded in it (NITDA, 2009).

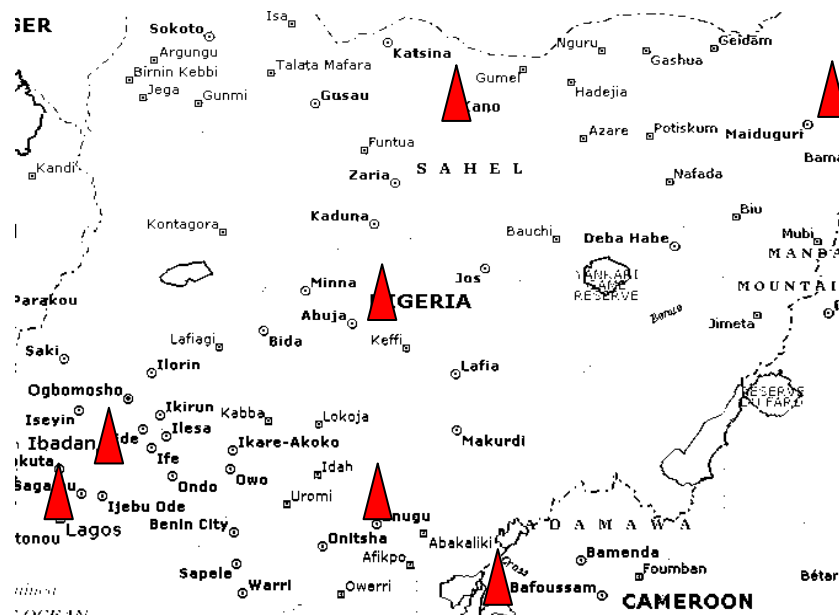


Figure 1.1: The Internet Exchange Point of Nigeria

However, one of the goals of NITDA as the regulatory body of all IT activities in Nigeria is to develop global competitive IT manpower for the nation. Various activities were embarked upon to fulfill this goal such as the need for assessment study and empowerment (which already commenced among the nation's tertiary institutions) though not adequately equipped to cater for excellence. However, they were setup in order to meet the nation's needs in educational and information technology development (NITDA, 2009).

This is what also necessitated for the computerization of higher secondary schools whose products feed the universities. The computerization of the schools involved the establishment of computer laboratories with Internet connectivity in all federal government colleges. It is to expose the students to practical computer education and build capacity in ICT in order to produce global competitive youth. About 60% of the Nigeria populace are below the age of 18 (Kwace, 2007) and are in school; this is therefore the quickest way to create a critical mass of ICT skills in the Nigerian populace.

The Internet has now developed to a world-wide medium of not only information dissemination, but a tool for conducting learning, social and business transactions. In order to share information on the Internet, Nigerians must have unique identity to enable persons keep their content information and to locate them in the Internet. This identity is usually referred to as "Domain Name" like .com, .edu, .net etc

In 2003, Nigerian government, delegated by Federal Ministry of Science and Technology recognized NITDA as the appropriate body for the top level domain i.e. .ng and expressed an interest to have NITDA formally recognized by Internet Corporation for Assigned Names and Numbers (ICANN) (Internet Assigned Numbers Authority Report,

IANA, 2004). Under NITDA, over 200 organizations have been registered under the country's domain name registration (.ng) (NIRA, 2009).

Nigeria faces so many problems of socio-political, ethno-religious and perhaps the educational and economical problems. Internet connectivity in campuses for easy access to information could probalbly help to deal away with such bottle necks. This necessitates the stake holders like the National Universities Commission (NUC) and National Commission for Colleges of Education, (NCCE) Education Tax Fund (ETF) and the National Board for Technical Education (NBTE) to intensify effort to providing Internet services in campuses of higher learning. This included the Polytechnics, Colleges of educations and the Universities.

1.3. Problem Statement of the Study

As technology continues to advance at such a rapid rate, much of the technology that was a luxury a few years ago like internet is now considered a necessity. Technology is now into business, academics, information, communication and entertainment. Internet technology consists of so many arrays of applications which involved the SNSs and many other resources. SNSs have their ways in less than a decade and proliferate so rapidly in clusters. It is now being used by large number of users which included students as well.

Kord (2008) reports that university students' involvement in social networking site has increased considerably since 2004. He added that students' usage of the social networking sites is a daily activity. Recent multiple studies (Gross & Acquisti, 2005; Lampe et al., 2007; Stutzman, 2006; Tufekci, 2008) show that about 80% to 90% of

university students have profiles on at least an SNS. Kord (2008) states that “online social networking was used by the students to bring the campus community together (p. 1).” Kord (2008) also asserts that “university students who are involved in SNSs may have experienced both positive and negative consequences (p. 1).” Despite the fact that social networking is a new aspect of computing of less than a decade its effect on the students need to be investigated. Wyled (2008) forecasts that the evolution of Web 2.0 phenomenon is of intense research interest as it takes shape over the next decade. The trend of blogging and SNSs has developed which gave opportunities for researches into the phenomenon.

The process of human socialization and relationship roles are changing. As such, the Internet has the capability to impact socialization and relationship roles of adolescents and young adults (Bryant & Bryant, 2005). The issues of adolescents’ gender roles and differences, sexual attitudes, and behaviors are in a critical stage of students’ development. There is a need to investigate such issues in relation to Internet usage.

From the practical experience the researcher had visited many universities’ Internet resource centres and cafes. He observed that most of the students were usually engaged in visiting such social sites more often and spending a lot of the time searching for their missed friends, lovers and fans and sometimes searching for sexually explicit materials. The field experience shows that Internet provides a forum for sensation seeking and seduction in chat rooms, interactive gaming, and viewing porn or sexually explicit materials which may have an adverse effect on the students’ social behaviors. From the profiles observed many of the students users tend to have changes in their behaviors online by using certain comments and posting information which might not be

expected on them offline. It is observed (Kord, 2008) that students have been using SNSs to post distasteful comments about faculty members and to harass peers. Yet there are very little studies on how all these are related to or have effects on students' social behavior and academic adjustment (Weisskirch & Murphy, 2004; Pritchard, 2008).

The rapid growth of such online communication and development of new media presents many new opportunities and challenges for social inclusion. This may support the notion that communities can be developed without regular face-to-face communication. The Internet may perhaps have positive social effects on both individuals and the communities. It has been documented but with minimal evidences that social interaction, particularly with family and community networks, is strongly associated with a range of positive behaviour outcomes (Mulvaney-Day, Alegria, & Sribney, 2007). Information Technology (IT) in the Nigerian context is the bedrock for the national development. It therefore constitutes those fundamental tools and such means of managing, assessing, planning, and change for achieving sustainable growth.

It is for this reason that every progressive country has a National IT Policy and an implementation strategy to respond to the emerging global reality. This will make it avert becoming a victim of the digital divide. As a developing nation, Nigeria had a vision of being among the top 20 developed nation by 2020 just like its counterpart Malaysia. Malaysia as well aspires to participate effectively and become a key player in the emerging Information Age. Therefore, the two countries need to have a highly efficient Information Technology system driven by a vibrant national IT policy. Ibrahim, (2006) noted that National Information Technology Council (NITC) in Malaysia was launched in 1996 against the turning point of 2020. She called it "turning ripples into tidal waves"

(p.175) which, entirely focused on turning people, infrastructure and application. She added, this is what led to the creation and certification of Multi-Media Super Corridor (MSC) in Malaysia. It later sprang into hepta-flagship i.e. smart school, electronic government, telemedicine, multipurpose card (Mycard), research and development (R&D) clusters, worldwide manufacturing web (WMW) and borderless marketing (BM) in other free trade zones (FTZ).

In relation to students' social behaviors, among the topics previous researches (Pritchard, 2008; Donath, 2008) do not address systematically the use of digital technologies for communication within formal organizations. Others were the technology's potential contributions to educational research, social-science and scholarly communication. In this study it reflects the relationship among students' use of social network sites (SNSs) and students' social behaviour (SSB) (Pritchard, 2008) and students' academic adjustment (SAA) (Kord, 2008; Lent, et al, 2008). This is a considerable area that needs the attention of researchers to explore especially in the context of the methodology to be adopted. They further argued that the issue of disparity in the Internet usage among and between the seniors and junior has not been clearly searched. How the postgraduate and the undergraduate differs in terms of the SNSs usage. The time spent on the SNSs and the level of impact it might have in relation to their academic pursuit.

Ibrahim (2006) posits that "there were studies on IT transfer but less impressive in developing countries like Malaysia" and particularly Nigeria as observed by this researcher for instance. Ibrahim (2006) further asserts that there are no study on interaction between actors and players on Technology Transfer. In the area of this

research also based on the literature there are limited studies on the interaction between the designers and the users of SNSs. In Nigeria as at the time of this study no profound study was so far conducted in the area of social networking sites in relation to university students. But many were conducted on Internet in general.

In a study conducted by Zywicka and Danowski (2008) on Facebook usage the researchers recommend continued research that would ask Facebook users if they think popularity on Facebook is different from popularity offline. This would allow a better understanding of the notion of popularity and how its meaning may vary in different contexts with different types of individuals. It would be interesting to see how university students used such social networks. Moreover, what differences in popularity, self-esteem, and sociability existed among the university students using them. Zywicka and Danowski (2008) research did not examine if and how social networking sites change interactions among students at university in relation to their gender, religion and level of study. Hence a very wide gap that requires the researchers' attention to build up does exist. In this case, the Nigerian situation differs with that of Zywicka's scope in terms of the gender role; ethnicity and the religious background because there has been limited studies on Nigeria that compares those aspects in relation to students' use of SNSs especially ethnicity and religion.

More closely related to the issues identified above, a growing body of scholarship addresses other aspects of SNSs, their users, and the practices they enabled. For instance, scholarship on the ways in which race and ethnicity (Gajjala, 2007), religion (Nyland & Near, 2007), gender (Geidner, Flook, & Bell, 2007; Hjorth & Kim, 2005), and sexuality (Pritchard, 2008) connect to, are affected by, social network sites raise interesting

questions about how identity is shaped within these sites. Hence all of these studies focus on the issues narrowly. There is the need for an in-depth examination and analysis on how the SNSs may shape the individual students' behavior and attitudes. (Hargittai, 2008)

Another related issue is how SNS can change or even tarnish individual behavior. In relation to that, Kord (2008) postulated that researchers need to further explore whether or not experiencing tragedy, like the Virginia Tech shooting, have influence on behavior socially and appear to be popular online. It was found that students who were involved in the incident, and even those that died, received large numbers of hits on their profile page and received more than a normal amount of comments on their walls (Kord, 2008; Vargas, 2007). Similarly it was estimated that over 236 Facebook groups and many more on MySpace, YouTube and discussion boards were created following the incident, and many Virginia Tech students were members and contributors. This requires a more strong approach especially the mixed model in order to critically examine, compare and correlate (Pelofsky, 2007) the different variables.

In addition to all these the academic and sociological inter relation in using the social networks was not equally examined by some researches (Hargittai, 2008; Humpreys, 2008; Fernandez, & Peter, 2009; Zywica & Danowski, 2008). They further relented that there is strong evidence that students' excessive SNSs use is associated with academic problems. But it is not clear whether these students might have experienced similar or related problems without the Internet or exclusively when using SNSs. The SNS enables opportunities for social contact that did not exist before its invention. So now it plays a role in some students' academic difficulties. Thus, researchers, policy

makers, academic administrators, faculty staff, and collegiate workers need to become increasingly aware of what appears to be a relatively small but growing problem on campus, particularly with undergraduate populations. SNSs can be used for good and for bad as well as academically and socially. As such there is the need to ascertain the entire nature, structure and nurture of it in relation to university students' social behaviors and academic adjustment especially in the identified area the Northern Nigeria. This is because Northern Nigeria has long been playing larger part in the evolution and transformation of Nigeria's national policies on education (Umar 2010).

Lockyer and Patterson (2008) argue that research related to social networking and Web 2.0 tools that support SNSs is limited. Where the research does exist, mostly they focused on identity, network structures, privacy, and technological issues. However, with the appropriate caution in their conclusion, they opened the need to continue to investigate the issue on how to bring together elements of models and evidence from informal learning theory with the observations of current and emerging behaviors in social networking sites to inform formal education. They also suggested for future studies to consider potentially moderating effect of other variables

With regards to students' academic adjustment, Omoteso (2006) examines the adjustment of university students in South-western Nigeria in relation to the influence of selected socio demographic variables. The study was limited to south-western region and the overall result indicates that academic adjustment problems of university students do exist in Nigeria. The nature of the problem can be seen in the students' failure to detach from old friends and family. Other issues are peer adjustment with the new friends and school laws. Most importantly they have difficulties in locating the lecture timetable

schedules as well as using the Internet facilities. A recent study (Rice, Vergara, and Aldea 2005) on (n=364) students show significant relationship between perfectionism and the cognitive-affective variables, and between perfectionism and the academic, psychological and social adjustment variables. Their study's framework was broader covering three dimension of social, psychological and academic adjustment; but was not correlated to SNSs usage or social behaviors. Rodgers and Tennison (2009) in their study of assessment of adjustment disorder among the fresher college students found that a "substantial portion of students experienced a set of adjustment symptoms meeting the adjustment disorder criteria (p. 220)." It requires further investigation on university students. Kord (2008) findings show that "SNS is a negative predictor of academic integration for student's perceptions of faculty and for their development and teaching as well as academic and intellectual development (p. 1)." He concluded that "online social networking was a negative influence on the college students' academic experience." Hesse (2007) also suggested that further qualitative and quantitative investigation about the perceived effects of this communication behavior be undertaken with regards to SNSs and students' adjustment.

The problems identified above consequently raised the capital question that how and why these social network sites relates to the students' social behaviors and academic adjustment in all the 12 sampled universities in the Northern Nigeria. With this question the answer can be generated through the derived sample from the accessible population and later it will be generalize on the main target population.

1.3.1. Nigeria National Information Technology Policy

This research at this stage examined the policy statement on the IT issues in the Nigerian context being it the central context and focus of the study. Nigeria's vision statement with regard to IT as stated in the National Policy for IT is to make Nigeria IT capable country in Africa and a key player in the Information Society by the year 2005, using IT as the engine for sustainable development and global competitiveness.

Therefore the mission statement was stated as, to 'use IT' for:

- (i) Education
- (ii) Creation of Wealth
- (iii) Poverty Eradication
- (iv) Job Creation
- (v) Global Competitiveness

Although Information and Communication Technology (ICT) policy can be seen in different angles the vertical, infrastructural, and horizontal policies. The vertical ICT policy addresses sectoral needs such as health tourism and education. Yusuf (2005) argued that the policy has no specific special application to education. He added that teachers' ability and willingness to use ICT and integrate it into their teaching is largely dependent on the professional development they received. The infrastructural policy deals with the development of national infrastructure like telecommunication which is not much of concern to this study. The horizontal aspect covers the societal aspects such as tariff and pricing, security, freedom of information, and privacy. Similar to Nigerian policy, Ayad (2007) states that "Malaysian ICT public policy was flagged up to cater for the national broadband policy (NBP) in 2004 as a strategy for knowledge based and

economical society. Thus to be engaged in discharging connectivity of public places like schools, clinics research centres and governmental agencies (p. 150).” The Nigerian national IT policy is however silent on teacher education and teachers’ ICT professional development.

In consideration of the recent and perhaps all the relevant and related literature so far available; it is increasingly obvious that the Internet is changing human life. The details of this change are not yet clear. A major debate in current literature involves the capacity of the Internet to enhance social and wellbeing in not only young but old age. The level of social network usage between the undergraduate and postgraduate students in the universities has not been ascertained clearly. The students / teachers or lecturers relationship in using the SNSs has not been able to answer the five Ws and H. These are ‘what’ social network attract ‘who’ among them and ‘when’ do they used it, is it during the working hours or after. Again ‘where’ do they use the network is it in home, office/school or cyber cafes in other words or telecentres then ‘why’ do they used it? Is it for fun, for education, or for socialization? The last one ‘How’ do they use it?

In the world today, if there is any professionals and profession that must keep abreast of the happenings in the world it must be the teaching and teacher. That was with the aim to guiding students in the process of behavior modification and socialization. Against that background now, most of the tertiary institutions in Nigeria were connected or about to be connected to the Internet. In Nigeria today Internet and cyber cafés are the buzzing words and are as well scattered around Nigerian campuses in which the scope of this research (Northern Nigerian universities) is inclusive. This tends to reflect on the students’ attitude towards their immediate and remote environment. The teacher-students

socialization involved the later to be functional members of a given society. Internet connectivity can be well achieving in Nigeria to resolve most of its persisting problems of ethnicity and religion as well as socio-political instability. Internet as a social treasure contains so much sites and data bases that are peculiar to Nigerian situation. These can be more powerful tools to address the Nigerian students' attitudes and behaviors of which most are adolescents and teenagers though there are seniors especially the postgraduate students. Many students across Internet usage may have a change in their behaviours both intellectually, socially, emotionally and physically. Many of the students tend to have been commonly using such buzzing words and phrases across campus like: browsing, surfing, chatting, YouTube download, Facebooking no network, low service signals, online game, have fun, email, tagging, e.forum etc.

Most recent studies (Fernandez & Peter, 2009; Donath, 2008) did not touch the real social effect of the social networks in relation to both social behaviors and anti social behaviors of university students and little was said about the students with regards to SNSs usage and ethnicity, gender and religion (Dwyer, Hiltz, & Passerini, 2007). This is also a gap needed to be address especially in Nigeria and the African society in general. Nigeria is a very important country in the world as well as African region. African as a large population is second largest countinental population in the world amounting to 1.013 billion (World Statistics, 2010). In addition, African Internet users although are in the increase however, are remarkably low estimated to about 86.2 million (4.8 %) in 2009 to 110.93 million as from June 2010 which is only 5.6 % of the world record (see Table 1.1) below. Nigeria has the largest Internet users in the African region of about 43.9 million (World Statistics, 2010).

Table: 1.1

World Internet usage and population statistics (from June 2010)

WORLD INTERNET USAGE AND POPULATION STATISTICS							
World Regions	Population (2009 Est.)	Internet Users in 2000	Internet Users in Latest Data	Penetration (% Population)	Growth 2000-2009	Users % of Table	
Africa	1,013,779,050	4,514,400	110,931,700	10.9 %	2,357.3 %	5.6 %	
Asia	3,834,792,852	114,304,000	825,094,396	21.5 %	621.8 %	42.0 %	
Europe	813,319,511	105,096,093	475,069,448	58.4 %	352.0 %	24.2 %	
Middle East	212,336,924	3,284,800	63,240,946	29.8 %	1,825.3 %	3.2 %	
North America	344,124,450	108,096,800	266,224,500	77.4 %	146.3 %	13.5 %	
Latin/Caribbean	592,556,972	18,068,919	204,689,836	34.5 %	1,032.8 %	10.4 %	
Oceania / Australia	34,700,201	7,620,480	21,263,990	61.3 %	179.0 %	1.1 %	
WORLD TOTAL	6,845,609,960	360,985,492	1,966,514,816	28.7 %	444.8 %	100.0 %	
Nigeria	152,217,341	200,000	43,982,200	28.9 %	21,891.1 %	39.6 %	

Source: (Internet Usage and World Population Statistics 2010)

One of the issues that prompted the beginning of this project is to serve as a pace setter in finding the level of the influence that the SNSs have over the targeted population. This is in addition to what might manifest from the students' social behaviors. Such as positive social behaviors like respect, love, punctuality, preference, tolerance, friendly, concern, obedience, just, trustworthy and etc while on the other hand anti social behaviors like aggression, isolation, harassment, intimidation, violence, crimes and to some extend poor offline relationships and hatred.

The researcher works with the computer centre in one of the institutions. The researcher therefore had a privilege of visiting many universities' Internet resource centres and cafes. He observed that most times the students engaged themselves visiting

such social sites more often and spending most of the times searching for their new and missed friends, lovers and fans and sometimes searching for sexually explicit materials. Hence the researcher develops interest in finding out the missing gap in literatures related to Internet usage specifically SNSs usage and the students' socialization processes and perhaps how are all these related to the students' academic adjustment in such institutions. How do these online social aspects of the Internet influence the students' both online and offline social relations especially in relation to their university activities? The researcher identifies that such issues like socioeconomic factors, faculty and ethnicity need to be taken into account as suggested in some studies (Dwyer, 2009a; Dwyer, Hiltz, & Passerini, 2007; Dawson, 2005; Fernandez, 2009; Humphreys, 2008). This therefore, may have a significant impact upon the low validity of such previous results. Therefore, the current study examined the demographic variables like age and gender differences, faculty, ethnicity, religion, socioeconomic background (SEB) and level of study. Valid effort and reliable measures were carried out to reveal the authentic result in those aspects. This researcher embarked on that as a secondary gap for the study. The primary topic remained, 'social networking sites usage and students' attitude towards the students' social behaviors whether (positive or negative, both online and offline) and their academic adjustment in Northern Nigerian universities.' It is clearly shown that social behavior can best be understood by social action, social interaction and social relation. All these are usually designed and directed at other people to induce a response from them. Furthermore, social behavior means a way by which of members of a given society communicating (Wikipedia, 2009).

1.4. Purpose of the Study

As stated above in the problem statement there is a need of such study considering the inavailability of studies in the scope area in order to examine the situation related to social networking usage in Nigeria. Alan, Marcon, Gummadi, Druschel and Bobby (2007) posited that, “sociologists can examine our data to test existing theories about offline social networks, as well as to look for new forms of behavior in online social networks (p. 3).” SNSs constituted an important research area for scholars interested in online technologies and their social impacts, as evidenced by recent scholarship in the area (Boyd & Ellison, 2007; Donath, 2007; Ellison, et al., 2007; Lampe, Ellison, & Steinfield, 2007). Moreover, another important reason is that, this study will formulate and test hypothesis on the SNSs usage in relation to students’ social behaviors, students’ academic adjustment and the moderating effect of the students’ attitude on the relationship of such variables. Additionally to investigate the variations in the extent of SNS usage in terms of some outlined demographic factors i.e. gender, age, faculty, and ethnicity, level of study, socioeconomic background and religion.

Internet is now an interesting and important research area for sociologists, education psychologist and education sociologist. This is testing theories of technology diffusion and effects of media on human socialization. Most especially in relation to SNSs because it is a medium uniquely that enabled integrating modes of communication and contents of information which as well embed all other media. With regards to the purpose of this study SNSs emerged as an avenue where educational excellence would be achieved by integrating and embedding educational facilities within its contexts. These lead to producing excellent and fully trained university students in Nigeria. Hence

achieving and realizing the Nigerian national objectives of tertiary education become operationalized. This means the national goals will be adequately achieved most especially the millennium development goals and consequently the achievement of the Nigeria's vision for becoming among the first twenty developed countries by the year 2020.

The use of the Internet in general and SNSs in particular has become more common for students. The proliferation of SNSs use has transformed the concepts of place, time and distance to become compacted. In the last few years it witnessed how Twitter site stimulated American 2008 election campaign (Sumner, 2009). Iran as seems conservative yet during the 2009 election the Facebook plays enormous role during the campaign. New media enabled virtual interpersonal interaction among individuals and introduced diverse new ways of sharing information and communication with others. SNSs usages, in particular, allow students and adults to socialize regardless of boundaries, mobility and physical impairment. People now meet one another online and maintained diverse social relationship which formed the online social community i.e. SNSs (Fernandez, 2009). What is more about it, is that, people not only create new relationships online, but can also maintain pre-existing relationships onto the online area. Such relationships encouraged the exchange of information and created reciprocal trust among members (Ellison, et al., 2007).

There exists a division within the education infrastructure concerning emergent technologies which claimed that this new revolution is not as beneficial as futurists like to claim. One of the reasons for this study is to examine the social behavior patterns of students such as the negative behaviors like lying, harassment and so on as well as

positive behaviors like loyalty, honesty, truthfulness and so forth when using SNSs. Secondly to find out how their academic adjustment is related to SNSs' usage. Lastly their attitudes and how the attitude moderates the relationship between SNSs' usage and social behavior patterns of students and their academic adjustment. For that purpose a correlation survey was drawn from the data gathered, examined, and analyzed. Such studies like this one opens avenue for future studies to seeing how SNSs user's students differ from those who don't use the SNSs. Another purpose was to determine whether SNSs users visit public Internet laboratories more or less often compared to university laboratories using their mobile facilities i.e. mobile phones. More so, how did the university authorities go about students using SNSs during classes, do they control it? Nwalo (2009) stated that the university libraries and computer laboratories in the Niger-Delta region have more ICT facilities than the special libraries and public libraries. He also revealed that mere availability of ICT facilities does not guarantee their use but availability matched with adequate power supply and enthusiastic work force. This means using the Internet or SNSs in particular in the public laboratories would be far less behind using universities' facilities; specifically if the university facilitated the laboratory adequately.

Omotayo (2006) reports that majority of postgraduate students of Obafemi Awolowo University ranked fourth on the use of Internet in Nigeria. He further observed that undergraduates learn the use of Internet through their friends. Many students rated their ICT proficiency as "good." They claimed that they learned about computers, Internet and using SNSs outside the University. Amalahu, Oluwasina and Laoye (2009) postulate that teachers, parents, governments, organization and the SNSs designers and

owners all may want to understand the real nature of the effect of the SNSs on the users which mainly compose the young university students. This would virtually help for the next line of action in relation to the design, usage and policies promulgation regarding the SNSs.

This study attempts to gain an understanding of the social processes of adolescent peer groups, specifically peer group activity and the media's effect on socialization process and the social context of its formation. Internet technologies is regarded as one of the potential development to bring huge improvements in education sector as it reshapes society and provide new ways and learning opportunities. Whether this potential will be realized for all university students depends on the ability of education to adopt and adapt it at the local level. This work examined the relationship among social networking the student's social behavior and the educational or academic adjustment of the university students. It investigated how these new resources SNSs varied in their usage in terms of gender, religion, age, faculty, ethnicity, SEB and level of study among students in Northern Nigerian universities. It lastly assessed the potentials for using online social network sites in the selected universities in Northern Nigeria.

1.5. Objectives of Study

Having identified the relevant problems one broad question was asked. To what extent Social Networking Sites (SNSs) use relate to the students' social behavior and students' academic adjustment in Northern Nigerian universities in terms of their gender, age, ethnicity, faculty and level of study, socioeconomic background and religion?

This study intends to broadly investigate the role of SNSs usage in modifying or changing socialization process (social behaviors and academic adjustment) of the students. What are the extents of the students' social behaviors and students' academic adjustment? To what level are they coping to such social traits like some of the social tasks involved in peer relationships? Examples of such tasks are:

- Joining a group, dealing with conflict
- Self defence, coping with failure, and assertiveness,
- Making a friend, sharing and cooperating,
- Coping with rejection, responding to and making requests,
- Helping others, having conversation, and supportive,
- Positive teacher preference, academic participation and contributions,
- Curricular and extracurricular activities participation and altruism.

The following are the objectives for the study:

1. To find out the extent of SNSs usage, students social behavior and students' academic adjustment, in Northern Nigerian universities.
2. To ascertain the relevance, similarities and disparities of the SNSs usage in relation to gender, age, ethnicity, faculty, level of study, socioeconomic background and religion among Northern Nigerian university students.
3. To find out the relationship between the SNSs usage, the students' social behavior and students' academic adjustment in the Northern Nigerian universities.
4. To find out if students' attitude moderate the relationship between SNSs usage and both students' social behavior and students' academic adjustment.

1.6. Research Questions

Owing to the above objectives the researcher stated the following research questions which were formulated in both descriptive, relationships and predictive manner. They are:

1. To what extent are the SNSs usage, students' social behavior and students' academic adjustment in Northern Nigerian universities?
2. Is there any significant difference in SNSs usage among the Northern Nigerian university students in terms of, gender, age, faculty, ethnicity, socioeconomic background, level of study and religion?
3. Is there any relationship between the SNSs usage students' social behavior and students' academic adjustment?
4. Does the students' attitude moderate the relationship between SNSs usage and both students' social behavior and students' academic adjustment?

1.6.1. Hypotheses

The ten hypotheses tested in the study were all null hypothesis and they are:

- H₀₁ There is no significant difference in the extent of SNSs use in terms of gender among Northern Nigeria university students.
- H₀₂ There is no significant difference in the extent of SNSs use in terms of age among Northern Nigeria university students.
- H₀₃ There is no significant difference in the extent of SNSs use in terms of faculty among Northern Nigeria university students.

- H₀₄ There is no significant difference in the extent of SNSs use in terms of ethnicity among Northern Nigeria university students.
- H₀₅ There is no significant difference in the extent of SNSs use in terms of socioeconomic background among Northern Nigeria university students.
- H₀₆ There is no significant difference in the extent of SNSs use in terms of level of study among Northern Nigeria university students.
- H₀₇ There is no significant difference in the extent of SNSs use in terms of religion among Northern Nigeria university students.
- H₀₈ There is no significant relationship between SNSs usage, students' social behavior and students' academic adjustment.
- H₀₉ Students' attitude does not significantly moderate the relationship between SNSs usage and students' social behavior.
- H₀₁₀ Students' attitude does not significantly moderate the relationship between of SNSs usage and students' academic adjustment.

1.7. Significance of the Study

The successful results of this study hope make very strong and meaningful empirical, theoretical and practical contributions. It is add to the conceptual, theoretical frameworks and methodological boundaries of knowledge. In essence, cross examination, exploration and review were made into past relevant studies and theories. Fair peer review were considered and proffered, problems and limitations were identified and solutions were suggested thereafter. This study contributed by identifying and advocating the role that online SNSs play on the university students' experience in fostering good

relationship and harmonizing various ethnic, religious and social groups. Furthermore, so it enhances the establishment of SNSs as tools for formation of adjustment and full involvement in general school activities in Northern Nigeria universities.

The result from this study as well makes enormous contributions in the literature related to the main variables examined i.e. SNSU, SAA, SSB and SATT which subsequently and invariably contributed to the general entity of knowledge. The model on this research sets a benchmark for action plan with regards to present and future education activities in Nigeria by harnessing the resources for a long lasting and reliable reform in the education sector in the country.

In specific terms this study surely helps practically reduce negative social behaviors like aggression, tantrum, lying, deceive and cheating among students and promote positive social behaviors like social capital, altruism, self-efficacy, mutual interaction and cooperation among university students in Northern Nigeria. Such things like cultism, terrorism and fanatic activities can be identified and be curtailed among the students. In real fact this study would however set a very significant landmark and establish a benchmark for future studies.

In terms of the measurement tools, this research definitely contributes because some particular tools of measurement were chosen, reviewed, modified and employed. This is with the consideration of the tools' usability, validity and reliability, hence, based on that the confirmatory factor analysis and reliability tests were employed. In addition, since the study examined differences on some variables in relation to some a significant mode of relationship evolved from this study because it correlated the main variables with each other. But in other studies, it was not so and most of such demographic

variables were not correlated with the use of SNSs like the ethnicity, faculty, level of study, and most importantly religion which tends to be forgotten by many Internet researchers (Albirini, 2006). He added that the study of the social aspect of the Internet can be done where findings can be synthesized about the individual users' behaviors with regard to the macroscopic analyses of both institutional and political-economic factors. Some studies (Haggital, 2007; Pritchard, 2008) correlate gender and Internet usage which gives out many conflicting results. As such this very study will immensely and deeply re-correlate them to have a clearer vision of their significant relationship. Using stronger tool to analyze the moderator variable i.e. students' attitudes towards SNSs was another contribution viewed by this study.

Some researchers alleged that the Internet and SNSs are changing our societies (Kwace, 2007; Liu, 2008). However, there is little agreement about what those changes are. Research like this is to encourage more sociologists, psychologists and technologists in education especially to contribute actively to such research spectrum. The study would poster an avenue for finding a way to embed the use of SNSs in the teaching learning process in tertiary institutions. In addition, considering the main constructs, this study will surely contribute in building excellent students educationally in universities by shaping their social behaviors, and adjust their adoptability and adaptability problems throughout their stay thereby preparing them for contributive future life in both university and after graduation.

More so, considering the fact that higher education specifically universality education aims at manpower and human resource development. Hence, another important significance of this study is that it will promote high level of skills and make the

university students more active which conform to Nik Yuzula (2006) by fostering behavior of problem solving and analyzing information through the help of SNSs contributed immensely in identifying, edifying, expanding, modifying, sanitizing, structuring, and controlling SNSs usage among the students in Nigeria. So that even after the students' graduated they will continue to use SNSs wisely in their stage later of life in the society. This will curtail the problems of preventing using SNSs i.e. Facebook, Twitter and so on during the work time (Frosch, 2007). It will also help understand the nature of interaction between the actors and the players in Internet technology. It will shape the interrelation among the government and policy makers, websites designers and website owners, and the users (students) of the SNSs on the other hand. This will definitely create plan to minimize problems, causalities and other tricky and treachery issues of Internet technology especially the SNSs. This is by creating encryption and decryption programs on the proxy servers along the Internet exchange points.

The findings of this research will be beneficial to government institutions and Internet Service Providers (ISPs), university authorities, teachers and parents. This is by adopting the findings and suggestion that evolved from the study. Other agencies and parastatals, individuals and nongovernmental organizations (NGOs) will equally find it useful because it would be a model that can enhance achievement of national goals and general educational objectives in Nigeria per se. The research would in no doubt clue and modify the avenue for producing quality and excellent students which will surely contribute in the actualization of the country's ambition of being among the twenty developed countries by the year 2020. Research like this is an eye opener for the education policy makers and curriculum designers to understand the persistent needs of

the university students especially in terms of the SNSs usage in relation to students' social behavior modification and adjustment problems. It will perhaps serve as a necessary tool for proper students' adjustment academically. In a nutshell the general contribution of this study is entirely for the production of phenomenon 'academic excellence' in Nigeria. Hence all of the above contributions would consequently stretch the boarder line of the body of knowledge.

1.8. Scope and Limitations of the Study

Internet as an enormous and spectacular entity covers the interest of this study. The scope of this study is within the sphere of some SNSs usage (Facebook- pictures/text based; YouTube video/text), and its relation to social behavior and academic adjustments of university students in Northern Nigeria only. The study was so limited to that, just to allow and give other avenues for other researchers to lay their own contributions in a wider perspective and complex way.

This research is limited to university settings because it investigated the relationship of SNSs usage and social behaviors and academic adjustment among university students in Northern Nigeria only. Hence, the unit of analysis represents student users of some SNSs in Nigerian universities only. The research covered all faculties consisted of both the male and female undergraduate and postgraduate student users of SNSs in all the twelve federal universities in Northern Nigeria. This is by considering their homogeneous nature in terms of the students' population, policies, regulations and ICT capabilities viz

Table: 1.2

The total number, nature and population of 12 federal universities in Northern Nigeria

SN	Universities	Acronym	Year establ.	Estm. Popul.	Status
1	Abubakar Tafawa Balewa Univ. Bauchi	(ATBU)	1980	7,000	Technology
2	Ahmadu Bello University, Zaria	(ABU)	1962	40,000	General
3	Bayero University, Kano	(BUK)	1980	20,560	General
4	Federal University of Technology, Minna	(FUTMI)	1983	13,000	Technology
5	Federal University of Technology, Yola	(FUTYOLA)	1980	11,515	Technology
6	University of Abuja, Gwagwalada	(ABUJA)	1988	20,400	General
7	University of Agriculture, Makurdi	(MAKURDI)	1988	5,684	Agriculture
8	University of Ilorin, Ilorin	(UNILORIN)	1975	20,084	General
9	University of Jos, Jos	(UJ)	1975	13,408	General
10	University of Maiduguri, Maiduguri	(UNIMAID)	1975	25,500	General
11	Usman Dan Fodio University Sokoto	(UDUS)	1975	18,944	General
12	University of Technology (Federal Polytechnic.) Kaduna	(KADPOLY)	1959	22,000	Technical/ Technology
	Total			237,039	

Source: Various websites of the universities. (Wikipedia 2009)

The scope covered university students in consideration of similar previous studies. Such studies (Dwyer et al., 2008; 2009; Ellison, et al., 2007; Hargittai, 2008) shows higher education institution communities as moderate users of Internet. The researcher chose only the federal universities because of two reasons. First, the

universities have higher rate of enrolments and are moderate in terms of Internet accessibilities. Secondly, the federal government universities have adequate funds and facilities more than other universities owned by state governments and privately owned universities. Lastly and most significantly in order to have a homogenous population and sample only the federal universities would be considered in this study.

The private universities were not considered in this study because most of the private universities have just been newly established (1999-date). Most of them were established in 2005 therefore are less than a decade and not yet fully rooted academically. The private universities also were more concerned with their commercialization. The exorbitant fees scared many students away. Only those set of economically well to do and vibrant students can afford.

State owned universities also were ignored in the study in the sense that many were just secondary school with small compounds converted to universities. Again very few started graduating they are mostly less than a decade old. Many lack the standards of a conventional university because of poor facilities. The policies behind the establishment of most state owned universities as stated earlier were mere politically motivated as such they are lacking in most essentialities, funds, staff, facilities, accreditation and recognition.

In essence most students prefer federal universities to state universities. In fact most state universities do not have adequate and reliable Internet connectivity. The enrolment of all state universities in the Northern Nigeria cannot equal the population in just one federal university like Ahmadu Bello University (ABU) which has almost 40,000 students.

1:8:1 Limitations

One major limitation of the study is that it was conducted only within the Northern Nigerian Federal Universities and on students only. Other limitations can be attributed to proximity because the area is very vast and is known of bad roads and risks of other dangers which the researcher suffered for. It is also found to be part of the limitations in this study were the limited resources, financial constrain and time management. The researcher is familiar with the area yet difficulties with regards to the subjects were experienced in the sense that many students would not want their identity of using SNSs be revealed to non friends. Besides, bearing in mind the differences in terms of policies governing the various institutions and varied calendar of sessions, the researcher employed some research assistants to help carry it out.

Additionally, computer literacy in Nigeria is very low. The use of Internet facilities depends on one's technical know-how on the computer economic status. It is observed presently, in the industrialized nations, computer is a household name everywhere. While in Nigeria, not all educated Nigerians are computer literate (NITDA, 2009). Most of the so called computer literates in the area have their knowledge restricted to the use of the computer as a word processor. This automatically means that Internet literacy is limited. An estimated number of Internet literates are about 25% of the total population. Of this percentage, 5% are from poor background, 10% are in the very high-income bracket, 20% are from National Companies, 25% academic institutions (staff and students) and 30% from the multi-national companies (Ahiakwo, 2008).

Therefore couple with all these, gathering information on relationships between people and the context of those relationships, which can range from cohabitation (i.e.

fraternities) to shared interests (i.e. film pals, soccer etc), is an arduous task for social networks researchers.

1.9. Organization of the study

The study was organized in such a way that it follows the traditional way of research report. It was a cross-sectional study in which the major variables were measured once and the relationships between them were determined.

Hence, the chapters are categorized into the normal five chapters, in which chapter one deals with introduction and the general overview of the study. The introduction of the chapter, the background of the study and the problem were conspicuously explained. The research broad objectives that determine the research questions were stated and hypotheses formulated.

The chapter also covers the scope of the study in forms of the subject-matter, concepts and theories as well as the niche area and the significance of the study. The chapter also gives an overview of Internet status in Nigeria, Africa and Malaysia and the guided policies with regard to the general issues of the information and communication technology in Nigeria.

The second chapter concentrates on general related literature review, starting from broad underlying theories, to the major conceptual framework and concepts. The chapter continues to update up to the tail end of the study. At the time of sumitting the work the literatures were saturated to the most recent studies.

Chapter three delves on the research design and instrumentation and its development. Methodological issues such as measurement, population and sampling size, sampling techniques are all presented in the chapter. Other contents of the chapter includes overview of analytical tools employed for data screening, normality, reliability and constructs/ content validity as well as internal and external validity.

Chapter four deals with data analysis, hypotheses testing and result presentation. Results of construct validity (content, convergent, discriminant and nomological validity as well as unidimensionality) and internal consistency test are presented and interpreted in this chapter. Results analysis by using Pearson product moment correlation, t-test, ANOVA, and multiple regressions are presented in the chapter. The chapter concludes with the summary of the key findings vividly spelt out to give a helicopter view of the report for the reader.

Chapter five presents a detailed and rigorous discussion on the findings in relation to research objectives, research context, underlying model/theory as well as available recent related literature. Chapter five concludes the research by presenting summary of the key research contribution, research implication and conclusions. It highlights the theoretical and practical contributions of the research with emphasis on the generazability and originality of the work. Other contents of the final chapter include the research limitations and recommendations for future studies. Finally the references and appendices tailed.

1.10. Definition of Operational Terms

SNSs: Social networking sites are Web-based medium which encouraged new ways to communicate and share information among millions of user who sign up in form of textual, graphical, pictorial or audio visual form like Facebook, YouTube, MySpace Twitter and so forth. It enhances interaction between and among people, teachers and their students.

SSB: Students' Social Behaviors refer to response or actions directed towards society, or school or taking place between, members of the same species which occurs as a result of social interactions. This in form of acts, actions, or practices of two or more people mutually oriented towards each other's selves.

SSA: Students' Academic Adjustments are the students' abilities to be flexible by adopting and adapting changes in their ways, thoughts, attitudes, behaviors, values, rules, and social norms in order to fit and feel adequate and be accepted into the new study environment.

SATT: Students' Attitudes toward SNSs. An attitude is a hypothetical construct. It represents students' degree of like or dislike for SNSs. It may be positive or negative. It is a manner of acting, feeling, or thinking that shows one's disposition, opinion, stands etc.

Northern Nigeria: It is one of the geo-political regions of Nigeria. It is more arid and sparsely populated. The people are largely Muslims and many are Hausa by tribe. It was a British colony formed in 1900 till 1960. It consists of 19 out of the 36 states in Nigeria. It has over 40 universities but only 12 were federal and to a certain level of standardization.

Universities: The 12 federal universities in Northern Nigeria. ABU, ABUJA, ATBU, BUK, FUTMINNA, FUTYOLA, KADPOLY, MARKUDI, UDUS, UNIJOS, UNILORIN, UNIMAID.

Old Students: The entire undergraduate students in level two, three, four and five (sophomores, juniors and seniors,) of the Northern Nigerian Universities.

Fresher Students: Entire level 1 students in the Northern Nigerian universities.

Postgraduate Students: The entire students in the postgraduate level (Master, PhD, and postgraduate) of the Northern Nigerian universities.

CHAPTER TWO: REVIEW OF LITERATURE

2.1. Introduction

The main objective of this literature review is to capture a cross section of leading theories and empirical studies on the subject matter. It commences with discussion on the various underlying theories, followed by review of literature on basic terms and concepts. It later explores the available evidence of university students' social behaviors, academic adjustment, risk factors, and how they relate to social network site usage in particular. Conceptual and theoretical background of the key terms viz socialization and the Internet form the platform for the study. The review examines research studies selected from the literature of the last decade i.e. from the years 1999 to 2009. These research studies were identified through searching of so many data bases mainly via the Universiti Utara Malaysia (UUM) library (Sultanah Bahiyah Library) resource units such as the Education Resources Information Center (ERIC), Institute of Electrical and Electronics Engineers (IEEE) Xplore, PubMed, ProQuest, and Science Direct databases, Association for Computing Machinery (ACM) digital library and to some extent some other libraries in Malaysia and Nigeria. The search keywords were mainly the primary concepts, measures or main variables in the topic and some sub units in the main concepts viz: Internet, social network sites, socialization, media and technology. Studies selected were those that reported findings related to students' social, psychosexual behavior, academic adjustment and pursuit, risk factors, student attitudes and use of the social networks. Refereed and indexed online journals were used almost exclusively and saturated. Moreover, the search for literature in this study extended up to the tail end of the study. This is to give the

researcher ability to capture recent development on the area. This is because the social networking is an area that is fast growing in the field of Internet Technology. Moreso, social networking plays a key role in students' integration into their universities or colleges.

2.2. Theoretical Framework

One of the issues raised (Dwyer, Roxanne & Widmeyer, 2008) was lack of theory that can explain the difference in success and failure by SNSs with relevance to acceptance and usage in order to advice developers. In their study they employed fit appropriation, task technology and structuration theories which appeared to be inconsistent in results. This section examines some theories and ideas postulated by many authorities in the field of sociology of education, social psychology and Internet technology. Most concern of this research focuses more on the educational technology, sociology of education, social psychology and some theories of learning behavior. Theories on Internet were at the infant stage; as such not much was developed as it is now gaining ground. The researcher explored these famous three major areas i.e. sociological, technological and psychological theories aiming to finding a gap to be filled especially in the modern age of informational revolution. The researcher tilted towards a particular ideology to have a based in the research ground and frame up the study. It is necessary to have an overview of such different and important pillars simply because the issue of social networking site touches all aspect of the social and psychological being of the users and perhaps the technological preference. Most of these social sites in terms of its design or its usage considered the psychological background and sociological relation of the users. In fact most sites especially the major and famous ones like Facebook and

MySpace for example existed to intensify the social relation that pre existed and some new ones in order to have a psychosocial control over and satisfaction of the users. But it seems as mentioned in the objectives of this study there are other salient and unanticipated issues that use to appear in a very much complex and complicated passion. This, therefore, called for the attention of this researcher particularly to investigate it and report on that in order to alleviate the consequential happening. The first segment of the theoretical background deals with the sociological theories where three schools of sociological thoughts are examined in due course. It examines their focus on social relations and to some extent how their views fitted in the new technology and vice versa which are all deemed expected to have effect on each other and of students' socialization.

2.2.1. Sociological Theories

2.2.1.1 Functionalism

As one of the oldest and the dominant theory, functionalism has its theoretical perspective in sociology and many other social sciences. This perspective has twin emphases: one of them is the scientific method application to the objective social world. The other was the use of an analogy between the individual organism and society.

The emphasis on scientific method in this leads to the assertion that one can empirically study the social world in the same ways as one study the physical world as well. Thus, Functionalists see the social world as "objectively real," as observable with such techniques, tools or models like social surveys and interviews. Many of these ideas can be traced back to Emile Durkheim (1858-1917). Durkheim was one of the first sociologists to make use of the scientific and statistical approach to sociological research since 1951. On communication, Durkheimians, (Durkheim's view) believed that point-to-

point communications media such as telephones do reinforce the organic social solidarity, while the broadcast media like radio, television and Internet in general do yield powerful collective representations.

Another functionalist, Talcott Parsons, who was known to be the best-known American sociologist around the 1950s, conceptualized society as a form of combination or collection of systems within systems. He argued that it is a series of social networks of such networks. He also posited that it is the personality system within the small-group system within the community system and within society (Parsons, 1951). Parsons (1971) also viewed the whole world as a collection of systems of societies. In relation to this general view it can be anticipated that the nature of today's Internet will be a miniature of society. In short, Internet can be termed as a 'miniature virtual social world.'

Studying morality scientifically, it meant the development of a means of demonstrating its objectivity (Spickard, 2001). Does that signify that morality can be shaped and reshaped as a result of using social network sites?

Functionalists analysed how individual behavior is moulded by broader social forces. Functionalists tend to talk about individual actors as decision-makers, although some critics have suggested that functionalist theorists are, in effect, treating individuals as puppets.

Robert Merton was another prominent functionalist who proposed a number of important distinctions to avoid potential weaknesses and clarify ambiguities (Merton 1968). First, Merton differentiates between manifest and latent functions of individual in a society. He leveled them as functions which are recognized and intended by actors in the social system and those which are not recognized by the actors; and thus, unintended

by the actors. He also distinguished between consequences which are positively functional for a society, those which are not for the society, and those which are neither. Lastly, Merton distinguished between levels of society, that is, the specific social units for which regularized fashions of behavior are functional or dysfunctional. Finally, he conceded that the particular social structures which satisfy functional needs of society are not indispensable, but that structural alternatives may exist which can also satisfy the same functional needs.

Like any other theory, functionalists have often been criticized. It is seen as being teleological, by reversing the usual order of cause and effect. Also by explaining things in terms of what happened afterward, not considering what went before then. Take for instance a tight functionalist might feel and explain certain religious practices, as being functional by contributing to a society's survival and well being. However, such religious traditions and practices will have been firmly established so long. So observing such kind of criticism of the basic logic on functionalist theory closely; the researcher understood that most current sociologists have stopped using any explicitly functionalistic explanations of social phenomena. This is by careful, objective scrutiny of social phenomena which will eventually be able to discover the general laws of social behavior. One of the other theories that emanated as counter to functionalist is the conflict theory (Kent, 2000).

From the Marxian (conflicts) and Weberian (interactionists) traditions there are concerns about power and inequality in the access to the new technology. The Durkheimian (functionalists) perspective sensitized the new media's impact on

community and social capital. This also leads to ask how the Internet may alter the practice of politics in the society.

2.2.1.2. Conflict Theory

As critics were raised against the functionalists' views as well as their methods, the several social theories that emphasize social conflict have their roots from the ideas of Karl Marx (1818-1883), the great German theorist and political activist. The Marxist, conflict approach emphasized a materialistic interpretation of the history, a dialectical method of analysis, a critical stance toward the existing social arrangements, and a political program of revolution.

With regard to communications, Marxists (Karl Max view) focused upon exploitation of communications media to enhance elite control of both production and politics using cultural hegemony and influence surveillance. They hold that the point-to-point media advances rationalization through reducing and limitating the time and spaces, while the broadcasting media brings together the elements of diffrent cultural statuses (Collins, 1979).

Marx in himself thought that the way such societal work was socially structured or organized and the technology that is underway (Internet) and adopted in a production will definitely have a strong impact on every other aspect of the given society. He maintained that everything of value in the society results from the human labor of the members of that society. Thus, Marx saw working men and women as engaged in making the society meaningful by trying to co creating the favorable conditions for their own coexistence. Marx summarized the key elements of this materialist view of history where he said,

“....In the social production of their existence, men inevitably entered into definite relations, which are independent of their will.It is not the consciousness of men that determines their existence, but it is their social existence that determines their consciousness” (Marx 1971:20).

In recent years Marxist theory has taken a great variety of forms. Many have argued against Marxism for empirical or epistemological reasons. Some argued that the Marxian conception of society is fundamentally flawed (Fukuyama, 2008; Prytchitko, 2008; Thornton, 2006). As earlier stated many notable as (Fukuyama, 2008; Prytchitko, 2008) argued that many of Marx's predictions have failed (Thornton, 2006). Marx predicted that “wages would tend to depreciate and that capitalist economies would suffer worsening economic crises leading to the ultimate overthrow of the capitalist system” (Wikipedia 2007).

2.2.1.3. Symbolic Interactionism

Symbolic interactionism is one of the major theoretical perspectives in sociology. This perspective has its beginning with the German sociologist and economist, Max Weber (1864-1920) and the American philosopher, George Mead (1863-1931). Both emphasized the subjective meaning of human behavior, the social process, and pragmatism. Kent (2000) asserted that there are a number of versions of interactionist ideology and thought. Many of these ideas evolved from phenomenological writings by many philosophers. The following description offers a simplified amalgamation of these ideas, concentrating on points of convergence. Herbert Blumer coined the term, "symbolic interactionism" (Blumer, 1969). Like Marx and Durkheim, Weber sought to understand the differences between traditional societies and those of the modern West.

Unlike the former however, he saw the difference as a matter of individual motivation, not social structure (Spickard, 2001).

According to Kent (2000) “Interactionists focus on the subjective aspects of social life, rather than on objective, macro-structural aspects of the social systems (p. 1).” One reason for this focus is that interactionists base their theoretical perspective on their image of humans, rather than on their image of society (just as the functionalists do). For interactionists, humans are pragmatic actors who must continually seek to adjust their behavior to the actions of other actors in the society. Kent as well stated, “we can adjust to these actions only because we are able to interpret them, i.e., to denote them symbolically and treat the actions and those who perform them as symbolic objects” (p. 1). He added, the process of adjustment is aided by our ability to imaginatively rehearse alternative lines of action before we act. He also maintained that the process is further aided by the ability to think about and to react to the persons’ own actions and even themselves as symbolic objects. Thus, the interactionist theorist sees humans as active members, and creative participants who construct their social world, not as passive, conforming objects of socialization (Kent, 2000).

Unlike the functionalist, the interactionist believed society consists of patterned and organized interactions within the members. Thus, research by interactionists focused mainly on those easily observable face-to-face interactions rather than on the macro-level structural relationships which involve social institutions. Whereas for the functionalists socialization creates stability in the social system; for interactionists’ negotiation among members of society creates temporary, socially constructed relations.

Interactionists emphasized on the improvisational quality of roles with human social behavior thus making humans as the role-making improvisers. Playing a role is one of the key mechanisms of interaction. Such roles are known to be inherently ambiguous; this required the humans to create those situations and roles they can act with. Interactionists tend to study social interaction through participants' observation, rather than interviews or surveys. To them this usually contradicts social cognitive theory which is applied in many different arenas like: education, media, public health, business, and marketing (Miller, 2005; Wikipedia, 2009).

Christian (2008) asserts that symbolic interactionists are often criticized by other sociologists for being overly impressionistic in their research methods and somewhat unsystematic in their theories. Each of the three (functionalist, conflict and symbolic interactionsm) and/or paradigms observed above, have their central views with regards to the SNSs paradigm (Figure 2.1). This has been categorized in the different systems of online interactivity in the forms of Web 1.0, Web 2.0 and Web 3.0 of social networks.

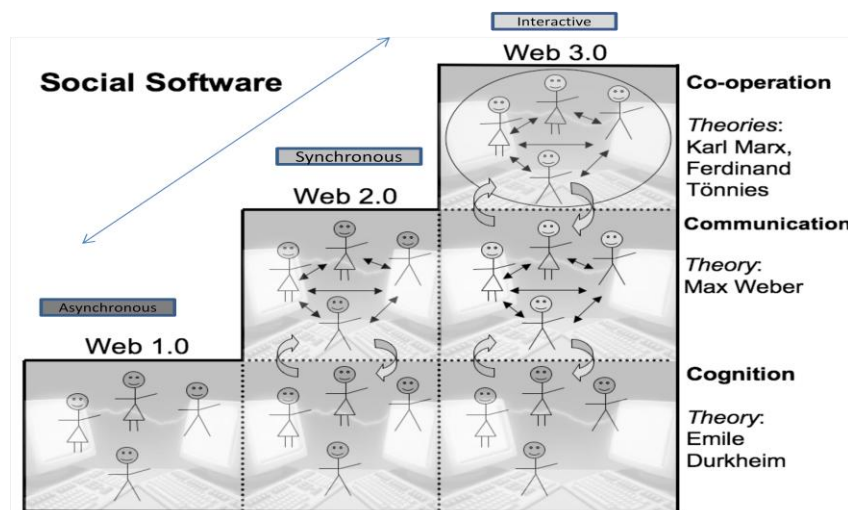


Figure 2.1: *The modified levels and relationship of the sociological theories and Internet technology.*

Source: Christian (2008)

Having examined the sociological theories, the next stage of this chapter is to closely have a helicopter view of some of the technology theories in general. Internet theories were earlier said to have been in their incubation period, yet, the researcher seemingly found it much paramount to highlight and ascertain some of the views concerning the technology theory.

2.2.2. Technology Theories

2.2.2.1. The Deterministic Theories

There are basically two extreme schools of thought about technology theory: the deterministic and instrumentalist theories. Surry (1997) summarizes the major distinction between these schools of thought. The proponent of technological determinists viewed technology as an autonomous force, beyond direct human control and saw technology as the prime cause of social change and global happening. On the other hand technological instrumentalists viewed technology as a tool. The instrumentalists see the knife as a tool for both evil and good depending on what the intentions are in using the tool. Hence they view technology as a tool, largely under human control, which can be used for either positive or negative purposes. Determinists claimed technology to be the most powerful force for change, behavior inclusive. Instrumentalists saw social conditions and human aspiration as the primary causes of change as a causal factor then. However, most contemporary technology theories are hybrid of both schools of thought with greater inclination toward one.

2.2.2.2. Instrumentalist Theories (Diffusion Theory)

One such theory with greater inclination toward the instrumental school of thought is the diffusion theory (Ahmad, 2008). Technology provides essential tools with which to accomplish the goals of a social constructivist classroom. A few examples of the way information technology can support social constructivist teaching and learning are telecommunications tools such as mobile phone, faxes and the Internet in general. By using e-mail, chatrooms, SNSs and blogs, it provides a means for dialogue, discussion, and debate interactivity that leads to the social construction of meaning. Students can talk with other students, teachers, and professionals in communities far from their classroom on very sensitive issues which may be difficult to some extent in real nature.

Surry (1997) asserts that “diffusion theory is well-defined, unified, and comprehensive theory” (p. 2). It is in a form of large number of theories, from a “wide variety of disciplines, each focusing on a different element of the innovation process, combined to create a meta-theory of diffusion” (p. 2).

Rogers’ (2003) diffusion theory is viewed as the process by which technology innovation is adopted and gains acceptance by members of a certain community (Rogers, 2003). He argues that four major factors interacted to influence the diffusion of an innovation. They are:

1. “the innovation itself,
2. how information about the innovation is communicated,
3. time, and
4. the nature of the social system into which the innovation is being introduced.” (p. 4)

Diffusion theory in its simplest form, investigates how these major factors interact to facilitate or impede the adoption of a specific product or practice among members of a particular adopter group (Ahmad, 2008; Surry, 1997). They further observed that contrary to popular thinking, diffusion theory is not a single solid and comprehensive theory. Rather they are a number of theories from different disciplines. Each of them focuses on a different element of the innovation process which combines together to form the meta-theory of diffusion. Rogers (2003) discusses the four most influential theories of diffusion i.e. innovation decision process, individual innovativeness, rate of adoption, and perceived attributes, as summarized by Surry (1997).

This theory has been so widely cited in the instructional technology literature on different stages. Sachs (1993) wrote, "after looking at the literature in our field, we need to know that there are five stages to the innovation adoption process" (p. 7). He then identified the stages as knowledge, persuasion, decision, implementation, and confirmation.

Other dimensions of the theories focused in this study were the learning theories where constructivism and social cognitive theories will be examined in relation to the social networks and social behaviors. This set of theories formed the core underlying theories for the study.

2.2.3. Constructivism Learning Theory

Constructivism was pioneered by Brunner around 1966. As a theoretical foundation this study also looks into the learning theories to display a great deal of diversity. Now there has been less than perfect agreement about the general categories of

learning theory in relation to web based learning. However this research examined the major ones. Miller and Miller (2000) suggest that developers of web based instruction choose a theoretical approach with more emphasis placed on being consistent with the chosen theory than on picking correct one. This study carefully examines this approach and considers Leinder and Javanpaa (1995) who were found to have identified five fundamental categories of learning theories. They are: objectivism, collaboratism, constructivism, cognitive information processing and socioculturalism. To the objectivists' term, learning involves the transfer of object knowledge from the instructor to the student. From collaboratists' standpoint, learning requires the emergence of share understanding by multiple learners. On the other hand, constructivists viewed learning as a creation of knowledge by the learner himself. While cognitive information processing perspective defines learning as the processing and transfer of new knowledge into a long term memory. Lastly and not least, the socioculturalism describe it as the interpretation of knowledge in a more subjective and individualistic manner (Leinder & Javanpaa, 1995).

The constructivism holds about three assumptions; the first is that learning is an active process where by the learner can construct knowledge base on experience. Secondly, learning occurs when there is disequilibrium and lastly it takes place in a social context. As such to them the learning is classified into three types viz: endogenous (suitable experience), exogenous (later experience) and dialectic (realistic experience). Aris et al. (2008) explain that constructivism stresses great importance on improving open learning experience. They also examined the differences among various blocks where they argued that behaviorism, cognitivism and constructivism are different schools of thought. Each one has a particular unique ideology. They added that cognitivism and

constructivism share common theoretical perspective. But the behaviorism differs entirely from the other two. To them, constructivism is more liberal because it allows learning freely according to the user's experience. They stressed that the role of teacher here is to provide the ground. They therefore provided some conditions from which the constructivism can take place effectively. Some of them are: present authentic task, multiple reality representation, create real situation, reflective practice is based on content and context, as well as active learning environment. So, one of the advantage of this thought is it allows the learner translate variety into reality hence it is a problem solving arena (Aris et al., 2008).

Constructivism, cognitive and Gestalt theories were presented by Leflore (2000) as the best that can support web design instruction. In a constructivist environment, learners and instructors do not exist independent of each other in which the individual learner has control over the development of his or her identity (Zheng & Ferris, 2008). So, since Internet has made the synchronous and asynchronous communication possible, this can make a very significant impact on the individual learning and to the society in general.

After examining most of the related theories on socialization, technology and learning, this study centrally gives much emphasis on the social constructivism theory (SCOT) (figure 2.2). This is because it is much more relevant and befitting. It is more closely related to the general topic and the main constructs or variables of the study.

2.2.3.1. Social Constructivism

Social constructivism expanded constructivism into social settings, wherein groups construct knowledge for one another, collaboratively, thereby creating a small culture of shared artifacts with shared meanings. Its origin was traced to Lev Vygotsky (1896-1934). Social constructivism gave emphasis on the culture importance and context in understanding what occurs in society and constructing knowledge based on this understanding (McMahon, 1997). This perspective is closely associated with many contemporary theories, most notably the developmental theories of Vygotsky and Bruner, and Bandura's social cognitive theory (Shunk, 2000; Kim, 2009). Social constructivism is based on specific assumptions they are: reality, knowledge, and learning

Reality: Social constructivists have the belief that a reality is constructed through human activity. Members of a given society come together to invent the properties of the world (Kukla, 2000).

Knowledge: Knowledge is also a human product, and is socially and culturally constructed (Ernest, 1999).

Learning: It is a process and is social in nature. It does not take place within the individual alone and it is not just a passive development of behaviors that external forces shaped (McMahon, 1997). Meaningful learning happens as long as individuals engage in any kind of social activities.

Intersubjectivity is a shared understanding among individuals whose interaction is based on common interests and assumptions that form the ground for their communication (Kim, 2009). Intersubjectivity not only provides the grounds for communication but also supports people to extend their understanding of new information and activities among the group members (Vygotsky, 1978). Knowledge is

derived from interactions between people and their environments and resides within cultures (McMahon, 1997; Shunk, 2000).

Parlincer (1998) asserts that social constructivism is closely related to social constructionism. However, there is an important difference. Social constructionism focuses on the artifacts created through the social interactions. But social constructivism focuses on an individual's learning that takes place because of their interactions in a group. He added social constructivism forms one of the major theories (behaviourism, social learning, constructivism and social constructivism) of individual development, arising from the work of Jean Piaget's theory of cognitive development (Grant, 2007; Parlincer, 1998). Piaget (1977) believes that individuals needed to construct an understanding of the world for themselves. It is also observed that social constructivism is an extension of constructivism through incorporating the role of other actors and culture in development, because it can also be contrasted with social learning theory by stressing interaction over observation (Grant, 2007; Zheng & Ferris, 2008).

Vygotsky shared many of Piaget's assumptions about how children learn but he placed more emphasis on the social context of learning. To him, adults and siblings, such as parents and teachers are conduits for the tools of the culture; including history, language, social context, and source of information which today included electronic forms like WWW the SNS inclusive.

If Vygotsky is correct that individuals develop in social or group settings, the use of technology to connect rather than separate students from one another would be very appropriate to use. The teacher often guides students as they approach problems. This is by encouraging them to work in groups to think about issues and questions, and support

them with advices as they tackle the problems, challenges and adventures that are rooted in their real life situations.

The web is being seen more and more as an effective and inexpensive means of delivering courses in the tertiary education. The growth of the web, SNSs in particular, is attracting the attention of tertiary educational institutions worldwide. It is significantly less expensive to produce materials electronically than in the printed form, and the materials may easily be kept up to date and disseminated.

Web remains true to its initial objective of being a means of linking documents across a diverse networks and regions (Mark, 2009) and this raises concerns over the level of interactivity and engagement that can be supported. There is no doubt that the web is a global resource of information that is potentially good for learning. It is worth being mindful of the fact that the web does not ensure learning any more than a library on a university campus does (Mark, 2009). So does that mean with all the Internet facilities in UUM for instance, one must visit Sultanah Bahiyah library for more books and other resources? It can be answered yes! This is because of its standardized and updated nature. For many scholars respects for the web is an ideal forum for constructivist learning. Despite of its limitations, the web offers a lot of interesting opportunities (Mark, 2009). It would be convenient to see social constructivism as a single solution to most of the limitations of the web, but there is no one theoretical approach that is likely to achieve the broader range of educational outcomes mainly required from all of the tertiary study.

The constructivists viewed such technology like the WWW as it provides essential tools with which to be used to accomplish the goals of a social constructivist classroom. Information technology can support the social constructivist teaching and

learning process. For example, as stated earlier, e-mail and the SNSs on the Internet provide a means for communication, sharing of views and general interactivity that leads to the social construction of meaning to them. Students chat with others in communities different from theirs. Therefore it can deduce to the fact that telecommunications where such tools that can provide students access to many different types of information and education resources. Thereby, helping them in better understanding of their culture, environment and of course the culture of others (Schmidt, 2007).

In contrast to the individual-cognitive constructivist view, the socio-cultural constructivist focused on the mind of the individual engaged in social action. Learning, then, is primarily a process of enculturation and acculturation into a community of practice (Vygotsky, 1978). In the last few years, as the Internet and the WWW have matured; those social aspects of learning described by Vygotsky (1978) become very useful to those aiming at designing educational models, projects or websites that involve academic distribution and intercommunicating of information to audience.

Like other theories, constructivism has been criticized on so many aspects. Among the critics to constructivism was Mike (2006) where he argued that,

- “It explains how technologies arise, but ignores the effects of the technology”
- “It is a social construction of knowledge in itself,
- Constructivist thinks knowledge as relational, multiple and plural
- It is local and particular. Not linear, serial, ordered and step by step.
- “Learning is student’s focus and is concern with whole and holistic knowing.”
- “World is not structured according to series of natural laws” and lastly

- They promote thinking that is intuitive, inspirational, analogical, recreational, and creational as well as transformational (p.279) (Mike, 2006).

The concern raised here does not undermine social constructivism. The researcher remained inclined with their idea. It is clear that the claims made of constructivism need to be challenged. According to the researcher this is one way this research can give room to idea expansion.

2.2.4. Social Cognitive Theory

From much of the literature reviewed, social cognitive learning theory is used (Pritchard, 2008) as a framework for studying Internet use and social behaviors. The basic tenets underlying this theory assume that individuals are more inclined to imitate a behavior if they are rewarded. Secondly, individuals are more likely to model a behavior when they can actually identify with the model. Finally, if the model is attractive and the behavior is possible then it is more likely to be performed (Goodson, McCormick & Evans, 2005; LaRose & Eastin, 2004). LaRose and Eastin (2004) added that behavior is determined by outcome. If the outcome is desirable, then the behavior is either experienced in a physical sense or mediated through observation.

Social Cognitive Theory (SCT) stemmed out of work by Miller and Dollard (1941). They view that human that are motivated to learn a particular behavior. Such behavior would be learned by the individuals through imitative observations. Imitation of some of the learned action or observed actions solidifies the individual observers upon which are usually rewarded by reinforcement (Miller & Dollard, 1941). Albert Bandura

theorized social learning and it continued to be expanded along that proposition since 1962 to the present (Wikipedia, 2007).

SCT as learning theory was basically on the belief that people can learn through observation on others' deeds and that human thought processes are the central point to understand their personality. Ormrod (2003) identifies the main principles of SCT that people learn through observing others as learning is an internal process that may or may not change behavior. He further stated that people behave in certain ways to reach goals. Behavior is self-directed (as opposed to the behaviorist thought that behavior is determined by environment). In addition to that, he maintained that reinforcement and punishment have unpredictable and indirect effects on both behavior and learning.

SCT centred on the notion of knowledge acquiring or learning through the observation of models. Those models could mean of an interpersonal imitation or from media sources (Bandura, 1988; 1989). LaRose and Easton (2004) view that sexually oriented media on the Internet provides an expected gratification. The user can observe a desired behavior and vicariously experience it through observation. They added that if the user is satisfied with the outcome of the behavior (i.e. viewing sexually explicit material); then in all likelihood the user would again be compelled to repeat the behavior.

The obvious concern for adolescent sexuality is the risk involved with sexual behaviors, specifically Sexually Transmitted Diseases (STDs) and adolescent pregnancy. Decreasing adolescent sexual behavior and its associated risk for instance is one of the top priorities of the United States national health objectives. It is apparent that beside using pornographic sites and other SNSs there are other factors involved with the decision making process of adolescents to engage in sexual activities that have yet to be

clearly determined. Given this information, it is essential to go into such areas in current researches so as to warrant for further research.

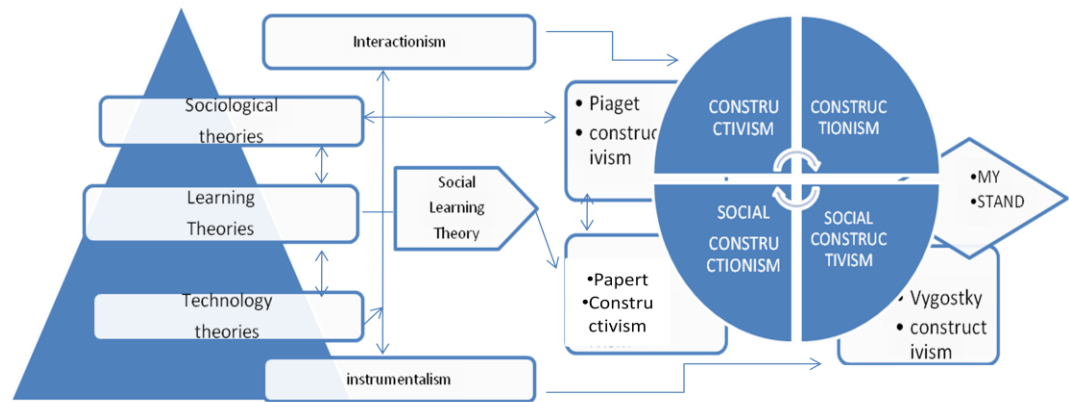


Figure 2.2: *The theoretical relationship of the study and the underline theories*

Having explored the theoretical background to proffer the platform and a solid ground for the study; the main concepts embedded around the study should be properly defined, critically examined and purposely justified with their relevance accordingly as it flows below.

2.3. Conceptual Framework

2.3.1. Socialization

It is obvious for the researcher to initially examine the socialization as it is among the primary constructs in the research. It is said to be (a process by which people, especially children, learn acceptable and unacceptable behaviors of a given environment.) Many agents were responsible for the socialization of any individual. They included the home, the school (virtual inclusive), the mass media (Internet inclusive) and religious centres. Socialization occurs as a result of interaction. “Social interactions are the acts, actions, or practices of two or more people mutually oriented towards each other's self. That could mean any behavior that tries to affect or take account of each other's subjective experiences or intentions (p. 2)” (Rummel, 1981).

Socialization is categorized into primary and secondary socialization. The former happens in the early stage of the life time while the secondary occurs from the middle state to the end of individual's life. This is the stage that involves the college and university students' life.

In a more related view by Perrolle (2007) it is through socialization individuals acquire the information and those techniques needed in order to function appropriately in society; while the society maintains its culture and social structure from generation to generation. Perrolle (2007) also posits that socialization teaches people their roles and the right places for them in a social class or strata. It provides them with the societal norms of behavior, values to live by, and beliefs to explain how and why they properly "fit" in a society. This as well can be manifested even in virtual communities. The virtual community exists within real life as geographically interrupted or disbursed groups which

manage to maintain themselves by using such communications (Internet, telephone etc) and transportation technologies. The following are the agents of socialization.

2.3.1.1. Agents of socialization

It is the duty of some specific sites or groups to carry out socialization. These are called the agents of socialization. The society relies on four major agents of socialization.

2.3.1.1.1. The family

Family is a general familiar concept as each one is its product. It is the earliest and without question the most influential agent of socialization. It grabs the child since birth when the child is most helpless and very much dependent on significant others up to the end of life. It is a universal saying that socialization via the family goes from cradle to grave. What makes socialization in the family so important and influential? It is because of such attributes like:

- Foundation for all civilized behavior:
- Language abilities (learning to talk)
- Body control (e.g., toilet training, gestures)
- Emotional control (e.g., patience, "don't hit your brother")
- Rules of public conduct (e.g., obedience "don't throw food")
- Moral values (e.g., honesty "lying is a sin")

All of these attributes above were attain at family before full integration to the general society. Being socialized is not easy. It seems messy, difficult, very demanding, and often frustrating. It's a duty carried out 24 hours the whole day, for 7 days in a week for the whole 52 weeks and perhaps 365 days for the whole year. This job also is with no vacations, lousy pay, many hours, and unorganized work conditions, and indeed no

immediate benefits. The power of the family is strongest during infancy and toddler years. After that the media carries on, then peers, and finally school challenges its exclusive access to the child. In the adolescent years, that power is further weakened by peer group influences and the predominance of the media in teenage subculture and that is the beginning of secondary socialization (Nels, 2006).

The family still returns as a predominant agent of socialization during the adult years with the roles of marital partner and parent.

2.3.1.1.2. Mass media

Mass media includes television, radio, movies, music, books, magazines, and Internet. Today the media seriously challenges the family and the society at large. Children can spend as much or more time in front of the computer on the Internet and interacting with parents and others. Messages and values carried by the media are powerful and seductive. Many of those messages and values challenge or directly contradict what parent's teach their children.

2.3.1.1.3. Peer group

Peers are people of roughly the same age (same stage of development and maturity), similar social identity, and close social proximity. They are friends, buddies, students, pals, troops, etc. During adolescence stage, the peer group is highly important to each other, oftenly directly as a challenge to even the family. In direct alliance with the media, teenage peers form their own subculture. They learn how to navigate the nuances and complexities of group interaction which is mainly without proper adult guidance or supervision. Socialization of peer group is usually linked to the puberty stage with important role of sexual relations and sexuality in life.

2.3.1.1.4. School

School is the agent of socialization after the home. The researcher discussed it after mass media and peer group in order to link it to the general concept of school socialization which is one of the focuses of the study. Socialization takes three forms in school; the official curriculum, social curriculum and hidden curriculum (Moscardelli & Heyes, 2004; Nels, 2006).

2.3.1.1.4.1 Official curriculum

This is what the school system and its teachers announced as their contents and goals. It includes the knowledge and skills learned. The school is the official place where the society transmits some of its accumulated knowledge, skills and values from one set of generation to the next (Moscardelli & Heyes, 2004). It's also the place where the societies officially pass on their cultural artifacts, religion and language, tradition, and other heritages. It is at least the "official" heritage.

2.3.1.1.4.2. Social curriculum

This is the way of learning the social behaviors that are appropriate for the peer groups which are not considered as friendship groups, which then transform into the model for the secondary group interactions in later life.

2.3.1.1.4.3. Hidden curriculum

This has to do with the learning of the rules of behavior that are needed to function in the formalized and organized groups. These include such behaviors like the self-reliance, obedience, precision, and competitiveness (Moscardelli & Heyes, 2004). In every environment, the hidden curriculum does exist. It is only limited to classrooms but also, the place of worship, recreational centres and commercial areas. Certain different

elements like the actions, reactions, behaviors expectation and skills that are unique to certain environments, express the elements of hidden curriculum. (For instance at the place of worship (most religions) the hidden curriculum guide the attendants to be neat and stay quiet without talking or laughing, bow head and to hold arms and do what others are doing.) In a classroom the member of the class is expected to sit quiet, listen and organize self as well as do what is instructed while wearing the formal dress.

2.3.1.2. School Socialization

School as an institution established by members of the society is a social organization aimed to provide certain academical, technological, social, vocational and spiritual services to the students. Role of teacher and students to each other is what is known as school socialization. Nels (2006) postulates that rights from home, school aged children are participants in the real life; they spend time with their parent's and siblings' friends. They also spend time with the adults, under the supervision of their parents, who know them well, and have the authority to discipline them. As they grow older the relation with parents may become less. The school now takes the major role. The school environment plays such a crucial role in behavior modification (social and psychological). Teachers, fellow students and the environment technological (Internet inclusive) biological, geographical and sociological settings remained the major actors in making the new intake get adjusted to the new school environment.

Today's school environment are major avenues for the connectivity of web. The web has always been a place for people to share ideas and post their views and comments, but it has not always been easy. Today, the web has become much friendlier, with the popularity of such sites like MySpace, Facebook Twitter, YouTube, etc. The

software behind these types of sites makes contributing, and taking part, in the online community easy and more personal for users. Even novices are finding their ways into the social community of the new web.

Socialization on the web takes place through so many ways with which the users can build communities. Friends and family who share the same interests or views engaged in sharing of pictures and videos, conversations and comments, and online 'presence' streams through such sites like Facebook, MySpace, YouTube or Twitter.

The analysis of virtual networks and communities has presented sociologists with considerable problems. Therefore there is a need of a thorough revision of a number of basic concepts of the sociological tradition (Albert, 2006).

Albert (2006) opines that three conclusions can be drawn about virtual communities. The disintegration of the traditional communities reacted into the development of virtual communities. Secondly, virtual communities arise more or less spontaneously as a result of people meeting each other regularly on cyberspace (for example chatrooms and conference systems). Lastly, the members of virtual communities meet online to do just about everything that other people do in their local social world. The only difference between traditional and virtual communities was that members of virtual communities mainly interact and communicate by screens (Albert, 2006).

2.3.3. Internet: History

The first recorded description of the social interactions that could be enabled through networking was a series of memos written by Licklider of MIT in August 1962 discussing his "Galactic Network" concept. He envisioned a globally interconnected set of computers through which everyone could quickly access data and programs from any

site. In spirit, the concept was very much like the Internet of today. Licklider was the first head of the computer research program at DARPA, (Defense Advanced Research Projects Agency) starting in October 1962 (Leiner et al., 2000).

By this platform therefore the Internet began way back in 1969 but it was called the ARPANET then. It started out as a research project and was developed by an agency called ARPA (Advanced Research Projects Agency) within the US Defense Department, in conjunction with a number of universities and military contractors. ARPANET developed out of the government's effort to connect computers together throughout the country (Leiner et al., 2000).

The main purpose of ARPANET was to secure communication between military organizations and safely store large amounts of critical information in the event of a nuclear holocaust. ARPANET purpose was to explore the possibility of a communication network that could survive a nuclear attack. This was achieved by having a network where data could take multiple paths from its source to its destination. If part of the network was destroyed, communications would still be possible through a different path (Comer, in Encarta 2009). It would not be wise discussing Internet without reflecting into the World Wide Web.

2.3.3.1. The WWW

The idea for the World Wide Web came from European Laboratory for Particle Physics known as (CERN). They needed a way to keep track of their information and documentation so that it could be easily accessed and updated. The inventor of the web Timothy Berners-Lee had previously worked with hypertext and recognized its appropriateness for this project. In 1989, the World Wide Web (WWW) went global, and

brought about the instantaneous access of information to every corner of the planet. The development of World Wide Web and its widespread brought with it a new community, which many people working on the WWW did not thought of as it is now.

In 1993 Mosaic was released as the first web browser, which later led to the program Netscape Navigator in 1994. This instigated Microsoft to producing Internet Explorer. The added WWW was able to use the Internet concept of joining computers around the world but using the point and click interface to make it accessible to ordinary people (Berners Lee 1999).

The Internet has therefore changed so much and faster in the past two decades since it came into existence. Its development is not only limited to the era of time-sharing, but the era of personal computers, peer-to-peer and client-server computing. For most people Internet is synonymous to WWW and it is sometimes being used interchangeably. Internet refers to the whole network while WWW describes a subsystem which uses the infrastructure of the Internet and sends multimedia files using the TCP/IP protocols. The web to the Internet is just as our solar system to the galaxy. Comparatively it is very small indeed.

Considering the fact that Internet is a collection of online communities which formed the collection of technologies, its success can be attributed to satisfying the basic community needs. It also helps in utilizing the community itself in a more effective way to put the infrastructure forward. The number of Internet users started to increase since 1993 and continued to steadily increase since then. The greatest increase in the number of users accessing the Internet began in 1999.

The WWW become not only for communications but also a dynamic means of self expression and explanation. It is a collective name for all the computer files in the world which are linked together by tags and are accessible via Internet through a browser on the individual computer set. The web therefore is a hyperlinked lot of global information and interaction system carried on the net in three components i.e. browser, web content and linkages between resources (Horton & Ignacio, 2006).

2.3.3.2. Size of the Internet

The Internet is a world-wide system of interconnected millions of computers. It is the biggest collection of information in the world nothing can match it. Some argumentative questions here are: How can we understand the number of the users in the world? do we know how to count them? Do we calculate it by computers online? Or is it by the number of online users? Is a page on Internet a realistic measure of information? Can we define the limits of website? With all these rhetoric questions actually now there were estimates. However, world statistics have an estimate of global, continental, regional and specific countries.

2.3.3.3. How the Internet Works

In the Figure 2.3 it explains what and how the giant Internet performs

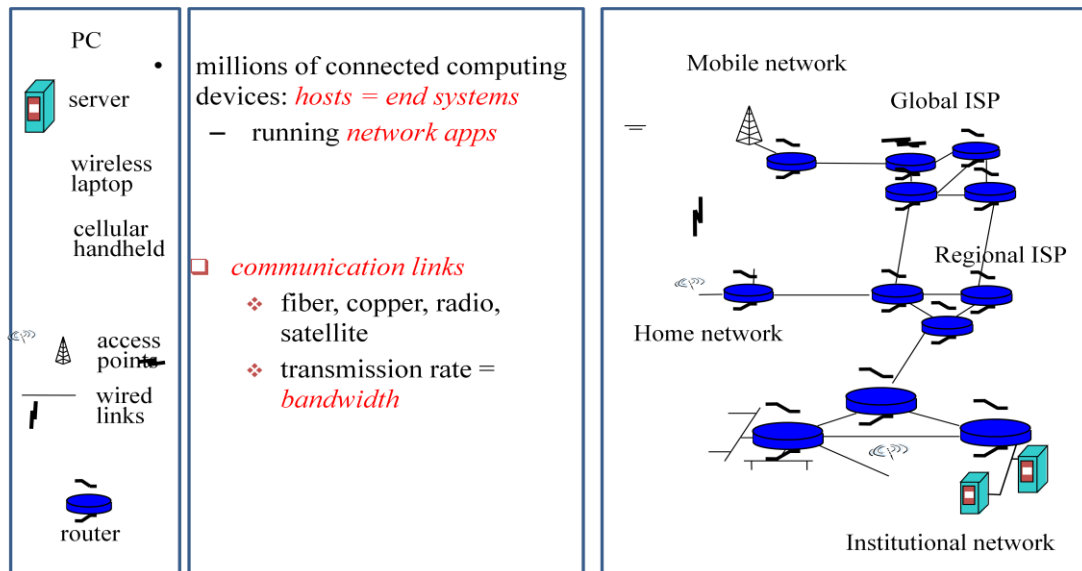


Figure: 2.3. *The form of Internet connectivity*

Source: Kurose and Ross (2008)

By examining the above (figure 2.3) we can deduce to the fact that a lot has been made to actualize this mammoth network. TCP/IP as Internet language was tested at DARPA three years earlier to 1980 and was adopted. Later it began to be shared among the DARPA Internet technology connections. That directly led to the eventual partitioning of the non military and the military communities. Since 1983, ARPANET used a significant number of defense research and devevelopment and operational organizations. The transition of ARPANET from NCP to TCP/IP ordered it to be split into a MILNET (military network) which was in charge of operational requirements and an ARPANET supporting research needs. It works basically based on TCP/IP, HTTP, skype protocols (Joshi, 2005).

2.3.3.4. Security and Privacy: How Safe Is Internet?

Christian (2009) views that information societies that emerge from the technology revolution has critical consequence on education. He added that globalization can be seen

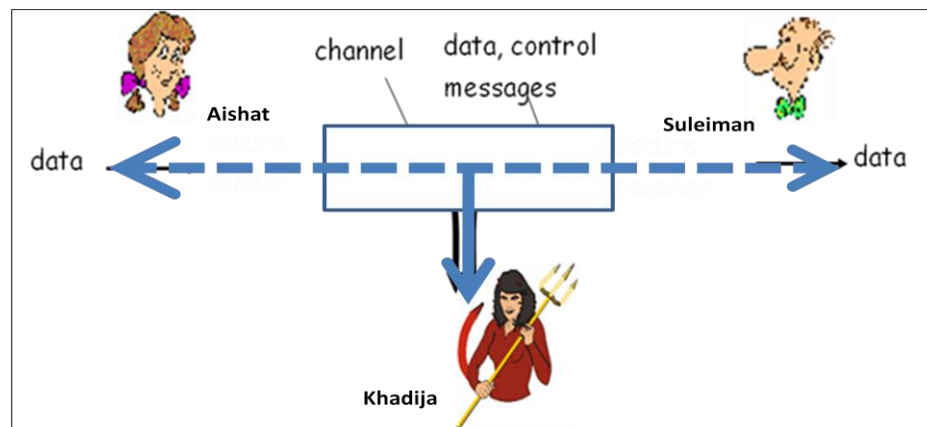
in so many ways. It is more of ideology constructed as an impersonal and inevitable force in order to justify certain policies. How therefore, Internet users could be protected in this form of globalized technology?

Parker (2009) also said that the way to protect ones document is to make sure it is sent encrypted. This ensures that if anybody happens to intercept the data on its way through its destination, they will only see garbled data and would not be able to read anything. He added that by making sure that the sensitive information is being sent encrypted; only submit it when the browser is in secure mode. This is indicated for example by a key in Netscape and a padlock in Internet Explorer.

Hacking in the media is done by hackers who portrayed as super intelligent criminals who spend their time penetrating government top secrets on mainframes. This can be possible through the SNSs through meeting an expert friend. One can influence or persuade another to venture into it. Many cases were evident that students hack and change many of the university's information or get other classified information. In a fully networked institution like Universiti Utara Malaysia (UUM) some can get into other students profile especially if they are friends by sniffing their ID / passport number and Matric number to hack into their privacies and of others.

They use simple minded methods to break into computer systems and make nuisances of themselves. This may easily involve a situation when one user presents himself as a different person. A male user may log in as a female, etc. It is very easy for many of the students to get involved in that through many SNSs. It seems very difficult for the user to fake age or gender on SNS because it deals with picture or video, yet some can manage to be pretending and be using other people's picture. The whole idea of

breaking into a mainframe, or any other top secret computer is a myth. The only way to avoid is likely not to have computers containing top secret information connected to the Internet. The general myth behind the secure and non secure information can be seen in these areas (Hodge, 2006). Confidentiality: only sender, intended receiver should “understand” message contents. When sending the message, sender encrypts the message while receiver decrypts message. Authentication would be requested from both sender and the receiver to confirm the identity of each other. Message integrity involves that sender and receiver ensure message is not altered (in transit, or afterwards) without detection. Thereby the making the access and availability of the services easier to all the users (sender and reciever). This can be understood further from the figure 2.4 below where Aishat and Suleiman (friends) want to communicate ‘securely’. Free from Khadija (intruder) who may intercept, delete, or add other unwanted messages.



Source: modified from Kurose and Ross (2008)

Figure 2.4: How message is passed safe online

The above message from Aishat to Suleiman has been delivered safely free from the Khadija interruption i.e. hacking, cracking or sniffing

The other issue is the control or censorship which aims to sieve unwanted information to some extent. There are so many attempts to control the explicit materials over the net. The UK Internet Watch Foundation (IWF) uses hotline system to actively monitor the Internet for illegal materials like child porn offenders (Kerry & Dennis, 2007). This is in accordance with the Sexual Offences Act, 2003. The Green Dam filtering software of China is another such kind of effort aimed at censoring and filtering indecent materials (MacKinnon, 2009). It is working either on network server or on personal computers (PCs) which can trap inappropriate data or materials from sites or meta tags embedded in the pages themselves and can grade content according to the agreed system (Wall Street Journal, 2009). This system employ meta tags but mainly depend on the web page designers and writers as such it is considered as having weaknesses. Such unsuitable materials can be categorized into different main groups. They are sexually explicit documents; drugs and violence, racist, terror, prejudice, propaganda, hoaxes, urban legends and virus. Berners Lee (1999) suggests that users are responsible for making the web safe where he asserted that:

“It is important to realize that the web is what we make it we the people who read, the people who teach children how to surf the web, and the people who put information up on the web. Particularly the people who make the links; the web does not force anything down your throat if you are worried that your children are going to read low-quality information, teach them. Teach them what to read, teach them how to judge information” (Berners Lee, 1999) (p. 1).

Increase in the connectivity of Internet to classroom shows that students will be spending time more on Internet accessing information inevitably. This means if students are ask to take charge of their own learning or to retrieve information from the Internet;

they will access both appropriate and un-scrutinized irrelevant materials. Now many schools have developed a policy on web usage for their students. Dwyer et al. (2008) opined that usage over time can result in the changes to the whole system.

2.4. Empirical Studies Review

Studies of less than a decade were reviewed in this area of the research to give a roadmap to the general modalities and background for the study in relation to collection and analysis of the data. In addition, a growing body of scholarship in relation to the other aspects of SNSs such as their users, and the practices they enabled. For example, scholarship on the ways in which race and ethnicity (Gajjala, 2007), religion (Nyland & Near, 2007), gender (Geidner, Flook, & Bell, 2007; Hjorth & Kim, 2005), and sexuality (Pritchard, 2008) connect to SNSs, or are affected by the SNSs usage. Social network sites usage also raised interesting questions about how identity is shaped within these sites. Fragoso (2006) examines the role of national identity in SNSs use through an investigation into the "Brazilian invasion" of Orkut and the resulting culture clash between Americans and Brazilians on the site. Other scholars are beginning to do cross-cultural comparisons of SNSs use which compared Korean usage of Cyworld and Japanese usage of Mixi. Herring et al. (2007) also examine the practices of users who bridged different languages on LiveJournal but more work in this area is needed.

Scholars documented about much of the implications of SNS use in respect to schools, universities, and libraries. Many literature and scholarship examined how students feel about having professors on Facebook (Hewitt & Forte, 2006) and how

faculty participation affects student-professor relations (Mazer, Murphy, & Simonds, 2007). Charnigo and Barnett-Ellis (2007) found that librarians are against U.S. legislation that bans minors from accessing SNSs at libraries. Finally, challenging the view that there is nothing educational about SNSs, Perkel (2009) analyzes copy and paste practices on MySpace as a form of literacy involving social and technical skills. It is as well suggested by some scholars that people using the Internet lose touch with their community environment and decrease time socializing and attending events outside the home (Nie, Hillygus, & Erbring, 2009). The objectives in Koch and Praterelli's (2004) study on the 'effects of introversion and extroversion on social Internet usage was to examine the social significance of the Internet. They used Likert scale to rate the negative effects of Internet use (i.e. addiction). Participants were asked to rate the Internet based upon reading a passage to determine different responses based upon gender.

Koch and Praterelli (2004) hypothesize that individuals who read a passage about negative effects of the Internet would respond negatively. They also assumed that introverts would be more comfortable with the anonymity that the Internet provides than those individuals that were described as extroverts. The participants in the study were recruited from freshmen level courses (n=240). Results of the statistical analysis proved not to be statistically significant regarding reading a negative passage about the Internet. Koch and Praterelli (2004) determined that the reason why it might not be statistically significant was because addicts don't always identify themselves as addicts.

It is now a very obvious concern that the Internet is changing human life; though the magnitudes of these changes are not yet vividly clear. One of the major issues in current literature involves the capacity of the Internet to enhance social capital and

wellbeing of students (Sum et al., 2008). In this regard, therefore Sum et al. (2008) investigate the relationships between Internet use and social capital and wellbeing. They conducted online survey at the University of Sydney on 222 seniors who responded to the survey. They felt that the respondents used the Internet for various purposes, including seeking information, entertainment, commerce, communication, and finding new people. The main findings of their study were that the relationships between Internet use, social capital and wellbeing is a complex construct and the Internet has different effects on social capital and wellbeing resulting from different use of this technology. Their results also revealed that the Internet is a double edged sword with the ability to both harm and do good. According to the findings of their study, using the Internet can be helpful for older adults if they are aware on how to use it (Sum et al., 2008).

2.4.1. Web Design and Architecture

The web has always been a place for people to share ideas and post their views, picture, videos and comments, but it hasn't always been easy. Today, the web has become much friendlier, with the popularity of such sites as SNSs, blogs and even wikis. The software behind these types of site especially the SNSs such as Facebook and YouTube makes contribution and taking part in the online community easy and more personal for the users. Even novices are finding their way into the online social community. Socialization on the web may take place through so many ways. Users can build communities with friends and family if they can share the same interests or views like sharing of pictures and videos, having conversations or chats through short messages and comments through such sites.

Hoffman et al. (2004) illustrate that individuals who use the web are much more satisfied with computer use. This is as a result of customized webpage designs, and overall increase in efficiency of computers, speed of Internet connections and self efficacy of the users. In the design of SNSs, the Internet users who frequently engaged in social networking may perhaps tell that using social networking sites does not necessarily required a technical expertise from the user. As such these sites are possibly there to have a tremendous effect on users' socialization and behavioral changes through shared activities with the other SNSs users from all over the world.

Furthermore, the users can use the tips on how to use the social networking sites to the fullest from their profiles. Profiling is the recording and classification of behaviours (Aïmeur et al., 2010). The user therefore, is not expected to limit or not limit his/her profile page with basic information such as the name, age, gender, and location. By mere indicating an interest's area and hobbies; the user can upload some material or data like photos, videos and comments that would reveal more about him and vice versa. Dwyer et al. (2008) stated that the profile serves as a mechanism for self presentation digitally to other users. She added that in consideration of the influx of members on Facebook who protested against particular information resulted into the level of concern of people in understanding whom they deal with and whom they care for.

For instance in designing the site, MySpace allowed users to manage create, store, share, distribute, ask and publish all sort of structured and unstructured web contents. A user can collaborate with friends and family to jointly produce and publish contents in their own new unique way. A photo album can have a voice clip attached to each photo about how and when the snapshot was taken (MySpace.com). More recently, both

MySpace and Facebook have added features to make it easier for users to share their data on other websites, pushing their profile out into the rest of the Internet (Greenwood, 2008). In order for users to maintain control of their information, they must remain constantly informed about changes. A social networking site that poses no confidentiality concerns about users, one day can change its policies almost instantaneously within the limits of the law. These websites created spaces designed to encourage their users, in both subtle and not-so-subtle ways, to feed information into the system, often without regard for the best interest of the users (Jones & Soltren, 2005; Fernandez, 2009).

2.4.2. Nigeria Internet Connectivity and Accessibility

The Internet has come with an evolution that cannot be compared with other existing technologies that were before it. Murphy et al. (2004) posit that initiatives that are underway in developing countries to provide access to current information through the Internet achieved by at least 25%. Nigeria as a nation came late into the Internet and still low and slows in the use of ICT in almost all sectors of the nation's life (Yusuf, 2005). Kwace (2007) and Awolaye et al. (2008) further identified some common problems attributed to poor availability, connectivity and accessibility of Internet facilities in Nigeria as to:

- Lack of qualified ICT personnel to support the connectivity.
- Exorbitant cost of equipment due to high exchange rates and the lack of will from the government part.
- Management attitude of the staff toward equipments and self development is regarded as being negative. This was also supported by Albirni (2006).

- Inconsistent electric power supply. (This is considered the strongest problem in Nigeria today.)
- Non-inclusion of ICT programmes in teachers training curricular. Though this very point seems to be now addressed to some extent.

Manir (2007) reported that most of higher education institutions in Nigeria are connected with the Internet via VSAT facilities with 'Pamsat' at their university computer centers. Awoleye et al. (2008) added that more people get connected to the Internet through integrated services digital network (ISDN), very small aperture terminal (VSAT) and even through their mobile phones (Olaturegun & Binuomote, 2007). The use of Internet as a communication channel in Nigeria has led to increased productivity in sectors such as the educational and communication (Idowu, Idowu & Adagunodo, 2004).

Most of the universities in Nigeria have a base station with at least a 150 foot mast/sectoral antenna that supplies service around campus. With installation of VSAT, the use of the Internet for research has skyrocketed, as it has with the existence of many private and independent Internet cafés in the cities. Awoleye et al. (2008) stated that "a number of universities in Nigeria are now making frantic efforts to improve on their ICT infrastructure (p. 85)." He cited Obafemi Awolowo University (OAU) as an example. The university's subnet called OAUNet currently connects 2 colleges and thirteen faculties equipped with a 20km of 2 gigabit fibres and connects to the Internet on a bandwidth of 6Mbps/1.5Mbps bandwidth." In addition to this he said, "OAU also have in her premise eight cyber cafes" (p. 85).

Yusuf (2005) observes that the field of education has not been unaffected by the penetrating influence of information technology. As access grows, Nigerian researchers,

scholars, and the general public have the opportunity to undertake research, teach, learn, and do other activities via the Internet. In fact, Internet has made tremendous contributions to radical changes in schools. It strengthens teaching and provides opportunities for connections between schools and the world. Information and communication technology may change the schools to be more efficient and productive, thereby generating a variety of tools to enhance and facilitate teachers' professionalism.

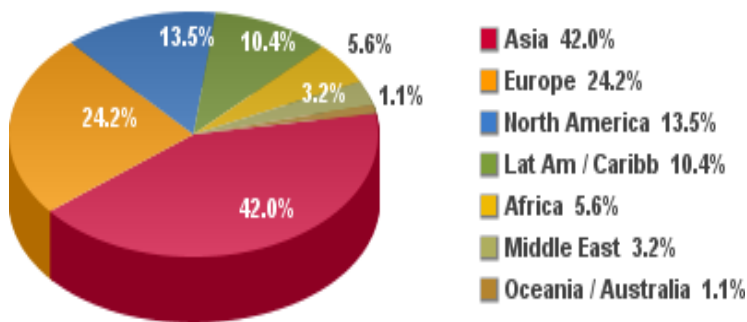
In addition, Internet accessibility on college campuses is a free service as most colleges and universities have user domains. This affordable, accessible, and unmonitored use of the Internet can increase the amount of students' time in using computers and allow them to circumvent necessary tasks of development. Online relationships provide an environment of anonymity which allows the user to engage in fantasies and create an entirely different self.

Many universities, polytechnics and colleges of education throughout the world and Nigeria in particular have established their presence on the Internet, thereby making it possible for researchers to access past and current research publications. Prospective students can also access information not only on courses being offered by institutions, scholarships and their admission requirements but also many more social sites.

2.4.3. Internet Usage

Internet usage support social interaction in micro (two-way conversation) and macro level (creating global online social gathering). The communication can be in various forms, individual or group, synchronous or asynchronous mode, anonymous or authenticated and so on (Dwyer, Roxanne & Widmeyer, 2008).

The Internet is a world-wide system of interconnected millions of computers. At the time of this report the number of Internet users was estimated at over 1.97 billion from which only 5.6% (figure 2.5) of the totals are in Africa. Thus, Nigeria has 43.9 million users representing only 28.9% of its population with 21.8% growth rate since 2000, which rated the country to scored 39.6% of the total African Internet users (World Statistics, 2010). The growth rate of the Internet users in Africa is the highest at 2.4% in the world followed by Middle East which has 1.83%. Malaysia in particular for instance has the total population of 26,160,256. The Malaysia's Internet usage is 64.6% of total Asia which is 16.9 million. Therefore Malaysia has so far increased by 35.8% as against the total users of 3.7 million in 2000 (World Statistics, 2010).



Source: World Statistics (2010).

Figure 2.5: *The Distribution on world Internet users by world regions*

Today the Internet continues to grow day by day making the McLuhan's global village a reality. The web has always been a place for people to share ideas and post their views and comments, but it hasn't always been easy. Today, the web has become much friendlier to use, with the popularity of such social sites like MySpace, Facebook, YouTube and a host of others. Nik Yuzila (2006) postulates that the use of Internet is synonym with the daily routines in society. It is usually referred to as the global or

galactic information infrastructure. Therefore, socialization on the web as anticipated by the researcher may take place through the many ways of using the Internet (Cho, 2010). First, is using SNSs where the users can build communities of friends and family who share the same interests or views. It can then function by sharing of pictures and videos, conversations through comments, and online chats or presence. It normally happens through such SNSs like Jaiku, Facebook, MySpace, Yahoo group, Orkut, Twitter and many thousands of smaller personally created SNSs like the researcher's own SNS 'MalayNet' etc.

2.4.4. Resources on the Internet

Internet refers to the technical infrastructure (public TCP/IP networks), other large-scale networks (like AOL) and foundational protocols. In considering the nature of the resource available on the Internet it signifies that it covers so many frameworks like technology, organization and community. Internet hosts an ever-increasing collection of resources (e.g. emails, discussion groups, chat rooms, list-servers, blogs, wikis, social networking sites) they all help users connect, communicate, collaborate and socialize.

The email evolved as a result of computer connectivity between nations. It allows interaction and it has changed people's daily lives all over the world. It allows academics to communicate among the national and international colleagues. Academicians send their writeups to others for peer revision or for publication in scholarly journals in various disciplines.

The web is a huge encyclopedia of information with billions of web pages, as many million pages are added daily. There are numerous individual home pages where people construct sites either as a means of expressing their creativity or for a very limited

or wide range of potential visitors. The WWW also provides very easy access to some governmental documents and legislative materials. Journals, magazines, newspapers, books and archives provide another important avenue for the construction, publication and circulation of Internet texts. Today there is an estimate of over 5 billion pages on which Google alone claimed to have 3.3 billion pages having more than half of the total global web pages (Wikipedia, 2009). Comer (2009) specified other resources i.e. SNSs (to meet people, dating, to discuss their interests, wikis, blogs), academics (to learn and share resources), media (to read the news) and FTP (which is mainly for software download).

2.4.5. Students and the Internet

The Internet or web has grown to have a place in schools, universities and businesses. It has also been praised by educators as a medium of promoting formal learning, lifelong learning and broadening the numbers and diversity of young people participating in education and socialization. Hence the impact of Internet on youths' formal learning should be considered substantial at least in terms of the number of the youth getting involved. This one reason attracted many of the researchers toward the SNSs with focus on universities and colleges (Dwyer et al., 2008).

A study was conducted in Nigeria at Obafemi Awolowo University by Awoleye et al. (2008), and the result shows that about 92% of undergraduate students have embraced the Internet and they used it very consistently. The time they spend is 3.5hrs/week while on the average, undergraduate experience of Internet usage is about 4 years. The study also indicated that most students use the Internet mostly for e-mail, social information search and online chatting, all of which were found to have significant

impact on the students' academic and social life. Further analysis revealed that gender attitude is also an important issue; male students appeared to have used the Internet more than their female counterparts; just as science based students used it more than the non-science based students (Awolaye et al., 2008).

Student users of Internet are as easily seduced by bad element as they were by positive and constructive ideas. So youth can be a country's weakness or its strength (Ayad, 2006). He added that e-community has positive impact on the use of ICT among youth especially in rural areas. Hazita Azman (2007) also asserts that government should be urged to develop the policies and contents that would support ICT application among students to improve their skills, knowledge and capabilities. Additionally, Ayad identified Malaysian population as 23.3 million as far back in 2000. Out of the above figure 43% was in rural areas and 60% was youth aged 15-29 mostly student. About 100,000 youth were dropout yearly in Malaysian schools due to inadequate ICT facilities in schools. Thus, they are exposed to variety of risk of social, economical, educational down grade (Ayad, 2007). He further asserts that they may fall in crime activities. The UN Report (2010) reported that about 1 billion youth aged 15-24 lived in the world today and 85% are in the developing nations of which Nigeria is inclusive. Ayad (2007) thereby suggests that youth need to be part of a group that can help themselves improve knowledge and confidence. The web-based system can provide cheap access for them to be active members of the society.

The digital divide between advanced and developing countries, particularly in Africa, is well established. Most African countries, Nigeria in particular, came late and slow in the use of ICT in all sectors of the nation's life. In Africa, there is low access to

basic ICT equipments, low Internet connectivity, low participation in the development of ICT equipment, and even low involvement in software development. In fact, New York City alone has higher Internet connectivity than the whole of Africa (Awoleye et al., 2008). The seeming backwardness of the African continent in ICT necessitated a continent-wide initiative known as the African Information Society Initiative (AISII). The organization originated from the African Regional Symposium on Telematic for Development, held in Addis Ababa, in April, 1995. The symposium organised by the Economic Commission for Africa (ECA), the International Telecommunication Union (ITU), UNESCO, for the establishment of a high level working group of African experts in ICT, to prepare Africa's entry into the information society.

Peculiar to Nigerian situation a large amount of undergraduate and postgraduate students were found to have differed by gender in the use of Internet and Internet-accessible colleges and universities (Awoleye et al., 2008). Herring (2007; 2010) idealizes that some students, searching the net is no more difficult than using the school library catalogue. For most, searching the web is more effectively while to some it is a difficult task. Herring (2010) added that the differences were significant for the overall use and even among students owning their own computers. The presence or absence of a computer in the home of origin strongly influenced Internet use. Such factors did not account for all the differences found by race/ethnicity. Self-reported study time was also found to be strongly connected to Internet use; this also differed significantly by race/ethnicity (Herring, 2010). Awoleye et al. (2008) also found that there is a high disparity among students according to faculty where they found that 3.07 mean as highest in technology faculty and 2.54 mean being the lowest in faculty of Administration.

2.4.6. Internet and Education

As so many sectors explored and utilized the resources on the Internet there is little or no doubt that education sector can as well hold from it potentials enormously. Like all other technologies the Internet resources i.e. SNSs can be utilized creatively by experienced professional and digitally literate teachers to enhance teaching and learning process across all higher levels of education. This requires the students' awareness and acceptance that the web is a meaningful tool to achieve their academic excellence. The teachers and the students must have a proficient skill as for using the web. This would enable effective interactivity and warrant a meaningful learning on the side of the students. All subjects' contents and the general curriculum contents might be available on the web otherwise the teachers can be uploading the required course contents onto their blogs, sites or directly onto the students' individual profiles. The smart contents can be in any form viz textual, audio, visual or audio visual in general. It can be access at any point on PCs or on mobile phones. AbdulHalim (2006) points out that one of the aims of Malaysian SSTP (Smart School Training Programme) is to apply and integrate technology like Internet and mobile facilities into teaching learning procedure.

Internet has been in used as a support tool for teaching- learning process in higher education institutions. The demands from students on Internet were increasing all over the world. This attracted researchers to study more details on factors influencing the Internet usage in educational fields. A networked learning institution can influence and inculcate positive attitudes on the students towards the Internet. Though, other negative attitudes like missing classes, negative teacher preference, Internet dependency and impaired academic pursuance may manifest as a result of the Internet usage especially

visiting the non academic sites. Despite all these, few studies explored the link between social network site use and education (Boyd & Ellison, 2007).

In UUM for example, provides computer mediated lessons with Internet facilities using fiber optic channel which have 155 ambits capacity since 1992. The computer centre uses JARING (MIMOS) by using ISLAN (Integrated Service Local Area Network) and was improved from 128 kilobytes to 2 megabytes wide network. It enables all active students and all the staff to use many resources like the email, digital library and host of other data bases such as IEEE, ACM, Proquest etc (Nik Yuzila, 2006). It is hope to be improved to higher standard in the near future; where the lecturers would be using other Internet facilities especially SNSs to conduct lessons.

Whenever there is a new technology it appears there is always a strong push to consider it for fundamental changes in the education sector. Many educational sites consider the metadata the most powerful model for resource location and identification. These sites usually adopt the DC (Dublin Core) system which uses some 15 fields. The field may likely include the title, publisher, date, type, subject, language, creator, description, format, source, relation, identifier, contributor, coverage, and the right, which eased the search for the learners. Many SNSs as well were linked to the sort of educational content sites like wikkis, blogs, etc. Information technology (IT) plays an instrumental role in all higher education institutions. Leach (2005) states that information technology affects every corner of university campuses. It covers from students' instruction to student services and to staff development.

In a quantitative approach Tahir (2006) focuses on how the use of a computer impacted active student's learning; from student to student, and student to instructor

interaction. He used 21-question survey instrument employed on 690 students by using systematic random sampling. Tahir (2006) reports that around 75% of the participants supported that the use of the computer assisted them to actively engage in their learning. More so about 54% of the students supported that use of the computer increased their interactions with other students and/or with the instructor (Tahir, 2006). His study centered on students' perception about the use of the computer technologies. Hence other studies can now include age, gender, ethnicity, income-levels, and other demographical information to understand the effects of digital divide. The ease of accessibility of computer technologies has increased dramatically in the recent years. However, many underprivileged schools, communities, and students still struggle to employ computer technologies on regular basis. By studying the relationship of technologies and student learning, one can provide very rich data about the use and effects of the computer and information technologies (Tahir, 2006; Pritchard, 2008).

SNSs facilitate informal learning for the users. Researchers like Lockyer and Patterson (2008) have analyzed interaction that has taken place in SNSs and have identified sharing of ideas and providing of peer feedback. However, with the appropriate caution and the need to continue to investigate the issue Lockyer and Patterson (2008) studied (n=12) postgraduate students of ICT education who were using flicker. They sought to find how elements of models and evidence can come together from the informal learning theory with the observations of current and emerging behaviors in social networking sites to inform formal education. As such they concluded that “the experience of using a social networking site in a formal education environment realized positive learning outcomes and experiences for the participants.”

Learning nowadays is not only confined to classrooms. By using the networks e-learning process has become quite convenient for users. Liu and Li (2010) proposes reasons that e-learning by SNSs will impact students' learning experiences. They also believed that SNS can effectively be used as e-learning tool in the future. In their findings they reported browsing friends' profiles and shared contents to be 77.8% of the total respondents while browsing friends' photos scored 68.5%. They stated that SNS allows sharing of tagged pictures. Therefore, students can share the useful information or learning materials by tagging. Students are more likely to add schoolmates or familiar people as friends than strangers. They equally asserted that privacy and trust should be considered in e-learning because learning through others must be in trust and should ensure the personal privacy. Liu and Li (2010) also argue that applying e-learning in SNS has disadvantages. They said security of personal information online may be subject to infringing at times. The Web 2.0 may definitely have significant implications for teachers and learners in the informal, formal, lifelong and work-based education (Franklin & Harmelen, 2007).

SNSs enhance Learning Management System (LMS) which is an application package meant for documentation, tracking, administration, and training. It is for programs in the classroom, organizations, meeting rooms, theaters, lecture halls and online events. It is an e-learning based program, for example the Moodle (Modular Object Oriented Dynamic Learning Environment), Sakai, Blackboard etc. A robust web-based LMS usually facilitate access to learning contents and administration (Ellis, 2009). It is a virtual learning environment adopted and used in schools, colleges and universities like Universiti Utara Malaysia (UUM), National Open University of Nigeria (NOUN),

and University of Jos in Nigeria (UNIJOS). It allowed instructors, teachers and facilitators to manage their presentations, programs, and courses and perhaps exchanged information with their students. It works in a full multi-media format. Such LMS is being used to supplement the instructional components thus serving as a central hub for learning materials. It provides capabilities for the asynchronous and synchronous online forum, discussion, assessment and tracking of students' activities (Shaari, Ta'a and Abu Bakar, 2009).

As SNSs are getting on the increase day by day, they also extend educational interactions among the students, teachers and school managers, which are significantly formal. Students use SNSs in informal education such as discussion on academic issues. However, using SNSs in the institution of learning or within the academic context in general is attractive to such young generation of users. These certainly open chances to acquire new knowledge through very effective, smooth and subliminal learning processes (Gillet, El Helou, Yu & Salzmann, 2008; Mazman, & Yasemin, 2010). In their study Mazman and Yasemin (2010) found that Facebook usage has the educational significant, positive relationship with other forms of usage like for collaboration, material sharing and communication. This means students of today needs more freelance and autonomy, in connectivity, in interaction and in the socioexperiential learning opportunities within the context of their learning environment (Mazman, & Yasemin, 2010). These warrant the integration of such new technologies i.e. SNSs in enhancing learning contexts which tremendously brought about more significant changes in the overall learning processes.

SNSs are such things educators should not ignore. They formed part of the culture especially of the juniors and adolescent. SNSs can help to get students ready for living

within and beyond the four walls of the classroom (Lamb & Johnson, 2006). The idea of ‘shuns the social spaces’, or ‘close the Facebook and face your book’ was denounced by Atwell (2006) where he argues that educators who shut SNSs out from their classrooms endanger the education system. It may be thought as irrelevant to many. It may perhaps be an imposition on the learners. This may turn away students from such social spaces all their interaction, ideas development and communication may perhaps be worthen and undermined (Atwell 2006).

Although many schools, colleges and universities have tried to ban using SNSs in school facilities the findings from Holcomb, Brady and Smith (2010) highlighted that there are academic potentials and benefits that SNSs offer in using a safe and secured SNS in an educational setting. Holcomb et al. (2010) further report that students that used SNSs regularly enhance their creativity, technology skills, diverse views and communication skills. Shaari and Ahmad (2010) also observe that SNSs are popular applications with university students and are potential tools for learning; students should not be prevented from using them, rather, an ideal way for proper utilization should be made in place in the higher institutions of learning.

It has been reported (Cross, 2006) that “of formal learning, only 10-15% takes place outside the formal settings; whereas major part of the learning which is 85% takes place outside the formal settings” (p. 2). Creating such SNSs environments relents to great educational potentials through collaborations, interactions and reflections. SNSs leverage both informal and formal learning opportunities. Yan Yu, Tian, Vogel, and Chi-Wai Kwok (2010) through a focus group examine the impacts of SNSs (Facebook in particular) from a pedagogical standpoint. They asserted that SNSs deeply penetrated

campuses in universities influencing all aspects in the life of the students. Yan Yu et al. (2010) based their work on social learning theory. They argue that social acceptance, acculturation and socialization processes hinged individual SNS engagement with the domains of social learning outcomes. Their results show that SNSs not only directly influence university students' learning outcomes, but also helps the students to have attained social acceptance from others and adapt to university culture. SNSs remained an environment to practice learning activities among university students. The university environment itself is a social system; hence, interaction among the students leads to sharing of academic contents within the context (Hwang, Kessler, and Francesco, 2004). University students continued to occupy with great extent a maximum proportion of the total population on SNSs (Madge, Meek, Wellens, & Hooley, 2009; Subrahmanyam, Reich, Waechter, & Espinoza, 2008). Recent research (Wang and Wu, 2008) was conducted in Northern Taiwan University. It indicated that, in a web-based learning, interaction among undergraduate students with peers improved their performance by getting immediate reciprocated feedback on various dimensions. Students do learn and make creative activities in the SNSs context. It has been found (Williams & Chinn, 2009) that 'net generation' learners portray diversified styles of learning expectations and information management.

2.4.7. Advantages of Internet

As explained earlier Internet did not emerge until 1982 but its genesis was since 1969. It began its rapid ascent only in the early 1990s, when graphical interfaces became widely available and commercial interests were allowed to participate. The Internet can be conceived as a rich, multi-layered, complex, ever-changing multimedia and textual

environment. The Internet provides several opportunities for the academia. It enhances dissemination of information and it is a medium for collaborative interaction among people via networking gadgets regardless of geographic limitation. The Internet is a 'live', constantly 'moving', theoretically borderless, potentially infinite space for the production and circulation of information. The Internet is arguably one of the most significant technological developments of the late 20th century. The Internet is a 'sea of information', that flow with various forces (educational, social, political, corporate, institutional, and so on), creating an ever-shifting shoreline. SNSs particularly as a segment of Internet hosted online communities. The members usually feel free in sharing things, and are not subjected to fearing the share of the information and views which seems formally inadequate on the systems. It is indeed a free knowledge sharing environment as well as fun, and thus, this translates into more evidence that knowledge is actually being shared on SNSs (Sugathan, Feisal Azlin, Nee, Akhir, and Yie, 2010).

In recent years, education has been in transformation into modern system whereby students take more active roles in their education. In this context, Internet-mediated education is gaining more and more popularity. Internet enhances teaching and learning as it provides opportunities for connection between school and the world (Kwace, 2007). It however provides rapid social, political, technological and economical transformation, which has eventuated into an organized networked society (Yusuf, 2005). Internet really distinguished itself from all other communication by providing quicker and easier access to more extensive and current information. Researchers get on through easy avenue for disseminating research reports and findings (Yusuf & Onasanya, 2004 in Yusuf, 2005).

Manir (2008) asserts that Nigerian researchers and scholars must make a move from the traditional to modern practices in order to exploit the benefits and potentials of Information technology. Researchers in Nigerian can only achieve optimally their contribution by disseminating their findings using the Internet. The Internet in higher educational institutions made it a platform for students in creating, organizing and disssimination of information which always enhances socialization (Nik Yuzula, 2006). In addition to that, “Internet can be beneficial if studies on factors that contribute to the success of the implementation of the Internet itself at the universities were done” (p. 120). There are numerous advantages of Internet-mediated socialization/education.

- The Internet is a user-friendly communication medium that is cost-effective and faster. Information can be accessed from anywhere with a connection. It is a useful tool which follows recent developments. The Internet provides means of accessing the expertise and specialist.
- Discussion groups via electronic mailing or chat rooms video conferencing, interactive learning environment by animation and simulation methods are further advantages of the Internet
- Another important advantage of the Internet is that students in developing countries like Nigeria have the opportunity to access a large pool of data, as obtainable in other fast growing countries like Malaysia the (Sultanah Bahiyah Library researcher’s experience); which could help reduce the information gap resulting from the disadvantages of the education opportunities in these countries.

2.4.8. Shortcomings of Internet

Internet seems unorganized; websites appear today, and disappear tomorrow. They move or mutate on daily basis. Moreover, the information found on the Internet has both the useful and the useless co-existence. It contains the good, the bad and the ugly materials. Most importantly not everything is available on the Internet. Other things are that SNSs build credibility, enhance connections, and at times lack anonymity because the anonymity of today differs from the last few decades. Now every information online can be anonymous yet it may be traceable (Zheng & Ferris, 2008). Website now can track and trace the visitors' (Internet Protocol) IP address and even the position of the workstation by using global positioning system (GPS) and counts the visiting number of each visitor on daily and hourly bases. Lack of trust and confidence make governments and other agencies sought to regulate the anonymous online interaction and communication in so many devious ways which invariably remained anonymous to the users. Other thought disadvantages are that with all efforts however, Internet is not free from scams and direct harassment to some extent and lastly it is not less time consuming. Yet, on the other side of the coin some of the disadvantages as identified by Christian (2009) can be seen as data abuse or lack of data protection, lack of privacy and privacy control and loss of personal contacts. Others may be seen in the form of stalking, indirect harassment and addiction which may cause health damages.

SNSs played roles in linking marginalized adolescents and spreading potential damaging behaviors (Raizada, Vinayak, Srivastav, Garg, Mehorata, & Chandak, 2009). Internet message board also plays vital role in creating communities centred on self-injurious practices e.g. online suicide and behaviors which may inflict harm on the

adolescent users' mind and body. Willenz (2006) investigates how adolescent solicit and share information related to self injurious behavior. He observed 406 message boards. He found out that female 14-20 years of age visited bulletin boards the most. Thus, he concluded that the Internet or SNSs message boards provide essential social support for bringing together self-injurious adolescent and sexual explicit materials. He further reported that the gender differences in the study on some SNSs like Facebook do not allow porn materials and it seems very difficult for unauthorized user to get into other users' profiles or information. But others sites like MySpace and YouTube do allow for such contents and another user can easily have access to other users' information by using phishing html code. This can lead to gaining details about the password, credit card number and user's full name, address and other transactions which may be dangerous to the latter. Such may warrant the posting of such explicit contents into other users' profiles.

Abuse of the Internet has recently become rampant and attracted the attention of scholars. Adebayo, Udegbe and Sunmola (2006) researched on the relationship between exposure to sexual content in the media and sexual beliefs, attitudes, and behaviors. They further stated that popularity of the Internet amongst youths, leads to youth involvement in online scams, sexual activities (including online chats, meeting partners, and looking for romantic and sexual relationships) and the development of their sexuality.

The most obvious concern and implication for adolescent sexuality is the risk involved with sexual behaviors, specifically diseases, like Sexually Transmitted Diseases (STDs), like Human Immunodeficiency Virus (HIV) and adolescent pregnancy and abortion. The decreasing adolescent sexual behavior and its associated risk is a top

priority of many countries' national health objectives. It is quite clear that more other factors are involved with regard to the decision making process of youths in engaging themselves in many online sexual activities that have not yet been identified or determined. It is essential therefore to review prevalent literature to gain insight into more areas of current research and areas warranting further research.

Another issue is child's safety. Most SNSs like Facebook, MySpace etc have age requirement but it is easy to by-pass it by simply giving inaccurate age rate. Copy right impingement also remains a serious case in dealing with SNS especially about the video clips for instance in YouTube. User, without considering the terms can easily upload, download or watch any kind of picture or video clip. YouTube for instance was sued several times on these issues. For example Viacom sued YouTube claiming one billion dollar for uploading 160 thousand videos belonging to Viacom without their permission (YouTube, 2009).

2.5. Overview on Social Networks

A social network service focuses on building online communities of people who share interests and/or activities, or who are interested in exploring the activities of others. Most social network services are web based and provide a variety of ways for users to interact, such as e-mail and instant messaging services. The relationship usually appears as friends, contacts, accounts, channels or twits.

SNSs created new ways in communicating and sharing of information. SNSs are utilized by millions of people around the world, and it is now becoming an enduring part of everyday life to many people. The main SNSs contained directories of some categories such as former classmates and work mates. They allow connection with friends based on

recommended systems of links and trust. Popular SNSs combined many of such things. For example, MySpace, Youtube, Twitter and Facebook are general and are among the most widely used SNSs. Bebo (Blog Early Blog Often) is European based while Hi5 is widely used in South East Asia. Xing and LinkedIn are for professionals. Orkut is mostly popular in Brazil and India is owned by Google. Friendster is privately owned. Others including Xiaonei, Cyworld, and QQzone are popular in East Asia. YouTube, also owned by Google is the most popular in video clips with over 200 million visitors.

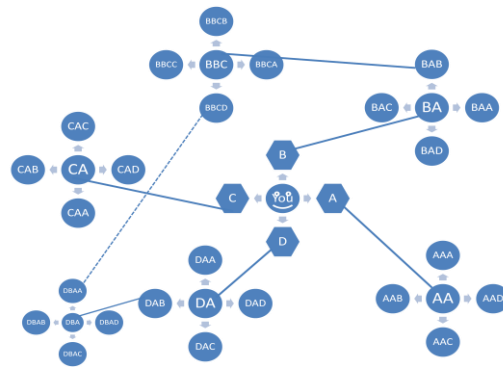


Figure 2.6: The nature of the SNSs users' single direction structure

This shows how the user can relate to one another from one friend to thousands of more others. From this structure (figure 2:6) it shows how the user named 'YOU' become friend to so many friends through his /her four mutual friends or profiles named A B C D. This can continue to expand into multiples of the structure at multi- directions as identified by Huang and Xia (2009) such as the incoming, outgoing and reciprocal connections.

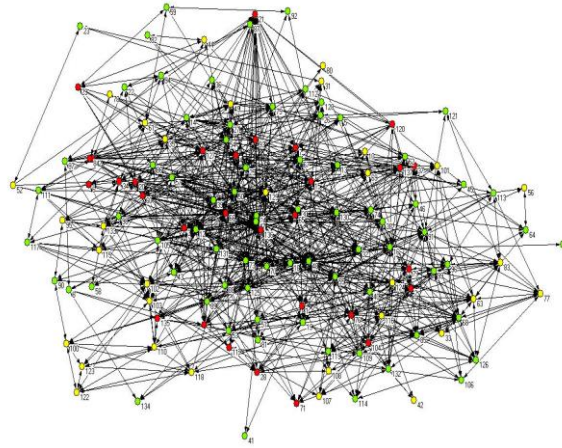


Figure 2.7: Sociogram of social network analysis and nature of the SNSs users' relationship structure

Source: Huang and Xia, (2009).

2.5.1. Beginning of SNSs

From 1997 to 2006, a number of community tools began supporting various combinations of profiles and publicly articulated friends. AsianAvenue and BlackPlanet mainly do allow their users in creating such personal and professional profiles where the users could identify their friends openly on their personal profiles. They can get connected without seeking any approval for the connections” (Kumar, Novak, & Tomkins, 2006).

Table 2:2

The evolution of SNSs from 1997-2006

1997	Six Degrees.com
1999	Live Journal, Asian, Black Planet
2000	Migante
2001	Cyworld, Ryze
2002	Friendster, Fotolog, Skylog
2003	MySpace, Hi5 LinkedIn, Tribe.net, Last FM
2004	Dodgeball, Flickr, Smallworld, Facebook (Harvard)
2005	Bebo, Facebook, YouTube, Xanga, Yahoo group, Ning.
2006	Windows live, Twitter, QQ zone, MyChurch, Cyworld (US), Facebook (General)

Social networking sites (SNSs) are becoming popular online terminus in recent years. Not surprisingly, the user attraction level has been accompanied by wide coverage in the popularity of press, including speculations about the potential advantages gained and harms stemming from the use of such SNS services (Hempel, 2005; Magid, 2006; Stafford, 2006). Academic researchers have started studying these SNSs, with questions ranging from their usage and role in identity construction and expression (Boyd & Heer, 2006) to the building and maintenance of socialization and social capital e.g. (Ellison, et al., 2007) and concerns about morality and privacy e.g. (Gross & Acquisti, 2005; Aïmeur et al., 2010; Hodge, 2006). While these areas of inquiry are all important and worthy of exploration, a significant predictive question has been largely ignored; in which this study in particular also wanted to examine. One of such fundamental and broad question

is, are there systematic differences between who is and who is not an SNS user, and are people equally likely to join the various types of services that exist?

2.5.2. Social Network Sites: A Definition

Social network sites can be defined (Boyd & Ellison, 2007) as web-based services that allow individuals to construct a public or semi-public profile within a bounded system. It also helps articulate a list of other users with whom they share a connection as well as enable view and traverse their list of connections and those made by others within the system. The nature and nomenclature of these connections may vary from site to site.

In consensus to the definition above, the first recognizable social network site was launched in 1997 and lasted till 2001. SixDegrees.com allowed users to create profiles, list their friends and, beginning in 1998, surf friends' lists. Each of these features existed in some form before SixDegrees. Profiles existed on most major dating sites and many community sites. Classmates.com allowed people to affiliate with their high school or college and surf the network for others who were also affiliated, but users could not create profiles or list friends until years later. SixDegrees was the first to combine these features. It was using the features to differentiate the users by nationality, age, educational level, or other factors that typically segment society (Hargittai, 2008; Boyd & Ellison, 2006; Boyd, 2008). From 2003 onward the proliferation of SNSs became wide as so many sites were launched. Boyd and Ellison (2008) opine that so many websites focus on media while others are for picture sharing like flicker, and others for sharing videos e.g. YouTube. .

What makes SNSs unique is not that they allow individuals to meet strangers, but rather that they enable users to articulate and make their social networks visible. It

supports social interactions which compose micro- two ways conversation to larger macro- multi way and global online social network (Dwyer et al., 2008). This can result in connections between individuals that would not otherwise be made and mostly who share some offline connection (Haythornthwaite, 2005). On many of the large SNSs, participants are not necessarily "networking" or looking to meet new people; instead, they are primarily communicating with people who are already part of their extended social network or share unique hobby. Now there are even SNSs for dogs (Dogster) and cats (Catster), even though it is their owners that must manage the profiles not the animals themselves.

SNSs (e.g YouTube and Facebook), are very popular online communication forms among adolescents and emerging adults. Yet little is known about young people's activities on these sites and how their networks of "friends" relate to the other online (e.g., instant messaging, chats) and offline networks. In Boyd and Ellison's (2008) study, college students responded, in person and online, to questions about their online activities and closest friends in three contexts: social networking sites, instant messaging, and face-to-face. The results show that participants often used the Internet, especially social networking sites, to connect and reconnect with friends and family members. Hence, there was overlap between participants' online and offline networks. However, the overlap was imperfect; the pattern anticipated that future adults may employ different SNSs online usage to strengthen different aspects of their offline connections. This suggests the concerns about young adults' life online. For instance if one wouldn't tell a stranger about his/her sexual habits, so why do millions of people freely revealed many information on SNSs that can be viewed by anyone; will their openness come back to

haunt them (George, 2006)? After joining an SNS, individual user is asked to fill out forms containing a series of questions. The profile is generated using the answers to these questions, which typically included demographical persona descriptors such as age, location, interests, and an "about me" section. Most sites also encouraged users to upload textual and multimedia documents profile. Some sites allowed users to enhance their profiles by adding multimedia contents like voice, still and motion photos. Others, such as Facebook, allowed users to add modules ('applications') that enhanced their profile. The profile plays a critical role in the use of SNSs. Donath (2008) opines that social networks provide a new way to organize, and navigate an egocentric SNSs. Are they a fad, short lived but ultimately useless; or are they harbingers or herald off a new and more powerful social world?

In a recent survey study, Hargittai (2008) tries to find the differences between people who used SNSs and those who stay away, despite a familiarity with them. Based on data from a survey (paper questionnaires) administered to a diversified group (1060 sample) of 56% of which were female and 44% males, all of young adults (18-19 years). The findings suggest that the use of such sites is not randomly distributed across a group of highly wired users. The study also looked at the predictors of SNS usage, with particular focus on Facebook, MySpace, Xanga, and Friendster. It shows that a person's gender, race and ethnicity, and parental educational background are all associated with the SNSs use. Additionally, people with more experience and autonomy of use are more likely to be users of such sites. Unequal participation based on users' background suggests that differential adoption of such services may be contributing to digital inequality.

2.5.3. Structure of SNSs

Most SNSs are similar to each other. There is commonality in their technical features (Lockyer & Patterson, 2008; Hosio et al., 2008). This is because most SNSs provide a profile which may include two specific modules: a comment section where other signed up users can leave their comments or messages and a list of the user's friends. By default, when a particular users' accounts is created, the profile remains private and the profiles may be offering photos, blogs and information on the users' hobbies, interests and activities (Aïmeur et al., 2010; Hosio et al., 2008). It will limit access to friends specifically added. SNSs help users get connected to so many individuals through creating such virtual self representation (profiles). Thereby such profiles may be having significant repercussions on the users' initialization, maintenance and development of such personal relationships with others (Toma, 2010).

The profiles are usually editable as such users can select it to be public or private profile according to their wish and option. So the profile will still remain visible to all other members. Most SNS profiles may be personalized because the user can design template which is the background of the user's profile, the way he /she likes which is known as the skin (Paolillo, 2008). Other popular ones like Facebook since 2006 has news feed which carries daily activities and is displayed on each member's profile. An example of such news is the Obama's Cairo speech on June 6th 2009 to the Muslim world which attracts so many applauses. More so Middle East (Tunusia, Eygypt, Libya and Yemen) street revolution was influence by the SNSs news feed. This probably attracted protester as it was sent and shared among all the fans of the pages on SNSs like the Facebook including the researcher's own profile. The founder of Facebook Mark Elliot

Zuckerberg (2009) in an interview (YouTube) has to personally appeal to the users saying that this is an information people used to dig daily, So it can be understood that strong negative or positive view and users' feedback may influence or even change the SNSs dealings. Toma (2010) views that users' profiles on SNSs benefit the users' dealings and promote self-concept.

SNSs are predicated on the concept of social interaction, and many of their features exist solely to make their users' information more widely available. They give access to vast array of pictures, videos and comments. It is an established view that most of these pictures on MySpace and YouTube seem grainy, unprofessional, because they are mainly uploaded videos and audios recorded on camera phones and camcorders into the profiles (Boyd & Heer 2006; Paolillo & Wright, 2005).

The visibility of a profile varies by site and according to user's discretion. Sites like MySpace allowed users to choose their profile to be public, self or 'friends only.' Facebook, being more liberal takes a different approach by default; users who are part of the same "network" can view each other's profiles, unless a profile owner has decided to deny permission to those in their network. Structural variations around visibility and access are one of the primary ways that SNSs differentiate themselves from each other. Profiles are unique pages or message where one can 'type oneself into being' and are pre-requisite for SNSs interactions. The authorized user (A) has details and access of a friend (user B) (Dwyer et al., 2008). It is therefore a digital representation of the users.

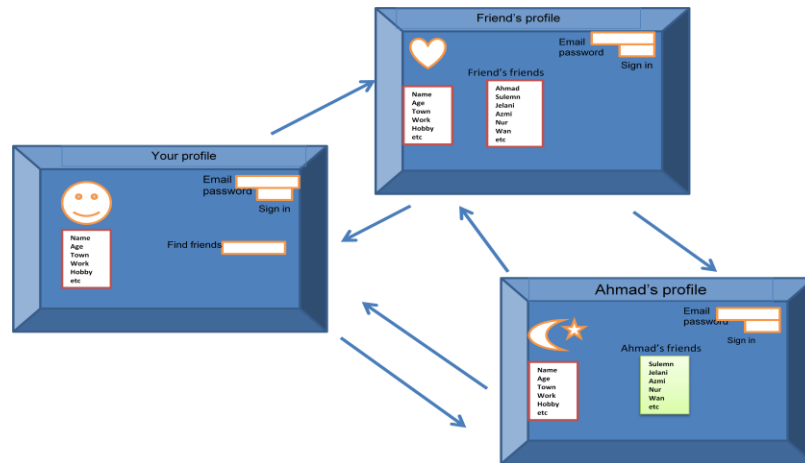


Figure 2.13: How friends' profiles are interrelated

One of the major issues of social networking sites is privacy. They are controlled by third parties; as such they represent spaces whose owners create the parameters for what is possible. On MySpace for example, users can use some hyper text markup language (html) files to customize most profile features, like adding new graphics and videos. They can also use phishing html code or web crawler softwares to access other users' profiles. Hence there are limitations to how much control they can truly exert there. For instance, in an experience to such one; a MySpace user sent to the researcher an email saying that the researcher's profile on MySpace was cracked into. In the words "I cracked into your profile; see what I get 4 u dear!" Then the researcher saw a series of pornographic pictures.

On Facebook, for instance, users' choices are even more limited, and new "applications" are required in order to add features to a profile (Lenhart & Madden, 2007). Some are even going further than creating simple profiles, and integrating services such as catalog searching directly into their social networking sites (Farkas, 2007; Fernandez, 2009). In a three way studies by Dwyer et al. (2008) the first was qualitative

with a semi-structured interview on 19 graduates and undergraduates students. They were sampled from the users of MySpace, Facebook, Xanga and Hi5. They found that “the students used SNSs because they can create and customize their profiles and they can also maintain existing relationship with friends.” The second study found that “it is convenient to track old friend” and find new one. Again one can have information and share it with friends easily.

The study was an online survey of 226 subjects (132 Facebook users, 94 MySpace users). It used open-ended questions; i.e. “*what do you like most about using SNSs?*” among other responses were that “*I can communicate with friends*”, “*I can have email, profile and organize my information*” “*it is like online address book,*” “*it saves time, effort and it is efficient to use*”, “*I need not call my friend by phone.*”

Most social networking profiles are made up of responses to a set of generic questions that prompt an individual to disclose a variety of personal information (Jones & Soltren, 2005; Kolek & Saunders, 2006; Kord, 2008; Stutzman, 2006). The visibility of the profile varies according to sites and user discretion. More so most sites require bi-directional confirmation of relationship like Facebook, while some do not e.g. YouTube.

Dwyer et al’s (2008) third study was also an online survey of 67 subjects with 23 male and 44 female undergraduates. The study tested the scales of fit which they called “ProfileDesignFit” and “MeetPeopleFit”. In the study they used Pearson product moment correlation and found that there is a strong correlation for both scales and perceived effectiveness and a measure of performance ($r=.460$) where Cronbach’s alpha were .773 and .763 for ProfileDesignFit and MeetPeopleFit respectively. The reason for their study

was to their argument that “focus on the profile bring up social, personal and technical factors that can best be explained with an integrated model.

SNSs researchers have also studied the network structure of Friendship. Analyzing the roles people played in the growth of Flickr and Yahoo! 360's networks, Kumar, Novak, and Tomkins (2006) postulate that there are passive members, inviters, and linkers "who fully participated in the social evolution of the network". Spertus, Sahami, and Buyukkokten (2005) identified a topology of users through their membership in certain communities. They viewed that sites can use this to recommend additional communities of interest to users. Finally, Liu, Maes, and Davenport (2006) argue that friends' connections are not the only network structure worth investigating. They examined the ways in which the performance of tastes (favorite music, books, film, etc.) constituted an alternate network structure, which they call a ‘taste fabric.’

Variation in the design of SNSs promotes the development of different culture (Donath & Boyd, 2004; Lenhart & Madden, 2007) on a site where creating a link involves little cost, users may amass thousands of friends. But the observer may not know which of this represent genuine relationship (Donath, 2008; Fono & Raynes-Goldie, 2007) the lack of a profit only increases the pressure on SNSs to find ways to monetize their users' information. Crucially, financial success is tied to their ability to bring in advertisers, who want people to advertise to, and ideally people who can be individually targeted by their interests. Similarly, what attracts new people to the site, and keeps the old people coming back, is the user-generated content. This usually takes the form of personal information (Fernandez, 2009).

Considering that the reasons for people joining SNSs varies (Boyd, 2005). However, Adamic and Adar (2007) in their studies tried to predict whether one person is a friend of another. They rank all users by their similarity to that person. Adamic and Adar (2007) study also envisage some shortcomings which are also considered a gap by this research as well. They admitted that they do not have the complete list of friends resulted in many false negative matches. That is, they correctly matched a user to someone the users know but they have no explicit link confirming such relationship. This makes a complete evaluation difficult for them as measures such as precision-recall rely on a complete data set like list of friends in their own case. They suggested that a future direction for this work would go beyond homepages to obtain social links directly from users. Additionally, while they have selected four data sources in particular (text, out links, in links and mailing list) there are many more that can be used. For example, demographic information such as address, major, and year in school, may provide extra clues.

Some academic institutions in Malaysia and other parts of the world are on Twitter, Facebook and YouTube. UUM for instance also accrued many followers including the researcher on Twitter, UUM/CAS is also on Facebook and the UUM media service is on YouTube as is with University Malaya Malaysia. In Nigeria very few universities are on SNSs also. Many of the organizations i.e government and non-governmental, economic, media, and human rights websites proudly provide direct link to at least one or more of such networks. Many among the population in Nigeria came to know of Facebook and Twitter through the media services especially the British Broadcasting Corporation (BBC) Hausa programme which broadcast their presence on

the Facebook and Twitter and encourage their Hausa listeners to go for discussion on several topics related to Nigerian socio-cultural, economical, educational and political issues. For instance, ThisDay newspaper of 3rd July (2010) reports that the comments on the Nigerian President's Facebook page made him revert his decision of banning Nigeria's soccer team (green eagles) from FIFA (Fédération Internationale de Football Association or International Federation of Association Football) competitions following their failure in the 'South Africa 2010' world cup. Easy accessibility via mobile phones also warrants the use of Facebook in Nigeria. Many political figures and political office aspirants opened pages and invited users to their profiles for political popularity.

In the same vein most importantly many Internet browsers including the present Mozilla provide link and allows direct lunching of Twitter and Facebook website; whilst Explorer allows MySpace. Safari gives quick access to YouTube. A lot of top and popular search engines like Google, Yahoo, Bing and MSN in one way or the other allow quick access to one or more of the popular SNSs. Mozilla as a member of Facebook community customized a page which attracted over one million two hundred fans including the researcher.

2.5.4. Facebook and its Background

It is examined that there are millions of contemporary young adults who use social networking sites. Facebook (2010) specified that Facebook is the world's largest social network, with over 400 million users. Everyday, people are now sending more than 1 billion Facebook chat messages (Facebook, 2010). One of the founders, Mark Zuckerberg bravely stated that if Facebook were a country, it would be the eighth most populated in the world, just ahead of Nigeria, Japan, and Russia. From the Google

worldwide data gathered (double click ad planner, May, 2010) Facebook is visited monthly by 540 million people, almost 35% of the Internet population. Approximately 570 billion pages are visited monthly on facebook.com.

Table 2.3:

The Statistic of Facebooking

Events	Description
Current active users on facebook	More than 500 million
Users who update their status each day	More than 35 million
Photos uploaded each month	More than 3 billion
Events created each month	More than 3.5 million
Pages created fans	More than 5.3 billion
Loggin on to Facebook everyday	50% of active users
Users of Facebook via mobile devices.	More than 250 million
Pieces of contents shared Monthly	More than 30 billion
Active pages currently on Facebook	More than 3 million
People who become fans of pages each day	More than 20 million

Source: Facebook.com/press, (2011)

However, little is known about how and why they used these sites; future studies can investigate it that ways. Pempek, Yermolayeva and Calvert, (2009) conducted a follow-up study and indicate that students used Facebook approximately 30 min throughout the day as part of their daily routine. They added that, “students communicate on Facebook using a one-to-many style, in which they create and disseminate their personal contents to their friends” (p. 2). However, they spent more time observing

contents on Facebook than actually posting contents. Facebook is used most often for social interaction, primarily with friends with whom the students had a pre-established relationship offline. So in addition to markers of identity for emerging adulthood, such as religion, gender, political ideology, social class, social capital and work, youth make use of media preferences to express their identity. Implications of SNSs use for the development of identity and peer relationships are other factors that need to be discussed at this level (Pempek et al., 2009).

The importance of individual users' online behaviors and its implications at various levels of the society has drawn attention of the educational and social researchers since the early development of the Internet. Recently, research on SNSs, such as Facebook and many others (Boyd & Ellison, 2007) begin to outline users' behaviors and characteristics (Ellison, Steinfield & Lampe, 2007; Golder, Wilkinson, & Huberman, 2007; Ellison et al., 2007; Zywnica & Danowski, 2008).

Facebook began in early 2004 as a Harvard-only SNS (Cassidy, 2006). For one to join as a user one must then have a harvard.edu email address. As Facebook began supporting other schools, those users were also required to have university email addresses associated with those institutions, a requirement that kept the site relatively closed and contributed to users' perceptions of the site as an intimate, private community.

Facebook in September 2005, Facebook expanded to include high school students, professionals inside corporate networks, and eventually, everyone. By then it was rated to 22,000 (Zywnica & Danowski, 2008; Ellison et al., 2007). By 2007 it was the third most popular site on the web. In August same year 2007 it was subscribed with over 22 million unique visitors and over 15 billion pages viewed (Freiert, 2007; Zywnica &

Danowski, 2008). As of March 2011 more than 500 million people used Facebook.

In 2007 there were below 40,000 Nigerians on the network. The approximate Facebook users was estimated at over 212,000, in 2009 and 657,360, in January 2010 who indicated Nigeria as their country (Facebook site utility, 2010); marking almost 53% increase from which more than 60% are students. In fact there was even a Facebook Nigeria Awards since 2009. In a nut shell Nigerian university students are heavy signup users of the Facebook more than any other SNS. Nigerian Facebook users were estimated at about 657,360 in 2009. Now at the time of this report the figure reached 1,757,720 (Facebook Statistics, 2010). It is quite apparent that there was a high increase in the Facebook use in Nigeria at the time of this report. There are almost 1.8 million Facebook users. The figure above is out of the 17,607,440 of total African users (World Statistics, 2010).

According to Boyd and Ellison (2007), and the Facebook site (2009), unlike other SNSs, Facebook users are unable to make their full profiles public to all users. Another feature that differentiates Facebook is the ability for outside developers to build "applications" which allow the users to personalize their profiles and perform other tasks, such as comparing embedded movie preferences and chart travel histories and other schedules. Facebook site shows that users update users' status on phone, browse news feed and view friends' profiles. It works on all phones with mobile web access. Facebook text messages can be updated, send to friends and receive SMS texts from them as well. Still with status updates, users can use wall posts as they happen. It makes easy upload and emails through personalized upload email facilities and or send photos and videos straight to ones profile.

Joinson (2008) examines the motives and uses of Facebook. In the study were 137 Facebook users as participants, who responded to an online survey. The distribution involved 53 males and 88 females mostly of 26.3 mean age range. The demographic items considered were age, gender, occupation, location. The major research questions sought to be answered in Joinson's study were: what other words describe what you enjoy about using Facebook? Using single, easy-to-understand terms, what do you use Facebook for? And what uses of Facebook are most important to you?

Some of the answers for using facebook indicated are: *'keeping in touch'* *'contacting friends who are away from home'* and *'chatting with lost people.'* Others included *'re-acquiring lost contacts,'* *'reconnecting with people.'* Other issues were that they used it in finding people they haven't seen for a while. Some poked other users or post private messages on walls. "Others get busy tagging in pictures, posting pictures and sharing pictures. Joinson's (2008) study identifies Facebook users and their use of Facebook privacy settings meaning the degree to which they had made them more private or more open. It uses a 7-point Likert scale. The scale was between 1 (very unimportant) and 7 (very important). Results from Joinson's study showed that participants had an average of 124 friends linked to their Facebook profiles. About half of the participants registered on the site for just less than six months. The majority agreed that they visited the site "daily (38.8%) or more than once a day (27.5%); and 4.2% visiting less than once a week." Amongst all Joinson's respondents, the most common responses for the time spent on the site daily were "between 1 and 2 hours which is just a bit higher to the others who proffered between 2 and 5 hours. A relatively insignificant number of respondents accepted to have spent less than 1 hour per day. (p. 3)"

With regards to the privacy issue, unlike previous research (Gross & Acquisti, 2005) majority of the respondents in Joison's study claimed to have changed the actual default privacy settings in most SNSs applications, making their profile more private, which is making it as private as possible. However about making no changes to the profile responses were substantially lower. The SNSs usage tends to be related to the 'social searching' and specifically, to learn about old friends and maintain old relations. This measured consistently high (Lampe et al., 2007).

Joinson (2008) employed a one-way ANOVA between subjects and found a significant effect of gender on profile privacy settings with females more likely to report making their profile more private compared to males. In all the cases, a higher usage level was associated to the younger users who also tend to have greater number of 'friends'. A second regression equation examined the same variables predicting the amount of time spent on the site. Additionally, in Joinson's (2008) study, regression was calculated to predict the number of 'friends' users reported on Facebook. Given that the number of friends should be related to the length of time users had been registered on Facebook, and the intensity of their use; the usage measures (length of time, frequency of visit, time spent on site) were entered alongside the remaining variables. He later concluded that users derived a variety of uses and gratifications from SNSs, including traditional content gratification alongside building social capital, communication, surveillance and social networking surfing.

Facebook allowed users to manage their 'feed', removing 'stories' as they wish. It provides a degree of privacy control to users, but it also enables users to engage with the site as a self-presentation tool. Pages created on SNSs are controlled and manipulated by

the users themselves usually by exhibiting narcissism with others. However, it was reported that visual anonymity decreases search ability and the friends' lists remain controllable (Cho, 2010). On Sunday, 11 July 2010 BBC news reported that agreement between Ceop and Facebook was reached. The Facebook installed and launched Child Exploitation and Online Protection Centre (Ceop) application. The ClickCeop package button on Facebook page aimed at reporting online abuse of children and teenagers. It is customized to suit the users' desire and flexibility in privacy control (BBC 2010).

Roblyer, McDaniel, Webb, Herman, and Vince (2010) conducted their study to determine how faculty used Facebook for educational or personal purposes. They sampled students ($n=120$) and faculty ($n=62$) at a mid-sized southern university. The survey employed Mann–Whitney U tests to compare the faculty and students how most likely they may have an account on Facebook, and how much often they do preview and checked the accounts. The results suggest that the faculty and students so much significantly differed ($z=-4.548$, $p<.01$) on how likely they have a Facebook account. Students and faculty used social networking sites for instructional and other purposes. A crosstabs analysis and Chi square compared the uses of the Facebook by group were done. The results indicated that students and faculty do not significantly use Facebook for instructional purposes. Roblyer et al. (2010) further conclude that two groups did not differ in the usage of Facebook for other communication purposes.

2.5.5. YouTube as an SNS

YouTube was founded in February, 2005 (Cheng, Dale & Liu, 2008) by three colleagues, Chad Hurley, Jawed Karim and Steve Chen (YouTube, 2009). Chad Hurley and Steve Chen got funded by Sequoia Capital in November 2005. They proceeded to become the pioneers and first members of the YouTube management team. It was officially launched one month later in December. Within a year of its launch, Google purchased YouTube in December 2006 (Cheng et al., 2008; YouTube, 2009). YouTube struck many partnership deals with a lot of content provider organisations like: CBS, BBC, Universal Music Group, Warner Music Group, Sony Music Group, NBA, The Sundance Channel and many more (YouTube, 2009).

YouTube is the leader in online user generated content (UGC) video clips, and the premier destination to watch and share original videos worldwide through a web experience. YouTube as a media production tool allows people to easily upload and share video clips of reasonable length on to the site named YouTube.com through their created profiles and across the Internet through other websites, mobile devices, blogs, and email (Cheng et al., 2008; Chen, Thoms & Fu, 2008; YouTube, 2009). It could be their original amateur video or a produced one from other source like TV stations i.e. Aljazeera TV and so forth. A media library is on YouTube which can make it a research and teaching tool from which students and researchers can refer. In studying the structure of YouTube, Paolillo (2008) asserts that most of the available information comes from mass media or marketing perspectives. In addition, educational materials are equally parts of YouTube contents. Paolillo's study (2008) used crawler iteratively to fetch and parse the users profile to identify the clips and comment. He found that YouTube is just like other SNSs

as it used typical core-periphery structure. But it has a multiple of core rather than single core like other SNSs.

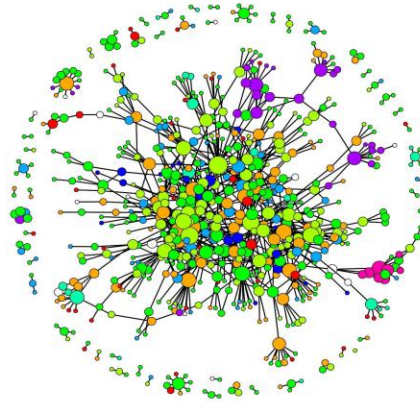


Figure 2.10: Sociogram of video on author's friends profile in YouTube

Source: Paolillo, (2008)

In general Paolillo (2008) concludes that YouTube functions like other social networking sites, both in terms of its degree of distribution and internal structure. Everyone can watch videos on YouTube, people can see first-hand accounts of current events; they can find videos about their hobbies and interests. As more people capture special moments on video, YouTube is empowering them to become the broadcasters of tomorrow. YouTube stated that “about 65,000 different kinds of user generated contents (UGC) videos are uploaded daily.” It further indicates that there are more than 100 million viewer users watching videos daily.” Additionally, there are YouTube users who are within the age range of 18–49, view YouTube site monthly (Ardito, 2007; Cheng et al., 2008). The contents are kept according to categories in respect to file name, format, and date of upload, file size, and feature of the video. That is why it possibly allows an indecent video to appear along with a religious preaching clip.

The YouTube site stated that their terms of service apply to all users of the YouTube website, including users who are also contributors of video content, information, and other materials or services on the website. It is found that many users only watch and download clips but do upload few videos (Cheng et al., 2008). While few of the users upload many videos. The YouTube website includes all aspects of YouTube, including all products, software and services offered via the website such as the YouTube channels, the YouTube ‘embeddable (Adobe flash) player,’ the YouTube ‘uploader’ and other applications being used by users.

The website contains links to third party which are not owned or controlled by YouTube itself. As such since YouTube has no control over them, it assumes no responsibility for the contents, privacy policies, or practices of any third party websites. In addition, YouTube further stands that do not and cannot censor or edit the contents of any third-party site. By using the website, the user expressly relieve the YouTube from any and all other liability arising from the users’ use of any third-party website. The YouTube site always curiously encourages users to be aware immediately when they leave the YouTube website that should read the terms and conditions and privacy policy of each other websites that one visits.

The YouTube site also states in order to access some features of the website, user will have to create a YouTube account. One may never use another's account without permission. When creating one’s own account, user must provide accurate and complete information. The users are solely responsible for the activity that occurs on their own accounts. So, they must keep the account’s password secured. For any breach of security or unauthorized use of someone’s account, the owner must urgently notify YouTube

immediately.” The site added that YouTube will not be liable for the losses caused by any unauthorized use of one’s account. YouTube (2009) states that it can accept almost any (no specification) video format for upload, which conform to the following identified settings to give the best results.

- ❖ Video Format: H.264, MPEG-2 or MPEG-4 preferred, WMV AVI (Cheng et al., 2008)
- ❖ Aspect Ratio: Native aspect ratio without letterboxing (examples: 4:3, 16:9)
- ❖ Resolution: 640x360 (16:9) or 480x360 (4:3) recommended
- ❖ Audio Format: MP3 or AAC preferred
- ❖ Frames per second: 30
- ❖ Maximum length: 10 minutes (recommend 2-3 minutes)
- ❖ Maximum file size: 1 gigabyte

Cheng et al., (2008) found that there are over seventy million videos so far offloaded, in 12 categories and the highest is music covering entertainment and comedy. They stated that the whole videos are within maximum of 600 seconds in order to conform to the 10 minute time frame.

More so, according to the YouTube site, “some YouTube content partners choose to make their videos available only to certain countries. For instance, they may only have the licensing rights for a particular region. On occasion, YouTube does block specific contents in order to comply with local laws in countries where YouTube has been launched. For instance, certain ‘Nazi imagery’ is unlawful in parts of Europe.” Recently Gaddafi and Ahmadinejad UN general assembly speeches September 2009 cannot be accessed in Israel and some part of Europe. The students democracy riot in 1989 cannot

be displayed or access in China. Even if uploaded the YouTube moderator would remove it but may still be linked by other videos. Any uploaded video clips can immediately get deleted in few moments when ever it's reported as flag by certain number of view users because of violation of terms.

Is there any relevance from the YouTube videos? Considering the above explanation from the YouTube site it seems everything can be on YouTube; the good things, the bad ones and the ugly. In using the YouTube the students have the controlling tool at their disposal. They constructed the environment the way they thought and wished. Although Cheng et al (2008) posits that 58% of the YouTube users have neither friend, nor do they rate or comment on profiles influence of friends may play a vital role in this aspect. This is because of the inter SNSs resource sharing and interactivity. Cheng et al. (2008) reaffirms that there is no disparity among the students in terms of using YouTube by downloading or uploading information clips.

Many of the SNSs have embedded or tag others on their page for easy linkage from one site to the other. The students may need the proper guidance in using such sites to be free from dangerous effect on their morality and academic pursuit. There might be some lectures online from other schools. Their course outlines would be uploaded by such lecturers somewhere on to YouTube. A student may feel not going to his real class instead might engage on the online lecture. Though the contents might be vital to the student yet the student may be away from class interactivity.

The other issue is the pornography which is very much available and rampant on the YouTube site. Students' morality would be at risk in visiting such site. It is not possible for the user to fall into the YouTube porn site without being notified. The user

must confirm his adulthood yet the issue is the availability of the contents. Though such contents are to some extent required by many, the students in universities need to be controlled. This could avail them from dangerous disease, other form of anti-social behaviors and interrogation. Such similar case happened to three high school girls who sent their photos through cell phones. The students aged 14 and 15 were charged for creating, possessing and publicising child pornography. They were said to supposedly snap the nude pictures of themselves and of other two girls with their cell phones and sent them to other students by phone and mail. This shows that affordability and connectivity may ignorantly forced naïve students fall into such problems. Blackberry, iPhone and iPod recently in the year 2010 have to revisit their third party policies to avoid being banned in some countries as a result of similar cases for instance in Saudi Arabia, India and United Arab Emirate.

2.6. SNSs and Students' Social Behaviors: (positive and negative)

“A behavior is always to be taken transactionally: i.e., never as of the organism alone, any more than of the environment alone, but always as of the organic-environmental situation, with organisms and environmental objects taken as equally its aspect.” Dewey and Bentley 1949 in (Rummel, 1981) (p. 1)

Social behavior is an aspect of social psychology which involves helping, aggression, and some kinds of romantic relationships. Some critical determinants of social behavior also are attitudes, self-concept, dissonance reduction, interaction with and presence of other people (Bertram, 2009).

Social behavior involved those observable responses, actions, or activities of someone. It is therefore defined in wikipedia (2009) as behavior/response directed towards society, or taking place between, members of the same species. It usually occurs as a result of social interactions. Social interactions are the acts, actions, or practices of two or more people mutually oriented towards each other; it is any behavior that tries to affect or take account of each other's subjective experiences or intentions (Rummel, 1981). It may manifest in two distinct ways, positive or negative based on the situation and actions around the society. Respect, honesty, love, punctuality, tolerance, friendliness truthfulness, law abiding are such indexes attributed to positive social behaviors.

On the other hand, anti-social or negative behavior covers a wide range of selfish and unacceptable activity that can blight the quality of community life. Terms such as nuisance, disorder, dishonesty, crime, aggression, disloyalty, intimidation, harassment, and violence and so on are also used to describe some of this kind of behavior (Baker & White, 2010). Baker and White (2010) in their study of predicting adolescents' use of SNSs assert that popularity of SNSs among adolescents has grown exponentially. According to the behavior chain model, SNSs aim to encourage a particular pattern of behaviors (Vasalou, Joinson, & Courvoisier 2010). Benevenuto, Rodrigues, Cha, and Almeida (2009) similarly investigate the impact of friends on the behaviour of users of social networks. They suggested that the success of SNSs is directly related to the quality of contents users share.

The rapid growth of online communication and development of new media presents many new opportunities and challenges for social inclusion (National Vital Statistics Reports, 2005). This may support the notion that communities can be developed

without regular face-to-face communication, and the Internet has positive social effects on both individuals (Singla & Richardson 2008; Sum et al., 2008). However, most of the literatures written about online social networking are related to the negative influence on students; Kord (2008) postulates anecdotal literature on SNSs that shows the effect is widespread and includes both the academic and social systems of the institution.

With the coming of the second generation Internet Web 2.0, it is apparent, that the key to making this whole thing works in the concept of socialization is that this term will become more and more important and it will be seen cropping up more and more. Along with general discussion of cyberspace and social issues, this will include an ongoing examination of some of the consequences of this new communication technology for religion in particular. So the more use the Internet the more turn their back on traditional media. Ellison et al. (2009) asserted that SNSs provide simple, cheap ways to organize members, arrange meetings, spread information, and gauge opinion. Indeed it is one of the easiest ways to socialize and get people informed.

Coyle and Vaughn (2008) also conducted studies of how American college students on campuses use SNSs. They surveyed two focus groups study and found that students who used SNSs like Facebook used it to maintain social capital among them and stay linked to whom they interacted with, like old friends and classmates. They maintain that SNSs impacted by technology is used for general communication. They found that about 53% reported having more than one account on SNSs. They conclude that SNSs are used for 'trivial interaction' and are used to 'maintain friendships', but as a 'noncentral form of socializing'. SNSs are exploding within the Internet society with the abilities of making users more expressive and creative.

Correa, Hinsley, and Gil (2010) examined the relationship between personality traits and SNSs use. The online survey was conducted on 1482 respondents from which 33% were males and 67% were females. Their findings differed by gender and age. It indicates that extraverted men and women were both likely to be more frequent users of SNSs while the men with greater degrees of emotional instability were more regular users. Correa et al. (2010) result also shows relationship between extraversion and social media use was particularly important among the young adult cohort. They also reported that the adults often use SNSs to socialize with people they do know and expand their circle of friends.

To Dawson (2005), “the burgeoning research on the social implications of the media revolution introduced by the Internet; the rate of growth of the Internet is unprecedented” (p. 1). He added that it is vastly out-stripping the speed and scope with which previous technologies spread around the world. Hosio et al. (2008) in an attempt to reduce similar occurrence, proposes a system to harness online user-generated content (UGC) to encourage such social interaction, awareness and perhaps communication in real life public setting.

Michele and Shonna (2007) in their study found that more than 51% of the approximately 21 million teens used the Internet and SNSs almost daily (Pew Internet & American Life Project, 2005). Many adolescents take many more known and unknown risks by offering their personal identifying information while communicating with many on the web. The purpose of their study as they stated was to determine college student risk taking behavior in popular social networking sites e.g. (MySpace and Facebook). They employed and utilized a mixed method approach. Risk behaviors in the study were

assessed by random observation of online behaviors of 225 self identified college students and 225 individuals who did not self identify as college students but were between the ages of 18-25. The subjects' SNSs profiles were reviewed for potentially dangerous postings of personal identifying information. From these reviews, themes and categories were determined to classify the level and interaction of risk behaviors. Singla and Richardson (2008) further postulate that the more time they spend talking, the stronger this relationship is. People who chat with each other are also more likely to share other personal characteristics, such as age, location place of work and address. Based on results their methodology, Michele and Shonna (2007) postulate that it is apparent that there is a need for education and development of skills and strategies to protect one's identity and safety.

Identity information disclosure is one of other serious issues regarding students' behavior in relation to SNSs usage. Stutzman (2010) opines that almost 71% of his respondents indicated participation in an SNS, with participation skewing heavily towards undergraduates as compared to graduate students. The most popular SNS was the Facebook, with 90% of undergraduates reporting its use.

Making false impressions and hiding identity on SNSs is evident from Manago et al. (2008) result. It shows that rampant false impressions do exist among some users of SNSs. they perceived it in such way that hidden aspects for their friends are hid totally from the physical world. Similar to offline social interactions the study reported constructive usage of SNSs among most users. Manago et al. (2008) as well show that emerging adults utilized MySpace to construct a sense of self in relation to what their peers are doing and most users spend time observing other users' profiles. They also

reported “many peers are easily accessible on the network and their personal information is open for observation” to everyone. Manago et al. (2008) also affirm that men tend to portray themselves on MySpace according to stereotypical norms of masculinity whereas most women portray themselves as attractive and affiliative. The findings of Manago et al. (2008) also indicate that women work harder on profiles to impress others, especially in terms of physical beauty while men are less concerned about what others think about them and put less effort into their profiles. Similarly, Zhang and Kline (2009) assert that many of the users of SNSs were more likely to comply with network members regarding the decision on love and even lead to marriage.

In Stutzman (2010) study student respondents were asked to react to some question statements regarding identity information disclosure on SNS's. Some of the results showed that ‘I am ok with friends accessing my SNS profile (mean= 4.55) and ‘I am ok with family accessing my SNS profile (mean=3.78).

According to Bolton (2009) more students than ever before have been caught cheating, lying, and stealing. In addition to that many teens have admitted to have been stealing from stores; from their parents and even from their friends. Many students also compulsively do talk lies because of others influences. First of all cheating has run rampant in high school and universities. In a survey by Bolton (2009) of almost 30,000 students in over “100 schools, 64 % of students admit to cheating on a test in the last year and over 38% have admitted to doing more than once” (p. 2). He added that 36% claimed that they have plagiarized over the Internet.

Another rising trend among teens is lying. About 83% of students have lied to their parents about something significant related to SNSs (Bolton, 2009). Other negative

behaviors among the users were witnessed online. This is evident as many of the sites are patrolled and controlled by some users or employees who report other users that posted obscenities, sexually explicit contents or used derogatory language (Leyden, 2009). Zezima (2007) opines that there are a lot of people tired of seeing half-naked women in ads on SNSs. Social behaviors online that has to do with sexuality and marriage relation have been impacted since the inception of SNSs. Knobloch and Donovan (2006) documented that social networks can and do influence the development of romantic relation. Loving (2006) and Parks (2007) argued that personal relationships do not exist in isolation from one another. He further added that relationships make up a social network or context that in turn becomes inextricably linked to the initiation, development and maintenance and dissolution of any given relationships. Similarly, it was shown (Loving, 2006) that females' friends are particularly successful or as successful as dates in predicting when relationship will break up. In Pritchard's study (2008) only adults were asked to participate, in which 70 % of adults surveyed reported themselves to be white and homosexual and same sex marriage seekers.

Yohannis and Sastramihardja (2009) assert that on SNSs users do so many deviant behaviors, like surfing pornography, racial activities, predator to some users, and creating fake profiles. SNSs are now integral part of life to young adults' and teenagers'. They further state that SNSs are used for entertainment and fun; for finding old friends, maintaining existing relationships, building new relationships, have self confidence, and leverage other social issues. On the other side of the coin, SNSs can also be used wrongly, by spending much of the time on it, or using the pages / profiles in promoting self, and to some extent deceiving others through the SNS, and making misbehavior such

as hoax. One thing to consider is that most of the users are within the adolescence stage which means they are more vulnerable to such fraud and all kinds of crimes. Yohannis and Sastramihardja (2009) viewed that SNS seems to become a kind of dangerous garden for the adolescents.

Antisocial behavior is a cluster of related behaviors, which included violence, aggression, disobedience, lying, stealing, temper and tantrums. Fuhong, Dan, and Chen (2009) reported that youth who become involved in criminal behavior at young ages (i.e., late childhood or early adolescence) appeared to be at a high risk in continuation of such negative behaviors up to their adulthood stage. They might be at the risk of other problems, like difficulties in academic pursuit, abuse of drug and other substances and early sexual experience or behavior, which may have serious and long term consequences on their life.

Even though the SNS usage varies among the students, negative behaviors are rampant. Fuhong et al. (2009) opine that the SNS users can be classify into three categories: active users, normal users and passive users. From this they concluded that few users are for the “fans”, a few users are not much interested and most users are for fun.

Furthermore, with regard to students’ behaviors, Xie, Kumar, Ramaswamy, Yang and Agrawal (2009) explored the behavior association and interaction influence in the social network. They opine that in the social network, the social interactions such as security risks may not be independent and they exhibit behavior influence on each other. They further asserted that this social interaction influence could span through a large society due to the explosive grow of computer and Internet. In their presentation they

showed human social networks as described by the social interactions among network nodes and they indicated that these nodes are interconnected by social interactions.

2.7. Students' Attitudes towards SNSs

Attitude as a construct in this study is a hypothetical psyche response representing an action or reaction. It represents individual's dislike or like for something positively or negatively. Attitude is just a decision about something. Friendship and interaction result from attitude. An attitude is thought of as a schema. This can be further seen as a network of representations. A schema integrates certain components of attitudes because it represents things like emotions, beliefs, behavioral tendencies and physiological reactions (Bertram, 2009).

Cho (2010) explored the attitudes and behaviors of users who differed culturally on their backgrounds through the SNSs. Given that, sometimes student users send friendship request for a connection with some of their professors. Users also sometimes differentiate on SNSs the real and old friends from the new and casual online friends. Cho (2010) further opines that in using SNSs the styles of communication among the users are mainly associated with their attitudes and behaviors. This shows that the users of SNSs do have only two categories of audiences i.e. the known ones and the unknown. The ability to develop new relationships seems to be a stronger feature of social networking sites. Dwyer et al. (2007) indicate that some participants showed that most of friendships that begun through these sites led to face to face meetings and continued relationships. For maintaining existing relationships, SNSs were the most popular tool.

One of the studies used a model to show how attitude influenced and moderated the use of technology in Jordan schools (Al-Jaraideh, 2009). Alenezi, Abdul Karim, & Veloo's (2010) study treated and confirmed attitude as mediator in the relationship between perceived usefulness, perceived ease of use and the students' behavioral intention. Sanet Coetzee (2005) also used attitude as a moderator. In his study he examined the role of cognitive- affective consistency to find out if consistency of attitude can affect the level of the relationship. He found that consistency of the cognitive- affective has significant moderating effect on the relationship between job performance and job satisfaction. Filzah (2007) also examines moderating effect of attitude in his study on the change management initiatives and change success and found it to have a significant contribution on the relationship between the two variables. Steinfield, Ellison and Lampe (2008) as well observe self-esteem and attitude as a mediator on the relationship of Facebook usage and bridging the social capital. It was then found to be positively a contributor and predictor. Dwyer et al. (2007) believe that there are both individual attitudes and characteristics of technology that impacted management of behaviors. They further argue that the attitudes included in the framework are the concern for information privacy as well as impression management. The two attitudes do not make up an exhaustive list of individual attitudes that influence relationship development but also the technology usage. They also postulate that impression management strongly influenced how participants consciously present themselves. it is evident from the participants views that one can't just completely be himself unless get to play the game, and have some sort of cool factor. Dwyer et al. (2008) further assert that the way we feel influence the way we interact; therefore, private attitude can damage social relation.

Wolfe (2010) found gender difference in the attitude towards SNSs and its usage where he reported females were a bit higher than males. He also reported differences in percentage in the SNSs usage among various faculties. The faculty of Art scored the highest followed by the faculty of social science and lastly the faculty of science with the lowest score. In terms of level of study, Wolfe (2010) also reported that sophomore had the highest level of SNSs use while freshman had the lowest.

In a correlation study by Nik Yuzula (2006) which was based on constructive theoretical background 211 samples were used. The Nik's findings were about the University Utara (UUM) as the target population. The statistical tools, used were ANOVA, t-test and correlations were all employed in the analysis. In general it showed that education level positively influenced the students' attitudes. On the other hand "gender, race and academic achievement have negatively influenced the students' attitudes towards Internet use" (p. 211) (Nik Yuzula, 2006).

In another recent study, Horng (2009) used 25 selected samples on SNSs in Taiwan (Facebook and Atlasport). Horng, through in-depth interview on focus group and questionnaire of SNS 40 users which are too small to represent the population developed two constructs (attractiveness and sustainability) to measure the preference of the SNS users. He found that the two are clearly correlated. The research also indicates that Facebook allows only people who know each other to access their profile unlike Atlasport which only links people who are alike or close to each other on the map as friends similar to what YouTube does. It means everyone is likely to have any one as a friend. In the interview, he found that 10% of the users are willing to provide all sort of content while the remaining rejected that notion. This is because of the nature of the

structure of the SNS. Some of the SNS sites monitor, sieve and filter information whereas others allowed it to pass without care of any kind it might be.

It is understood from many recent studies as it indicated that many SNSs student users turn to the SNSs like YouTube, FindAdultFriend for pornography or social contact because they consistently fail to succeed socially in their own world due to bad behaviors from such action (Raizada et al., 2009). These individuals generally fell into one of the two categories: the ‘socially incompetent’ or awkward who cannot do well; and the ‘socially unappealing.’ In the first place, the so called ‘socially inept’ were individuals who never mastered how to get along with others. The second groups ‘socially unappealing’ who fail socially. They lacked the physical attractiveness or money that would give them a fighting chance in many social circles. The assumption is dangerously naïve; this is because many of the Internet relationships are most likely built on deception and misrepresentation. Children pretend to be adults, adults pretend to be children, men pretend to be women and vice-versa, and people lie about their religion, background and accomplishments.

2.8. Students and Academic Adjustment

Yallop et al. (2005) define adjustment as “a process of fitting individual or collective patterns of activity to other such patterns carried out with some awareness of purposefulness” (p. 314). This could manifest in various forms like socially, psychologically, emotionally, economical, academically (which interests the present study). In their view, Zhou, Peverly, Huang, Wang and Xin (2003) saw students’ school adjustment to have occurred primarily in three domains: academic (academic

achievement and academic motivation), social (quality of peer and adult relationships), and behavioral (externalized and internalized distress). Baker and Siryk (1999) view that adjustment to university is multifacets it involves an array of demands varying in kind and degree which required a variety of coping responses or adjustments.

Tseng (2004) summarizes the key adjustment problems being faced by international students into four categories: academic adjustment, socio-cultural adjustment, psychological adjustment, and general living adjustment. Academic adjustment is probably the most popular among the four. As mentioned previously, students have difficulties with learning new educational system, new academic rules, language proficiency, and acquiring new learning strategies.

Student academic adjustment can therefore be referred to adopting and adapting changes in the attitudes, behaviors, values, rules, regulations and social norms in order to fit and be accepted into the new study environment. Abdullah, Elias, Mahyuddin and Uli (2009) and Autumn (2009) posits that university adjustment is seen in terms of college achievement which covered students' academic achievement and their personal growth. Van Eman (2009) views academic adjustment as having such dimension like attitudes toward school, towards classes and teachers, academic self-perceptions, goal values, and motivation/self-regulation.

University students' experiences are influenced significantly by involvement in an online social networking use. This may lead to the '*question of whether online social networking involvement contributes to academic adjustment and social behavior modification.*' If it can complement traditional interactions where students share with peers and faculty, it may also raise questions about the negative influences SNSs may

have for students who sequester or isolated themselves in their own constructed private spaces, profiles or walls instead of being involved in the general on-campus offline social, academic and spiritual activities (Kord, 2008; Murray & Malmgren, 2005). Students used the Facebook website as a medium or avenue where they can adjust by expressing themselves, share their daily lives with friends and family members, and keep in constant touch with a group of new and old friends (Kord, 2008).

It has been widely observed (Abdullah et al., 2009; Lent, Taveira, Sheu & Singley, 2009; Rice, Vergara, Mirela & Aldea, 2006) that transition for students from school to university is greatly influenced by whether they have been taught to go on their own way to take responsibilities for their own paths. Many students rely mainly on things to be done for them at schools, which may include even thinking to be done for them. Many students have difficulty adjusting to the fact that they need to be self-disciplined and self-motivating. At school, the discipline used to be imposed on them (Abdallah, et al., 2009). It is usually said that students lack self confidence to answer many questions in class. Some even may miss lectures because they cannot find the venues easily. Other issues attributed to the new students are plagiarism rules and use of the Internet as a source for assignments (Abdallah et al., 2009; Lent et al., 2009). Generally new students lack respect for teachers and colleagues and find difficulties adjusting to an environment which they control because there is no teacher standing over them telling them what to do and when to do (Christopher & Kimber, 2005; Tseng, 2004). Tseng (2004) distinguished between family interdependence attitudes and behaviors and found that they had counteracting influences on academic adjustment. She added that family obligation

attitudes do contribute to greater academic motivation among youth from immigrant families as compared with U.S.-born families.

Prapas (2009) examines and compared the relationship among the achievement motivation, adjustment and self confidence among the participant and non participants in college activities of Thailand. He had 431 and 339 samples from each group in which 400 were from the major campus while the remaining 370 were from the other small campus. The gender distribution showed female have the highest level (70.9%) of relationship between achievement and adjustment. While in terms of the faculty representation it indicated those from faculty of Art and Social Science having the high score of 34% in the aspect as well. The result showed no gender differences between the groups in terms of the achievement, motivation, adjustment and self confidence. Prapas stated that academic adjustment is an essential and usual social competence with the present globalization. He saw adjustment as a continuous process in life and a tool for globalization fitness.

Campbell (2002) asserts that the university setting and interpersonal interactions affect the students' adjustment. University adjustment aspects included acceptance, culture, withdrawal, and cooperation that affect the perceptions and experiences of the students have about the university. The study research design was qualitative which examined the academic and social aspect of the adjustment. It used purposeful sampling consisting of 27 Caribbean students. The result indicated that the subjects indicated more academical challenges are harder in their institution than most schools. Some participants mentioned that occasionally they felt homesick. Other students reported experiencing drastic changes in the school environments. Other views were suggestion that the

students need to be more active members of the college community. In terms of the social and academic adjustment some of the students reported to have deans, faculty members, and other college employees as part of their social network.

A study of new friendships and adjustment among first year university students was conducted by Buote et al. (2007) at six selected universities in Canada. The study assessed the quality of new friendships and adjustment in the university. An in-depth face-to-face interview was conducted with these students as well. Buote et al. (2007) and Rice et al.'s (2005) results indicate a significant positive relation between new friendships and adjustment to university. There was an association which was found to be stronger for students living in residence than for those commuting from home to the university. Rice et al. (2005) also provide insight into the processes through which such relation between the adjustment and quality of new friendships occurs. Results were discussed in terms of the importance of new friendships in helping individuals to adjust to a new social or school environment.

In their study, also Abdallah et al. (2009) used the Baker and Siryk (1999) adjustment model to explore university students' adjustment. They sampled 250 first year Malaysian public university students using a multistage cluster sampling technique. The study by Abdullah et al. (2009) examines the role of gender in college adjustment and the impact of college adjustment on students' academic achievement. The findings show that students' overall adjustment was at a moderate level. In which male students were found to be better adjusted compared to female students. Furthermore, the results also indicated that throughout a period of one semester, students' academic achievement was found to be significantly predicted by college overall adjustment, academic adjustment, and

personal-emotional adjustment. But how do the SNSs may affect the first year students and for the remaining year to undergo?

Omoteso (2006) conducts a study in south-western Nigeria. His study investigated the nature of the university students' academic adjustment and to find out the influence of selected socio-demographic variables on the students' academic adjustment. Omoteso (2006) study adopts academic adjustment inventory (AAI) consisting of 25 items. Demographic items consisted of gender, family background and peer status. He found that university students need to have relatively wide knowledge of their course of study. The lecturers often are most interested in the students' ability to describe and argued on their own. In the Omoteso's study gender had been found to be a factor in academic adjustment of students. From the Omoteso's findings as well it was evident that the students have academic adjustment problems. These problems included "unfriendly attitude of lecturers and strictness of the university rules" (p. 60). Other finding of the study was that family background of the students did not have significant influence on their academic adjustment. The study found that "the university undergraduate students in south-western Nigeria had various academic adjustment problems and their peer status while in secondary school had significant influence on their academic adjustment" (p. 62). On a similar but partially contrary view, Autumn (2009) investigates the relationships between students' socio-economic background (SEB) and adjustment to college. The results indicate that students from low-SEB are less well adjusted academically and personal-emotionally, as well as having less attachment to their university than their peers from higher socioeconomic backgrounds.

Rodgers and Tennison (2009) modified and adopted students adoption to college questionnaire (SACQ) developed by Baker & Sirky's, 1999 on 426 fresher students of 17-26 years age range. They used a four point's scale open ended questionnaire consisting of 20 items which they called College Adjustment Symptoms Survey (CASS). With cronbach's alpha value of (.88) they found that students have symptoms of adjustment difficulties or disorder. Academic adjustment difficulties were the highest rate 26% followed by social adjustment 17%. Behavioral adjustment in their findings was 11% which is the least. Rodgers and Tennison, participants reported 'being away from the family; adjustment to classes and workload; difficulty with the management and difficulty making friends and roommate problems' each.

Hesse (2007) explored the SNSs usage among international exchange students in the United States and reports that some SNSs provide search functionality based on lexical descriptions of interests, attitudes, and biographical factors, such as age and location. Lent's et al. (2009) in a longitudinal study on 252 students of which 90% were Portuguese assert that most students could use these facilities to find peers in their surroundings who are similar in certain regards and pursue real-life interactions with them. Hesse (2007) further postulated that use of SNSs among exchange students shapes their adjustment process. The SNSs use is not a substitute to personal interaction, but a kind of 'augmented reality.' It helps students on exchange to get informed of their environments and expand contact with their host culture. SNSs extend information accessibility on the schools social fabric and of peer groups.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter builds on the previous chapter; it specifies the appropriate research design, model adopted and the general framework created. Other issues discussed in this chapter are the population, sample, sampling techniques and sample size. Other components touched in the chapter are the validity and reliability issues. The chapter also identifies the method of data collection and outlines the statistical data analysis tools employed.

3.2. Research Design

This study examined the relationship of the use of social networking sites and the social behaviors and academic adjustment of the university students in Northern Nigeria. The researcher used mixed method approach research model in this study. Therefore both quantitative and qualitative paradigms and methods were employed at significantly equal weight in both data collection and data analysis stages. It obviously signified that adding qualitative flesh to the quantitative bones is a good strategy to overcoming some of the educational research problems (Gay et al., 2009). The quantitative paradigm result of the research determined the relationship between independent variable (SNSs usage) and the dependent variables; (students' social behavior and academic adjustment) as well as moderating effect of students' attitude on the relationship between the independent and two dependent variables. The raw results were extracted from the accessible population from the six selected universities viz: ABU, UNIABUJA, BUK, UNIMAID, UNIILORIN and UDUS) which were subsequently generalized on the general targeted population i.e. all the twelve Northern Nigerian federal universities in Northern Nigeria.

This quantitative research design was descriptive in nature and the subjects were measured once by administering questionnaires. Hopkins (2008) asserts that quantitative research is all about quantifying the relationships between variables. So, in this work there was no control of any variable or subjects because this research is not an experimental. It measured attitude and behavior. It is an established fact that such things like behavior tends to be difficult to control as it changes over time (Bergman, 2008; Creswell, 2003, 2005; Plano & Creswell, 2008; Weirama & Jurs, 2009). In addition research in an academic institution like universities for that matter; especially on what has to do with Internet technology may take some period of time to accomplish if it is scientific. This study took the researcher almost three consecutive months to finish the data collection in all the six institutions with the help of some research assistants. This researcher chose the descriptive presentation or report, because it requires a non experimental approach. This is because it was done to establish associations between the variables not causality as the experimental does.

Qualitative paradigm also formed part of this research because of its suitability on human study. It is believed that the qualitative aspect is a good modality that can help yield a wonderful result in this study. The subjects were asked in interview as focus groups and some profiles of the students were observed in their natural settings in Internet cafes, hotspots; and other relevant places they used to surf Internet like their rooms. The observation was done both coverth and overth in such a way that the elicited usage behaviors were captured more naturally. Bearing the critics against the qualitative study (Creswell, 2008) the researcher considered all that and tried as much to avoid any bias in the process of conducting the qualitative aspect.

It is evident that quantitative study is an inquiry into an identified problem, based on testing a theory with hypothesis, (Creswell & Plano 2007; Plano & Creswell, 2008) which measured with numbers, and analyzed data by employing statistical techniques (Onwuegbuzie & Johnson, 2006). The main goal of quantitative methods is to determine whether the predictive generalizations of a theory hold true.

By contrast, a qualitative study is a process of inquiry with the goal of understanding a social phenomenon or human problem from a multiple perspectives or it may be called a multi angular process. The quantitative and qualitative methodologies share things in common particularly when examining some of the phenomena. Both approaches deal with data, which normally break the flow of events in the social world and selectively focus on such issues like attitudes, utterances, actions, functions, or behaviors of individual respondents. Additionally, “at the same time, the two approaches bring distinctive qualities to the research process” (Cupchik, 2001) (p. 6). The constructivist perspective suggested several things which can advance the abstract approach to qualitative data collection (Onwuegbuzie & Johnson, 2006). Since the process is ultimately interpretive, one can only require for coherence in the analysis. That would be enough to justify the authenticity of the bases of the qualitative setting in any research study (Creswell, 2003; Creswell, 2008).

All these therefore, are among the purposes that prompted the researcher selected the mixed-method design, as highlighted by Sydenstricker (2007). Creswell (2008) viewed that triangulation involved a simultaneous collection of data, merge the data or keep in separate and then analyze the data for a suitable result/solution to the research problem.

Mixed-method involved creative alternative tactic to the normal traditional way of conducting research or in a more colossal or wide strategy in implementing an evaluation research or study (Creswell, 2008; Creswell & Plano Clark 2007). As such it is an ingenious genuine effort to be reflexive or spontaneous and more critical of the evaluation practice (Sydenstricker, 2007; Wiersma, & Jurs, 2005). It is important to be able to identify and understand the research approach underlying any given study because the selection of a research approach influences the questions to be asked, the methods to be chosen, the statistical tools aimed to be used, the inferences that would be made, and the ultimate goal or objectives of the research (Bergman, 2008). All of these factors were already considered because they all reflected and fitted adequately in this ‘mixed model’ approach or method.

Some authors believed that the skilled researcher can successfully combine the approaches at a time (Fraenkel & Wallen, 2006; Gall, Gall & Borg, 2007; Gall et al., 2009; Sydenstricker, 2007). The researcher reasoned for taking this mixed model for so many reasons. First of all, the choice and use of mixed research always should be when it is feasible. The researcher was also excited about this new movement in educational research as it was with many researchers who felt to get along in order to promote the conduct of excellent educational research. Major reasons why this researcher applied the mixed model approach are due to the following reasons forwarded by Creswell, (2009); Gall et al. (2009):

- The use of dual methods or approaches in research works the same way whether quality or quantity wise.

- When dual approaches were used to view on the same phenomenon and if they provided the same result, then the researcher have what is known as the “corroboration”. This means that there were more superior evidences about the result over the others that adopted only a one sided quantitative or a qualitative approach.
- It is very interesting also to note that virtually all research literatures might be mixed in either qualitative or quantitative single method even if not a mixed method research was used. That is because there might be some of the quantitative and some of the qualitative literature. So, it therefore reflects a mixed literature. The literature is well known as the platform for the research. It is the beginning and the end because all the data to be analyzed may give out results that would subsequently apply to the existing literature.

As stated earlier correlation or association survey was the format chosen by the researcher. This was so because it was to examine the attitudes and behaviors of the students in terms of using the SNSs and their ability to cope with their social and school environment. Correlation was chosen because the study was related to human behavior. A correlation deals with phenomenon and it describes the relationship that exists between or among varied constructs or variables. In other way it predicts the outcomes of the existing relationship (Lodico et al., 2006).

The term survey research refers to the means or modalities of collection and analysis of the responses from large samples of people through polls and questionnaires or any other relevant tool designed to elicit opinions, feelings, attitudes, behaviors and sentiments about a specific topic (Creswell & Creswell, 2005). Although surveys are

important sociological research tool, their suitability for many types of investigations or findings has been widely criticized as being weak. However, the researcher found it paramount to use it. This is because such powerful parametric statistical tools were used to analyze the results. The t-test, regressions, Pearson product moment correlation, and ANOVA, factor analysis and reliability test were all used appropriately in this study.

The classical form for this study was a cross-sectional one which means it revealed relationship at a short period of time. It generally represents only suggestive evidence of a non causal connection. A cross-sectional study is mainly a good starting point to examine multi-variate relationship (Creswell & Creswell, 2005; Creswell, 2008; Creswell, 2009) and to this researcher it is the better design that fitted in and so it was the one adopted. Though longitudinal studies are good (Creswell, 2009) as well, yet the researcher was inclined to the cross-sectional considering the time frame involved and the nature of the subjects with regards to their behaviors and attitudes which may change over time and in due course. Quantitative and qualitative aspects were all chosen to form part of data collection and analyses. Thus, all were made qualitatively and quantitatively (Creswell, 2009).

3.2.1 Framework of the Research

The brakedown of the research framework for the study can be seen below and shown in figure 3.1.

Independent variable	SNSs Usage
Dependent variable 1	Students' Social Behavior
Dependent variable 2	Students' Academic Adjustment
Moderating variable	Students Attitudes towards SNSs

Demographic variables	Faculty, Gender, Age, Ethnicity, Religion, Socioeconomic Background, and Level of study
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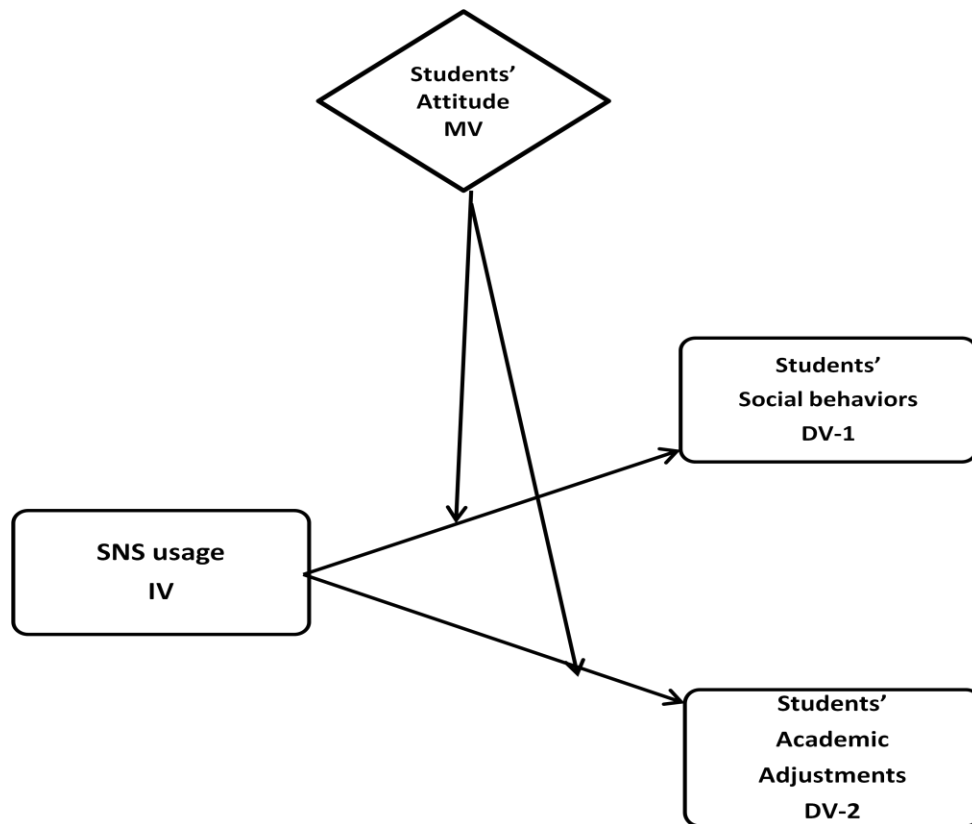


Figure 3.1: The framework of the study

3.2.2. Population

The population for this study composed of all university students using SNS in Northern Nigeria. The population validity is the ability to generalize on a larger population from the result of the sample. Gall, et al (2007; 2009) argued that one of the criteria for judging research is the population validity.

Therefore, in this study the target population comprised of the entire students of the twelve federal universities in Northern Nigeria. It involved both males and females at

all levels of the undergraduate section and postgraduate section. They were estimated at over one hundred thousand (NUC, 2009). Many of the students in the study area use the Internet and weare so vulnerable to social change, and all sorts of anti-social behaviors. Generalizing findings to populations other than those identified with social behavior disorders would be risky concerning the foreseen limitations of the study which includes an inability to control several variables (Creswell, 2008).

For this study the accessible population was students from the six selected federal universities in Northern Nigeria. The population frame was obtained from the Nigerian University Commission (NUC). The survey element adopted a stratified sampling technique where geographic location, level of study and faculty formed part of the strata. Location, status and strength in ICT facilities were the criteria considered for choosing each particular university that falls in the sample. The former secretary to the National University Commission stated that, nearly 1 million students are enrolled in more than 200 higher institutions in Nigeria. In 1998, Nigeria had 63 colleges of education, with a total enrollment of 105,817 students; 45 polytechnics, with 216,782 students; and 36 universities, with 411,347 students (NUC, 2009).

In addition to those, he stated that there are 87 mono-technics, 100 schools of nursing/ health technology/ midwifery and other professional training institutions which had an estimated combined enrollment of 120,000 students. He added that the enrollment in Nigerian universities doubled every 4 to 5 years in the 1960s, 1970s, and 1980s. It slowed down in the 1990s at an average rate of 12%.

Today the total number of universities in Nigeria reaches 96 with a total estimated population of 1.15 million students from which the target population i.e. twelve federal

universities were determined with the estimated total of 237,039 students. The accessible populations i.e. six federal universities were selected with the estimated population of one hundred and twenty six thousands (126,988).

The units of analysis were students therefore; the demographic characteristics variables such as their faculty, gender, age, ethnicity, religion, socioeconomic status, and level of study were such common things worth focused in this study. The age range fell between 16 years to 50 for both undergraduates and postgraduates. It was also examined that the subjects came from different socio-economic background because the study covered all the categories of federal universities in Northern Nigeria. In terms of religion, it consisted of both the Christianity and Islam. As such each student respondent was expected to be either Christian or Muslim. But very insignificant others were traditionalist.

From the accessible population, the student sample was randomly chosen and participated as the subjects for the study. There were six universities chosen with an estimated population of 126,988 students. Two universities were selected from each zone (North East, North Central and North West) in order to have adequate representation. The following were the six selected universities from the twelve universities. This was done with the consideration of their popularity, availability, functionality and accessibility of the Internet facilities and most importantly the students' population.

Table: 3.1:

The ticked accessible population from the general targeted population

NORTH/EAST	Population	NORTH CENTRAL	Population	NORTH WEST	Population	
UNIMAID	25,500	✓ ABUJA	20,400	✓ ABU	40,000	Total
FUTYOLA	11,515	<i>MAKURDI</i>	5,684	✓ UDUS	18,944	
✓ ATBU	7,000	✓ UNIILORIN	20,084	KADPOLY UNITECH	22,000	
✓ BUK	20,560	(UJOS)	13,408	FUTMI	13,000	
Total	64,575		59,576		12,888	
						237,039/ 126,988

More so, the study covered all academic levels. Both postgraduates and undergraduate students from the selected universities in the area participated.

3.2.3. Sample

Sampling is that part of statistical practice concerned with the selection of individual subjects intended to yield some knowledge about a population of concern, especially for the purposes of statistical inference (Gay, Mills & Airasian, 2009) and generalization on the entire population. It is a portion of the population (Ary, Jacobs & Razavier, 2002). For an accurate estimate of the relationship between variables, a descriptive study usually needs a sample of hundreds or even thousands of subjects in surveys. The total sample universities were six with two from each geo-political zone of the three geo-political zones in Northern Nigeria viz North-East, North-Central and North-West.

According to Glenn (2009), 390 subjects are adequate for the population above one hundred thousand under the precision of 5%. Going by that both Krejcie and Morgan

(1970) and Creative Research System (2009) opined 384 as well; (all are enough for the population above one million). So, the researcher employed 400 subjects (under the precision of 5%) in order to proportionally balance the six institutions selected; and to have moderate and manageable representative sample. All were under the adequate 95% level of confidence. The confidence level tells how sure the researcher can be. It is expressed as a percentage and represents how often the true percentage of the population who would pick an answer lies within the confidence interval. The 95% confidence level means one can be 95% certain; the 99% confidence level mainly are for science and medicine indicating that one can be 99% certain. Most researchers in education and social sciences used the 95% confidence level (Creswell, 2003; 2005; 2008; 2009).

The 400 minimum samples were randomly drawn in a stratified way from the six institutions which comprised each level of study and all gender. Each stratum i.e. school/faculty, gender, levels of study were assigned a number folded in papers which were picked in order to determine the representation ratio. Approximately about 600 maximum samples were proposed from which the only marked 400 were selected. This is because of the nature of the students' attitude towards responses to research and other issues like negligence and alike.

3.2.4. Sampling Technique

For the purpose of sampling in this study three techniques: stratified random, cluster and snowball (McMillan & Schumacher, 2008) were employed at various stages (Fraenkel & Wallen, 2006; Hunt & Tyrrell, 2004; Gall, Gall & Borg, 2007; Gay et al., 2009; Wiersma & Jurs, 2005; 2009) because all were found to be fitted. Hunt and Tyrrell (2004) states that in a stratified sample the sampling frame is divided into non-

overlapping groups or strata, e.g. geographical areas, age-groups, gender, religion, faculty. A sample is drawn from each stratum, when the sample is in simple random sample then such categorical selection is referred to as stratified random sampling. In the case of proportion (Gall et al., 2007) or non equal allocation (Wiersma & Jurs, 2005; 2009); this researcher drew the sample using the stratified random sampling. This gave a clearer representation of each stratum. Thereby leaving no stone untouched (Fraenkel & Wallen, 2006; Gay et al., 2009).

Cluster sampling method was also employed for the purpose of interview. From the categorized cluster of the respondents in relation to the geographical regions, university location, faculty, religion and gender, the focus groups for the interview were formed. Each group consisted of four students each representing the clusters in each university. Altogether there were six groups of four students each.

The random numbers were used by way of employing the random number generator chart as formulated by Ary et al. (2006) to select the numbers that fell against the institutions selected. Each university and strata was assigned a number. It was done in a form of 'pick and fall' draw whereby some students were asked to perform it. The number assigned to a particular university picked, qualified the university to appear in the sample. The university was then chosen as a sample from which the stratified groups and the students were selected proportionally and participated in the study. In determining the sample size the faculty, level, gender, religion and ethnic background were all proportionally considered (table: 3.2). As stated earlier, beside the randomization a one-stage cluster sampling and snowball were employed for the purpose of interview (Boyce & Neale, 2006; Marshall, 1996). For the snow balling method it was carried out with the

help of the research assistants. The first set of students contacted to volunteer and participates in the interview leads to incorporating other students to form the focus group for the interview. As for the cluster sampling four students were selected from each naturally classified cluster or colony of the students i.e. gender and by considering other demography clusters like region, level, faculty and religion. They formed the six focus groups of four participants i.e. one group from each university making total of twenty four subjects.

The interview respondents were selected to get their feelings about the construct being examined. Through the research assistants the subjects with adequate awareness, knowledge and interest of SNSs usage were selected to form the groups in each university from which the interview was scheduled and conducted as early as possible at varied times.

3.2.5. Sample Size

The sample size of a statistical sample is the number of observations that constitutes it. It is typically denoted n , a positive integer (natural number). The sample size is with minimal percentage between strata. It is normally smaller in qualitative method (Weirsmas & Jurs, 2005; 2009) and larger in quantitative (Gay, Mills & Airasian, 2009). In this study it was 400 and 24 for quantitative and qualitative respectively. It is enough to generalize on the target population which is a little above two hundred thousand (Glenn, 2009). From this number the subjects were selected and formed the six groups of four students each with the sum of 24 samples for the purpose of conducting the interview. The researcher in determining the sample size considered three criteria as

suggested by Glenn (2009); the level of precision, the level of confidence or risk, and the degree of variability in the attributes being measured.

Table: 3.2:

The brakedown of sample

		Frequency	Percent
FACULTY	SCIENCE	182	45.5
	SOC SCIENCE	91	22.8
	ARTS	37	9.3
	MEDICAL	49	12.3
	LAW	41	10.3
	Total	400	100.0
GENDER	FEMALE	291	72.8
	MALE	109	27.3
	Total	400	100.0
AGE	15-30	390	97.5
	31-45	5	1.3
	=<45	5	1.3
	Total	400	100.0
ETHNIC	IGBO	42	10.5
	YORUBA	114	28.5
	HAUSA	139	34.8
	OTHERS	102	25.5
	NON NIGN	3	.8
	Total	400	100.0
RELIGION	CHRISTIANITY	155	38.8
	ISLAM	240	60.0
	OTHER	5	1.3
	Total	400	100.0
SEB	UPPER	59	14.8
	MIDDLE	303	75.8
	LOWER	38	9.5
	Total	400	100.0
LEVEL	FRESHER	99	24.8
	OLDER	276	69.0
	POSTGRADUATE	25	6.3
	Total	400	100.0

3.2.6. Sample Error

Under normal situation the sampling frame should be a representative of the entire or purposive population. This was considered by the researcher in this study. The sample error and bias were minimized as much as possible by drawing an appropriate sample in a proportional manner to give a proportional representation. In quantitative approach it is believed that the bigger the sample the less the error (Creswell, 2008; Creswell, 2009).

3.3. Data Collection Tools

Given the fact that in this study there were 400 sample respondents selected from the six universities located in different geographic area across the Northern Nigeria, printed questionnaires were administered for collecting the quantitative data. Interview was also conducted in the form of focus group (Weirisma & Jurs, 2009). Gall et al. (2007); Gay et al. (2009) argued that the emphasis on the interview is to examine the in-depth feelings of the subjects about the environment. This research adopts the triangulation method/model whereby the tools i.e questionnaire, and interview were all employed simultaneously but at short interval.

In qualitative study the researcher is the primary instrument of data collection (Creswell, 2009) because it can be done with the little assistance from research assistants. It is researcher-centered where the subjects elicited response in the presence of the researcher while he/she records the data. In quantitative approach it is subjects-centered. The researcher received the recorded responses from the subjects in a short while or in later days.

3.3.1. Questionnaire

In designing the questionnaire instruments (Kord, 2008; Goodson et al 2005; Pascarella, & Terenzini 1991; Sturgeon & Walker, 2009) were modified and adopted to obtain demographic and general perception with regard to university students' feelings, perceptions about using SNS, academic adjustment and social behaviors (Pritchard, 2008).

An instrument modified by Goodson et al. (2005) was chosen and redesigned because of its suitability to be used as a tool for this survey. This survey tool used five-point of Likert scale questions viz: strongly agree, agree; undecided, disagree and strongly disagree (Ary, Jacobs & Razavie, 2002).

Ahmad (2008) observes that "if the researcher designed the questionnaires carefully, he can have the current data so that inferences about effect and causality can be made" (p. 9). To Tabachnick and Fidell (2007) in questionnaire design, some rules of thumb were observed: direct, simple and concise instructions; good flow and classification of section on the questionnaire; confidentiality; reverse and negative questions; boxes for easy check / ticks, not using ambiguous, leading and double barrelled questions.

The sections (1-2) of the questionnaire had 7 items which obtained information on demographic data: faculty in university, gender, age range, ethnicity, religious affiliation, socioeconomic background and level of study. Sections (3-6) of the questionnaire had 100 items reflecting the four variables with each variable having 25 items. The items focused on the general responses regarding the students' SNSs usage, students' social

behaviors and students' academic adjustment, and the students' attitudes towards the SNSs usage.

3.3.2. Interview

With regards to the interview instruments (Asmusssen & Creswell, 2008; Manago et al., 2008) were modified and adopted with three sections (1-3). First section dealt with general information, and the other sections asked about students' SNSs usage, social behavior, and academic adjustment.

The researcher adopted both questionnaires and interview to allow the subjects to elicit adequate responses. The questionnaire items were structured while the interview items were open-ended or semi-structured. This helped the researcher to avoid unnecessary responses which may be subjected to bias on the part of questionnaire and control on the part of the interview.

In carrying out the interview the researcher who was the interviewer as well had to be a traveller and interacted with the subjects. As a data miner, the researcher had to carry it out that way. The interview was time consuming but resource intensive. The researcher carried out the interview personally. That was done with the help from the six employed trained assistants who guided, and helped gather the students. One assistant was chosen from each university sampled and visited. Most of them were researcher's former students. Most of them were contacted by phone and they accepted the offer. In essence, that was done in order to control the quality of the interview results which were considered as crucial (Boyce & Neale, 2006).

Bearing the fact that in a qualitative study the procedure is stressed more than the product, the typology style advanced by Lofland et al. (2005) was the kind of qualitative

analysis carried out in this research. This means that the classification systems of the responses taken from the participants were categorized into themes and sub themes.

The semi-structured interview responses underwent the six steps of analysis (Braun & Clarke, 2006) where the responses were recorded, transcribed verbatim, familiarized, coded, stored and later converted to themes. The themes were reviewed to get the theme mapped before being named. Later the named themes were described and explained. The interpretation bias was avoided as much as possible through a peer review method. A neutral expert was sought to review the interpretation content where the researcher and the expert sat together to review the whole of it.

In essence, the thematic analysis mainly focused on the identifiable themes and patterns of respondents' behaviors, feelings and dispositions. In collecting the data a mobile phone with memory chip was used to record the respondents' voices. The data was later transcribed into text form from which the conversations which were made out of some of the patterns of experiences and feelings were identified, code, categorize and recorded as themes and sub themes. That was done in order to thematically identify all data related to the pre-classified patterns. The data was later combined with the catalogues patterns and themes. The themes gave out the comprehensive view of the general information needed. Finally, in order to build a valid argument the themes were referred back to the existing literature consulted, reviewed and referenced, which formed the story line. The interwoven literature with the findings signified constructed story which this interviewer stands to the merit.

As stated earlier the interviews represented the qualitative aspect of this study. This is in order to investigate the extent of the Social Networking Sites Usage (SNSU),

the Students' Social Behavior (SSB) and the Students' Academic Adjustment (SAA) in Northern Nigerian universities. The interviews were conducted once with each of the six focus groups formed from each of the six clustered selected universities out of the targeted 12 universities in the region.

3.4. Data Collection Procedure

The researcher provided the institutions with an introductory letter issued by his institution, UUM (appendix H). After receiving the formal approval (appendix H) research assistants from each of the institutions were selected. That was to ease the stress in the collection of data especially on the questionnaire administration. But as for the interview the researcher did it himself with little assistance from them. Although the interview was time and money consuming however it was successfully conducted. A consent letter (appendix C) was given to individual group members to read and sign before the interview was conducted. The data presented in this report was collected within three months. It was carried out from 15th November, 2009 to 15th February, 2010.

The snowballing sampling technique was used. Johnson and Christensen (2004) describe it as relying on some of the participants to identify others in interviewed. Many of the participants in this study help in getting others who used SNSs to participate in the interviewed. The focus groups were set of individual students from the sample area i.e. the accessible population who shared common social experience, location, and other social characteristic of interest and studentship (Creswell, 2008). The data was also collected from the focus groups formed by snowball sampling technique where six groups each having four subjects participated to ease the interview session and save time, energy and money. At times the focus group interviews were subjected to dominance

(Creswell, 2008) by the most active participants especially in Ilorin and Usman Danfodio universities. Yet the researcher was able to have control the session to allow equal participation. The researcher was keeping on controlled switching over from one set of questions to the others to avoid confusion in the focus group. The groups were formed after obtaining formal approval from each of the institutions to carry out the study. The subjects or respondents were assured of utmost confidentiality on their responses. The responses were recorded on a digital micro chip (memory card) during the interview using mobile phone facilities. This made it easier for up loading the items on computer for transcribing.

This study being it a cross-sectional the researcher collected the data at a given shortest time. The subjects were issued the questionnaires by the researcher with the help of the employed and trained research assistants in the six institutions accompanied by physical stimuli (pen) (Steven, 1946). After a few days the researcher went to each of the institutions and collected the filled and returned questionnaires with the exception of Ilorin which was mailed after a week. Upon that the interviews were organized and conducted by the team on each selected focus group under a good control of the collection environment and field force (McMillan & Schumacher, 2008). The groups consisted of all strata being represented namely the level of study (both undergraduates and postgraduates), the age range, gender, ethnicity and the faculty. The interviews were all conducted in noise free halls conveniently chose by the groups in each university with the approval of the institution with the exception of BUK. There the security refused to allow for the conduct the interview within the academic area saying that it violates their

rules. They advised to find a more convenient place. The interview later shifted to the students' hall common room which was found to be more convenient.

3.5. Validity and Reliability

3.5.1. Validity

In ensuring the validity of the instruments, as part of its development the instruments were tested in a pilot study. The pilot results were factor analyzed. This helped to examine, modify and fish out the unfitted items in both the questionnaire and the interview. More so, the instruments (questionnaire, and interview) were discussed with experts in the field. Notable among them were the supervisor to the researcher and colleagues, who have experience in the field of research. It helped in making corrections on typographical errors, double-barrelled and ambiguous questions.

By the fact that a modification of particular tools would be made, in the quest to validate these instruments both the construct and content validity were examined and vividly spelt out here. Construct validity assessed the extent to which measurement instrument correctly measures the construct or variable it claimed to measure and attain gold standard (Hair, Black, Babin, Anderson & Tatham, 2006; 2010; Lodico et al., 2006; Mcmillan & Chumacher, 2010). New good construct must have a theoretical basis which mainly has clear operational definitions and mainly involves measurable indicators. There are many types of validity (Mcmillan & Chumacher, 2010); however the researcher sticks to a more consensus and unified type of validity. This research assessed the construct validity by examining the following multivariate instruments: reliability and content validity as suggested (Hair, 2006; 2010).

Content validity on the other hand is concerned with whether the items measure the full domain implied by their label. Garson (2006), Hair et al. (2010) and Gay et al. (2009) view that content validity is an essential part of the construct validity, given the importance of constructs labeling in theory development and testing. More so context sensitivity is another factor that considered by this researcher. The research involves qualitative aspect; therefore, the researcher should consider factors such as values and beliefs that influence cultural behaviors especially of the general population.

3.5.2. Reliability

Reliability and item analysis are used to construct reliable measurement scales, to improve existing scales and to evaluate the reliability of scales already in use. There are different types of reliability such as test-retest reliability, alternative-form reliability and internal consistency reliability (Coakes, 2005; Pallant, 2005; Hair, 2010). Reliability test on the items was conducted using SPSS 12.0 where the Cronbach alpha values were determined as shown in the following table.

Table: 3.3

The Reliability Statistics by Cronbach's alpha of all the questionnaire items

Cronbach's Alpha	Alpha on Standardized Items	N of Items
.932	.933	100

Items analysis is used to construct reliable measurement scales to improve existing scales and to evaluate the reliability of scales already in use. Internal consistency can also mean the extent to which tests or procedures assess the same characteristic, skill or quality. It is a measure of the precision between the observers or of the measuring instruments used in a study. The different types of reliability such as test-retest reliability,

alternative-form reliability and internal consistency reliability were taken into account (Coakes, 2005; Creswell, 2009; Gall, et al., 2007; Pallant, 2005; Mcmillan & Chumacher, 2010; Netemeyer et al., 2003). All the aforementioned forms of reliability are appropriate for both cross sectional and longitudinal data. So since this research relied exclusively on cross-sectional data (Gay et al., 2009), internal consistency reliability is the most appropriate as recommended by Netemeyer et al. (2003). Internal consistency refers to the degree to which the items that make up a scale ‘hang together’, i.e. measuring same underlying constructs (Pallant, 2005). One of the most commonly use indicators of internal consistency of the correlation strength between the variables is Cronbach’s alpha, which is based on the correlating items (Coakes, 2005).

3.5.3. Pilot Study

Pilot study was conducted at the initial middle stage of this study. Questionnaires were self administered to 50 students in UUM which included both postgraduate and undergraduate among the international and local students. The targeted numbers of the respondents were 40 which are 10% of the sample for the main study. Out of the 50 distributed only 38 were returned. The questionnaires had 100 items and 7 demographic items. It was based on four point Likert scale exempting the middle indication option. After analysis on the responses, it was found that many items need to be adjusted in terms of the language, the structure and the suitability. Some double barrel questions were identified and some vague statements were also examined. All of these were adjusted and corrected. The undecided option was also included for the original and final questionnaire for the main study. This was as a result of observation by some of the respondents and

other experts. More so because most of the previous studies consulted adopted that. The attestation section was also reset to give the respondents utmost satisfaction on their confidentiality of the responses they would make.

The responses items were subjected to reliability test and factor analysis to uncover some latent structure (dimensions) of a set of variables. It is one of the tools used to develop and or validate scales. It helps reduce a large number of variables to a smaller number of factors. Exploratory Factor Analysis (EFA) helps uncover the underlying structure of a very large set of variables (Hair et al., 2010). It is the most used form of factor analysis. The Confirmatory Factor Analysis (CFA) seeks to identify if the factor numbers and the loadings of the measured (indicator) variables on them conform to what is expected. The items were also correlated to each other after being transformed into main variables. It indicated positive relation between the variables. In this pilot study the total alpha value reaches the .80 as shown in table 3.4. Summary of the pilot alpha result on specific construct is shown in the tables 3.5.

Table: 3.4.

The overall alpha for the four constructs at pilot stage

Cronbach's Alpha	Alpha on Standardized Items	N of Items
.807	.802	4

As suggested by Hair et al. (2006; 2010), internal consistency in addition to assessing reliability is also an indicator of convergent validity. All the three variables in this research were subjected to the test of the internal consistency (Cronbach & Shavelson, 2004).

Tables: 3.5.

The alpha value for each item at pilot stage

	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
SNSU (IV)	.780	.619	.673
SSB (DV)	.673	.504	.733
SAA (DV)	.600	.392	.769
SATT (MV)	.466	.237	.824

3.6. Data Analysis Instruments Used

In analyzing the data in this study, the embedded triangular analysis was suitable. Creswell (2008) asserts that, one of the most difficult tasks in mixed method is the triangulating the analysis perhaps is the controversial stage (Morgan 2007). Here the researcher stressed independently combining the figures (Quant) and text (Qual) to portray the picture of the situation examined. The quantitative aspect was done through careful descriptive presentation and discussion of the findings in a more factual, tabular and figurative form. While each of the qualitative data was codified and analyzed separate in thematically form (Creswell, 2008; Lofland, Snow, Anderson & Lofland, 2005). Qualitative interview was particularly conducted in this study to get the reality of the participant's experiences. The quantitative results on the other hand were also analyzed using SPSS 12.0 according to the statistical illustrations identified earlier. Thereby, later the two sets of data were compared at the discussion stage.

In a nut shell the interviews data were analyzed and coded. Trends, categories, and common themes were arranged and later matched with the questionnaire data at the discussion level. That was in line with Lichtman's (2006) 'Three C's of Analysis' which stand for Coding, Categorizing, and Concepts identification.

The ten hypotheses were tested alongside the answered research questions by using the multiple regressions tool, a one way ANOVA and the independent sample t-test. To this end, the t-test tool was employed to test the factor as postulated by Ary et al. (2006) who also stressed that t-test is one of the most widely used tools in finding differences on gender.

Correlation was applied to describe the strength and the direction of relationship between variables (SNSU, SSB and SAA). Simple bivariate correlation illustrated the correlation between two continuous variables and is mainly the common measure of linear relationship (Coakes, 2005; Pallant, 2005). Therefore, correlation tools i.e. Pearson product moment correlation was used to correlate the independent and the two major dependent variables. Correlation uses the coefficient value of ± 1.00 which determined a stronger relationship. But 0.00 values implied zero relationship. Value less than .30 is low, and value that falls within .30 to .39 are low moderate. Absolute values from .40 to .60 are regarded as moderate. Any value from .61 to .80 is considered moderately high and value above .80 is regarded high (Coakes, Steed and Clara, 2009; Van Eman, 2009).

ANOVA was another tool used to analyze the other variables in order to find the differences among the users of the SNSs in terms of their age, religion, ethnicity, faculty, level of study, socioeconomic background with exception of gender. ANOVA is a statistical instrument used to determine whether samples from two or more groups come from populations with equal means (Coakes, 2005; Coakes et al., 2009; Hair et al., 2006; Pallant, 2005).

Multiple regressions are often used when a large number of correlations have been explored in a given study (Mertler & Charles, 2005). In this study therefore it was

employed in order to correlate several clustered variables. The purpose of multiple regressions here is generally to find the relationship between several independent variables and the dependent variables and the effect of the moderating variable on them. It is represented by a linear equation of relationship where $Y = a + b_1 * X_1 + b_2 * X_2 + \dots + b_p * X_p$. The hierarchical multiple regressions were used on the moderating variable, which is student attitude on the relationship between the independent and dependent variables (Baron & Kenny 1986; Judd, Kenny & McClelland, 2001; Muller, Judd, & Yzerbyt 2005). The table 3.6 shows the statistical tool used for each research question.

Table: 3.6:

The statistical tools used for each of the research questions

Research Question	Tool employed
RQ 1	Qualitative /Descriptive
RQ 2 (gender)	t- test
RQ 2	ANOVA
RQ 3	Pearson Product Moment Correlation
RQ 4	Hierarchical Multiple Regression

CHAPTER FOUR: FINDINGS

4.1 Introduction

In the previous chapter methodological issues were explained and this chapter presents the results of the quantitative hypotheses status on one section and the qualitative interview result on the other. The chapter discusses on the quantitative data preparation, data screening and the underlying statistical requirements and the analysis tools used.

In essence the data preparation and screening were the first issues involved before the process of raw data conversion from questionnaire into useable data file of the main variables. It deals with the missing data values which were found to be absent, and then accurate data key-in and transformation of variables to be normally distributed. Data screening was carried out in three steps: checking, finding and correcting the errors. All these processes were carried out here as suggested by Coakes (2005) and Pallant (2001).

The chapter presents the result from the data collected, sorted and analyzed. This segment is divided into sections as explained earlier above. The first section introduces the chapter. Section two deals with the results presentation on demographic and total responses and section three explains the aspects of quantitative analysis. The frequency presentation and other sorts of analysis are presented according to the main research questions representing the major variables. Section four shows the qualitative aspect of the study. The interview results are thematically presented in accordance with the items featured in the interview. The last section identifies and states the summary of findings.

4.2. Quantitative Analysis

The data obtained in this study were in two forms i.e. qualitative and quantitative. In the quantitative aspects the responses from the 400 respondents were manually crosschecked and screened on the SPSS and the correctness of the data was ascertained before further analysis. The raw data was initially keyed-in. Each of the questionnaires was given identification (ID) for easy error detection. After the raw scores were exported, the reliability test and factor analysis were carried out. The scores were also explored for normality of the distribution curve. The demography of age shows non-normal distribution. This is because the university age range in Nigeria centered around one category i.e. 15-30 years.

After the cross-tabulation and exploration the data, the descriptive statistics result indicates the skewness and kurtosis as being adequate. It appears to have neither leptokurtic (negative) nor platykurtic (positive) effect. The Q-Q plot also indicates a normal linear distribution of the plots. All the scores were then computed to form the main variables. The 25 item sets were merged each as one variable thereby the final average scores were used for further analysis between the four variables. These are in the forms of t-test, correlation, ANOVA and regression.

4.2.1. Data Preparation Exploration

For the quantitative aspect, the raw data obtained were entered each as a case of the survey questionnaires. For the coding system the responses were assigned five scale numbers according to the Likert options provided on the questionnaire i.e. (1= strongly disagree, 2= disagree, 3= undecided, 4= agree and 5= strongly agree). The items also were then given codes i.e. (C1-C25, D1-D25, E1-E25 and F1-F25) each according to the

sections on the questionnaire representing each of the main variables. The numbers were written on the survey to designate its location in the spreadsheet where the data were entered prior to transfer into the SPSS 12.0 software. During the data entry phase, few rules were observed to eliminate ambiguities in the open response items. The data were screened for possible errors like ‘out of range’ or ‘wrongly input’. It was later transformed into the main variables. For instance, demographic questions were assigned values i.e. 1 for male and 2 for the female respondents. Other items i.e. items C1 to C25 were transformed to represent the social networking sites usage (SNSU), items D1 to D25 and E1 to E25 were for the two dependent variables: Students Social Behaviors (SSB) and Student Academic Adjustment (SAA) respectively. Whereas the items F1 to F25 were transformed for the moderating variable, Students Attitude towards Social Networking Sites labeled SATT.

Before further analyses, the items on the main variables were explored and later subjected to factor analysis and reliability test. The processing summary of the data explored for error and missing shows zero error detected after the general data exploration. The result indicates 100% valid on all the 400 cases of the variables with no single missing case at all. It identifies each case and its value as being high or low. It also shows those item cases with the highest score and those with the lowest according to the variables

4.2.2. Factor Analysis Results

For the purpose of factor analysis of the total items on the questionnaire all the items were categorized into the 4 main groups of the variables in the study: the SNSU, (IV), the SSB (DV1), SAA (DV2) and the SATT (MV). Each of the construct consisted

of 25 items totaled to 100 items. They were subjected to the factor analysis. That was in order to identify the dimension or factors, other uncorrelated and smaller salient variables and to fix them with the correlated set. Beside the data reduction and extraction method, other tests i.e. Kaiser Meyer Olkin (KMO) and Bartlett's test were run. The result indicated the $p > 0.05$ (KMO = .846) and (Bartlett's test of sphericity) $p < 0.05 = (.00)$ significance. The factors extraction of Principal Component Analysis (PCA) as well as the scree plot figure also shows the items extracted. The scree plot shows adequacy among all the 100 items. From the scree plot of the eigenvalues arrangement, it indicates all items to have been normal.

4.2.3. Reliability Test

In the initial data analysis, descriptive statistics consisting of central tendency measures and bar graphs were computed which confirmed that the data was free of entry errors. The whole 400 samples were reliably valid. A total of 400 lists were tested each with 100 items. The specific alpha results were itemized according to the variables observed. It shows the specific result of the reliability test where all the variables are indicted to be reliable with. SNSU = .84, SSB = .81, SATT = .83 while SAA has little lower = .80. The total reliability alpha was also shown as .93 which means that it is reliable.

4.2.4. Skewness and Kurtosis Analysis

It was determined that the parametric assumptions related to this study consisted of sound measurement and acceptable normality. The Gaussian (bell shaped) distribution shows that the data is normal. Hair et al. (2006) viewed that the assumption of normality as the most fundamental assumption for multivariate analysis. He sees normality as the

degree of the distribution of sample metric data corresponds to normal distribution. Some of the descriptive statistics observed here were normality on the demography and on the main variables, the outliers in form of histogram, the stem-and leaf plot, boxplot, and the detrended normal plot (Coakes, 2005; Hair et al., 2006; Pallant, 2001). Hence, on the basis of these figures (skewness, and kurtosis) and visual inspection (of histogram, box plot, normality probability plot and detrended Q-Q normal plot) as well as the sample size no variable was transformed as they were all fairly and normally distributed.

Means and standard deviations were as expected. The minimum and maximum statistics revealed variable scores outside the expected range and were addressed. Assessment of the skewness and kurtosis statistics indicated the data distributions for both the demography variables and the main variables (appendix E).

4.2.4.1. Skewness on the Demography

As shown earlier in the sample it indicates 400 participants from both undergraduates and postgraduates partook in the study from the six selected Northern Nigerian universities. In this aspect the description of the demographic items on the survey are presented. The items included the faculty, gender, age, ethnicity, religion socioeconomic background and the level of study. The mean, median and mode differences, the range, the standard deviation and the skewness were among the major things identified (appendix E).

The descriptive analysis on the demographic distribution shows the results where the distribution appeared to be normal in some aspects and non-normal in the others. The sample distribution of ethnicity has the highest score. Out of the 400 samples the score shows ethnicity has ($M= 2.8$ and $SD= 0.9$), gender ($M= 1.3$, $SD= 0.4$). In terms of faculty

the score is higher ($M= 2.2$, $SD= 1.4$) while that of age is the lowest score ($M= 1.0$ and $SD= 0.2$). The skewness of the demography distribution shows that five variables: faculty ($= .85$), ethnicity ($= -.18$), religion ($= -.23$), SEB ($= -.12$) and level ($= -.17$) with the exception of gender ($= 1.0$) and age ($= 7.0$), were positively skewed.

The graphs (appendix F) indicated the distribution of the sample according to demographic viz: variables: faculty, ethnicity, religion, SEB, and level of study were moderately normal. Whereas, the others variables i.e. gender, and age, show non normal. On these demographic variables, this result was possible as it was usually normal with survey research especially on the issues of age because the university students indicated their age range of being lower than 30 years. Female students tend to show more interest than males which made their ratio high.

Skewness value as a measure of the asymmetry of the distribution is always (0). It is neither negative nor positive. Skewed distributions tail tends to have a normal midpoint not much extended to the right or to the left. In this case the variables: SNSU= (-.15, .29); SSB= (-.08, .77); SAA= (-.07, -.06); indicated a very insignificant and partially negative skewness and kurtosis while a positive skewness was on SATT= (.12, .52) as shown in Appendix E where the distribution is normal.

The two tests run in this aspect: the Shapiro-Wilk and Kolmogorov-Smirnov (appendix E) indicated the results for each variable as follows: (SNSU=.99 and .03), (SSB=.99 and .05), (SAA=.99 and .04), (SATT=.99 and .06). These results show that SNSU have the lowest score in Kolmogorov test with the lower significance $p>0.05$ (.20*) while SATT scored highest. Invariably it means that the two variables have

opposite results in the Shapiro test with the moderately low significance where SNSU has (.45) and SATT has (.00) an almost perfect statistic result and low significance.

4.3. Quantitative Analysis

Descriptive presentation is indispensable and is a prerequisite for inferential statistics (Pallant, 2005). Descriptive tools in this study were used for projecting the sample characteristics in order to check the main and demographic variables for any violation of the assumptions under the inferential statistics and to address some specific research questions of the study. The mean, medium, mode, standard deviation, skewness, kurtosis and range appeared to be of much concern. Data preparations, data screening, for normality and outliers, were all carried out. Then, data transformation followed for further analysis (Coakes, 2009; Pallant, 2005). Analysis of the research questions proceeded when it was determined that parametric statistical assumptions were met. Although qualitative analysis was used on questions one, two and three; descriptive statistics were also generated to answer the first, second and third research questions as well. This was in order to get in depth meaning.

A correlation was used to see the relationship between the normally distributed interval variables i.e. both independent and the two dependent variables. In this, it shows the homoscedasticity, linearity and normality. Correlation coefficients provide a measure of the direction and strength of the relationship. The closer the correlation coefficient is to ± 1.00 , the stronger the relationship. Correlations with an absolute value less than .30 are considered low, while correlations with an absolute value above .80 are considered high (Coakes, 2009).

The variation of the distribution of the 400 samples in terms of the main construct

is shown as SNSU, SSB, SAA and SATT. Each of the variables scores were identified in terms of the mean difference, the standard deviation, the range the variance, and to some extent the skew and kurtosis (appendix E). All the variables show that the skewness is almost normal though the three variables are negatively skewed but normal because they were less than 1, i.e. SNSU= -.15, SSB= -.08, SAA= -.07. But SATT= -.12 is positively skewed.

The distribution shows normality in all the variables. Each of the variables shows the mean above 80 except SNSU with a difference of only .5. The standard deviation (SD) also shows high score above 10 each. The figures (appendix F) were the histograms, Q-Q plots, and skew plots showing further detailed explanations of the distributions of scores for the four main variables.

Research Question 1

To what extent are the SNSs usage, social behavior and academic adjustment among students in Northern Nigerian universities?

To address question one, descriptive statistics were used to examine the extent of SNSU among students in Northern Nigerian universities.

Table 4:1

Descriptive statistics of the extent of SNSU among students in Northern Nigeria universities

SNSU	SD		D		U		A		SA		M	SD
	F	%	F	%	F	%	F	%	F	%		
C1: I frequently use at least one or more of the Social Networking Sites (SNSs).	7	1.8	21	5.3	24	6.0	176	44.0	172	43.0	4.2*	.90
C2: I spend approximately more than one hour per day	28	7.0	77	19.3	60	15.0	143	35.8	92	23.0	3.5	1.2
C3: I have been using SNS for the past one year.	25	6.3	50	12.5	38	9.5	125	31.3	162	40.5	3.9*	1.2
C4: I came to know about SNS through browsing the Internet.	26	6.5	46	11.5	34	8.5	145	36.3	149	37.3	3.9*	1.2
C5: I came to know about SNS through a friend's invitation.	53	13.3	87	21.8	46	11.5	123	30.8	91	22.8	3.3	1.4
C6: I am interested in viewing pornography often on SNS.	205	51.3	65	16.3	46	11.5	52	13.0	32	8.0	2.1	1.4
C7: I came to know about SNS through invitation by unknown user.	159	39.8	108	27.0	60	15.0	45	11.3	28	7.0	2.2	1.3
C8: I do browse SNS mainly in the University's computer laboratory.	122	30.5	99	24.8	56	14.0	74	18.5	49	12.3	2.6	1.4
C9: I browse SNS mainly in the private Internet cafes around the campus.	45	11.3	78	19.5	59	14.8	134	33.5	84	21.0	3.3	1.3
C10: I browse SNS mainly in the wireless hot-spots / mobile broadband	45	11.3	84	21.0	54	13.5	140	35.0	77	19.3	3.3	1.3
C11: I hid some of my identities when signing up on SNS.	104	26.0	75	18.8	46	11.5	109	27.3	66	16.5	2.9	1.5

C12: Online interaction makes me feel ok just like the offline interaction.	25	6.3	52	13.0	61	15.3	171	42.8	91	22.8	3.6	1.2
C13: Using SNS makes my interpersonal relationship always stronger.	23	5.8	43	10.8	61	15.3	161	40.3	112	28.0	3.7	1.1
C14: I prefer doing things in isolation especially when using SNS.	52	13.0	77	19.3	85	21.3	121	30.3	65	16.3	3.2	1.3
C15: I use special (short) language and jargons when using SNS.	47	11.8	76	19.0	57	14.3	127	31.8	93	23.3	3.4	1.3
C16: Compared to other SNS users, I am very popular on SNS.	63	15.8	98	24.5	113	28.3	83	20.8	43	10.8	2.9	1.2
C17: I feel that Females are more interested in using SNS more than males.	62	15.5	70	17.5	65	16.3	101	25.3	102	25.5	3.3	1.4
C18: I feel I am a heavy user of SNS.	44	11.0	95	23.8	105	26.3	108	27.0	48	12.0	3.1	1.2
C19: I use SNS at any time and I don't care managing my time.	95	23.8	118	29.5	70	17.5	70	17.5	47	11.8	2.6	1.3
C20: I cannot share so many things with real-life friend but can share	104	26.0	110	27.5	61	15.3	76	19.0	49	12.3	2.6	1.4
C21: I prefer using SNS in group or company of other people because	48	12.0	82	20.5	88	22.0	115	28.8	67	16.8	3.2	1.3
C22: I sometimes log onto SNS like facebook through links from	34	8.5	104	26.0	83	20.8	123	30.8	56	14.0	3.2	1.2
C23: I always browse SNS in isolation just to keep some of my secrets	66	16.5	103	25.8	69	17.3	106	26.5	56	14.0	3.0	1.3
C24: I use to tag friend users who have more pictures so that	59	14.8	95	23.8	77	19.3	103	25.8	66	16.5	3.1	1.3
C25: When using SNS I get motivated not to stop because it always	26	6.5	38	9.5	55	13.8	167	41.8	114	28.5	3.8*	1.2
Total	400	100	400	100	400	100	400	100	400	100	3.183	.516

In the table above, out of the 25 items asked on the variable SNSU, item C1 (*I frequently use at least one or more of the social networking sites.*) has the highest mean (= 4.2, SD = .90) followed by item C3 (*I have been using SNSs for the past one year*)

with mean score (M= 3.9, SD=1.2) and then item C4 (*I came to know about SNSs through browsing the Internet*) with the mean score (M= 3.9, SD=1.2).

Item C6 (*I am interested in viewing pornography often on SNSs*) has the lowest mean (M=2.1 SD=1.4) and followed by item C7 (*I came to know about SNSs through invitation by unknown user*) with the mean (M=2.2 and SD=1.3), which is also very low.

The cumulative descriptive statistic of the extent of social networking sites usage in Northern Nigeria universities (appendix E) shows the level of SNSU among the student in Northern Nigerian universities. The grand result shows the mean of (M=3.2 and SD=.52). This means that there is a high level of SNSs usage in Northern Nigerian universities.

Table 4:2

The descriptive statistic of the extent of Social Behaviors among students in Northern Nigeria universities

	SD		D		U		A		SA		M	SD
	F	%	F	%	F	%	F	%	F	%		
SSB												
D1: SNS is important to me because I can expose myself to any one I wish online.	31	7.8	63	15.8	29	7.3	154	38.5	123	30.8	3.7	1.3
D2: SNS allows me to express my feelings and secrets to friends online.	38	9.5	59	14.8	67	16.8	163	40.8	73	18.3	3.4	1.2
D3: SNS allows me to stay in contact always with my family members	18	4.5	38	9.5	47	11.8	171	42.8	126	31.5	3.9*	1.1
D4: I have a change in my behaviors and life style when I started using SNS.	60	15.0	89	22.3	83	20.8	115	28.8	53	13.3	3.0	1.3
D5: I can post abusive statements on SNS which I cannot do offline.	120	30.0	85	21.3	54	13.5	92	23.0	49	12.3	2.7	1.4
D6: SNS allows user to acquire very few bad behaviors like lying.	53	13.3	59	14.8	64	16.0	126	31.5	98	24.5	3.4	1.4

D7: Using SNSs at times makes me isolated and prevents me from	51	12.8	97	24.3	75	18.8	126	31.5	51	12.8	3.1	1.3
D8: Using SNS enhances my participation in group activities and sport fans.	29	7.3	53	13.3	65	16.3	179	44.8	74	18.5	3.5	1.1
D9: Students carry out cultist / fraternity and crimes activities on SNS.	62	15.5	58	14.5	120	30.0	105	26.3	55	13.8	3.1	1.3
D10: I will have preferred opposite sex as friends than same sex on SNS.	42	10.5	82	20.5	65	16.3	121	30.3	90	22.5	3.3	1.3
D11: SNS may cause some negative or anti social behaviors on students like:	78	19.5	59	14.8	80	20.0	112	28.0	71	17.8	3.1	1.4
D12: I would not mind selecting my life partner (wife/husband) on SNS.	121	30.3	75	18.8	71	17.8	86	21.5	47	11.8	2.7	1.41
D13: The friends I had on SNS are willing to listen to me and help me	16	4.0	44	11.0	75	18.8	148	37.0	117	29.3	3.8*	1.1
D14: Generally SNS is important to my university social experience because	21	5.3	24	6.0	59	14.8	196	49.0	100	25.0	3.8*	1.0
D15: Most students at this university have values and attitudes	12	3.0	27	6.8	79	19.8	171	42.8	111	27.8	3.9*	1.0
D16: In my view this university requires its own SNS for students' local interaction.	15	3.8	23	5.8	62	15.5	160	40.0	140	35.0	4.0*	1.0
D17: I feel that harmony among students from diverse cultures and	15	3.8	37	9.3	79	19.8	139	34.8	130	32.5	3.8*	1.1
D18: SNS enhance positive social behaviors like: Love, Respect, Responsibility,	11	2.8	27	6.8	46	11.5	180	45.0	136	34.0	4.0*	.98
D19: I have respective interaction with at least a lecturer from	62	15.5	93	23.3	86	21.5	108	27.0	51	12.8	3.0	1.3
D20: I use to be frustrated when using SNS around my campus due to	43	10.8	59	14.8	64	16.0	130	32.5	104	26.0	3.5	1.3
D21: Among lecturers I have had contact with are willing to spend time	77	19.3	96	24.0	104	26.0	82	20.5	41	10.3	2.8	1.3
D22: In my opinion interaction and friendship on SNS tends to be	20	5.0	60	15.0	109	27.3	151	37.8	60	15.0	3.4	1.1

D23: I sometimes post pornographic statements or pictures and	204	51.0	55	13.8	39	9.8	55	13.8	47	11.8	2.2	1.5
D24: I am ready to block or stop interaction with any friend/user that post indecency	40	10.0	34	8.5	70	17.5	98	24.5	158	39.5	3.8*	1.3
D25: I am friendly so I can accept invitation from anybody for a friendship on SNS.	27	6.8	52	13.0	80	20.0	132	33.0	109	27.3	3.6	1.2
Total	400	100	400	100	400	100	400	100	400	100	3.3	.47

Table 4:2 above also further highlights the detailed scores of the extent of social behaviors among students in Northern Nigerian universities. The result as shown above indicates that items D 18: (*SNSs enhance positive social behaviors like: Love, Respect, Responsibility....*) has the highest mean (M= 4.0 and SD= .99); and item D 16: (*In my view this university requires its own SNS for students' local interaction*) followed it with the mean score (M= 4.0, SD= 1.0). The other opinion with high mean is item D3: (*SNS allows me to stay in contact always with my family members*) and D15: (*Most students at this university have values and attitudes*) which have the scores (M= 3.9) each and (SD = 1.1 and 1.0) respectively.

On the other hand, since item D 23 (*I sometimes post pornographic statements or pictures*) indicates that it has the lowest mean which is (2.2), while the (SD= 1.5) which is also very high.

The third variable in question one is the extent of SAA in the Northern Nigerian universities. Table 4.3 indicates the level or extent of the students' academic adjustment in the Northern Nigerian universities as very high. The detailed scores are presented in the table.

Table 4:3

The descriptive statistic of the extent of Academic Adjustment among students in Northern Nigeria universities

SAA	SD		D		U		A		SA		M	SD
	F	%	F	%	F	%	F	%	F	%		
E1: Using SNS makes me feel motivated to be on campus and carry out	15	3.8	48	12.0	71	17.8	150	37.5	116	29.0	3.8*	1.1
E2: Preparing for my class so early helps ease many difficulties with	14	3.5	32	8.0	51	12.8	150	37.5	153	38.3	4.0*	1.1
E3: I have developed a close offline personal relationship with at least	24	6.0	47	11.8	69	17.3	149	37.3	111	27.8	3.7	1.2
E4: As a result of using SNS I found difficulties in conducting and submitting	92	23.0	122	30.5	73	18.3	66	16.5	47	11.8	2.6	1.3
E5: Since coming to this university I have developed close offline	18	4.5	59	14.8	52	13.0	175	43.8	96	24.0	3.7	1.1
E6: I can discuss on my academic activities through Interaction informally	30	7.5	66	16.5	81	20.3	151	37.8	72	18.0	3.4	1.2
E7: Some of the lecturers I have had contact with are genuinely interested	53	13.3	86	21.5	94	23.5	107	26.8	60	15.0	3.1	1.3
E8: Some of the comments I come across on SNS change my feelings positively	39	9.8	60	15.0	86	21.5	139	34.8	76	19.0	3.4	1.2
E9: Using SNS is important to me in the university life because it increases	73	18.3	82	20.5	91	22.8	93	23.3	61	15.3	3.0	1.3
E10: Using SNS makes me depressed that I tend to forget time and even miss classes.	121	30.3	95	23.8	45	11.3	45	11.3	94	23.5	2.7	1.6
E11: I study early in the morning rather than in the night which helps my	39	9.8	70	17.5	71	17.8	130	32.5	90	22.5	3.4	1.3
E12: The rules in this university prevent proper use of SNS by the students.	70	17.5	98	24.5	88	22.0	95	23.8	49	12.3	2.9	1.3
E13: SNS usage makes my courses intellectually stimulating because we can	24	6.0	70	17.5	94	23.5	154	38.5	58	14.5	3.4	1.1

E14: SNS make one integrated into university system by participating in academic events.	26	6.5	53	13.3	83	20.8	170	42.5	68	17.0	3.5	1.1
E15: I use to get some of my study related items (course outline) from SNS e.g. from YouTube.	40	10.0	80	20.0	72	18.0	133	33.3	75	18.8	3.3	1.3
E16: SNS usage makes me Isolated from the normal academic activities	78	19.5	101	25.3	65	16.3	91	22.8	65	16.3	2.9	1.4
E17: Frequent SNS usage makes it difficult for me to find, make, or meet new	72	18.0	123	30.8	81	20.3	80	20.0	44	11.0	2.8	1.3
E18: SNS allows me to establish new friends which may boost my relations and popularity.	18	4.5	42	10.5	73	18.3	171	42.8	96	24.0	3.7	1.1
E19: Getting in touch with my old friends and family members on SNS.	18	4.5	31	7.8	42	10.5	165	41.3	144	36.0	3.9*	1.1
E20: SNS makes ease the possibility of students organizing meetings,	26	6.5	53	13.3	62	15.5	158	39.5	101	25.3	3.6	1.2
E21: Using SNS will help me perform academically well as I anticipated.	13	3.3	72	18.0	99	24.8	107	26.8	109	27.3	3.6	1.2
E22: Most of the lecturers I have had contact with are interested in helping	35	8.8	101	25.3	88	22.0	115	28.8	61	15.3	3.2	1.2
E23: Using SNS makes me feel confident and be contributive in class.	13	3.3	66	16.5	96	24.0	156	39.0	69	17.3	3.5	1.1
E24: Using SNS helps solve many of the students' academic problems.	21	5.3	64	16.0	87	21.8	153	38.3	75	18.8	3.5	1.1
E25: Frequent SNS usage is detrimental to my intellectual and social values.	39	9.8	93	23.3	117	29.3	104	26.0	47	11.8	3.1	1.2
Total	400	100	400	100	400	100	400	100	400	100	3.3	.38

Table 4:3 above shows the descriptive statistic of the extent of SAA in Northern Nigerian universities. Out of the 25 questions asked, six cases indicate mean scores of less than 3. Items with the highest means were E2 (*preparing for my class so early helps ease many difficulties*) and E19 (*getting in touch with my old friends and family members*

on SNS) and E1 (*using SNS makes me feel motivated to be on campus and carry out*) which all have the mean scores ($M=4.0$, $SD= 1.1$) and ($M= 3.8$, $SD= 1.1$) respectively.

Those items with lower means among all the cases examined are E4, E10 and E17. Item E4 (*as a result of using SNSs I found difficulties in conducting and submitting...*) has the mean score of ($M= 2.6$ and $SD = 1.3$). Item E10 (*using SNS makes me depressed that I tend to forget time and even miss classes*) and item E17 (*frequent SNS usage makes it difficult for me to find, make, or meet new friends*) have the lowest mean scores of ($M=2.7$, $SD= 1.6$.) and ($M= 2.8$, $SD= 1.1$) respectively.

From the result of the 25 items investigated, the cumulative descriptive statistic of the extent of SAA in Northern Nigeria universities suggests that the level of SAA among the students in Northern Nigeria is very high considering the overall mean score and standard deviation ($M= 3.3$, $SD= .382$). In all, the levels of SNSU, SSB and SAA among students in Northern Nigeria universities are high.

Research Question 2

Is there any significant difference in SNSs usage among the Northern Nigerian universities students in terms of gender, age, faculty, ethnicity, socioeconomic background, level of study and religion?

In order to answer the above question, the independent sample t-test was carried out on gender while one way ANOVA on the other variables i.e. age, faculty, ethnicity, socioeconomic background, level of study and religion. Each of the seven variables was addressed by one hypothesis of which the statuses of the hypotheses were decided according to the results of the analysis on each item. To find if there exists any difference

among males and females in terms of using SNSs, an independent samples t-test was used. That was to compare the means of the normally distributed interval. This is in order to see if there is a significant statistical difference between them.

H₀₁ There is no significant difference in the extent of SNSs use in terms of gender among Northern Nigeria university students.

In order to test this hypothesis, an independent sample t-test was carried out. Levenne test was significant. Table 4.4 below presents the independent sample t-test result on the differences between males and females in SNS usage in Northern Nigeria universities. Results of the t-test show that the t statistics, $t(398) = 3.5$ was significant (.001) at the .05 level. Thus, the null hypothesis is rejected. This shows that there exists significant difference between the males and females in SNS usage. Females students with mean ($M=81.1$, $SD=14.0$) had higher usage of SNS compared to males with only ($M=75.4$, $SD=15.0$). This suggests that there is significant difference between male and female students in the extent of SNSs usage in the Northern Nigerian universities.

Table 4:4

Independent Samples t-test on SNSU in terms of gender

Gender	N	Mean	Standard Deviation	t	df
Male	109	75.4	15.0	3.5*	398
Female	291	81.1	14.0		
P > 0.05 (2-tailed)					

For the second part of this question, one way ANOVA was used on the normally distributed interval variable. ANOVA was aimed at finding the statistical difference in of SNSs usage between the demographic groups i.e. faculty, ethnicity, SEB, and level of study.

H₀₂ There is no significant difference in the extent of SNSs use in terms of age among Northern Nigeria university students.

One way ANOVA was performed to determine the differences between the age groups in the extent of SNSs usage. The Levene test was significant. The ANOVA result as depicted in Table 4.5 shows that the differences was not significant with $F = (2, 397) = 1.3$ $p > 0.05$ (0.27). This suggests that there is no significance difference among the age groups. Thus, the null hypothesis is accepted. This indicates that there is no statistical significance difference among the age groups in the extent of SNSs usage in Northern Nigerian universities.

Table 4: 5

One Way ANOVA on SNSU in terms of Age

Age	N	M	SD	F	Df
15-30 years	390	79.4	0.91	1.299	2,397
31-45 years	5	87	0.91		
=< 45 years	5	86.8	1.03		

$p > 0.05$

H₀₃ There is no significant difference in the extent of SNSs use in terms of faculty, among Northern Nigeria university students.

To test the above hypothesis, one way ANOVA was performed. The Levene test (appendix E) indicated total significance of .890 which means $p > 0.05$. As shown in Table 4.6, the ANOVA result shows that the differences was not significant with $F = (4,395) = 2.1$ $p > 0.05$ (.07). Thus, the null hypothesis is accepted. The result shows that there is no significance difference in SNSs usage among the faculties. This indicates that there is no statistical significance difference among the faculties in the extent of SNSs usage in Northern Nigerian universities.

Table 4:6

One Way ANOVA on SNSU in terms of Faculty

Faculty	N	M	SD	F	Df
Science	182	79.8	13.6	2.136	4,395
Social Science	91	80.4	15.0		
Arts	37	84.0	15.5		
Medical	49	76.3	14.9		
Law	41	76.1	15.3		

$p > 0.05$

H₀₄ There is no significant difference in the extent of SNSs use in terms of ethnicity, among Northern Nigeria university students.

To test this hypothesis, one way ANOVA was performed. The ethnic groups was reduced from five to four due to the small number in the Non Nigerian group. The Levene test (appendix E) indicated total significance of .009. The result of the ANOVA as depicted in Table 4.7 shows that the differences was significant with $F = (4,397) = 4.2$

$p < 0.05$ (.002). Thus, the null hypothesis is rejected. This means that there exist differences in the extent of SNS usage among the various ethnic groups. This indicates that there is significance difference among the ethnic groups in the extent of SNSs usage. Scheffe post-hoc test shows that the Hausa tribe which has the highest mean of 83.0 is significantly different from the ‘Others’ group which has the lowest mean of 76.0. No other differences between the groups were significant (appendix E).

Table 4:7

One Way ANOVA on SNSU in terms of Ethnicity

Faculty	N	M	SD	F	Df
Igbo	42	80.8	11.7	4.280*	4,397
Yoruba	114	77.8	17.1		
Hausa	139	83.0	13.0		
Others	102	76.0	13.1		
Non Nign	3	87.6	24.8		

$p < 0.05$

H₀₅ There is no significant difference in the extent of SNSs use in terms of socioeconomic background among Northern Nigeria university students.

ANOVA was also carried out to test this hypothesis. The Levene test (appendix E) was significant. The result of the ANOVA indicates that the difference was not significant with $F = (2,397) = 2.2$ ($p > 0.05$). Thus, the null hypothesis was accepted. This shows that there is no significance difference among the socioeconomic background (SEB) groups in the extent of SNS usage among the student in the Northern Nigerian universities.

Table 4:8

One Way ANOVA Group Difference SNSU in terms of SEB

Faculty	N	M	SD	F	Df
Upper	59	83.0	15.9	2.239	2,397
Middle	303	78.7	14.3		
Lower	38	80.4	13.3		

$p > 0.05$

H₀₆ *There is no significant difference in the extent of SNSs use in terms of level of study among Northern Nigeria university students.*

With the above hypothesis, one way ANOVA was run. The Levene test (appendix E) was significant. The ANOVA result shown in Table 4.9 shows that the difference was not significant with $F = (2,397) = .38$ ($p > 0.05$). Thus, the null hypothesis was accepted. This indicates that there is no significant difference in SNS usage in terms of the level of study. This means that there is no significant difference among the three various levels of study in the extent of SNS usage among the students.

Table 4:9

One Way ANOVA on SNSU in terms of Level of Study

Faculty	N	M	SD	F	Df
Fresher	99	80.1	14.9	.380	2,397
Older	276	79.2	14.3		
Postgraduate	5	81.4	15.2		

$p > 0.05$

H₀₇ There is no significant difference in the extent of SNSs use in terms of religions among Northern Nigeria university students.

To test the null hypothesis Ho7, one way ANOVA was carried out. The Levene test (appendix E) was significant. The ANOVA results shown in Table 4.10 show that the difference was significant with $F = (2,397) = 5.7$ ($p < 0.05$). Thus, the null hypothesis was rejected. This means that there is a significant difference among the religions in the extent of SNS usage. Sheffe post hoc test indicates that students of Islam faith with the mean ($M = 81.5$) is significantly different from the students of Christian faith who has the mean score ($M = 76.8$). No other significant differences were detected.

Table 4:10

One Way ANOVA on SNSU in terms of Religion

Faculty	N	M	SD	F	Df
Islam	240	76.7	14.9	5.711*	2,397
Christianity	155	81.5	14.03		
Other	5	73.0	10.7		

$p < 0.05$

Research Question 3

Is there any relationship between the SNSs usage, students' social behavior and students' academic adjustment?

H₀₈ There is no significant relationship between SNSs usage, students' social behavior and students' academic adjustment.

The Pearson product moment correlation coefficient (r) was used to determine the relationship between the independent variable (SNSU) and the two dependents (SSB and SAA). Table 4.11 shows the correlation is significant with the r value of 0.64. This shows that the relationship between the social networking sites usage and students' social behavior among the students in northern Nigerian universities is positive and moderately strong. This indicates that the higher the social networking sites usage, the higher the students' social behavior in Northern Nigerian universities.

Table 4:11

Correlations between SNSU and SSB

		SNSU	SSB
SNSU	Pearson Correlation	1	.643(**)
	Sig. (2-tailed)	.	.000
	N		400
SSB	Pearson Correlation		1
	Sig. (2-tailed)		.
	N		400

The next analysis is on the correlation between the SNSU and SAA. The Pearson correlation result as shown in Table 4.12 indicates that the correlation is significant with the r value is of 0.59. This means that there is a positive and moderate relationship between social networking site usage and students academic adjustment in Northern Nigerian universities.

Table 4:12

Correlations between SNSU and SAA

		SNSU	SAA
SNSU	Pearson Correlation	1	.592(**)
	Sig. (2-tailed)	.	.000
	N		400
SAA	Pearson Correlation		1
	Sig. (2-tailed)		.
	N		400

In Table 4:12 above, the result indicated highly significant correlation ($r=.59$). This means there is a highly positive relationship between social networking site usage and students academic adjustment in Northern Nigerian universities.

Research Question 4

Does the students' attitude moderate the relationship between SNSs usage and both students' social behavior and students' academic adjustment?

H₀₉ Students' attitude does not significantly moderate the relationship between SNSs usage and students' social behavior.

Research question four determines the moderating effect of the attitude (SATT) on the relationship between the social networking sites usage (SNSU) and students' social behaviors (SSB) on one hand and the relationship between the social networking sites usage (SNSU) academic adjustment (SAA) on the other. To achieve this, the hierarchical regression analysis was employed to investigate and predict the moderating effect of the SATT on the two relationships. They were separately examined to test the hypotheses nine and ten respectively. The three basic steps in conducting the hierarchical

regression as suggested by Coakes (2009) were followed. Hierarchical regression was applied to test whether additional variable on a model i.e. (attitude) contributes to the predictive ability of the model over those variables already included in the model.

Hierarchical regression, also called sequential is one of the fussier statistical techniques. It is rich and more appropriate on large and normally skewed and distributed samples such as the present one. Multicollinearity is not good for regression. It should be check if regression is going to be used to avoid the occurrence of wrong result. Collinearity exist when the relationship of independent variables are highly correlated ($r = 0.9$) and above. It is when two or more variables simultaneously run near perfect linear combination of each other. It is a similarity in linear perfection between two or more variables. When the variables are more than two, it would be termed as multicollinearity. The more the degree of collinearity, the more unstable the regression status will be. Errors may be highly inflated if that occurs. It is also sensible to outliers. Regression does not like outliers at all. So they can be identified and possibly deleted initially before regression analysis. The residual scatter plot also helps in checking the normality, linearity and homoscedasticity.

The result of the regression analysis shows that the students' attitude towards SNS (SATT) has an effect on the relationship between the social networking sites usage (SNSU) and both the two dependent variables i.e. students' social behaviors (SSB) and academic adjustment (SAA). In the first part of the moderating effect of SATT on the relationship, the Model 1 indicates the R value of 0.56 and R square change value of 0.320. This shows that attitude significantly contributes (32%) in the relationship between their social networking sites usages and their social behaviors. The F change

(1,398 = 187.1) based on Model 2, the R value was 0.70 and the R square change shows (.171) which means that attitude significantly contributes (17%). This indicates that students' attitude moderated the relationship between their social networking sites usages and their social behaviors.

The analysis result so far shows that there is under the standardized coefficient beta the value $\beta = .56$ $B = 33.3$ which shows significant interaction (appendix E). Under collinearity statistics the level of tolerance indicated .74 while the partial correlation shows .50.

Table 4:15

The moderating effect of SATT on SNSU and SSB

Model	R	R ²	Adjusted R ²	Std. Error	Change Statistics				
					R ²	F Change	df1	df2	Sig.
1	.565	.320*	.318	10.2	.320*	187.1	1	398	.000
2	.701	.491	.488	8.8	.171*	133.3	1	397	.000

H₀₁₀ Students' attitude does not significantly moderate the relationship between of SNSs usage and students' academic adjustment.

The second part is the moderating effect of SATT on the relationship between the social networking sites usage (SNSU) and and academic adjustment (SAA). The result also shows significant contribution of the moderating effect. The Model 1 shows the value of the R (.68) and that of R square (.470). This means that attitude significantly contributes (47%) to the relationship between the social networking sites usage (SNSU) and and academic adjustment (SAA). The F change indicates (1,398 = 353.2). Based on

Model 2, the R value was 0.74 and the R square change shows (.081) which means that attitude significantly contributes (8%). This shows that students' attitude moderated the relationship between the students' use of social networking sites and their academic adjustment.

The analysis of the result also shows that there is under the standardized coefficient constant value (13.1) SATT (beta= .56 B= / .63) SNSU (beta= .32; B= .32) which shows significant interaction.

Table 4:16

The moderating effect of SATT on SNSU and SAA

Model	R	R ²	Adjusted R ²	Std. Error	Change Statistics				
					R ²	F Change	df1	df2	Sig.
1	.686	.470*	.469	10.2	.470*	353.2	1	398	.000
2	.742	.551	.548	9.4	.081*	71.1	1	397	.000

4.4. Qualitative Analysis

The qualitative section here reports the results obtained. Interviews were conducted in this study to get the reality of the participants' experiences and in-depth feelings. The interview addressed three research questions. They are 1. *To what extent is the SNSs usage in Northern Nigerian universities?* 2. *To what extent are the students' social behaviors in Northern Nigerian universities?* 3. *To what extent is the students' academic adjustment in Northern Nigerian universities?*

The total number of the respondents engaged was 24 volunteered students. Four students in each of the six groups were selected from the clusters by way of snowball method. There were six interview questions to represent the three variables i.e. SNSU, SSB and SAA. The questions examined in-depth views of students on the variables addressed.

The respondents were identified and selected based on some of their demographic characteristics namely gender, age range, faculty, ethnicity and level of study. They were assigned different names for anonymous purposes to hide their original identity. All names used were not the respondents' original names; this was done for utmost confidentiality. Dates and time of the interview sessions were recorded and the venues where the sessions took places were identified and clearly stated. (Appendix G)

The analysis was arranged according to the thematic categorization. The items on the interviews were treated serially as they flow during the interview session. But the responses were merged together according to the frequencies and themes of the responses with consideration from which university a particular respondent was. The responses sometimes were contrary and sometimes were similar. The researcher tried to avoid all

unnecessary and long discussion but the main ideas were extracted and presented. Additionally many of the responses that were out of point were discarded even though recorded initially; thus, they were not included in the report.

This section as stated earlier, presents the qualitative aspect of the data. It is thematically presented according to the responses related to the research questions and main variables. Each of the themes consisted of some question items addressing a particular variable. Each question is followed by the responses from the six focus groups. The responses appeared at random because each of the focus groups responded to one set of eleven questions. Most of the respondents presented their responses clearly. The responses were categorized into those in support and those in disagreement. The main focus was to examine an in-depth feeling with regard to why, how and when they use SNS, especially how those factors that enhanced social behaviors and facilitated academic adjustment among the students. The actual dispositions of the respondents on the issues at stake were gathered, coded and presented. The differences and similarities in the responses were also observed. Therefore the real feelings were examined, categorized and reported as follows. The responses were identified thematically according to major themes and sub-themes. As stated earlier, in all the three research questions addressed there were six interview questions asked on the students. From their responses all in all twenty major themes and three minor or sub- themes emerged.

Table 4.4.2
Summary of the themes report

RQ	I Q	Themes	Sub-themes
1	1 2	4 2	
2	3 4	4 3	1
3	5 6	4 3	2
3	6	20	3

Question One

In a few statements can you say why you use SNSs?

For this question four themes emerged. The entire respondents' responses (n=24) to this question showed their overwhelming concerns, motives and rationales behind using SNSs. These led to the emergence of themes. Most of them cited using Facebook heavily and they used it for various purposes. All of them (n=24) reported to get connected with friends and families. They also used it in getting new friends and to get in touch with old friends. They have been using SNSs to search for lost friends. Their views and responses were reported below which lead to the emergence of some themes and sub themes.

The themes of responses under this question were presented according to the number of responses from the respondents. Each of the cluster responses was presented as part of a particular theme. This means that the themes emerged were presented categorically. One of the themes on the students' rationale for using SNSs is that they

communicate and interact with different people. Most of the respondents indicated that they used it in order to communicate and interact with their relatives, lost friends, old and new friends of former schools and family members. Other themes were: *'know each other and get information and news,' 'share experiences and ideas'* and *'solve academic problems.'*

Theme one: Communicate and interact with different people

This is the first theme that emerged, in essence using SNSs is to communicate and interact with many people. Among those responded was one student (FG 2). When asked she claimed that she used SNSs to get connected with old friends and relatives for easy communication and interaction as she stated: *"it allowed me to connect with different people. I am able to connect with my old friends my relatives and other people I have not seen for a very long time. I used Facebook just to get communication activities easy."* (FG 2/1/pg5)

SNSs helped them to connect to people especially when the face to face interaction is not obtainable. Some opined that it allowed them to share feelings with others. Other responses indicated discussion on personal issues with other people on various affairs and at various situations. Some stated that they used it for seeking academic assistance from others.

In a similar view to this theme; a large portion of the respondents agreed that SNSs helped them in communicating with lost ones. One of them stated the reason for using SNSs. When asked she said that *I used SNSs to communicate with friends and many people I did not meet for a long time.* She added that *"So it is very interesting. In fact is good."* She said (FG1/3/pg7). Therefore SNSs are believed to be reliable communication

tools for the people especially those in the remote out of the vicinity of each other. SNSs students' users for this matter usually chat with one another on the SNS and send messages. Additionally they always keep on sharing emails and SMS with each other among some of their old schools mates and current university mates. This is most importantly when they are faced with a problem or uncertainty about something. Therefore they can discuss it with someone online and get their problem solved.

Majority of them posited that the essence of using SNSs was to connect and interact with so many people on the network across the world. Another respondent hold similar view by explaining her own reasons for using the SNSs. According to her, SNSs like Facebook helped her to interact and communicate with her friends especially those she did not come in contact with for a very long time. She added "*it makes me meet different people from other parts of the world. I communicated, interacted and have personal relationship with them*" (FG 1/4/pg16).

Another view was getting in touch with old and new friends. Another respondent reported why he used SNSs. He gave his view by saying that he used SNSs like Facebook to get in touch with long lost friends. It made him reach them and interact with them sometimes when face to face contact was not possible. He added "*I think Facebook is a very good invention and is very ok*" (FG2/2/pg4). SNS as a social environment connects users with old friends and family. SNSs therefore are tools with a connection factor among the members of a society. It links people with each other from many angles.

Theme two: Know each other and get information and news

On this matter many respondents (n=21) agreed that they used SNSs like Facebook for the purpose of knowing each other as well as obtaining information from

many friends old and new and from other sources like organizations, media and groups. Hence this emerged as the second theme. The respondents hold that it helped them in knowing each other and getting news. One respondent said *“SNS helps me in knowing each other and getting information from the old friends of my old secondary school and primary schoolmates. Those got married or about to get or not at all; you will know all”* (FG 2/3/pg.6).

The respondents reported that it paved way for knowing each other by getting detail information of people especially on their profiles updates. Additionally, it suggested that the users gave a lot of their details like gender, marital status and sometimes address. Most importantly they portrayed their feelings in statements. This gives general information of each other and to know each other. The respondents accepted that they used SNSs to connect with people in other part of the world. They believed that SNSs usage is beyond their local scope. It stretches wide to cover global perspective.

Theme three: Share experiences and ideas

From the response of students on why they used SNSs, another theme emerged is sharing experience. From the responses gathered; *‘SNSs helped in sharing ideas’* emerged as another theme because majority of the respondents (n=18) had such similar view. Hence the following answers were recorded. In response to this question while majority of the respondents indicated sharing of ideas as their reason.

One respondent concurred with this view on this question. He viewed that he used the SNSs to share experiences with others as he stated *“we used SNSs like Facebook in order to share our experiences and ideas with our family members and friends; that is the*

reason why we used it” (FG 6/3/pg13). Another respondent responded to this question and stated “What I love most in SNS is interacting with loved ones that I have not seen for a very long time and sharing ideas on how to make head way in times of difficulty and in times of research (FG 3/3/21). The students’ perception of SNSs shows SNSs as a hub for chatting and sharing views and feelings. One respondent viewed further “you can also belong to chat and discussion groups of your interest many of them existed on SNSs especially on Facebook” (FG 3/4/pg21).

In the same vein regarding the above theme one respondents made his assertion on this issue. He said that SNSs warranted him opportunity to share his experience with others. His view was spelled out in his words by saying *“SNS gives me an opportunity to share my experienced with other people in the world and in short time I used to get immediate reply for my messages. So it is a problem solving avenue to me” (FG 1/2/pg9).* Another respondent reported that what he likes most on SNSs is that there are a lot of things people used SNSs for. He added that people can share so many similar views with others. It also allows them to meet with others from various locations; especially those that they do not meet for a long time.

Theme four: Solve academic problems.

Another theme which emerged from the responses on the question why the students use SNSs is *solving academic problem*. Majority of the students (n=23) reported using SNSs to solve academic problems. A respondent from (FG 3) saw it as an avenue to reach other and for seeking academic assistance. In his words he stated *“I used SNSs such as Facebook because is an avenue whereby one can reach people such as friends, well wishers, and meet other people who could be of help in the area of academic*

research, exams and some other academic things”(FG3/1/pg25). Another respondent have similar opinion. In her words she stated that

“I use networking sites such as Facebook and Hi5 to reach my friends especially those I have not seen for a very long time and to get connected with other people from all over the world especially with people that are friends to my friends, and also to get academic assistance from people who are not necessarily my friends” (FG 3/2/pg25).

This took us to the second question.

Question Two

In your opinion why do you encourage other people to use SNSs if at all you do?

Theme one: SNSs unite people

In responding to this question from the responses only two themes were extracted. Twenty students are of the views that SNSs usage should be encouraged because it unites people as it allows them to interact with whoever they feel like on the network. SNSs become a phenomenon that many things can be done with Internet facilities. More so it makes people aware of what is happening in the society and the world at large as it is like a global village. SNS is available to everyone in the world and it is a medium for people to chat, talk and deal with others across the globe academically, politically, socially and economically.

This shows that almost all of the respondents admitted that they encouraged other people to use SNSs because it helps in interacting and communicating with others easily and remotely. All respondents admitted that it is an avenue where people give out their feelings and interacted with whoever they feel like or they want to on the network just like normal life in a global perspective. The SNSs usage is encouraging because it helps

in uniting people in form of social capital. One respondent opined that SNSs unite people and make them aware of what is happening in their society. She added *“Well, I think it brings people together. Nowadays there is nothing one can do without such Internet especially the SNSs many influential people and organizations are on it. It unites people, marking them aware of the happenings in the society and get them informed and connected”* (FG2/4/pg1).

Another student responded to this question and specified conditions for encouraging someone to use SNSs. His view was that he can only encourage someone to use SNS because if the person has vital information to share with someone like friends or family members he can do so. He added that *“it unites people by connecting one with others that are not around or close to each other who are far from one’s place”* (FG 6/3/pg14).

Another respondent supported this view that he encouraged others to use SNSs because to him SNS helped in keeping them in touch and uniting various friends, family members and lost ones. He further said *“I guaranteed encouraging people to use SNSs”*. He also added *“I will encouraged people to use SNSs so as to make them meet their love ones, long lost friends and get united as the case may be”* (FG2/2/pg4) .

Theme two: World is a global village

Among other views is that as a result of SNSs usage factor, the world become like a global village where people are available and common to everyone within a small scope and range of time. This emerged as the second theme. Overwhelming majority (n=19) opined that SNSs brought the world together. One respondent had this view. He said *“I think the world is a global village now. I mean the SNS is available to everyone in the*

world. It gives people who used the medium an avenue to chat, talk and deal with others across the global” (FG1/2/pg12). Another respondent also supported the theme where she discussed her experience and said.

“World is one now. SNS is a modern system of communication through computer. It is one of the shortest and cheapest means of unification through communication and interaction with the love ones, the lost ones and those you don’t even know by sending mails chat and talk. When you lost a friend for several years if you can remember the name if she is on the network you may get her” (FG2/3/pg7).

Students feel that SNSs is a unifying and socializing agent to them. A respondent said that SNS, as a social environment socializes him with his friends and made him bonded with family. He further said that he used SNSs to get in contact socially with girl friends and family members back home even though he was far away from them. He added *“I can relate to them back to my country Sierra Leone at any given time and they can show me their recent pictures and videos. In fact it socializes I feel at home”* (FG6/1/pg5).

This indicated that to the students, the most important rationale for using SNSs is to interact with their family, friends, and old relations and to some extent to make some new relations. This can happen even when they are many miles away from home because the world become like one global village. Therefore, they believed that they will encourage others to use it. That is one of the only possible ways they can get connected with significant others and friends. If one’s friend is not on any SNS, these may probably hinders the interaction benefit out of it.

The second aspect of the variable examined was the issue of students’ social behavior change as a result of SNSs usage. It included both pro-social and illicit or anti-social behaviors in using SNSs. The students were asked two questions from which some

themes emerged. Among the themes emerged here is that *'there is the need to control and monitor students SNSs usage'*, *'it is really doing harm to national security'*, *'porn exist on SNSs and students use to browse the porn sites which mainly depend on individuals' decency'*. More so from the responses it indicated that some students believed that *'behavior damage on SNSs depends on the kind of friends'*. So SNS is a place that portrays who the users are and what they feel or believed in. It can also be understood that SNSs boost users' popularity.

Question Three

Why do you feel controlling and monitoring SNSs usage in your university is necessary?

On this question, four themes and one sub theme emerged from the responses. The first is that there is a need to control and monitor students SNSs usage. Others were it is a threat national security, pornographies exist on SNSs and that the possibilities of terrorist activities are carried out on the SNSs. All the twenty four respondents gave their positive views under these questions. They overwhelmingly supported that monitoring and censorship on SNSs usage in the university is required and they think that it should be done conditionally this was through giving orientation to students on proper utilization of SNSs. However, out of the total respondents another category hold the view that many students use mobile phones which would be difficult for the school to monitor or censor on what is happening around. The first theme that emerged under question three was that *'browsing porn sites depends on individuals' decency'*.

Theme one: Regulate students' SNSs usage

In response to this question, many of the respondents (n=17) concurred to one another with the exception of a few. There are some of the main ideas extracted from their responses to backup the theme. From these it can be understood that they believed it to be a welcome idea to control and monitor SNSs especially on their campuses. Some even cited examples on having similar experience of the control on some SNSs in their institution like Facebook and YouTube especially during working hours. Other respondents suggested for adequate authentication of what is to be uploaded to or downloaded from the sites. One of them had similar view and supported this idea where he added

“Yes I think is right, I think there should be the level of censorship and the supervision and level of security. This is because whatever you are posting on SNSs should be controlled. Especially something that is not right. There is a need for a certain level of authentication and determine on what is expect on the board of such network” (FG2/2/pg5).

Other students opined that still many of the users visiting private cafes for browsing, need some orientation on how to make proper use of the SNSs. One respondent argued *“I think even if they control, or monitor it, still people can move outside the campus and browse it. I think the only way is to provide the students with good orientation on how to use SNSs appropriately” (FG6/1/pg5).*

Another respondent also argued that even if the control of SNSs is possible on the campus's network, the students can still go around to the commercial cafes and do their browsing there. It is very skeptical having full control on SNSs usage. The respondent affirmed his position on this notion where he said his experience:

“Yes, of course control is adequate. They do it here as well. Recently we face some difficulties; you can go to ‘UNET’ (University’s Network) where we do go to browse. You can log on to some sites but cannot go. So we use our wireless network on the laptop to browse, they blocked us from logging on to Facebook specifically. So to some extent it can be done” (FG3/3/pg27).

Theme two: Harm to national security.

One of those supported this idea acknowledged his experience of media in relation to American election and the role of SNSs like Twitter and Facebook played. He viewed his opinion:

“it is very possible to threaten national security, in fact there was a time I was watching CNN; I think it was in Iran during election they used Facebook, Twitter or their about and they gathered. So that is their medium of communication and this is really doing harm, yet Facebook does well. I don’t think that should be used to condemn Facebook. It is used for bad purposed yes, but that shouldn’t be any reason” (Bala, FG5/4/pg15).

In his view on this matter a respondent (FG 6) proclaimed that for now, control is not adequate. To him most of the users go outside the campus to private cafes for browsing. Others use mobile phones which would be difficult for the school to monitor or censor on what is happening around. *“This is a serious problem to our nation”* he said. To him the university where he studies has no adequate Internet facilities for the browsing; not to talk of the facilities for controlling. He posited that if the university could have adequate facilities provided to students then that would be possible. The commercial services would be discarded and the students are compelled to use only the schools controlled facilities. He added that now every café one visits around the commercial places can see only students browsing SNSs like Twitter, YouTube or Facebook; to him therefore there should be an action on this issue. He added *“In other*

advanced societies they do control and monitor everything but here is not easy”
(FG6/1/pg5).

Theme three: Pornographies on SNSs

On this question again the respondents (n=18) believed that pornography existed on SNSs. To some of the respondents pornography is immoral and it should not be allowed. Other views indicated that the nature of African society required control on such issues like pornography on SNSs YouTube for instance because if it is allowed it may have devastating effect on the whole academic generation. They added that normal person should shun up from pornography. Some reported that if they come across such pornographic materials they felt embarrassed. They explained that some students in some institutions do use pornography because they are unserious student fellows and they are always trying to humiliate others with it. To some of the students, pornography is not educative at all and it is immoral. Any pornography visible on SNSs must have been uploaded by certain individual or organizational user somewhere. So many students upload pornographic and nude pictures on YouTube and MySpace. Majority hold the view that pornographic materials are uncalled for and are very bad to students' well being. Hence they suggested that the university network and the web developers should create security that can always prevent such pornography. Although some claimed that browsing pornographic sites depends on individuals' decency it should not be allowed to be rampant among the students.

From these we can deduce to the fact that majority of the respondents reported not in favor of pornography on SNSs. Very few indicated using porn materials but to them it depends on the individual's decency and maturity. One of the respondents suggested that

the SNSs developers have to bear the right of security that can prevent and control such pornographic materials on their sites.

On this issue a respondent explained her view by saying *“I was on hi5 then to MySpace but not really active like Facebook.”* She claimed that on Facebook pornography is not allowed plainly. Things like that *“are rampant on YouTube but are not good on SNSs”* (FG2/4pg3) and she do not see why a reasonable person should use such things on SNSs. *“A user should not bring such pornographic videos and pictures on Facebook.”* She added *“it is not educative at all it is immoral and it should not be allow, it should be controlled.”* She suggested that a normal person should shun it up. Another one who claimed to be an artist confirmed that pornographies do existed on SNSs. He stated his view and said that actually he sometimes come across such pornographic materials especially on MySpace and YouTube. He said student users used to upload such pornographic pictures or videos. He lamented *“I think these are some of the unserious student fellows who wanted to humiliate others with that rubbish on SNS”* (FG/6/1/pg6). Another student added that even though those doing pornographic activities know that there are a lot of people out there that could view it on their profiles. Yet he concluded that *“I just look at them as unserious guys. They should be blocked”* (FG2/1/Pg10). Another respondent interviewed agreed of the existence of pornography on SNSs but condemned it especially in the academic environment. He shared his experience by saying *“I would not like it, it is uncalled for. We don’t need such in academics. Social network is an avenue where we share ideas. So such pornographies are uncalled for. I would not encourage one to upload such pictures or download; is too bad to some extent. It needs to be banned”* (FG1/1pg10).

Similarly, on this aspect others reported that there is a need for security that can prevent students from browsing pornography in schools. For example, one of the respondents criticized using pornography on SNSs and suggested a way to control it on most popular SNSs. In his word *“I think that one is very bad. I think the web developers should create a very good and flexible security that can prevent such porn things or prevent the users from posting such pornographic images and videos especially on YouTube and MySpace”*(FG6/3/14).

Another respondent avowed the notion and he discussed his view and said *“viewing all these porn sites it depends on individuals’ decency. But for me sometimes I do feel embarrassed when I come into sites like that but all the same I find it sometimes ok; but most of the times I feel embarrassed”*(FG4/3/pg22).

This suggests that any individual browsing pornography on SNSs must have element of indecent behavior. Browsing pornography is embarrassing especially if one coincidentally comes across it. This means many pornographic materials get crack into other users’ environments. Other people may fall into it unconsciously. And those who want to go for it; with all the control they may try to crack into the blockade.

Sub Theme one: Pornography on SNSs is embarrassing and immoral

About twenty respondents reported the view that pornography on SNSs is embarrassing and immoral. Among them is one who lamented that as a medical student he used the pornographic sites. He argued on this matter by saying:

“What I see about all these pornographic pictures many a times when I open these sites and just see some things like that quite right I feel embarrassed, and in fact I feel very bothered sometimes. It can be censored because some people are not matured enough to see these

pictures. However to my profession it is alright because I learnt a lot but I think for other people it is not” (FG4/4/pg22).

Another one added, *“I know SNS is not a porn view site but when I saw it definitely I will ignore it. I am there to do what I want to do not to look at pornography. It is just a waste of time and self deception.”* From all of the above it can be understood that the students’ responses indicated that they usually come across such items but out of their desire. They usually feel embarrassed and bored in viewing such items. They somewhat support the view of using the pornography to some extent but only for the mature adults. Another view shows that African society does not value pornography. It is immoral and most people frown at it. Therefore, control on issues like pornography is a welcoming idea. In his words another respondent reported his feelings *“Because of the African setting there might be restriction of pornographic pictures especially on SNSs which may affect the whole students’ life on campus... I think it should be monitored especially on this campus”* (FG3/4/pg28). This indicated that majority of the respondents do frown at indecencies and claimed not to have been using the pornographies in dealing with SNSs due to the nature of their societal orientation.

Theme Four: Terrorist activities on SNSs

This is the fourth theme that emerged under this question. Fourteen students (n=14) admitted that it is possible for terrorist and cultist activities on SNSs. One respondent in her view confirmed the possibilities of terrorist activities on SNSs and cited example with Facebook. She said *“actually yes! Because on Facebook for instance if you see someone inviting you; you either add or reject the offer. The person you add if is such kind then terrorism or cultism started”* (FG1/4/pg17). She also said that Facebook is a

free site that one can add or reject friends as many as possible. She believed that it is a channel to create terrorism and cultism in the world.

Another one also averred his feelings where he said that he does not know much on that. But, to him SNSs like Facebook is a medium used for interacting and people communicate through it. He asserts that terrorism can also go on it or through it since it has to do with network. Another also contended and guessed that there is breach in privacy and code of conduct on SNSs. *“It is possible”* (FG2/1/pg6) he said. To him since it is a social network it should not be expected to be free from such problems. He said that he knew those guys (terrorist, cultists etc) are on earth and they live their life that way; so they can know their way into it. He lamented *“to me it is possible and no one can completely stop it because they are on earth like us but effort should continue”* (FG2/1/pg6), He urged.

Another one acknowledged that SNSs can be used by terrorist just like the politicians do. He said: *“Is possible, is very possible for terrorist activities to be carried out on SNSs”* (FG/5/1/24). They can be communicating with their secretive ways using codes and special jargons. He suggested *“it needs some caution and precaution to reduce these activities on the SNSs”* (FG/5/1/24). Another said *“actually I don’t know anything about that. The problem we are facing now is terrorism and such cultism. So at least if it can be prevented we will appreciate it”* (FG1/3/pg8). Other respondents said that the SNSs do not aid terrorism but reduce it. One of them in his view contemplated that such network can aid in avoiding terrorism. The SNSs should not be seen as an avenue for terrorist rather it is an avenue for the anti terrorist espionage he said:

“If there is anything like terrorist information or an activity that would pass across the network, since is a social network it may give alert on the terrorist action. Security can be inform appropriately so that to know how to handle and deal with such people. Such networks would even aid in avoiding terrorism and it will help manage such problems” (FG/1/1pg11).

Question Four

Why do you think that SNSs may dehumanize and tarnish users’ behaviors?

From this question so many responses were identified which formed about three themes. The first theme was behavior damage on SNSs depends on the kind of friends one has. The second theme was excessive use may damage behavior and tarnish users’ image while the other is that pre-existing behavior and feelings of users guide their actions on SNSs. From the responses examined it shows that it all depended on what impression the users gave to people. As such it depended on the kind of friend one have on SNSs. Additionally it reveals that the intention of the user determined the effect of SNS user’s behavior. Other views were that SNS is for socializing thus it adds value to users’ behavior rather than tarnishing. So, SNS has both the advantages and the disadvantages. Some respondents believed that moderate SNSs usage has less negative effect on behavior. Many also believed that pre existing behavior and feelings of users guide their actions on SNS. If it is bad then it can continue to change users’ behavior to become worst and go for fraudulent activities. If it is good then they only go for friendship and self development; in general therefore less than half of the respondents accepted that SNS do not tarnish users’ behavior.

Theme one: Behavior damage on SNSs depends on the kind of friends

On this situation many respondents (n=18) believed that SNSs usage dehumanize students' behaviors but depending on the nature of the friends and interaction one engaged in. Whether SNS may dehumanize and tarnish users' behavior one student said *"yeah! In certain ways I think it does. But it depends on what impression you give to people and in what you brought to people. What you feel you are yourself and what you want people to believe about you. I think it does"* (FG4/2pg28). Another respondent also when asked replied *"It depends on the mindset of the individual. And it depends on the kind of friends you have. So I don't believe that SNS would have such effect on everyone."* He further said

"SNS is a network for socializing is for one to add value to himself. So to some extent an average individual that is trying to stay connected to SNS would have something at the back of his mind that he or she is going to gain at the long run. So, to me I don't think they are dehumanizing to every individual user of SNS" (FG1/2/pg12).

Theme two: Excessive use of SNSs can dehumanize and tarnish behavior

Majority of the students (n=18) were of the view that excessive SNSs usage can tarnish and dehumanize users behavior in terms of time management, viewing nudity, creating lies, appearing untruly to others, hiding or exaggerating information, and doing so many callous activities. Some indicated that SNSs like MySpace and YouTube are more vulnerable to attacking user behaviors. But all depends on the users mind set.

One respondent said that *"if the user made browsing SNSs to be 100 percent part of his life. If the SNS become ones academic, social and economic life, it will affect his behavior at long run.* He further said, *"I think in that it can dehumanize and tarnish his*

behavior image. Or if user is visiting SNSs like YouTube excessively he may fall into behavior damage due to the nature of the contents of different kinds” (FG5/2/16).

Another respondent when asked on whether SNSs may dehumanize and tarnish user’s behavior, he admitted it to be so. The student presented his argument in his word and said:

“Of course, just like the uploading of false information and or downloading indecent picture, or statement on the profile; these can always give a wrong impression of who truly you are. So to me on that issue I think it will just continue to change users’ behavior to become bad. So it does tarnish behavior” (FG4/1/pg28).

Another one also holds similar view that over usage of the SNSs may lead to behavior tarnish and damage where he said:

“Yes, it can damage thinking because sometimes some people just published false information about people which is very wrong. Some gave out information on politicians; others just publish information about others which is not correct or right. Always trying to create and look at information that is not genuine or looking at unwanted contents. So I do agree that SNS dehumanize users’ behaviors” (FG4/3/pg29).

The general view on this issue suggested that excessive SNSs usage can tarnish and dehumanize users’ behavior. Certain behavior manifestation such as hiding and exaggerating information and doing so many callous activities as reported by the respondent proved it.

Theme three: Users’ pre-existing behaviors guide their actions on SNSs

Other respondents (n=16) agreed with the notion of behavior damage on SNSs. They were claiming that anyone with bad behavior on SNSs was already a victim of behavior problem. They argued that if a person is trying to be lured by another person

into a problem the person can be identified and can be flagged, blocked or even be reported.

One of the respondents pointed out his disagreement that SNS as a dehumanizing and tarnishing agent of users' behavior. His opinions were expressed in his words where he reported *"No! Not at all; it does not because whatever you do on SNSs that is what you feel and that should be your pre-existing behavior already so SNSs do not change or tarnish ones behavior"* (FG5/2/pg29).

Another respondent on this issue clarified the matter in her view by saying it is a two way issue. She highlighted that it has both the advantages and the disadvantages. She believed that many users go on SNS to do fraudulent activities like scam and trapping someone or luring women to indecency and harassment. To her, this can continue to tarnish their image and dehumanize them. On the other hand others go for friendship, for fun and leisure just to meet people and interact decently. To her this cannot have any effect on their behavior negatively. But, for those with bad orientation can continue to be bad or may turn to be good ones. Another respondent on this matter felt that intention of the user determines the effect on user's behavior in using SNS. When asked she said

"Actually it depends on the individual's intention of using the SNS. If the intention is to get to know people whom one lost it is ok for the user. They can talk their past and present. But it depends on the motive one has in using the SNS whether it will have negative or positive effect. If your intention is good you get to be good and other wise" (FG1/4/pg17).

The next aspect investigated is on students' academic adjustment. Academic activities on SNS as part of the academic adjustment is another issue examined among the students. In relation to that the students answered the following questions.

Question Five

Why do you think that SNS is relevant to academic activities (teaching/learning process)?

In response to this question, four themes and two sub-themes emerged here. Students indicated that they sometimes used SNS for academic activities. Respondents indicated using SNSs for academic activities whereby one can log in, talk and converse on topics related to specific areas with experts. They reported using SNSs to enlighten other users on any development. In addition, they share some views and information with others academically. The SNSs are also found to be potentially giving access to other sites like Google, wikis, YouTube for academic materials. Hence, some reported using it in carrying out research. They equally used it to ask other users questions, in any aspect. Not only that SNS helped students know all what is happening around the school. Other academic activities carried out on SNS was that a user can become a fan/member of a group to share information on all academic issues like assignment and symposium on campus and any other information on vacancies that exists elsewhere. Therefore, the SNS is just like a library where one gets links to many academic resources. SNSs provide environment where students can learn and send information. SNSs have link to other research site where students can search for information about their studies.

Students need to control the way they use SNSs and not to make it a total day activity. Students should not depend on the class instruction and textbooks alone, but go to Internet for assignments. Some anticipated that lectures could be done on the net virtually via SNSs. Other responses indicated that future research will definitely be

simple. The ICT development indicated that computers are common everywhere. They are in the class, in the room, in the pockets. So teaching and learning will be anywhere. Hence, SNSs can play a vital role in teaching and learning process and can facilitate online students' evaluation and automatic answer generator in various academic fields. Not too far the SNSs would come to serve as a medium through which an examination could be conducted globally.

Theme one: Use SNSs to share academic information

The first theme emerged was using SNSs for sharing academic information. All of the respondents (n=24) responded positive on this issue. One of them said *"I used SNSs for academics purposes. I belonged to a particular group on Facebook. They post different academic things. When there is any development they update it for the group members to see. I learnt a lot from it"* (FG5/1/pg6). Another supporting view indicated that students used SNSs for academic purposes not only for friendship. The respondent spoke out his opinion and said

"We use it for academic activities, academic relation and friendship. You can have some friends of your former school and other kinds of groups especially on Facebook. We share same views and information where each one can talk or converse on topics related to their area. You can create and name the group according to the course or subject and invite others to join. You then start to share some ideas around the school or extend it at the global level if you want" (FG6/3/pg14).

Another student felt that it all depends on with whom user is communicating with. If the person is from business or academic they could be chatting on business or academic as well. The user can as well join group or have access to other sites like Google, 4share, YouTube to get academic materials. She boldly said *"at least that networking is very good in academic aspects."* Another view related to this in support of

theme one under question five come from one respondent who stated that *“when I am doing my projects, I pass some information to them and they get it across back to me”* (FG6/2/pg21).

Also in support on using SNSs for academic activities through searching for academic materials, one respondent said *“through Facebook you know I got a lot of academic materials. I also go to Google and other sites to get materials especially if I cannot go to the library I just go to Internet and get what I want. It is simple and easing you can get in a plenary form”* (FG1/3/pg8). In a similar response another respondent supported this theme. She said *“I belonged to a group which we used to go on Facebook to get articles and activities from other groups, clubs or school so that we adopt them here. Actually now SNSs go beyond friendship. In fact with that we do a lot of academic interactions with friends”* (FG5/4/pg25).

Following these views, it can be understood that all of the respondents (n=24) agreed to the fact that the SNSs are used for academic activities. Mainly they used SNSs for academic activities through group’s discussions and sometimes they asked themselves one on one on the difficult areas.

Theme two: Used SNSs in conducting research

SNSs are used for research purposes. Twenty student respondents hold this view. One among them claimed that they used SNSs for research activities. He said:

“I used it in carrying out research, meeting people and trying to find a way for myself. I believed the only way I can get more information about a lot of places is by meeting some other people online even abroad. So that is the most important part of SNS to me. But I wouldn’t know what other people used it for but for me those are the things I enjoyed using the SNS for” (FG4/3/pg24).

Another view with much strong support on the fact that SNS is being used for academic activities in Northern Nigerian universities came from another respondent who described that they used it in sharing information related to their assignments and symposium in the university. He was so skeptical about the matter yet he said

“There will be no bounds on SNSs because these things are what helped students in carrying out their research. For instance now you can know a professor through Facebook that you never think of before, you can ask him question on your project and he will reply you through the mail. Not only that you can get to know several people. In fact, it really helped students” (FG 3/4/pg28).

When asked, another respondent said, *“when I have assignment, I can just communicate to my friend who is on Facebook to give me the answer if he knows. At time it works. During my research I believed it will also help me”* (FG5/2/pg25). Another student added his view to support that they share academic information related to assignment and symposium on SNSs. In his words he said

“Yes on Facebook we meet different kinds of people. There are educationist that if you have difficulty in any area of your academic they may help you out. I am a physicist undergraduate I met a professor of physics on Facebook I communicated with him and asked him questions, on aspects I have difficulty. I also have a friend who is a physicist outside there I used to ask him questions via Facebook. So I think is very good for academic purposes” (FG4/4/pg25).

Another confirmed that she used SNSs for academic activities especially for research purposes and discussion with experts. She reported using SNSs by sending questions on certain academic problems across the network. She said that she always received instant answers to her problems. She further stated: *“Yes I do, I used the network to contact some of my friends like me and experts that are chemist. I contacted*

them for further research or in any topic that I felt is difficult. You know I communicate with them or text it to them. They gave me instant reply” (FG5/3/pg25).

Theme three: Know the happenings in school

Using SNSs helped one to get informed and understood all that is happening in the university. Those using SNSs tend not to be isolated from the ongoing and current situation within the school related to both academic and social activities. When asked one of the respondents replied:

“You get to know all what is happening in school of course. I can remember of recent it was posted on Facebook that there is something going on. There was an activity going on in school that if you become a fan/member they will be giving you more information on all academic issues like assignments and more other things on campus (FG2/4/pg3).

In similar opinion, another respondent indicated that they used SNSs to search for information related to their research area and search for a job. One respondent said *“There is another activity of job / vacancy on Facebook that gives information on when and where the vacancy existed. One can get to apply. I think is good academically too. It is worse academic activities” (FG/3/1pg3).*

Theme four: A virtual class environment

This is another theme emerged out of the students’ responses. It is the most often recurred response, with 17 of the 24 interviewed. It is labeled as *SNS is a virtual class environment where student can learn*. Majority of the student respondents were in support of the idea that SNSs enhanced students’ academic adjustment. From these it can be deduced that the students responded positively. From the seventeen respondents holding this view, one of them suggested for positive things from SNSs where he said:

“I think SNSs provide environment where student can learn remotely be sending and receiving information. Additionally, SNS lets them have link to other research sites where students can search for a handful of information about their studies especially sciences. With that it helped them develop their academic skills” (FG1/2/pg11).

Another view was a mere suggestion. She pointed out her feelings by saying *“I think students should control the way they used it. Not to make it a total day activity up to 50% of their academic time. I think they have to give it a less time. They just used it for online academic interaction just like normal classroom. And they should use it wisely for friendship not for other dubious acts” (FG6/4/pg16).*

Sub-theme one: Future teaching and learning will be everywhere

On this issue, some respondents have additional information which led to the emergence of two sub- themes. The respondents had a much broader foresight. One of them stated,

“Due to the used the network now we don’t depend on the class instruction alone. We go to Internet for assignments not just textbooks. Even lecture I think can be done on the net. In the near future every student will have his lectures anywhere in the class, in his room on his bed. So teaching learning will be everywhere” (FG1/4/pg17).

Another one asserts that they learn from one another from within and outside the country. People from different race, religion and countries come together no segregation. They learned at one spot which appear like a global classroom. He said from here in Nigeria we can learn from Malaysia. He predicted that in the future SNSs would be wonderful in such a way that certificates of learning can be obtained through them.

Sub-theme two: SNSs a medium for examinations and evaluation

Some respondents supplemented this idea. They also confirmed that SNSs will play a vital role in the near future in teaching learning process. They forecasted that SNSs can facilitate online students' evaluation and automatic answer generator to some questions in various academic fields. He said:

“Well, in the nearest future I anticipated that Facebook and other SNS network alike would serve as a medium through which an examination probably could be conducted across the globe for student in other part of the world. And it would also serve as a medium through which certain academic product of research could be obtained” (FG3/1/pg25).

Another had his view similar to the above that instant question and answer on SNSs will probably become easier. Hence it will definitely boost the students' academic development. She stated

“What I anticipated is just not only getting to friend to assist you when you need their assistance academically but there should be another way in which you can just log in and just send your question and get their answer, instantly, instead of getting through friend” (FG3/2/pg25).

At this juncture future in teaching learning process has been anticipated to be potentially inclined on SNS. Students' responses suggested that SNSs can serve as a medium through which an evaluation of academic activities can be carried out.

Question Six

What sort of difficulties have you experienced in adjusting academically in this university?

Under this question three themes emerged. The themes are *'cope with all rules and regulations and all the stress in the academics'*; *'harsh weather and rainy season affect class'* and *'difficulty in adjusting academically'*. From the general responses we can understand that some of the respondents believed to be following the academic time table strictly. Others reported that rainy season also affect their class that the students and lecturers usually get poor attendance. Others reported poor structure of the school buildings which are not inadequate as well compared to students' population. They admitted that it was not really easy adapting in the university under such conditions.

Some of the respondents did not accept any difficulty in academic adjustment. They argued that it has been necessary for one to adjust. Only nine respondents rejected having difficulties academically. However, majority accepted experiencing difficulties in adjusting academically. They related their experiences which were discussed below.

Theme one: Cope with school rules and regulations

The first theme is that one has to cope with the rules and regulations for proper academic adjustment to take place in the universities. Many (n=21) among the respondents shared similar view on this matter. For example one of those who answered this question said

"you don't have the choice in following the rules. You just have to do what is necessary and you have to do it at the right time. So I don't think I have much difficulty in adjusting academically in this institution. I think I am good with it and I am working ok" (FG2/4/pg4).

Another respondent also had similar view where she said *“yeah! In adjusting academically we don’t have choice because we have to pass through the school not that the school pass only through us. So we have to cope with all rules and regulations and all the stress in the academics”* (FG6/4/pg7). They believed that bearing the situation is the ultimate alternative. One must adjust as a matter of necessity without caring to feel bad of the experience. Another one viewed by saying *“in this sense the rules are not convenient for fresher students. But with time we can cope that is the only way”* (FG1/4/pg18).

Theme two: Harsh weather affects academic adjustment

On this issue, many of the respondents (n=13) reported that weather has a role in their adjustment in universities. Some viewed that the rainy season mostly prevented them from attending classes promptly. While other believed that the differences from where they come from usually affect their academic adjustment in the present university. In their opinions one of the views from one respondent who was a fresher student elaborated on the question. He lamented by saying:

“The population, the school structure, and the weather, for fresher students are not convenient. Especially during hot here is too harsh. Again rainy season also affects our class we get poor attendance.” (FG1/4/pg18).

Another view on climate in adjusting academically in universities come from one of the respondents. He said *“well, there is such difficulty. When it come to whether although I am used to it because I am from a place that the weather is of the same kind with here; I found other problems. Anyway I am used to it; I am from Katsina, it is almost the same.”* (FG5/2/pg27) Another student also holds similar view in relation to weather problem. He said *“before I came in newly to this place there were a lot of things like; the*

weather differences from where I came from to the far north here. So it was not really easy, adapting. But you know one thing with humans is the ability to adapt to any situation because adjusted to it, there are no differences” (FG4/1/pg26). Another one added on the matter where he said

“Talking about the weather actually when I first came into the schools, being the first time of coming to this kind of climate area I found it very heard initially but as time goes on rounding up on my programmed now I have really adjusted myself. So the only part I still find difficulty it has to do with my time” (FG6/2/pg26).

Theme three: Difficulty in adjusting academically

One of the respondents who believed to have experienced difficulties in adjusting academically said *“yeah, there is something I found difficult academically especially when it has to do with my time. Sometimes I have some clash programmes. And something you have to stage yourself periodically in what you do to adjust yourself” (FG4/2/pg26).*

On this theme, once again one respondent highlighted his views about difficulties in academic adjustment. He postulated that there are no easy things in life. *Everything is challenging. Adjusting academically is not easy (FG6/1/pg5)* he said. He cited example that in Nigeria for instance where the economy is negatively effective and not vibrant like other rich countries, a new student who is economically low found it difficult to move around the campus easily and make friends. He affirmed that his experience was bad during his first year. His imbalance economic status affected his stay in the university. From another group one respondent said *“Yes, I do find some difficulties in adjusting though, now it has past” (FG5/1/pg26).*

From the points discussed, six interview questions emanated from the three research questions. All in all, twenty themes and six sub-themes emerged which revealed the feeling of the respondents regarding the level of SNSs usage, social behaviors and academic adjustment.

4.5. Summary of Findings

4.5.1. Summary Quantitative Findings

From the qualitative and the quantitative data analysis, the following are the summary of the findings.

1. The quantitative results show that the extent of SNSs usage, the social behaviors and academic adjustment is high among the university students in Northern Nigeria.
2. The finding also shows significant gender differences in the extent of SNSs usage. Similarly, there are no differences in the extent of SNSs usage in terms of age, faculty, socioeconomic background and level of study. This is with the exception of ethnicity and religion whereby significant differences existed.
3. The present findings also reported strong positive inter-relationships among the variables SNSs usage, students' social behaviors and students' academic adjustment.
4. The findings also found students' attitude to have a strong moderating effect on the relationship between the SNSs usage and both the students' social behavior (SSB) and students' academic adjustment (SAA).

4.5.2. Summary of Qualitative Findings

- 1 The qualitative result on the other hand also indicated heavy SNSs usage more specifically Facebook among the students in the area. They used the SNSs to get connected to friends and family. That was indicated as the major reason for using SNSs and they do interact with many more other people. It similarly revealed the time they normally spent on SNSs sharing, talking and interacting. It indicated that they used SNSs to share experiences, and for other social activities. More so they used it beyond the friendship as they carried out academic activities to solve many of their academic problems.
- 2 The interview findings also show that many influential personnel and organizations used SNSs to propagate their ideologies politically, religiously and economically. It is most likely and very possible for terrorist and cultists to be using SNSs for their activities as well. It also shows that SNSs usage may likely dehumanize students' behaviors because many reported use of porn, posting false information and other callous activities on SNSs by some students within the campuses.
- 3 The findings revealed that although it depends on the decency of the user; indecent uses of SNSs were carried out by the students. It involves the terrorist, cultist, druggist and pornographic activities because many of the SNSs allow joining groups of interest which resulted into secret groups and fraternity activities to be carried out by using symbols, jargons and special language signs in communicating to each other. The findings therefore show the need for controlling and or monitoring of SNSs especially on campus. In other words the

students should be given orientations especially where the total control proved difficult.

- 4 Coping with the rules and regulations, economic challenges, harsh weather and rainy season were found to be among the major factors contributing to difficulty in adjusting academically among the students in the area. However the results also indicated that some students do not face any difficulty in adjusting academically in this institution probably because of climatic similarity.

The following are the summary of the themes emerged from the interview in accordance with the research questions.

Table 4.4.3

Summary of the themes reported

RQ	I Q	Themes	Sub-themes
RQ1 SNSU	Q1: ‘In few statements can you say why you use SNSs?’	Theme 1: Communicate and interact with different people Theme 2: Knowing each other and getting information from the old friends Theme 3: Share experiences and ideas Theme 4: Solve academic problems	
	Q2. ‘In your opinions why do you encourage other people to use SNSs if at all you do?’	Theme 1: SNSs unite people Theme 2: The World is a global village	
RQ 2 SSB	Q3. ‘Why do you feel controlling and monitoring SNSs	Theme 1: It is right to control and monitor SNSs usage	Sub Theme 1: Viewing porn sites on SNSs is embracing and immoral

	usage in your university is necessary?’	Theme 2: It is really doing harm to national security Theme 3: Pornographies exist on SNSs Theme 4: Is very possible for terrorist activities to be carried out on SNS	
	Q4. “Why Do you think that SNS may dehumanize and tarnish users’ behaviors?”	Theme 1: Depends on individuals’ decency and the kind of friends Theme 2: Excessive use of SNSs can dehumanize and tarnish behavior Theme 3: Pre existing behavior and feelings of users guide their actions on SNSs	
RQ 3 SAA	Q5. ‘Why Do you think that SNS is relevant to academic activities?’	Theme 1: Share academic information Theme 2: Used SNSs in carrying out research Theme 3: Know of what is happening in school Theme 4: A virtual class environment where students can learn	Sub-theme 1: Future teaching and learning will be anywhere. Sub-theme 2: SNS is a medium where examinations could be conducted
	Q6. “What sort of difficulties have you experienced in adjusting academically in this university?”	Theme 1: Cope with all rules and regulations Theme 2: Harsh weather affect class Theme 3: Difficulty in adjusting academically	

CHAPTER FIVE: DISCUSSION

5.1. Introduction

The summary of the study main findings, the significance and implications of the study are all presented in this chapter. The chapter also highlighted on the contributions of the study and limitation which lead to suggestions for future studies and conclusions of the study.

5.2. Research Summary of the Study

The study was organized in such a way that it follows the traditional way of research report. It was a cross-sectional study in which the major variables were accessed once and the relationships between them were determined. Hence, the chapters were categorized into normal five chapters.

First chapter highlights on the background and importance of the research area. In the chapter, it was said Internet literacy and competency in Nigeria has been very slow although is the highest in Africa. The usage rate is as moderately low as only 11 million in 2009 (World Statistics, 2009), this was merely 7.4% of the total population. It increased to 23,982,200 in early 2010 that were approximately 16.1 % of the total population (World Statistics, 2010). As of this report Nigerian Internet users reached 43,982,200 which are almost forty percent of all the African users (World Statistics, 2010).

The chapter also highlited on the problems and showed that SNSs have their ways in less than a decade and continued to proliferate so rapidly in clusters. It is now being used by large number of users which included students as well. Kord (2008) reported

that university students' involvement in social networking sites has increased considerably since 2004. He added "the students' use of the SNSs is a daily activity (p. 1)." Recent multiple studies (Gross et al., 2005; Lampe et al., 2007; Stutzman, 2006; Tufekci, 2008) showed that between 80% to 90% of university students have profiles on an SNSs. Kord (2008) states "online social networking was used by the students to bring the campus community together (pg 1)." He also asserts that university students who involved in SNSs may have experienced both positive and negative consequences. Despite the fact that social networking is a new aspect of networking computing of less than a decade its effects on the students can be seen. As part of the problems and issues identified in this study it reflects the relationship among students' use of social network sites (SNSs) and students' social behaviors (SSB) (Pritchard, 2008; Kord, 2008) and students' academic adjustment (SAA) (Lent et al., 2008). This is a considerable area that needs the attention of researchers to explore especially in the context of the methodology which needs to be adopted. In a study conducted by Zywicki and Danowski (2008) on Facebook the researchers recommended for continued research that would asks Facebook users if they think popularity on Facebook is different from popularity offline.

Another related issue raised was how SNSs can change or even tarnish individual users' behaviour. In relation to that, Kord (2008) postulates that researches need to further explore tragedy, like the Virginia Tech shooting, whether it can make someone have a change in behaviour socially and appear to be popular online. As part of the practical experience, the researcher works with the computer centre in one institution i.e. College of Education Azare. The researcher therefore had a privilege of visiting many universities' Internet resource centres and cafés. He observed that most times the students

engaged themselves visiting such social sites more often and spending most of the times searching for their new and missed friends, lovers and fans and sometimes search, view and download sexually explicit materials especially on YouTube. This was one of the geneses for the conceptualization of the idea to investigate the phenomenon whether the SNSs are catalyst or panacea for societal changes and development educationally, economically, socially, religiously and politically.

Other things included enumerating the key objectives of the research which included: To find out the level of SNSs usage, students' social behavior and students' academic adjustment, in Northern Nigerian universities. To ascertain the relevance, similarities and disparities of the SNSs usage in relation to gender, age, ethnicity, faculty, level of study, socioeconomic background and religion among Northern Nigerian university students. To examine the relationships between the SNSs usage, students' social behaviors and students' academic adjustment in Northern Nigerian universities. To determine if students' attitudes moderate the relationships between SNSs usage and both students' social behaviors and students' academic adjustments. The chapter also stated the researched questions as follows:

1. To what extent is the SNSs usage students' social behavior and students' academic adjustment in Northern Nigerian universities?
2. Is there any significant difference in SNSs usage among the Northern Nigerian universities students in terms of, gender, age, faculty, ethnicity, socioeconomic background, level of study and religion?
3. Is there any relationship between the SNSs usage students' social behavior and students' academic adjustment?

4. Does the students' attitude moderate the relationship between SNSs usage and both students' social behavior and students' academic adjustment?

There were 10 hypotheses formulated and tested in this study which were all specified in this chapter. The scope of the study focused on the social network site usage in relation to social behaviors and academic adjustments among students in the Northern Nigerian universities.

The second chapter generally concentrated on the review of related literature, starting from broad underlying theories, to the major conceptual framework and specific concepts. The chapter continued to update up to the tail end of the study until the whole literature was overwhelm and saturated. At the beginning it started with one of the key issues raised by Dwyer et al. (2008) as lack of theory that can explain the difference in success and failure by SNSs with relevance to acceptance and usage in order to advise developers. Theories examined were sociological thereby citing functionalism as being the oldest. Lead by Durkheim, functionalism generally viewed that point-to-point communications media like telephones and Internet reinforce organic social solidarity, while broadcast media like radio or television in general yield powerful collective representations. Other theory examined was conflict theory lead by Marx, (1818-1883), the great German theorist and political activist. The Marxist, conflict approach emphasized a materialistic interpretation of the history, a dialectical method of analysis, a critical stance toward the existing social arrangements, and a political program of revolution. Then the sociological theory touched was that of Weber, (1864-1920), and Mead, (1863-1931). Both of them were pioneers and emphasized the subjective meaning of human behaviour, the social process, and pragmatism.

Other theories upheld in this study were technology and learning theories. Under the learning theories it focused on constructivism blocs. Social constructivism was credited to Vygotsky, (1896-1934). Parlinger (1998) asserts that social constructivism is closely related to social constructionism. However, there is an important difference. Social constructionism focuses on the artefacts created through the social interactions, while social constructivism focuses on an individual's learning that takes place because of their interactions in a group. Generally constructivism as an epistemologically philosophical view believed that knowledge is "constructed" conventionally based on human social and experience perception.

Other things discussed and examined were type of socialization and ways of socialization. The concept of Internet, its resources, accessibility and connectivity in Nigeria were discussed. Other topics examined in this chapter were the Internet advantages, disadvantages, its relation to education and impact on students.

The evolution, structure and types of SNSs were aspects also discussed. The SNSs history began early 1997 by 2001 a number of community tools began supporting various combinations of profiles and publicly articulated friends (Kumar et al., 2006). In terms of structure most SNSs are similar to each other. They have commonality in their technical features (Lockyer & Patterson, 2008). This is because most of them provide a profile which may include two specific modules: a comment section where other signed up users can leave their comments or messages; and a list of the user's friends. By default, when a particular user account is created the profile remains private. Facebook for instance have millions of contemporary young adults who used the site. The Facebook site (2010) specifies that Facebook is the world's largest social network, with over 400 million users.

Every single day, users are sending more than 1 billion chat messages on the Facebook (Facebook, 2010). One of the Facebook founders Mark Zuckerberg once bravely stated that if Facebook were a country, it would be among most populated in the world.

Paolillo (2008) concluded that YouTube functions like other SNSs both in terms of its distributions degree and internal structure. YouTube site stated that as much as 65,000 different kinds of user generated contents (UGC) videos clips are uploaded on the site daily. It further indicated that there are over 2.86 million registered users on Youtube. In addition almost 100 million viewer users watch videos daily. Mainly these viewer users who view the YouTube site are within 18–49 of age range, (Ardito, 2007; Cheng et al., 2008). This figure resembles with the age range of the respondents in this present study.

On students' behaviors chapter two showed where Michele and Shonna (2007) in their study found that more than 51% of the approximately 21 million teens used the SNSs almost daily. Many adolescents take many more known and unknown risks by offering their personal identifying information while communicating with many on the web. Stutzman (2010) studies identity information disclosure as one of the serious issues regarding students' behaviour in relation to SNSs usage. Bolton (2009) also reports that more students than ever before have been caught cheating, lying, and stealing. Still on this issue Yohannis et al. (2009) asserted that on SNSs users do a lot of deviant behaviours, like surfing pornography, racial activities, predator to some users, and creating fake profiles.

Later on the attitude which was the moderating variable it indicated that the ability to develop new relationships seems to be a stronger feature of social networking

sites. Dwyer et al. (2007) indicate that some participants showed that most of friendships that begun through these sites led to face to face meetings and continued relationships. For maintaining existing relationships, SNSs were the most popular tools for that. In her conclusion she said attitude towards SNSs enhanced its usage. The study conducted by Al-Jaraideh (2009) also used a model to show how attitudes influenced and moderated the use of technology features that enable interpersonal relationship management.

In chapter three it indicates the used of mixed approach research model in the study. It delves on the research design and instrumentation and its development where the instruments (Goodson et al., 2000; Pascarella, & Terenzini, 1991) were modified and adopted. Methodological issues such as measurement, population were indicated as 12 universities in Northern Nigeria. The sampling sizes for accessible universities were six in number. For the students' sample, 400 respondents were drawn for the questionnaires and 24 volunteer student subjects were selected for focus group interview. The sampling techniques were stratified random and clustered for the questionnaire and for interview a snow ball technique was employed. Other contents overviewed under chapter three were the data analysis tools employed in the study. The SPSS 12.0 was used because it was the only licensed package available to the researcher at the moment. Data were explored before descriptive statistics were carried out to see the data suitability, normality, validity and reliability. The t-test was conducted for gender variance, while ANOVA were done on other six demographic variables. Later correlation and regression were applied on the main constructs to find their relationship and moderating effect of attitude on them.

Chapter four dealt with qualitative and quantitative data presentation and analysis. The hypotheses testing, results of constructs and content validity were all discussed.

Internal consistency test were taking care of; and were presented and interpreted in the chapter. Using the SPSS 12.0 the reliability test and factor analyses were carried out. The reliability test indicated all the variables were significantly reliable; it shows the Cronbach Alpha for all the variables. The explored descriptive statistics results indicated the skewness and kurtosis as being adequate. The Q-Q plot also indicated a normal linear distribution.

Analysis of the research questions proceeded where bivariate correlations were generated to answer some of the research questions. Results analysis by using Pearson product moment correlation indicated strong positive correlation among the variables. The correlation between the three constructs was statistically significant. Independent t. test was done on gender and the t value shows no significant difference. Furthermore in the ANOVA on some of the demography variables i.e. age, faculty, level of study and socioeconomic background (SEB) show no significant differences while on ethnicity and religion it shows that there were significant difference in the extend of SNSs usage.

Hierarchical multiple regression on the last two research questions was also shown here. The result of the regression shows that the MV (SATT) has a moderating effect on relationship between the IV (SNSU) and both the two DVs (SSB and SAA). It indicated contribution of SATT on both the SSB and SAA relationship with SNSU which were quite significant.

The chapter also presents detailed discussions on the interview findings in relation to research objectives, research questions and context. It also identified the hypotheses status, underlying theory / model as well as relating the results with the recently available

related literature. The chapter was concluded with the summary of the key findings. They were vividly spelt out to give a helicopter view of the research report for the readers.

The last chapter i.e. chapter five concludes the whole research work. That is by highlighting the theoretical background, regulatory thrust of the research work with emphasis on originality and presenting summary of the key research conclusions. Other content of final chapter includes discussions on the implication, research limitations and suggestions for future studies and general contributions and recommendations. Finally other things like references, and appendices lists tailed at the end.

5.3 Discussion

This portion of the chapter discussed the key analysis tools used in analysing the data. This ranges from data screening, normality test, and factorability of the data, sample characteristics, reliability and validity test; to hypotheses testing via multiple regressions, ANOVA and t-test. The chapter ends with the summary of the key findings. This chapter builds on the previous chapter by presenting in-depth interpretation and the discussion of the research findings in relation to research context, research questions and hypotheses, recent literatures, underlying theory/model and research objectives. The aim is to communicate the research findings in perspective hence prepare the ground for research conclusions, summary and implications in the final chapter five.

5.3.1: Interpretations on Research Questions and the Hypotheses

The research question one was discussed below. Also the hypotheses tested in the study were ten (10) null hypotheses as they were also discussed in relation to the Research Questions below:

Research Question 1

To what extent is the SNSs usage students' social behavior and students' academic adjustment in Northern Nigerian Universities?

Social Networking Site usage

The first question investigated the extent of SNSs usage among the students in the area. The statistical modalities used were the qualitative and descriptive statistics. Both students' qualitative and quantitative responses indicated a highly significant level of usage. Giving that majority of the subjects reported heavy usage of SNSs others indicated moderate. Very insignificant numbers showed low level of SNSs use. From the descriptive results the case item '*I frequently used at least one or more of the social networking sites*' indicated high frequency and high mean score. This suggested that almost all the respondents use the SNSs. Impliedly therefore; this finding can facilitate Nigeria's vision statement with regard to IT as stated in the national policy for IT. That is to make Nigeria IT capable country in Africa and a key player in the information society by the year 2020; using IT as the engine for sustainable development and global competitiveness. A sufficient amount of researches reviewed were in line with the present view whereas others were not.

This comparatively tallied with Ayad Sa'ad (2007) who viewed that Malaysian ICT public policy was lunched to cater for the national broadband policy (NBP) in 2004 as a strategy for knowledge based and economical society. In general it is an eye opener to the Nigerian national IT policy which was silent on teacher education and teachers'

ICT professional development. The items of this questions included how students came to know of SNSs and to rate their level of usage.

The finding interprets Omotayo (2006) who also observes that undergraduates learn the use of Internet through their friends. The present study plainly explains that many students rated their SNSs usage for more than a year and claimed that they learned about using SNSs on their own outside before coming to the university. More so these findings as well confirmed constructivists' idea that learning is a creation of knowledge by learner himself. The students reveal that SNSs usage helped them better understood both their culture, environment and of course the culture of others (Schmidt, 2007). The study further confirms Awoleye et al. (2008) whose finding showed that about 92% of undergraduate students have embraced the Internet and are using it very consistently before arriving in schools in Nigeria.

Research finding such as Hargittai's (2008) was in consensus with the present study in terms of high level of SNSs usage. Hargittai's findings showed that students are likely to "use Facebook significantly (60%) compared to (40%) or more for other groups". More so, the present study believes that there was high increase in the extent of SNSs usage in Nigeria in recent years this further explains on the Facebook statistics utility (2010) which reported that the approximate Facebook users (estimated 2010) were over 657,360 subscribers who indicated their country as Nigeria. Facebook statistics utility (2010) also reported the increase of almost 53% users from which more than 60% were students. In fact, in Nigeria there was even a Facebook Nigeria award (FBN) in 2009. It intended for the reunion and online community development program, slated to enhance the change in youths in Nigeria. In a nut shell, Nigerian university students are

heavy signup users of the Facebook more than any other SNS. Nigerian users of Facebook now estimated to about 1.75 million (2010) far ahead the figure last year 2009 which was merely 657,360. It is quite apparent that there was a high increase in the Facebook and general SNSs use in Nigeria.

The present study's result supports previous studies like Ellison et al. (2007) in relation to the most frequently used SNSs and why it is used. They found that more than 90% of college students used Facebook. Coyle and Vaughn (2008) also found that about 53% reported having more than one account on SNSs. Again, Ellison et al. (2007) also found that SNSs are used for social interaction with offline acquaintances in order to maintain friendships rather than to make new friends. Furthermore they found a strong positive relationship between Facebook use and social capital, or the resources gained through social interactions. Coyle and Vaughn (2008) were supported as well in their view that SNSs are exploding within the Internet society with the abilities of making users more expressive and creative. This study also tallies with Aïmeur et al. (2010); Lenhart and Madden (2007) whose studies also reveal that youth primarily use SNSs to stay in touch with family, firm and missed friends thereby shrinking the distances from lost friends and family members.

The present qualitative results reported that as a result of SNSs usage factor the world become like a global village where people are available and common to everyone within a small scope and range of time. Hence it was as well in perfect congruence with that study in this case. In addition, about half of teens investigated used SNSs to make new friends (Lenhart & Madden, 2007). Hence the present findings consistently go with Lenhart and Madden (2007) that almost 55% their respondents used SNSs essentially for

social relations. Joinson (2008) as well reported use of SNSs by students to get in touch with new friends and keep the relationship with their old friends and families or find the lost friends. The present qualitative thematic result further shows that students believed to be using SNSs to get connected with old friends and relatives for easy communication and interaction.

This study in some areas relates to Joinson's (2008) study which identifies Facebook users' privacy which refers to the degree to which they had made them more private or more open. Based on 7-point Likert scale; Joinson's (2008) results showed that participants had an average of 124 friends linked to their Facebook profile. About half of the participants in Joinson's (2008) study registered on the site for just less than six months. The majority agreed that they visited the site daily or more than once a day and others visiting less than once a week. Kord (2008) also reports that students spending time on SNSs significantly contributed to their peer group interactions since they form the majority of their online friends.

Amongst the Joinson's (2008) respondents, the most common of their responses with regard the time spent on SNSs daily were between one and two hours which was just a bit higher to the others who proffered between two to five hours. Similar to Joinson's study the present qualitative result shows that a relatively insignificant number of respondents reported that they spent either less than one hour per day on SNSs. Majority indicated that they spends the range from two to three hours on SNSs.

However, in the same trend the quantitative descriptive also found that the item '*I spend approximately more than one hour per day*' scored higher frequency level which

explained that many of the respondents spent more than one hour everyday browsing SNSs.

With regards to the privacy issue, unlike previous research Gross and Acquisti (2005) report that majority of the respondents claimed to have changed the actual default privacy settings in most SNSs applications. From the present result therefore, significant number of respondents reported making their profile more private; and very few reported making it as private as possible. On the other hand, about 'making no changes to their profile' the responses were substantially lower. The uses of SNSs tended to be related to the 'social searching' and specifically, to learn about old friends and maintain old relations. This measured consistently high.

In light of the data discussed from studies so far this study also found that the more they used the SNSs the more they turned their back on traditional media for socialization as also observed by Ellison et al. (2009) who assert that SNSs provide simple, inexpensive ways to organize members, arrange meetings, spread information, and gauge opinion. Therefore, SNSs are indeed one aspect of the easiest ways to socialize. The present qualitative findings reported that SNSs usage needs to be encouraged because it unites people.

There are more than 2.86 million registered and over 100 million viewer users watching videos on YouTube. Mainly they are within 18–49 of age range (students fall within this range) (Ardito, 2007; Cheng et al., 2008). The present study also found that many of the students from the qualitative and quantitative responses indicated frequent use of YouTube to download contents either for academic purposes or for fun. Very few agreed uploading UGC on YouTube which coincides with Cheng et al. (2008) who also

found that many users only watched and downloaded clips but do not upload. This is because only registered users can upload clips on their created profile channels.

On false impressions and hiding identity this study is in consistency with Manago et al. (2008) whose result also suggested rampant false impressions by some users who perceive alternatively hidden aspects for their friends which is not truly seen in the physical world. Similar to offline social interactions this study reported constructive usage of SNSs among most users. Manago et al. (2008) showed that emerging adults utilized MySpace to construct a sense of self in relation to what their peers are doing and most users spend time observing other users' profiles. They also reported that "many peers are easily accessible on the network and their personal information is open for observation (p. 452)" to everyone as reported in this study. Manago et al. (2008) also affirmed that there was a "consensus among both men and women whereby men tend to portrayed themselves on MySpace according to stereotypical norms of masculinity whereas most women portrayed themselves as attractive and affiliative. (p. 452)" The findings of Manago et al. (2008) also indicated that women work harder on profiles to impress others, especially in terms of physical beauty. More so, "Men are less concerned about what others think about them and put less effort into their profiles" which all mismatch the present study.

In consensus to the present study, previous studies (Aïmeur et al., 2010; Grigg & Johnson, 2006; Jones & Soltren, 2005; Kolek & Saunders, 2006; Stutzman, 2006; Kord, 2008) all reported that many of SNSs profiles were created to prompt individual users to disclose a variety of personal information without caring for privacy. It also provides insight into students' value and belief systems by providing the opportunity to designate

their political and religious affiliations and sometimes their sexual preference, marital status, and the extent of the relationship. They also conceded for self-expression through pictures and video.

With regards to popularity the present study found that many of the student users of SNSs thought of being popular on SNS. Some users are judging their self-worth through the accruing number of 'friends' they attracted. Some mainly aim at various targets like economic gain, self promotion and political ambition. Adebayo et al. (2006) stated that popularity among youths, leads to youth involvement with online scams, sexual activities (including online chats, meeting partners, and looking for romantic and sexual relationships) and the development of their sexuality. In the present findings the item *I am interested in viewing pornography often on SNS* was chosen by more than 50% of the respondents in the strongly disagree category. This indicates that more than half of the respondents used SNSs in the decent ways. Using pornographies is low among the respondents which probably have to do with the religious inclination and influence.

Similarly, the present qualitative result also highlighted that some students in some institutions used pornographies because they are unserious students who are always trying to humiliate others with such things. They reported that pornographies are un-educative and are immoral. Visible pornographies on SNSs were uploaded by certain individuals or organizational users somewhere. Many students uploaded such pornographies and nude pictures on YouTube and MySpace. The results as well shows that pornographic materials are uncalled for and are very bad to students' well being. Hence the universities networks in conjunction with the web developers should be creating security that can always preventing such pornographic documents. Although

some of the students claimed that browsing pornographic sites depends on individuals' decency it should not be allowed to be rampant among the students.

In another trend the qualitative findings of this study indicate that students used SNSs for academic activities. It indicates that using SNSs for academic activities involves logging in, talking and conversing on topics related to specific academic areas with experts. SNSs also enlightened users on any academic development. This however, supported Wang and Wu (2008) who conducted their study in Northern Taiwan University and indicated that, in a web-based learning, interaction among undergraduate students with peers and experts improved their performance by getting immediate reciprocated feedback on various academic dimensions. Furthermore, they shared some views and information with others academically.

This study is also in consensus with Roblyer et al. (2010) who also concluded that two groups (faculty and students) did not differ in the usage of Facebook for other communication purposes. Similar to Roblyer et al. (2010) the present study revealed that students and faculty used social networking sites for instructional and other purposes. This is in similitude with Liu and Li (2010) who also proposed that e-learning via SNSs will impact students' learning experiences by sharing such experiences. They also believed that SNS can effectively be used as e-learning tool in the future. In their findings they reported browsing friends' profiles and shared academic contents. In the present result it shows students discussed on their academic activities through interaction informally thereby supporting that SNSs are potential informal academic environments.

This is in tally with Tahir (2006) whose assertion showed that about 54% of the students believed that the use of the computer increased their interactions with other

students and with the instructors thereby paving way for formal online interaction with profound learning outcomes. The present finding as well indicated that SNSs incorporated and enhanced the Learning Management Systems (LMS) which allowed student users to have some of their courses outlines of study be chosen personally by themselves. This supported the view that students of today have more freedom and autonomy, in connecting, interacting and in the socio-experiential learning opportunities (Mazman & Yasemin, 2010). LMS tools such as Moodle, and Blackboard, will soon have their robust ways into SNSs.

Social behaviors

On the other segment this question is also addressed to investigate the extent of the Students' Social Behaviours (SSB) in the Northern Nigeria universities. The overall result shows that there is a highly significance level in the extent of social behavior among the university students in the Northern Nigeria.

Social behavior is seen as a response directed towards society, or taking place between, members of the same species which occurs as a result of social interactions. Social interactions are as acts, actions, or practices of two or more people mutually oriented towards each other. It is in two ways i.e. positive or negative based on the situation and actions around the society. Those things like respect, honesty, love, punctuality, tolerance, friendliness truthfulness, law abiding and so forth are attributed to positive social behavior. Whereas anti-social or negative behavior covers a wide range of selfish and unacceptable activity such as nuisance, disorder, dishonesty, crime, aggression, disloyalty, intimidation and harassment, violence.

This result was found to be positive in respect of the positive behaviors and significantly negative against the negative or anti social behaviors among the students. This is partially related to Kord (2008) who observed that students' behaviors are being influenced by SNSs because they have been using it to post distasteful comments about faculty members and to harass peers. Yet there are very little studies on how all these are related to or have effects on students' social behaviors (Pritchard, 2008). The qualitative result also indicated that students interacted with various categories of people: friends, family and strangers. This explained that SNSs have positive social effects on both individuals and communities. Present study also indicates that many students already do have certain negative or positive behaviors prior to the signing up on SNSs. This continued to shape their attitudes toward the SNSs and mode of using it. Mulvaney-Day, et al. (2007) opined that social interaction, particularly with family and community networks, is strongly associated with a range of positive behavior outcomes. The results also responded positive to Hargittai (2008) who suggested that there is the need for an in-depth examining and analysis on how SNSs may shape the individual students' behaviors and attitudes.

The present qualitative findings show that excessive use may damage behavior and tarnish users' image. Pre existing behavior and feelings of users guide their actions on SNSs. The findings therefore supported Ellison et al. (2009) that the more time they spent on SNSs the more they are apart with their local offline environment, yet it enhances their bond with the ones they interacted online. The present findings also revealed that users go on SNSs to do fraudulent activities like scam and trapping someone or luring women to indecency and harassment. This continued to tarnish their image and

dehumanize them. On the other hand other users go for friendship, for fun and leisure just to meet people and interact decently which may not affect behavior negatively. It was also found that users tend to spend less time talking to their friends and family members on phone.

More so, on the present quantitative findings it shows that the item '*using SNS enhances participation in group activities and sport fans*' was fully supported by the respondents. It therefore suggests that both cultural and traditional events are organized on SNSs. It is used for invitation to political event and other social activities like marriage, birthday/naming and funeral ceremonies. Other social activities (parties and sport events) around the campuses are organized and members get invited through these channels. Some academic activities can be communicated to friends like unexpected schedule of lecture symposium or excursion. This is evident considering the Universiti Utara Malaysia College of Arts and Science (UUM/CAS), International Student Society Universiti Utara Malaysia (ISS/UUM) profiles is on Facebook of which the researcher is a member/fan.

Michele and Shonna (2007) reported that almost 51% of the approximately 21 million teens who used the Internet and SNSs almost daily has effect on their behaviors both positive and negative. The present studies' also concured with Pew Internet & American Life Project (2005) which investigated students' risk taking behavior in popular SNSs. He reported that adolescents take many more known and unknown risks by revealing their personal identifying information while communicating with many on the web.

In the present findings SNSs caused some negative or anti social behaviors on students which was supported by the respondents. While on the other hand the item '*SNSs enhance positive social behaviors*' has been highly supported by the respondents. This means that those in support of the positive behaviors outweighed those in support of the negative behaviors caused by SNSs usage.

This study also supports the notion that communities can be developed without regular face-to-face communication and the SNSs have positive social effects on both individuals (Sum et al., 2008). However, most of the literatures about SNSs were related to the negative influence on students. Kord (2008) who is also in condign with this study postulated anecdotal literature on SNSs that showed the effect is widespread and included both the academic and social systems of the institution.

As part of the findings on the qualitative aspect of this study some of the students indicated negative social behaviors which similarly coincided with Bolton (2009) who found that about 83% of students have lied to their parents about something significant related to SNSs. Yohannis et al. (2009) believed that SNSs users do so many deviant behaviors, like surfing pornography, racial activities, predator to some users, and creating fake profiles. They also asserted that SNSs use were associated with depression and social isolation. It is therefore found to be positive with the present study.

This study further explained Stutzman's (2006) study of undergraduates which analyzed their behaviors on Facebook. He looked at how first-year freshmen adopted the use of Facebook, mainly looking at the percentage of freshmen (85%) who had a Facebook account as of the first day of classes. In looking at how many students had adopted this behavior prior to arriving at campus, Stutzman (2006) also reported that

many had established their accounts before coming to university. The current study found that the students believed to be '*using SNS for the past one year*'.

The present study also conformed to Jones and Sultren's (2005) study who gathered information through a paper survey from students attending Massachusetts Institute of Technology (MIT). They downloaded profiles to analyze the extent of user disclosure. Jones and Sultren's survey determined their perceptions of the privacy of the information listed in Facebook profiles, and to verify if these students had read the privacy and terms of the service policies presented when signing up for a Facebook account. Similarly, Jones and Sultren confirmed that 80% of MIT matriculating freshmen joined Facebook before even arriving for orientation. Kord's (2008) results also verified that participant's involvement in SNSs was a pre-existing behavior. These tallied with the present findings that most of the students reported to have been using the SNSs before they enrolled into the universities.

With regard to marriage and mate selection as a social behavior this study found that *I would not mind selecting life partner (wife/husband) on SNS* was not supported by the respondents. From the quantitative result also it suggests that many were not willing to have online friends as life partners. This did not coincide with Zhang and Kline (2009) who asserted that many of the respondents were more likely to comply with network members regarding the decision to marry. It did not concur to Knobloch and Donovan (2006) who as well documented that close social networks do influence the development of romantic relation. On the other hand, the findings also indicated that students *preferred opposite sex as friends than same sex on SNS*. This concurred to the view that online users' personal relationships do not exist in isolation from one another (Loving, 2006;

Parks, 2007) which is in line with the current study. Similarly, the studies (Loving, 2006; Parks, 2007) have shown that females' friends are particularly successful or as successful as dates in predicting when relationship will break up. Loving (2006) reported the risk of sexually transmitted diseases (STD) transmission of persons seeking sex partners on the Internet versus those not seeking sex partners on the Internet. In Lovings (2006) study out of the 856 respondents interviewed, 135 had sought sex partners on the Internet. That was conformed to the present study which found that students preferred opposite sex as friends than same sex on SNS.

Academic Adjustment

In the same vein the question also investigated the level of the students' academic adjustment. It reveals that the extent of academic adjustment among the students in Northern Nigeria universities was also significantly high. This suggests that the finding here supported some views from previous literature as it contradicted some. Kord (2008) posited that students used the Facebook website as a medium or avenue where they adjusted by expressing themselves, shared their daily lives with friends and family members and keep in constant touch with a group of new and old friends. They also used it to know about what is happening around them. The present result suggests that the item *using SNS makes me feel motivated to be on campus and carry out academic activities* was highly supported. This indicated that SNS is an avenue and a tool for academic adjustment.

In the present qualitative result some students reported transition difficulty which has to do with harsh weather and economic problems coupled with the difficult rules and

regulation which supported some previous studies Abdullah et al. (2009); Lent et al. (2009); Rice et al. (2006); Tseng (2004); Van Eman (2009) viewed academic adjustment as having dimensions and reported that transition for students from school to university is greatly influenced by their own way to take responsibilities in the universities and other things like weather and the new rules. In the present study, the students revealed of difficulty adjusting to the fact that they need to be self-disciplined and self-motivating. At school the discipline used to be imposed on them. They reported that one has to cope with the rules and regulations for proper academic adjustment to take place in the universities. This study tallied with Abdullah et al. (2009) who also posited that students lacked self confidence to answer many questions in class. Some even missed lectures or had difficulty finding the lecture venues easily. Other issues attributed to the new students were plagiarism rules and assignments submission. Previous studies (Abdallah et al., 2009; Christopher et al., 2005; Lent et al., 2009) all asserted that new students lacked respect for teachers and colleagues and got difficulties adjusting to an environment. In this present study, it is found that there was no difference between gender which therefore expanded Prapas (2009) whose conclusion showed no difference between the gender.

This differs from Abdullah et al. (2009) who showed that “students’ overall adjustment was at a moderate level and male students were found to be better adjusted compared to female students (p. 496).” The study also differs with Omoteso’s (2006) study which, hold that gender had been found to be a factor in academic adjustment of students. But, it supported Rodgers and Tennison (2009) who found in their study gender difference in the academic adjustment.

Prapas (2009) stated that adjustment is an essential and usual social confidence with the present globalization. The present study also indicates that the university setting in terms of infrastructure and provision influence the level of adjustment. University adjustment aspects included acceptance, culture, withdrawal, and cooperation that affect the perceptions and experiences the students have about the university. This study supported Prapas (2009) in this aspect as well where it's found that *SNS brings harmony among students from diverse cultures*.

Many students on both the questionnaire and the interview showed that friendship influenced their adjustment in their various institutions. This therefore confirmed studies Buote et al. (2007); Rice et al. (2005) who indicated a significant positive relation between new friendships and adjustment to university. There is an association which was found to be stronger for students living in residence than for those commuting from home to university. The present study also correlated to Tseng (2004) study which also distinguished between family interdependence, attitudes and behaviors and found that they correlated significantly and that they had counteracting influences on academic adjustment. She added that school can be a time of increased conflict between the youth's family and their academic demands as reported by some respondents in the present interview.

On the other hand the present study also examined the differences in the extent of SNS usage to confirm Hargittai (2008) and it is positive with the report that a person's gender, race and ethnicity, and parental educational background are all associated with the SNSs usage. In this section the differences on the extent of SNSs usage was discussed in terms of gender, age, faculty, ethnicity, level of study, SEB and religion.

Research Question 2

Is there any significant difference in SNSs usage among the Northern Nigerian universities students in terms of gender, age, faculty, ethnicity, socioeconomic background, level of study and religion?

H₀₁ There is no significant difference in the extent of SNSs use in terms of gender, among Northern Nigeria university students.

The result of this question indicated that there is significant difference between the gender groups in the extent of SNS usage in the Northern Nigerian universities. Therefore the *H₀₁: There is no significant difference in the extent of SNSs use in terms of gender, among Northern Nigeria university students* was rejected. It confirmed and disposed some literature as discussed below. The present question bridged the gap advocated by Bryant and Bryant (2005) who suggested that the issues of adolescents' gender roles and gender difference, sexual attitudes, and behaviors are in a critical stage of students' development they need to be investigated. Similarly, the study by Zywicki and Danowski (2008) suggested for further study to examine if and how SNSs changed interactions among students at university in relation to their gender. Prapas (2009) conducted the study on achievement motivation, adjustment and self confidence among participant and non participant of college activity and found no gender difference which however contradicted the present study. The present study also was not in consensus with Hoffman's, et al. (2004) in this aspect. Although the study (Hoffman et al., 2004), asserted that Internet use among college students is primarily for social activities. Their findings on both high school and university students found no gender gap. The present

study found that SNSs is beyond social activities and that Internet particularly SNS is all-encompassing in the lives of university students in all endeavors, and has become a staple in their life.

Peculiar to Nigerian situation a large amount of university students were found not to differ by gender in use of SNSs. This confirmed Awolaye et al. (2008) who additionally reported that the differences existed among both undergraduates, and postgraduate students. Herring (2010) was also supported by the present study. He reported gender differences and idealized that searching the net is not so difficult than using the school library catalogue to some students.

This study also disagrees with Dwyer et al. (2008) who discovered that there was no significant difference between the gender. But it confirmed Willenz (2006) who investigated how adolescent solicit and share information related to self injurious behavior and reported the gender differences. It also extended Jones and Sultren (2005) who also reported explicit consent to the distribution and sharing of information on SNSs, and furthermore reported that privacy concerns differ across genders.

The present study also agreed with Wolfe (2010) whose study revealed that the gender differences existed significantly where he reported female as being more highly than the males in the extent of SNSs use. Wolfe (2010) found the gender difference in the attitude towards SNSs to have existed more with the females which, therefore conformed to the present study respectively.

Furthermore this study indicated that there were more female participants than male participants. Although it indicated students' used of SNSs for an average of two - three hours per day the male participants preferred night browsing, while the female

participants preferred the daytime. More so, the male participants were seemingly much older than the female. In general there were differences between the males and females in terms of the general usage of SNSs. Synchronously Hargittai's (2008) findings also showed gender difference where females (80%) used Facebook while males (49%) used MySpace. Generally Hargittai's findings showed significant differences according to type of users. Hargittai (2008) also asserts that when it comes to aggregate SNS usage, women are more likely to use such services than men, but this depends on the type of site being use. Hargittai further related that "female students in the sample are much more likely to use MySpace. There was little difference between young women and young men in the group when it comes to Facebook, Xanga, or Friendster use. (p.279)"

On the contrary, Joinson (2008) study's sample was 137 Facebook users as participants who responded to an online survey. The distribution involved the 53 males and 88 females. In a one-way ANOVA between subjects he found a significant gender difference on profile privacy settings. To him, females are more likely to report making their profile more private than males. In the present study it shows that students are more likely to expose themselves to any one online and express their feelings or their secrets to friends online.

H₀₂ There is no significant difference in the extent of SNSs use in terms of age among Northern Nigeria university students.

This study found that there is no significant difference in terms of age in the extent of SNSs usage among students in Northern Nigerian universities. Therefore the H₀₂ 'There is no significant difference in the extent of SNSs use in terms of age, among Northern Nigeria university students.' was accepted. This contradicted Awoleye et al.

(2008) who reported that difference in the SNSs use exist even among undergraduates, and postgraduate students in terms of age. Herring (2010) also idealized that “students have no difficulties in searching the net than using the school library catalogue in terms of their age. For most students searching the web is more effective among the lower age; while to older age students it is a difficult task.” He added “differences were significant for overall use and even among students owning their own computers in terms of age. Willenz (2006) also found that female students ranged 14-20 years of age visited bulletin boards most and concluded that the SNSs message boards provided essential social support for bringing together self-injurious adolescent and sexual explicit materials.

H₀₃ There is no significant difference in the extent of SNSs use in terms of faculty, among Northern Nigeria university students.

On this question the findings shows that there is no statistical significance difference among the faculties in terms of SNSs usage in Northern Nigerian universities. Therefore the H₀₃ ‘*There is no significant difference in the extent of SNSs use in terms of faculty among Northern Nigeria university students*’ was accepted. This is not in consistence with Awoleye et al. (2008) who asserted that in Nigerian situation a large amount of students differed significantly in the Internet use. In their study Awoleye et al. (2008) also found that there was a high disparity among students according to faculty where they found the mean score as highest in technology faculty and faculty of Administration being the lowest in the mean score. Cheng et al. (2008) on the contrary opined that there was no disparity among the faculty members in terms of using YouTube by downloading or uploading information clips. This was possible because using Internet

in general differed with using SNSs. Hargittai's (2008) findings showed significant differences according to type of users of SNSs. This study is in consonance with Hargittai (2008) who examined differences among users and non users and reported that "there were no significant differences according to faculty in SNSs usage. This was because of the inter SNSs resource share and interactivity. He further indicated that there was disparity among the faculty members in terms of using YouTube by downloading or uploading information clips. All of the above views consistently go with the present study; especially among the faculties of Sciences and the Arts in which the faculty of Arts has the highest level of usage. This study also indicated that the Arts students have the highest level of SNSs usage compared to others and Science students have the lowest.

Wolfe (2010) also reported differences in percentage in the SNSs usage among various faculties and students. Business faculty was found to be with the highest score while faculty of sciences has the lowest score in percentage which was not supported by the present study because there was no any significant difference reported.

H₀₄ There is no significant difference in the extent of SNSs use in terms of ethnicity, among Northern Nigeria university students.

This study found significant difference in the SNSs use in terms of race/ethnicity. Hence, *H₀₄, there is no significant difference in the extent of SNSs use in terms of ethnicity, among Northern Nigeria university students* was rejected. Although the difference shows very minimal it indicates that the area was mostly dominated by one ethnic group the Hausas. Media houses like BBC Hausa service boosted the SNSs usage

through posting debates, and discussion on local, global social and political issues on their Facebook and Twitter pages in the Hausa language. Herring et al. (2007) examined the practices of users who bridged different languages.

Regarding race and ethnicity, Hargittai's (2008) findings also show ethnic differences where the Hispanic students are significantly less likely to use Facebook compared to other groups, whereas they are much more likely than others to use MySpace among Hispanic students compared all others. Moreover, Hargittai (2008) asserts that white students, Asian and Asian American students are much more likely to use Facebook than others, but they are significantly less likely to use MySpace. In the present study the Hausa, Yoruba, Igbo and others showed significant differences among them in terms of the SNSs use.

H₀₅ There is no significant difference in the extent of SNSs use in terms of socioeconomic background among Northern Nigeria university students.

In terms of socioeconomic background the present study found that socioeconomic background has no differences in terms of SNSs usage. Kord (2008) reported that socioeconomic background has significance effect on the Facebook and MySpace usage. His finding showed that “students whose parents have less income are significantly less likely to be on Facebook and are significantly more likely to be on MySpace (p. 277).” Those who have at least one parent with a college education are “significantly more likely to be on Facebook.” But those whose parents were graduates were “considerably less likely to spend time on MySpace. (p. 277)” Some of the variables measured in Kord's study were socio-economic status and the educational achievement level of the students' parent.

In a nutshell in the present study there is no variation in using the SNSs among the various socioeconomic backgrounds. In view of all these the H_05 : *There is no significant difference in the extent of SNSs use in terms of socioeconomic background among Northern Nigeria university students* was accepted

Most of the respondents reported using commercial cyber café for browsing SNSs whereas very few used their mobile phones. This suggests that there was lack of adequate Internet facilities in the campuses. In view of this most students' families that do not have access to the Internet connection, the students found it difficult interacting with the family members while in school. This finding is in accordance with some studies (Awolaye et al., 2008; Kwace, 2007; Murphy et al., 2004; Yusuf, 2005) who reported that the rate of deployment, access and usage time of new technologies in developing countries is relatively low, especially those of sub-Saharan Africa. They also identified the common problems which attributed to poor availability, connectivity and accessibility of Internet facilities. Kwace (2007) similarly reported low access to basic ICT equipments, low Internet connectivity, low participation in the development of ICT equipment, and even low involvement in software development in Africa. In fact, he said New York City has higher Internet connectivity than the whole of Africa.

Koch and Praterelli (2004) hypothesize that as a result of family background individuals who read a passage about negative effects of the Internet would respond negatively. They also assume that introverts students are more comfortable with the anonymity in using the Internet than extrovert students. The findings of Sum et al. (2008) as well showed that using the Internet can be helpful for older adults and the well to do people if they are aware how they use it. From the qualitative result, the present study

also found that efforts were being made by the NUC and the university authorities in improving the IT capability for easy access of the Internet. This study therefore agreed with Awolaye et al. (2008) who state that a number of universities in Nigeria are now making frantic efforts to improve on their ICT infrastructure.

H₀₆ There is no significant difference in the extent of SNSs use in terms of level of study, among Northern Nigeria university students.

From the ANOVA results it shows that there is no statistical significant difference in terms of using SNS among the various levels examined. This shows that the H₀₆: *There is no significant difference in the extent of SNSs use in terms of level of study, among Northern Nigeria university students* was accepted. In the aspect of level of study Wolfe (2010) was at variance with the present study where he reports differences among the various levels. He indicates sophomore as having the highest level of SNSs use while freshman having the lowest. On the other issue whether the gap in Internet use narrows from freshman to senior year; it reveals that there are differences among all races/ethnicities, fresher, sophomores, seniors, and juniors in use of the SNSs.

H₀₇ There is no significant difference in the extent of SNSs use in terms of religion among Northern Nigeria university students.

By the fact that there are some of these sites which are religiously biased the present findings was concerned with very few but major ones (Facebook, MySpace, YouTube and Twitter). All of these were general in nature and liberal with religious affiliations. Many students indicate that the SNSs have relevance in their religious injunctions. They also use SNSs for their religious discussions. With this there were three

categories of religions report in the present study i.e. Islam, Christianity and the others (traditional). The result shows no significant difference among the religions in the extent of SNS usage in the Northern Nigerian universities. From this point it can deduced that H_07 : *There is no significant difference in the extent of SNSs use in terms of religion among Northern Nigeria university students* was rejected. Nyland and Near (2007) investigated religion as a demography variable. This study also did and reported that religion has no significance difference in the SNSs usage among student in the Northern Nigerian universities.

Research Question 3

Is there any relationship between the SNSs usage, students' social behavior and students' academic adjustment?

H₀₈ There is no significant relationship between SNSs usage, students' social behavior and students' academic adjustment.

This portion of the study tried to identify the relationship between the SNSs usage and the SSB among students in Northern Nigerian universities. The correlation result shows positively high significance. The findings here suggest that the relationship that existed between the SNSs usage and the students' social behavior in the Northern Nigerian universities is strong. Therefore Hypothesis *H₀₈: There is no significant relationship between SNSs usage and students' social behavior* was rejected. This result so far is concordant to previous studies like Ellison et al. (2007) who found a strong positive relationship between Facebook use and social capital. Similarly, the study (Dwyer et al., 2008) surveyed on 44 male and 23 female undergraduates. They discovered that there is a strong correlation between perceived effectiveness and a measure of performance in SNS usage.

Pempek et al. (2008) examine how much of the time were spent on Facebook reading or observing what other people are doing such as looking at people's walls, looking at pictures, reading profile information. Some of their reports were "I used SNS because it is a good way to keep me informed as far as who my friends are interacting and associating with." "I communicated through messages, wall posts, and even events." "I have been able to sustain so many friendships through Facebook, which is the biggest reason why I used it." "Using SNS wall is a lot easier and less time consuming than

picking up the phone to call a friend.” All of these showed different kinds of behavior in using SNSs.

Similarly, in the present study the following items were positively supported i.e. ‘*SNS is important to me because I can expose myself online.*’ ‘*SNS allowed me to express my feelings and secrets to friends online.*’ Other items also supported were ‘*I have a change in my behaviors and life style when started using SNS,*’ ‘*SNS allowed user to acquire very few bad behaviors.*’

Items that were negatively supported included *I sometimes post pornographic statements or pictures* which scored highest mean; *I would not mind selecting my life partner (wife/husband) on SNS* with a moderately high mean score. Another item is ‘*I used to post abusive statements on SNS which users cannot do offline*’ which also has a significant mean score.

Pempek et al. (2008) report that females users are looking specifically at their own profiles significantly more friends than males. It also reveals that female users posted significantly more photos than male users. Females were more often tagged in photographs than were males. One of the respondents stated “it is amazing how connected it has made me with my past.” Other respondent viewed their behaviors with regard the usage as “learning information about others.” The findings also suggest that users are more obsessed with using SNSs as they check the SNSs more than their email. Other behavior identified in these findings in using SNSs was self-presentation. People do present themselves as how they want others to perceive them.

This study is in consistency with Xie et al. (2009) who explored the behavior association and interaction influence in the social network and the effect of social

network sites on students. Xie et al. (2009) opined that in the social network, the social interactions such as security risks may not be independent and they exhibited behavior influence on each other. Benevenuto et al. (2009) similarly investigated the impact of friends on the behavior of users of social networks. They suggested that the success of SNSs is directly related to the quality of contents the users shared. In the current study it was found that the item '*SNS caused some negative or anti social behaviors on students*' shows low score. On the contrary the item '*SNS enhanced positive social behaviors*' scored a high mean. From this therefore, it indicated that students' social behaviors are related to their SNSs usage in Northern Nigerian universities. The more the usage the more the social behaviors either positive or negative based on what contents the user is sharing with other users.

Stutzman (2006) investigated identity-sharing behavior in SNSs and reported that many of the students shared personal information on SNSs. Although the distribution was skewing heavily towards undergraduates he reported that 71% respondents had indicated participation in SNSs and sharing personal information behavior. He also reported over 20 million users potentially invasive to negative behaviors (sexual, political, religious, views, photo etc). The present study is similar to Koch and Pratarelli (2004) who also reported that male students viewed more sexually explicit material for social purposes. Horng (2009) found that many SNSs evolved from user generated services and approaches. The negative impact may lead users to leave or abandon a site. Therefore in the present study it suggests that the user behavior guide the SNSs process. Users' behavior either negative or positive determined the quality and decency of the SNS site. Their behaviors directed the flow of the SNSs as it gives direction to the managers.

Adebayo et al. (2006) reported a relationship between exposure to sexual contents in the media and sexual beliefs, attitudes, and behaviors. Other researches on SNSs (Boyd & Ellison, 2007; Ellison et al., 2007; Golder et al., 2007; Zywicki & Danowski, 2008) outlined user behaviors, its characteristics and its relations with SNSs use which all reported to be positive. On this the H_0 : *There is no significant relationship between SNSs usage and students' academic adjustment* was rejected. The statistical correlation result indicated a highly positive significance between the SNS usage and the students' academic adjustment.

In a similar study by Kord (2008) it investigated the relationship between SNSs and academic and social integration and intentions to re-enroll in university. The overall effect of spending time using the Internet either for academic or social purposes did not prove significant in student's integration, as it provided less than 2% of the overall explained variance. Some of the significant outcomes of the study showed the negative relationship between time spent on the Internet for leisure purposes and academic interaction with faculty; whereas, the relationship between academic Internet usage and interactions with the faculty was positively correlated. This information supports faculty use of online tools to engage students and to encourage an academic presence and adjustment through the use of technology. This led to the conclusion by Kord (2008) that SNS was a negative influence on the students' academic experience.

The correlation result also suggests a highly significant correlation between SNSU and SAA. Therefore, SNSs usage and students academic adjustment in Northern Nigerian universities positively correlated. It can therefore be deduced to the fact that there is a strong relationship between the SNSs and academic adjustment. Hence H_0 : *There is*

no significant relationship between SNSs usage and students' academic adjustment has been rejected.

Kolek and Saunders (2006) also mentioned using SNSs as a faculty-students interaction strategy in their research which keeps them abreast with the school environment. Kolek and Saunders (2006) research project also provided evidence that students continued to spend time engaging in SNSs to stay firm to school after they began attending classes. They found that 82% of undergraduates had Facebook profiles which keep them attached to school mates and family members. They reported that females were more likely than males to have a Facebook account used them frequently. This study is similar to Hesse (2007) who explored the use of SNSs among international students on exchange in the United States. His evidence showed that most students used SNSs at least partly to stay connected with friends back home and to be networked with other exchange students to stay attached to new school. He added that students often reported having difficulties building upon interactions and transforming them into more lasting relationships. This view also conformed to the present study. His conclusion revealed that host culture outweighed the presumably negative effects of being too closely connected to the home culture. Additionally many of the Boyd's (2006); Lenhart's (2007) respondents, reported having limited their profile to only their friends as a means to adjust to their institutions. Lampe et al. (2007) explored the relationship between profile elements and number of Facebook friends. The findings showed that profile fields reduced transaction costs and are harder to falsify. More so they are most likely to be associated with larger number of friendship links. Lampe et al. (2007)

reported positive relationship between the profile elements and number of friends on Facebook.

From the quantitative result it shows the result of the relationship between the students' social behaviors and the students' academic adjustment (SSB and SAA) has the value which suggests a highly significant positive relationship. This means that the more the students' social behavior the more their academic adjustment among the Northern Nigerian university students. With this result therefore the H_{08} : *There is no significant relationship between students' social behavior and students' academic adjustment* was rejected. This finding therefore leads to answer the question of whether online social networking involvement contributes to academic adjustment and social behavior modification (Kord, 2008; Murray & Malmgren 2005). The present findings clearly outlined issues and answered questions regarding the negative influences of SNSs. The SNSs have these negative influences on students who sequester or isolated themselves to their own constructed private spaces, profiles, channels or walls instead of getting involved in the general offline on-campus social, academic and spiritual activities.

The current study found that students used the Facebook website as a medium or avenue where they adjusted academically by expressing themselves, shared their daily lives developments with friends and family members; and perhaps kept in constant touch with a group of new and old friends. They used it as well to stay up to know about the happening around them. This is in concord with Kord (2008) who also reported similar in his findings. He showed that "SNS is a negative predictor of academic integration for student's perceptions of faculty and for their development and teaching as well as

academic and intellectual development. (p. 119)” He concluded that online social networking was a negative influence on the students’ academic experience.

The present study examined the relationship between the students’ social behaviors and the academic adjustment in Northern Nigeria and found it to be highly and positively correlated unlike Omoteso (2006). Omoteso only examined the sexual behavior and adjustment of university students in south-western Nigeria. He found that family background of the students did not have significant influence on their academic adjustment. The study found that “the university undergraduate students in south-western Nigeria had various academic adjustment problems and their peer status while in secondary school had significant influence on their academic adjustment.”

Moreover, the present study bridged the gap suggested by Hesse (2007). He suggested for further qualitative and quantitative investigation about the perceived effects of this communication behavior to be undertaken with regards the issues on SNSs and student adjustment. In his study, he explored the SNSs use among international exchange students in the United States. His findings indicated that use of SNSs among exchange students shapes their adjustment process. The SNSs use is not a substitute to personal interaction, but a kind of “augmented reality.” It helped students on exchange get informed of their environments and expand contact with their host culture. SNSs extend information accessibility on the schools social fabric and of peer groups.

Among other related studies in consistence with the present study was Tseng (2004) study. The study distinguished between family interdependence “attitudes and behaviors and found that they had counteracting influences on academic adjustment.” She added that “family obligation attitudes contributed to greater academic motivation among

youth from immigrant as compared with U.S.-born families.” On the same vein the results of Buote et al. (2007); Rice et al. (2005) indicated a significant positive relationship between new friendships and adjustment to university which coincided with the present study. There is an association which was found to be stronger for students living in residence than for those commuting from home to university.

In a similar but smaller scope, Autuum (2009) investigated the relationships between students’ socio-economic background (SEB) and adjustment to college. The results of the study indicated that “students from low-SEB are less well adjusted academically and personal-emotionally, as well as having less attachment to their university than their peers from higher backgrounds.” The present study in a wider scope examined the SEB in relation to the academic adjustment and social behaviors and found no significance difference. The middle class, the lower and the upper mainly have similar adjustment ability and maintain similar social behaviors in the university. This could be possible because majority of the students were from the middle class. More so, those from the upper class mostly go for studies abroad and the lower class do not usually get the opportunity to go to university.

In their study, Lockyer and Patterson (2008) suggested for an investigation on whether current and emerging behaviors on SNSs to inform formal education. In their findings they argued that there are evidences of informal learning existence on SNSs which is related to users’ current and emerging behaviors. They asserted that if such is manage properly it can manifest to a formal education. Thus in general term the H_08 : *There is no significant relationship among SNSs usage, students’ social behavior and students’ academic adjustment* was reject.

Research Question 4

Does the students' attitude moderate the relationship between SNSs usage and both students' social behavior and students' academic adjustment?

H₀₉ Students' attitude does not significantly moderate the relationship between SNSs usage and students' social behavior.

In this question the result shows the contribution and moderating effect of SATT on the relationship between SNSU and SSB as being significant. Therefore the *H₀₉: Students' attitude does not significantly moderate the relationship between SNSs usage and students' social behavior* was rejected

Goodson et al. (2000) in studying university students found that participants' attitude towards seeking sex information and sexual entertainment which formed part of social behavior varied based on the frequency of their Internet usage. The presents study share similarity with this view in the sense that the attitude was found to be a significant moderator on the relationship between the SNSs usage and students' social behavior. The study goes along with Dwyer et al. (2008) who also postulate that the way we feel influences the way we interact therefore private attitude can influence social relation to the positive or negative.

Wolfe (2010) reported differences in percentage in the SNSs usage among various faculty students and found gender difference in the attitude towards SNSs and its usage. In terms of the level of study, Wolfe (2010) reports that sophomore have the highest level of attitude towards SNSs usage while freshman having the lowest. In similar trend, Nik Yuzila (2006) claimed that education level was positively influenced by the students' attitudes. While on the other hand gender, race and academic achievement have

negatively influence students' attitudes towards Internet use. Al-Jaraideh (2009) uses a model to show how attitudes influence and moderate the use of technology features that enable interpersonal relationship management. It was found significant that attitude have a significantly positive moderating effect.

H₀₁₀: Students' attitude does not significantly moderate the relationship between of SNSs usage and students' academic adjustment

More so the findings show the contributions and moderating effect of SATT on the relationship between SNSU and SAA. The hierarchical regression result shows statistical significance. Hence the *H₀₁₀: Students' attitude does not significantly moderate the relationship between of SNSs usage and students' academic adjustment* was rejected.

Yan Yu (2010) study also found a significant mediation effect of socialization between the SNSs and learning outcomes. Steinfield et al. (2008) observe self-esteem as a mediator to the relationship of Facebook usage and bridging the social capital and found it to be positive contributor and predictor. Students' attitude toward the use of SNSs has gone wide and it is seemingly out of desperation and curiosity to have presence on the network and gain friends. These create a way to get adjusted to the school environment and do away with some of the academic adjustment problems.

This study found that attitude significantly moderates the relationship between of SNSs usage and students' academic adjustment. This suggests that the relationship is found to be positive. Hence students' use of SNSs goes along with adjustment. Therefore, students interacted with whom they like and any other to get adjusted. This reflects the Horng (2009) who also indicates that Facebook allows only people who know each other

to access their profile unlike other SNSs like Atlasport which only links people who are alike or close to each other on the map as friends just like the YouTube does. It means everyone is likely to have any one as a friend out of desperation.

In the table 5.1 below it indicates the summary of the summary relation on the objectives, research questions and hypothesis.

Table 5:1

The summary relation on the objectives, research questions and hypothesis

Objective	Research Questions	Hypotheses	Decision
1. To find out the level of SNSs usage, students social behavior and students' academic adjustment, in Northern Nigerian universities.	1. To what extent is the SNSs usage students' social behavior and students' academic adjustment in Northern Nigerian universities?	None None None	none none none
2. To ascertain the relevance, similarities and disparities of the SNSs usage in relation to gender, age, ethnicity, faculty, level of study,	2. Is there any significant difference in SNSs usage among the Northern Nigerian universities students in terms of, gender, age, faculty, ethnicity, socioeconomic background, level of study and	H ₀ 1: There is no significant difference in the extent of SNSs use in terms of gender, among Northern Nigeria university students. H ₀ 2: There is no significant difference in the extent of SNSs use	Rejected Accepted

socioeconomic background and religion among Northern Nigerian university students.	religion?	in terms of age, among Northern Nigeria university students.	
		H ₀ 3: There is no significant difference in the extent of SNSs use in terms of faculty, among Northern Nigeria university students.	Accepted
		H ₀ 4: There is no significant difference in the extent of SNSs use in terms of ethnicity, among Northern Nigeria university students.	Rejected
		H ₀ 5: There is no significant difference in the extent of SNSs use in terms of socioeconomic background among Northern Nigeria university students.	Accepted
		H ₀ 6: There is no significant difference in the extent of SNSs use in terms of level of study, among Northern	Accepted

		Nigeria university students.	
		H ₀ 7: There is no significant difference in the extent of SNSs use in terms of religion among Northern Nigeria university students.	Rejected
3. To find out the relationship between the SNSs usage, the students' social behavior and students' academic adjustment in the Northern Nigerian universities.	3. Is there any relationship between the SNSs usage, the students' social behavior and students' academic adjustment in the Northern Nigerian universities	H ₀ 8: There is no significant relationship among SNSs usage, students' social behavior and students' academic adjustment.	Rejected
4. To find out if students' attitude moderate the relationship between SNSs usage and both students' social behavior and students' academic adjustment.	4. Does the students' attitude moderate the relationship between SNSs usage and both students' social behavior and students' academic adjustment?	H ₀ 9: Students' attitude does not significantly moderate the relationship between SNSs usage and students' social behavior. H ₀ 10: Students' attitude does not significantly moderate the	Rejected Rejected

relationship between of
SNSs usage and
students' academic
adjustment.

5.3.1 Comparison between Qualitative and Quantitative.

The combined qualitative and quantitative results also suggested that SNS is used among the students in Northern Nigerian universities in order to communicate and interact with relatives, lost friends, old and new friends of former schools and family members. It helps in connecting people where face to face interaction was not obtainable. It allows sharing of feelings with others. It is also a discussion board on personal issues with others on various affairs and at various situations. It is as well used for academic activities among both students and teachers. In fact SNS is a social environment which socializes people both friends and family.

The categories of the present results also reveal that chatting among SNSs users is more likely that they have interests in common. The time they take on SNSs sharing, talking and interacting, the more likely the stronger their relationship may be. People interacting with one another on SNSs are likely to share their personal information and their characteristics with each other. Things like the address, age, place of work and even financial status are shared among the users most likely to the opposite gender. Many students reported that using SNS made their interpersonal relationship always stronger.

On the motives and rationale behind using SNSs, in this study it was found that using Facebook was heavy among the university students and they used it for various

purposes. One of the ways was to get connected to friends and family. Others motives were to get new friends and get in touch with old friends. It was also found that chatting on the net and sending messages were other important aspects among the students. Some students indicated that they keep on sharing emails and SMSs with each other among their schools mates.

SNS allows users to interact with whoever they feel like or they want to on the network. There no many things one can do without such Internet facilities as it unite people; it also made the students to be aware of what is happening in the society. This suggests that the world is a global village because Internet and SNS in particular is now available to many people in every nook and corner of the world. It is a medium or avenue to chat, talk and deal with others across the global spares academically, socially and in businesses.

The findings indicate from one to three hours as the time the students usually used to spend browsing SNSs. The quantitative and the qualitative results indicated that most of the students are spending approximately more than one hour per day on SNSs. But, none indicated more than five hours because if not for someone uploading items there is no need to stay such longer as it might be boring. Majority showed that the motive behind their mind determined the time to be spent. Others believed that the gadget used and the financial ability of the user to subscribe the service guided the time to be spent on SNSs by any user. As there is no enough and reliable Internet connection mainly in most of the universities in the region, the students relied on commercial Internet cafés around the campuses or by using their mobile phones which are more expensive to use. Some of the findings show motives for changing profile which was mainly for updating status or else

if encountered with a negative problem while using the site. It was also found that as life changes so also the dealing with the SNS profiles should change.

With regard to pornography usage on SNSs, it was found that some students in some universities of the Northern Nigeria do used pornography on SNSs by uploading pornography and nude pictures especially on YouTube and MySpace. They were regarded as unserious student fellows who wanted to humiliate others. It was also found that there is nothing educative at all in pornography, it is just mere an immoral act. It was found that many students denounced porn and said that they used to feel embarrassed when they come in contact with porn sites. As majority of the respondents claimed not to be using porn they urged web developers and university authorities should create security that can prevent such things on SNSs. The findings also suggest that browsing pornographic sites depends on individuals' decency. Moreover, it also shows that normal person should shun away from pornography especially on SNSs as it is a social hub where a host of every categories of decent people are on it.

The results also indicate that the successes of SNSs are based on their egalitarian structure. It was also found that there is a need for controlling and or monitoring of SNSs especially on campus as the case was in some organizations and companies who forbided using Facebook especially during working hours. Although most of the users go to private cafes for browsing and that there will be no bounds in using the SNS. Yet the findings also indicate that the nature of African society particularly the densely populated Nigerian society requires control on such issues like pornography which may have devastating effect on the whole academic generation in the area. On the qualitative interview more than 80% denied using pornography. Similarly the quantitative data

analyzed showed that viewing pornography often on SNS scored the frequency (n= 270 which represents 66.6% of all the respondents. This indicates that some rarely use pornography while vast majority do not.

SNS structure propels popularity and gives chances to spread all out. Users can create and customize their profiles, wall, and pages. They can also make links to other sites of choice. It is good and easy to work with. The SNSs also gave access to teacher/student relationship which subsequently made teaching/learning possible on SNSs.

The findings also show that it is most likely and very possible for terrorist and cultist activities to be carried out on SNSs. It shows that the people (terrorist inclusive) can go in there sign up day and night freely and share their views with any other user. SNSs are global village networks squares. People go on and communicate through it, chat and pass information anonymously or otherwise. If something is not done urgently it will be a threat and do harm to national security. Similarly it was found that such network can aid in avoiding terrorism because information can be read by all friends especially on Facebook if not customized by the users.

From the majority views the findings shows that SNSs usage may likely dehumanize students' behaviors but depends on the nature of the friends and interaction one engaged in. Others disagreed with the notion. Claiming that anyone with bad behavior on SNSs was already a victim who suffered from such behavior dislocation. But majority of the view hold that SNSs do tarnish and dehumanize users behavior in terms of time management, viewing nudity, creating lies, appearing untruly to others, hiding or exaggerating information, and doing so many callous activities. Some cited

MySpace and YouTube as more vulnerable to attacking user behaviors. It is evident from the quantitative result that SNS causes some negative or anti-social behaviors on students significantly.

The findings also suggest that the SNS is a network that would likely portray who the users are as such some users exaggerate things on the way they want other people see them. It also indicates that many among the students agreed in making false statements and lies sometimes on SNSs but not always. However majority of the students claimed to be posting correct and good information in order to find sincere friends and share correct information. Some suggested that information should be restricted to individual's profile alone.

5.4. Research Implications

This research has a number of implications that can be logically classified into three as follows: the practical, psycho-sociological and theoretical.

5.4.1. Practical

There is the poor meaning of friendship in SNSs i.e. (between friend and acquaintance). Long term, the effects may or may not be devastating. On the one hand there are vulnerable people who are field dependent who believed in everything they saw on the web. Those who believed they talked to their net idols. It may turn them to anti-social beings who are computer reliant on the basis of safety of being anonymous but unknowingly still ajar. The attitudes and behaviors of SNSs communities or social groups may have been exploiting by increasing numbers of users just as the case was of general Internet users (Karagiannidis et al., 2010).

SNSs usage tends to be passionate among the youth of the zeitgeist. It is just an extension of phonebook which contained the good, the bad and some ugly information about users. SNSs such as YouTube, Twitter, MySpace and Facebook may have such profound effect on adults' users and children as well. SNSs continued to encouraged users to involve in more SNSs exploration and to contribute constructively in integrating one SNS with other SNSs, forums, and blogs for educational materials.

In SNSs, as deviants also have many friends. It could be a potential hub for grooming people to sexual abuse and other deceit acts. Deviant users sometimes got banned from SNSs which lead to aggravation, aggression, aggregation of social judgment of deviance. It will result to good and bad; proper, and improper behavior. This is by spending time chatting, laughing or admiring photos, SNSs made users social; while on the other hand a lot of users wasting time on-line with no one around but only screen make the users anti-social.

Users' ways of lives on SNSs are accessible to others. The true friends, predators, and online stalkers may get that advantage to hurt or render help. SNS like the Russian based SNOB which was termed as the virtual club for the millionaires has such attacks of predators. In using SNSs, there is a need to be careful in using anyone's real address, real place of business, real name, that could endanger them. The anonymity adds unusual twist and variations to socialization. Anyone can be friend to all by simulating whomever they desired.

SNSs are excellent ways to catch up with new and old friends and meet new people with same interests. Every day millions of users flocked and participated on SNSs

for many reasons. It posts many benefits to society and it added a dynamic way for people to communicate through social, academical, cultural and religious discussions.

Some activities that have to do with religious aggression and intolerance may lead to terrorism. It is difficult to plainly carryout terrorist activities on most popular SNSs yet it may help motivate terror activities around the world. For instance the Facebook case on religious cartoons in May 2010 leads to mass demonstrations in many Muslim countries. Therein may leads to sermons and campaigns around the campuses in churches and mosques on how to be using the SNSs wisely, ethically and judiciously. Students should get informed and be warn of the dangers of wrongs use of such services.

5.4.2. Psycho-sociological

SNSs like Facebook and Twitter contribute to an instant gratification and self-centered. On the other hand gossip and latest trends are the order of the day on SNSs. It also made those troubled with socialising in real life to be socialized easier. SNSs may be infantilizing the users' brain into the small children psyche state who usually got attracted by such buzzing words and styles; who are well known of little attention span. Other issues were that instead of interacting directly with human beings, SNSs user may end up learning how to interact through machines proxies i.e. computer, mobile phones, ipods, ipads etc. More people are becoming dependent on technology to communicate, this make it harder to communicate in a more real way. As such it invariably reduces gap of virtual interaction and increase barrier of bare real interaction.

Extreme loneliness getting serious while support and human care appearing to be empty and unreal. A computer certainly cannot shake hand, hug or embrace someone. So, friendship is more likely disheartening and fake. SNSs make user less motivated and less

active to do other things. Generally interactions on SNSs tend to lack basic body language which is essential for mind satisfaction. The online friendships can abruptly terminate at anytime, unnoticed and without farewell to each other and it may hurt one another later.

SNSs seem to have replaced the pen pals. Now the society is totally a freeway in exchanging views, photos and videos. Private life photos and information are free to anyone online. Everything that everyone does is shared to the world. Thoughts, feelings and other information are displayed for anyone to friends of friends. Some recorded and posted videos and photos during bad moments help refresh grief remembrance; especially of death. If uploaded and later viewed or played by family members and friends in an attempt to comfort them it adds to their grief.

SNSs offer opportunities to learn through person-to-person contact; how children, teenagers, adults and students relate to their communities, politics, lifestyles, and other aspects of their daily lives. Friendly communication and interaction could bring more understanding among contemporary young people around the world. On the other hand, cyber bully and other sort of e. crimes may become rampant over the network which leads to a lot of psychological discomfort to vast array of victimized users.

SNS is not only a preferred way to spend time, it is engrained into our culture. SNSs have revolutionized our culture, and the way of viewing our relationships with people. It has shrunk the earth regional distance in such a way that the chance of not meeting each other is getting thinner and thinner.

5.4.3. Theoretical

It requires keeping rules in mind when participating. Because any post like legal behavior post may have permanent record on the user. All the pictures, negative comments, and secrets posted may boomerang on the user. It may even cause losing a job. Opinions posted, could boomerang to hurt user. Information posted, even if it was wrong someone may read it as a fact or correct. SNSs users take friends as they are because anyone can sit down behind a computer and create a false identity or fabricate untidy information.

Flatter, innuendos, intimation, or flirting comments can break relationships. Other things like posting of pictures with past boyfriends or girlfriends might breed jealousy, create chaos and lead to paranoia or distrust and miscommunication which may even lead to break of marriages.

As one portion of people organizes meetings, social events and exchanging information on the SNSs others in the society grips to social isolation or else do callous acts like terror or cultism. As it is a venue of people with common interests, and sharing of feelings, experiences and views. It is also an open invitation to forum of predators, with unsavoury purposes in mind like identity theft, scamp etc.

SNSs came to stay, so YouTube, Twitter, MySpace, Facebook, and host of others opened the opportunity to rise and fall. It just depended on users mind on how to go with them by so doing one determines how they may implicate the affects. On this SNSs are therefore mixed blessing which can be used and abused. It also suggests that moderate SNSs usage may likely control the users' heartbeat for staying cool at one place. It will also make users mastered the computer or any other gadget being used. It shapes instant

thinking by spending ideal hours in amusement and it improves life by expanding the world view.

5.5. Contributions of the Study

5.5.1. Theoretical Contributions

Findings of this research have made a number of contributions to social cognitive learning, social constructivism and diffusion theory. First, this research has empirically pushed the applicability of all the theories to developing nations in forms of instructional design by SNSs. Although it is argued that bias in the diffusion research in favour of developed countries do existed; the research therefore extends the applicability to university settings not only in Northern Nigeria but pave way for other researches to deal with other part of the country. Some sociological, technological and psychological key issues related to theoretical perspectives were supported. Most especially on the Rodgers innovation diffusion theory, the social cognitive theory and the social constructivism led by Vygostky.

This research also as part of its contribution formulated a model with the ability to explain phenomena in terms or existing relations and variation among various constructs i.e. the SNSU, SSB, SAA and SATT. The model was also put to test in an edifice way of the literature flow and sequence thereby portraying the practical relationship and variance among the major variables.

The study reveals that through obtaining memorabilia from other members in form of pictures, text or videos, the users SNSs profiles and boards appeared to have restored their sense of self-worth. This comes up by reminding them of most important

aspects in their lives in relation to their connectedness with families, friends, and other group or societal membership.

The present research contributes to the literature in the sense that through using SNSs. It suggests of building and maintaining those social connections as well as engaging in social interactions. Other contribution can be seen related to the online affordances in form of SNSs profiles' editability and asynchronicity which steamed up the possibility of building the gigantic online society.

Next, this research also explored the possible impact of seven demographic factors viz: the level of the study, gender, age, religion faculty, ethnicity and socioeconomic background in relation to the SNSs usage. The research also found weak demographic differences especially in terms of ethnicity and religion.

Again evaluation of construct correlation, moderation, R^2 , beta coefficients and relationship between overall SNSU in relation to SSB, SAA moderated by SATT revealed that the model accurately explained the fitness of the moderator variable in the model. In essence this research proved the versatility of the model. Reasons for the robustness of the model were equally proffered. This research also indicates relative importance of SNSU, SSB and SAA elements; hence provided vital input for comparing the model to different environment like Malaysia in particular.

Testing the students' attitude as a moderator is another contribution of this study. Many studies used attitude as moderator but not congruently to this research model. The effect of the attitude being positive here, it shows clearly that it contributed to the model affirmation.

Involving students in this research is another contribution to knowledge. Many of the students quench their naive quest on many issues regarding the SNSs, and social behaviors. They did that by seeking more clarifications from the researcher on those issues which they obviously dwell in long before.

5.5.2. Practical and Methodological Contributions

The major methodological research contribution of this study is the development of scales for measuring SNSU, SSB and SAA appropriate for Nigeria as a specific country. This process commenced with literature search, expert contributions and factor analysis and reliability tests that were carried out.

Another contribution was the finding of the research which enhances practical reduction of some of the anti-social behaviors like lying, aggression, cheating, tantrum, and deceive among students and promotes pro social behaviors like altruism, mutual interaction, social capital, self efficacy, and cooperation among universities' students in Northern Nigeria.

Others contributions were pilot study and the subsequent questionnaire modification, adoption and development as well as satisfactory results of constructs correlation, constructs validity and internal consistency test. Experts' comments on the instrumentation validity were vital for understanding of the operating environment, for example conceptualizing distribution to included not only geographic coverage (which is very popular in the literature) but also network service availability of SNSs in developing nations like Nigeria).

Many of the respondents came to understand the conceptual background of SNSs, its background and types. Other non users come to developed interests in using the

services. A lot of academics from the universities sampled were happy and so keen to seeing the results from the work. Others conceived idea and developed interest in conducting similar studies in relation to SNSs.

The study opens gate for many Nigerian academics to ponder and show desire to join the trend. Universities authorities were happy to witness such work in their institutions. Some even commended the researcher for randomly having their institutions in the sample. All the institutions involved were proudly promising to adopt the findings for their betterment. Many students got to understand and hope to overcome the way to deal with the SNSs usage in terms of their time, safety and privacy. The student subjects continued to interact with the researcher henceforth via mail. They were asking many questions related to how to go about certain issues related to SNSs usage. This make the researcher created a blog (SNSs Mindset) and pages on Facebook (University of Face book, and Mind your English) and continued to guide the students appropriately. The users of the SNSs have a clean way focus and attitude toward ethical usage of the SNSs without being tempted to negative experiences. Governmental policies regarding the usage, institutional / organisational rights, SNSs designers/ developers' tips and users' guide were all inclined in the study. They were easily identified, extracted, adopted and be benefitted from.

One other contribution of this study is investigation and setting a landmark on issues raised by Amalahu, et al. (2009) who postulate that teachers, parents, governments, organization and the SNSs designers and owners all may wanted to understand the real nature of the effect of the SNSs on the users which mainly compose the young university students.

The present research work posters an avenue to finding a roadmap to embeded the use of SNSs in the teaching learning process especially in tertiary institutions. The study helps promoted high level of skills in SNSs usage and made the university students more active in a quest to adjust academically. This is by fostering behavior of problem solving and analyzing information through the help of SNSs. In totality this study contributes colossally in identifying, expanding, edifying, structuring, sanitizing, modifying, and controlling SNSs usage among the students in Nigeria. It serves as search light for the Nigerian education policy makers and curriculum designers to understand the primary needs of the university students in terms of the ICT regulations in general and SNSs usage in particular as well as students' social behavior modification and perhaps their proper adjustment academically. This tallied with Hazita Azman (2007) who also suggested that government should urge to develop policies and contents to support ICT application among students to improve their capabilities, knowledge and skills.

These findings equally show that SNSs are things educators should not ignore. SNSs enhance learning management system (LMS) in making documentation, tracking, administration, and training in institutions. As a virtual learning environment SNSs should be used in Nigerian schools, colleges and universities. The idea of shun the social spaces or close the Facebook and face the book was denounced (Atwell 2006; Cross, 2006) where they argue that educators who shut SNSs out from their classrooms endangered the education system. The study as well agrees that formal learning that takes place outside of formal settings was very low compared to informal learning which takes place outside of formal settings. Creating and using the SNS environments relents great advantages to educational potential through collaboration, interaction and reflection.

Hence, it can be concluded that SNSs leverage both informal and formal learning opportunities.

This means in no doubt this study fosters a way to producing quality and excellent students in the country through the proper SNSs usage, positive behavior, adequate adjustment and positive attitude. Certainly that will facilitate the countries ambition of becoming among the top 20 developed countries by the year 2020. In a nutshell the prime contribution of this study is entirely for the phenomenon academic excellence production for the general realization and development of the Nigerian country by the 2020 making it among the top twenty most develop nations.

5.6. Generalization and Recommendations

Attempt to generalize the findings of this research to other situation in relation to SNSU, SSB and SAA should be done with caution since this research exclusively focused on the constructs or variables in Northern Nigeria. Even though there are similarities in demographic homogeneity among the subjects and between the technology-enabled services i.e. SNS. There is also great deal of variability among different types of the SNS technology usage i.e. Facebook, MySpace, Twitter or YouTube. One striking difference found relevant in this context again is the modality of the accessibility.

While the university community is a very good sample for this research for example, previous research has shown that youth and students are heavy users of SNSs. It is one of the most easily accessible sample segments in developing nations (Nigeria in particular).

Having seen SNSs proliferated like a wild fire bringing people closer by the dearth of distance, it is evident that most students used commercial cyber cafés to browse the SNSs while others used mobile phones. The study proposed that the Nigerian universities need to

establish presence on SNSs as the case was with most of the Malaysian universities and many other renowned institutions globally. The SNSs are one of the easier channels to reach out audience. Hence, it simplifies social capital and easy faculty-students interactions. As such policies, programs and other important aspects can easily be diffused, regulated, and benefitted by SNSs medium. However, it should come to the notice that many rules, ethics and etiquette applied on the real world with regards to interaction equally needs to be applied on cyberspace otherwise known as netiquette behavior.

In view of this SNSs were identified as the avenues for both the good and bad activities and that the students are more vulnerable to such problems. It is mandatory to look into a solution out of it. A lesson from this work will leads to orientations and provisory advices for the students on how to wisely and judiciously use SNSs. It extends some of the privacy and security issues and concerns explicitly advanced by some SNSs in using their sites. These included the general guidelines regarding community violations, contents of hateful nature, sexual assault and abuse of minors (Paedophile), suicide and impersonations.

This study, therefore, set a clue for the next line of action in relation to the design, usage and policies promulgation regarding the SNSs. It also pave ways for revisiting national policies on ICT and suggested for government's negotiation or treaties with major SNSs companies, other governments on SNSs services and access and perhaps usage policies in such countries particularly Nigeria which is the concerned of the present study. Furthermore, SNS companies need to set default privacy settings of profiles to the highest level. This would help the users to have comfort in using the sites especially in

using other features like face to face video/webcam chatting, academic cyber games, online quizzes and debates, cyber counselling and ethics, ergonomics and so forth.

To the users, therefore, in view of the above the study opts to suggest for the users safety measure. It is evidently understood that the perception of invisibility and the ability to establish anonymity usually caused harm and empathy for one self and others. It allowed users carelessly disclose their personal identity, values, relationships and sexual identity. The free-speech right, relegate user regardless of the harm influence attitudes and behavior. On commercial sites, dangerous users used common techniques which included offering “gifts,” to influence users’ attitudes and behavior. The users may fall to prey and engaged in risk taking behavior through looking for love affairs. The individual user needs to review the terms of use for the sites and discuss in the context of their family’s values when sign up. They need to help their friends and significant others when they get harm. Ask oneself what is the real situation like the personality risks and the values that are implicated. Other things to ask self in using SNS are: do my personal interests violate any laws, agreements, or rules? More so are they okay and fitting in the real world? Or is it going to reflect on me later?

For ones’ safety therefore should avoid disclosure of personal information and of others or images. Also should shun interaction with dangerous individuals or such groups. And should also try to identify and report sexual harassment or cyber bullying. The user should make sure to avoid any relationship leading to addictive access, creating and making a lie or false information and should always be ready in try to prohibit harmful activities. It is important to control who has access to ones profile. User also

needs to be very selective in SNSs usage by limiting contacts to long channels through ‘friends of friends hoping for popularity.’

Another issue to conclude with is that users should be ready to block anyone who tends to be interacting rudely or trying to manipulate their interaction by offering gifts, talk of sex, ask about and or posting sexy pictures. Users should as well try to avoid posting harmful materials on their walls or profiles. One should always respect the privacy of other friends and poster good values and seek to help any friend user that is making bad choices of friends or is about to fall or is in danger.

Users should be aware that the documents (words, images and pictures) they posted online are available to a lot of people and to search most engines more than they expect. As it happens on the net it stays there forever even if it is removed because sometimes it might be saved by someone else. As such the users can be advice to be using avatar instead of their real pictures or nicknames for their added protection.

To the government this study, however, suggests on the use of strong software and firewalls at the national IXPs servers and the universities network. Government agencies, organizations, campuses, parents and individuals should engage in respectful monitoring of SNSs use by use of monitoring software. This means that to control the network process of packets flow just like what some government did. Such tools are like the China’s ‘Green-Dam’ and ‘FortiGuard web filtering package mainly used in European Union (EU) which is also the control package used on the University Utara network (uumzone). The package should rather act as traffic controller, counsellor and guide that work like a police, or army that can totally prevent and stop any move of such suspicious content. It only identify suspicious interaction and it prompt-advice the user

instantly. It should provide web URL (uniform resource locator) and information packet filtering for government agencies, libraries and schools networks. It has to be able and enables the end point security proxy that can block access to such inappropriate, dangerous and harmful websites which carries malware like spyware, pornography, terrorism, cultism, racism, phishing, spamming attacks, and other objectionable things which may vulnerably push the agencies into certain legal obligations and liabilities dismay (Varlejs, 2008).

The censorship and policing on the SNSs proves to be difficult yet certain privacy policies, usage rules and guidelines should be set as a borderline between the violators and the punishments. The government can constantly be monitoring SNSs like Facebook and YouTube from the officials' Internet exchange points to identify deviants and any threat to national security socially, economically, educationally, and politically as the case is being observed in China and other countries especially during the recent middle east social media revolution crises.

5.7. Limitations and Suggestion for Future Researches

A number of the research limitations evident in this research can be overcome in future research. For example, there is the need to re-test these scales with a larger sample and confirmatory factor analysis this is in order to further confirm the validity of the constructs. Further studies are also required to targeting samples as unit of analysis other than university academic community. Other demographic variables not included in the present study can be examined on this model. Academic achievement can also be correlated with the SNS usage as well in form of experimental method.

Despite theoretical and practical importance this research was not able to statistically validate constructs measuring motivation, self-efficacy and satisfaction in relation to SNS usage even though many items were included in other constructs.

Several educational services existed on SNSs, mainly designed in a manner that allows informally and extremely stumpy customization of the actual needs of the individual users (Karagiannidis et al., 2010). There is need for more recognized, accredited and formalized tools and services to allow purely academic interactivity on SNSs. The need for features of intelligence levels for the user interface in the current systems is imperative. This will allow collaboration and infrastructural interaction of the web.

This study suggests that a social behavior which is a dependent variable in the study needs to be tested as an independent variable in relation to other variables like the SNS usage. Deep investigations of social behaviors in relation to SNS usage are required on other categories of subjects and a wider scope beyond the present work.

The present findings are limited to some selected SNSs i.e. (MySpace, Facebook, YouTube and Twitter) therefore generalizing on all SNSs is not possible especially those like the Second Life, QQ Zone, LinkedIn, Tagged and alike have some different structures from the ones investigated.

Focus groups here are also limited in the extent to which they illuminated the actual processes and their identity exploration and commitment. Hence, transgender can be considered in future studies as suggested by some respondents. Longitudinal studies that can observe SNSs' users' behaviors and track their self-perceptions over time would

better ascertain if online users' social behaviors, adjustments and attitude differed from offline is solicited in future studies.

More so with regard to academic adjustment the SNS relationship can be measured against other dimensions of adjustment like the psychological adjustment, and social adjustment. Students' social behaviors as well needed to be examined so deeply in future study especially by employing full observation techniques on all users not only their profiles which this study did not use.

In this study attitude was tested as a moderator hence other variables needed to be examined as moderator and mediator variables on the present model. Other levels of education (primary and secondary) needed to be focused as to solidly weld the whole system and comprehend the SNSs usage and social behaviors and academic adjustment in one falcon view in that respect and see if there might be differences or similarities between them.

Given that many researches in the area were dominated by quantitative approach; this study employed triangulation mixed method. However there is a need to adopt also only qualitative research. This can be done at various types like ethnography, content analysis or grounded theory. It can be by using taxonomy analysis, analytical induction or quasi-statistics kind of analysis. By doing so the area should be explored by future researchers with a view to having insight in the wider areas of SNSs usage as it is tentative always. Finally, the present study methodologically was cross-section survey; hence, a longitudinal and experimental approach can equally be conducted.

5.8. Conclusion

If knowledge is power, communication is freedom. In sum, SNSs technologies such as Facebook, YouTube, MySpace and alike were found to be significantly used among students in Northern Nigerian universities. They provided such avenues for self expression especially among university students where they shared and interacted with each other. Although one may expect interactive experiences, it is found that considerable number of students creep around looking at their friends' profiles and have theirs being explored by others as well. They were found busy posting information to walls, posting and tagging pictures for and of others to observe a public communication style. Social networking sites allowed profiles construction among the emerging adults and made them engaged in sharing activities that reflected values, identity, feelings and experience.

The present study therefore do concludes that SNSs is a social hub of information traffic shared through profiles which now really goes beyond the O' Reilly (2005) idea that SNS is a set of social economic and technology trends based on user openness, participation and effects on network. It now encompassed other tendencies that manifested from so many other similar virtual communities. Its emergence is not just spontaneous and unplanned phenomenon as O' Reilly (2005) thought. Now it is a planned and being executed according to the users' definition and wish. Hence, a countries' policy can be promulgated and be executed according to the government's decision through the SNSs in respect to academic, social, political, religious, cultural and economic perspective.

Additionally, therefore it is inferred in this study that while friendships, ideology and relationships become the facets of adolescents' development, it is befitting in the

digital age where individual media preferences have also evolved as an important role in the students' expressions of their status as to who they are in the society. Researchers that can examine theories of adolescence and emerging adulthood, now have a space in online SNSs which open gateways to study the evolution of identity development and friendship which may have a profound impact on the behavior and attitude.

The study also concludes that the extent of social behaviors and academic adjustment is high among the universities students in Northern Nigeria in relation to SNSs usage. There is no significant difference between the gender in the extent of SNSs usage. Similarly, there were no differences in the extent of SNSs usage in terms of age, faculty, SEB and level of study. This is except the ethnicity and religion where there were significant differences that existed. The study demonstrated strong positive triangular relationships among the SNSs usage, Students' Social Behaviors and Students' Academic Adjustment. It also deduced that attitude towards social networking a site (SATT) is a strong moderator of the relationship between the SNSs usage and both the Students' Social Behavior (SSB) and Student's Academic Adjustment (SAA).

The study reports rationales for SNSs usage among the students in Northern Nigerian universities. Such were in order to communicate and interact with lost friends, old and new friends of former schools, relatives and family members. It connects people when face to face interaction was not obtainable. It allowed sharing of feelings, grudges, sadness, happiness, belief, views, values and opinions with others. It is also a discussion board on personal issues with others on various affairs and at various situations. It is as well used for academic activities among both students and teachers. SNSs give access to teacher/student relationship and made learning possible on SNSs. In fact SNS is social

environments which socializes people both friends and family. SNS is a medium or avenue to chat, talk and deal with others across the globe academically, socially, religious, culturally, economically and business wise. The study highlighted on the average SNSs usage time mainly spent from one to three hours among students. Most of the students relied on using their mobile phones and commercial Internet cafés around the campuses. The study also reported existence of callous activities like terrorism and cultism activities usually carried out on SNSs. It is therefore suggested the need for proper guide, orientation, controlling and monitoring of SNSs especially on campuses. This however, leads to the conclusion that using the SNSs can be helpful if the users are aware of how they use it.

This study also demonstrates that SNSs usage dehumanizes students' behaviors but depends on the nature of the friends and interaction one engaged in. Some of the views hold stressed that SNSs dehumanize and tarnish users' behavior in terms of time management, creating lies, viewing nudity, appearing untruthful to others, hiding or exaggerating information, and doing a lot of callous activities. These can all be attributed to improper guide of using the SNSs by the student users.

From the theoretical conclusion this study gave much emphasis to Social Constructivism Theory (SCOT). This perspective is closely associated with many contemporary theories, most notably the developmental theories of Vygotsky and Bruner, and Bandura's social cognitive theory. As discussed in the literature, Vygotsky viewed that an individual develops in a social context or group, use of technology to communicate with the students divided from each other was fully supported by this study.

The study also confirmed that it is convenient to see social constructivism as a single solution to most of the limitations of the web. The present study laid theoretical approach that is likely to achieve the broader range of educational outcomes mainly required from all of the tertiary study. The social aspects of learning as described by Vygotsky and supported by this study have become more useful for those looking to design educational models, projects, and or sites involving a distributed but intercommunicating audience especially the SNSs. Additionally this study did not concur to the view that social constructivism theory (SCOT) explains how technologies arise, but ignores the effects of the technology after the fact. The study varied with that in the sense that constructivist thinks knowledge as relational, multiple and plural as well as being local and particular.

In the conclusion also the present study also relates to social cognitive theory (SCT) as learning theory which was basically on the believed that people can learn through observation on others deeds and that human thought processes are the central point to understand their personality. Many SNSs users learned to behave certain ways by observing others behaviors on their interaction with them on SNSs. The present study believed that SNSs users learned many (positive and negative) behaviors and got their attitudes influenced by mere interaction with and observation of other people's profiles. In general the SNSs enhance socialization, as socialization is a process by which people, especially children and adolescent, learn acceptable and unacceptable behaviors of a given environment.

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APPENDICES

APPENDIX A: List of Approved Universities in Nigeria

S/N	Federal	Year estab.	S/N	State	Year	S/N	Private	Year
1	University of Ibadan, Ibadan	1948	1	Rivers State University of Science & Technology, Port- Harcourt	1979	1	Babcock University, Ilishan Remo	1999
2	University of Nigeria, Nsukka	1960	2	Ambrose Alli University, Ekpoma	1980	2	Madonna University, Okija	1999
3	Obafemi Awolowo University, Ile-Ife	1962	3	Abia State University, Uturu	1981	3	Igbinedion University, Okada	1999
4	Ahmadu Bello University, Zaria	1962	4	Enugu State University of Science & Tech, Enugu	1982	4	Bowen University, Iwo	2001
5	University of Lagos, Lagos	1962	5	Olabisi Onabanjo University, Ago-Iwoye	1982	5	Covenant University, Otta	2002
6	University of Benin, Benin City	1970	6	Lagos State University, Ojo, Lagos	1983	6	Pan-African University, Lagos	2002
7	Bayero University, Kano	1975	7	University of Ado- Ekiti, Ado-Ekiti	1982	7	Benson Idahosa University, Benin City	2002
8	University of Calabar, Calabar	1975	8	Ladoke Akintola University of Technology, Ogbomoso	1990	8	ABTI-American University, Yola	2003
9	University of Ilorin, Ilorin	1975	9	Imo State University, Owerri	1992	9	Redeemers University, Mowe, Lagos State	2005
10	University of Jos, Jos	1975	10	Benue State University, Makurdi	1992	10	Ajayi Crowther University, Oyo	2005
11	University of Maiduguri, Maiduguri	1975	11	Delta State University, Abraka	1992	11	Al-Hikmah University, Ilorin	2005
12	Usman Danfodiyo University, Sokoto	1975	12	Adekunle Ajasin University, Akungba-Akoko	1999	12	Caritas University, Amorji-Nke, Enugu	2005
13	University of Port-Harcourt, Port-Harcourt	1975	13	Kogi State University, Anyigba	1999	13	CETEP City University, Lagos	2005
14	Federal University of Technology, Owerri	1980	14	Niger-Delta University, Yenagoa	2000	14	Bingham University, Auta Balefi, Karu, Nasarawa State	2005
15	Federal University of Technology, Akure	1981	15	Anambra State University of Science & Technology	2000	15	Katsina University, Katsina	2005
16	Federal University of Technology, Yola	1981	16	Kano State University of Technology, Wudil	2000	16	Renaissance University, Enugu	2005
17	Federal University of Technology, Minna	1982	17	Ebonyi State University, Abakaliki	2000	17	Bells University of Technology, Badagary	2005
18	Nigerian Defence Academy, Kaduna	1985	18	Nasarawa State University, Keffi	2002	18	Lead City University of Ibadan, Oyo State	2005

19	University of Abuja	1988	19	Adamawa State University, Mubi	2002	19	Crawford University, Igbesa, Ogun State	2005
20	Abubakar Tafawa Balewa University, Bauchi	1988	20	Gombe State University, Gombe	2004	20	Wukari Jubilee University	2005
21	University of Agriculture, Makurdi	1988	21	Kaduna State University, Kaduna	2004	21	Crescent University, Abeokuta	2005
22	University of Agriculture, Abeokuta	1988	22	Cross River University of Technology, Calabar	2004	22	Novena University, Ogume, Delta State	2005
23	Nnamdi Azikiwe University, Awka	1992	23	Plateau State University, Bokokos	2005	23	University of Mkar	2005
24	University of Uyo, Uyo	1991	24	Akwa Ibom State University of Technology	2005	24	Joseph Ayo Babalola University, Ikeji-Arakeji Osun State	2006
25	Michael Okpara University of Agriculture, Umudike	1992	25	Ibrahim Babangida University, Lapai, Niger State	2005	25	Caleb University, Lagos	2007
26	National Open University, Abuja	2002	26	Tai Solarin University of Education, Ijagun	2005	26	Fountain University, Oshogbo	2007
27	Fed. Univ. of Petroleum Resources, Effurun	2007	27	Umaru Musa Yar'Adua University, Katsina	2006	27	Obong University, Obong Ntak	2007
			28	Bukar Abba Ibrahim University, Damaturu Yobe State	2006	28	Salem University, Lokoja	2007
			29	Kebbi State University of Science and Technology, Aliero	2006	29	Tansian University, Umunya	2007
			30	Osun State University, Osogbo	2006	30	Veritas University, Abuja	2007
			31	University of Education, Ikere-Ekiti	2008	31	Wesley Univ. of Science & Tech., Ondo	2007
			32	Ondo State University of Science and Technology, Okiti-Pupa	2008	32	Western Delta Univ., Oghara, Delta State	2007
			33	Taraba State University, Jalingo	2008	33	The Achievers University, Owo	2007
			34	Kwara State University, Ilorin	2009	34	African Univ. of Science & Tech., Abuja	2007
			35	Sokoto State University, Sokoto	2009			2007
	Total						96	

Source: www.nuc.edu.ng Bulletin Vol. 4 No. 35 24th August, 2009

APPENDIX B

Interview questions

UNIVERSITY UTARA MALAYSIA (UUM) SINTOK, KEDAH.
COLLEGE OF ART AND SOCIAL SCIENCE,
FACULTY OF EDUCATION AND COGNITIVE SCIENCE,
DEPARTMENT OF INSTRUCTIONAL TECHNOLOGY

Time: _____
Date: _____
Place: _____
Interviewer: _____
Interviewees: _____
Position of interviewee: _____

(RQ1 SNSU)

- 1: In few statements can you say why you use SNSs?
- 2: In your opinion why do you encourage other people to use SNSs if at all you do?

(RQ 2 SSB)

- 3: Why do you feel controlling and monitoring SNSs usage in your university is necessary?
- 4: Why Do you agree that SNS may dehumanize and tarnish users' behaviors?

(RQ 3 SAA)

- 5: Why do you think that SNSs is relevant to academic activities (teaching/learning process)?
- 6: What sort of difficulties have you experience in adjusting academically in this university?"

Thank you for the cooperation and participation in this interview. Confidentiality with regards to your responses would surely be safeguarded and would only be used for this study and nothing more.

APPENDIX C

Interview Attestation to focus groups

CONSENT

I want to thank you for taking the time to meet with me today. My name is _____ as the researcher I would like to talk to you about your experiences and feelings as user of Social Networking Sites (SNS). We are assessing the SNSs usage and its relation to Students' Social Behavior (SSB) and Students' Academic Adjustment (SAA). This is as part of the PhD research project conducted under University Utara Malaysia. The interview should take less than an hour. I will be taping the session because I don't want to miss any of your comments. Although I will be taking some notes during the session, I can't possibly write fast enough to get it all down. Because we're on tape, please be sure to speak up so that we don't miss any of your important comments. All of your responses will be kept confidential. This means that your interview responses will only be shared with research team members only and we will ensure that any information we include in our report does not identify you as the respondent. All documented items would be destroyed immediately after the successful completion of the study. Remember, you don't have to talk about anything you don't want to and you may end the interview at any time.

Are there any questions about what I have just explained? YES..... /NO.....
Are you willing to participate in this interview? YES..... /NO.....

APPENDIX: D

Questionnaire

**UNIVERSITI UTARA MALAYSIA (UUM) SINTOK, KEDAH.
COLLEGE OF ART AND SOCIAL SCIENCE,
FACULTY OF EDUCATION AND COGNITIVE SCIENCE,
DEPARTMENT OF INSTRUCTIONAL TECHNOLOGY**

Section: 1

This questionnaire is for the academic research purpose that would form part of the requirements for the award of PhD degree by the University Utara Malaysia. The questionnaire aimed at getting information on SNSs (Social Networking Sites) usage; SSB (Students' Social Behaviors) and SAA (Students' Academic Adjustment). In view of this you are assured that your kind response would be treated confidentially and cannot be used anywhere different from the purpose of this study. Thank you in advance for your cooperation. Please respond by tick or fill in gaps as appropriate.

Section: 2

Name of University: _____

Faculty:

Sciences and related
Social sciences and related
Arts and related
Medical and related
Law and others

Gender:

Female
Male

Age Bracket:

15 - 30
31 – 45
Above 45

Ethnicity:

Yoruba
Hausa
Igbo
Others
Non Nigerian

Religion:

Christianity
Islam
Others

Socio Economic Background:

Upper income family
Middle income family
Low income family

Level of study:

Fresher
Older (Level 2-5 / sophomore, junior, senior)
Postgraduate (Master/ PhD)

Respond by ticking the appropriate (SA=strongly agree, A=agree, U=undecided, D=disagree, SD=strongly disagree)						
S/N	Questions Items					
	SECTION 3	SA	A	U	D	SD
1	I frequently use at least one or more of the Social Networking Sites (SNSs). Like: Facebook, MySpace, YouTube and Twitter.					

2	I spend approximately more than one hour per day browsing Social Networking Sites.					
3	I have been using SNS for the past one year.					
4	I came to know about SNS through browsing the Internet.					
5	I came to know about SNS through a friend's invitation.					
6	I am interested in viewing pornography often on SNS.					
7	I came to know about SNS through invitation by unknown user.					
8	I do browse SNS mainly in the University's computer laboratory.					
9	I browse SNS mainly in the private Internet cafes around the campus.					
10	I browse SNS mainly in the wireless hot-spots / mobile broadband around the campus.					
11	I hid some of my identities when signing up on SNS. (e.g. gender, age and photograph)					
12	Online interaction makes me feel ok just like the offline interaction.					
13	Using SNS makes my interpersonal relationship always stronger.					
14	I prefer doing things in isolation especially when using SNS.					
15	I use special (short) language and jargons when using SNS.					
16	Compared to other SNS users, I am very popular on SNS.					
17	I feel that Females are more interested in using SNS more than males.					
18	I feel I am a heavy user of SNS.					
19	I use SNS at any time and I don't care managing my time.					
20	I cannot share so many things with real-life friend but can share with online friends on SNS.					
21	I prefer using SNS in group or company of other people because I have nothing to hide.					
22	I sometimes log onto SNS like facebook through links from other web sites not directly.					

23	I always browse SNS in isolation just to keep some of my secrets from other people around.					
24	I use to tag friend users who have more pictures so that I can be more popular.					
25	When using SNS I get motivated not to stop because it always keeps me in touch with my friends.					
	SECTION 4	S	A	U	D	SD
1	SNS is important to me because I can expose myself to any one I wish online.					
2	SNS allows me to express my feelings and secrets to friends online.					
3	SNS allows me to stay in contact always with my family members and love ones.					
4	I have a change in my behaviors and life style when I started using SNS.					
5	I can post abusive statements on SNS which I cannot do offline.					
6	SNS allows user to acquire very few bad behaviors like lying.					
7	Using SNSs at times makes me isolated and prevents me from meeting my friends in person.					
8	Using SNS enhances my participation in group activities and sport fans.					
9	Students carry out cultist / fraternity and crimes activities on SNS.					
10	I will have preferred opposite sex as friends than same sex on SNS.					
11	SNS may cause some negative or anti social behaviors on students like: Vandalization, Smoking, Drinking, Lying, Violence, Terrorism, Harassment, Porn, Cultism, Recklessness, Disobedience, Crime etc					
12	I would not mind selecting my life partner (wife/husband) on SNS.					
13	The friends I had on SNS are willing to listen to me and help me if I had a personal problem offline.					
14	Generally SNS is important to my university social experience because it brings harmony among different ethnic and religious members.					
15	Most students at this university have values and					

	attitudes different from my own.					
16	In my view this university requires its own SNS for students' local interaction.					
17	I feel that harmony among students from diverse cultures and religions happens on SNS.					
18	SNS enhance positive social behaviors like: Love, Respect, Responsibility, Tolerance, Friendliness, Perseverance, Carefulness, Caring.					
19	I have respective interaction with at least a lecturer from my university on SNS.					
20	I use to be frustrated when using SNS around my campus due to poor Internet connectivity.					
21	Among lecturers I have had contact with are willing to spend time outside class to discuss issues regarding SNS with students.					
22	In my opinion interaction and friendship on SNS tends to be temporary and deceptive.					
23	I sometimes post pornographic statements or pictures and I enjoy viewing them when using SNS.					
24	I am ready to block or stop interaction with any friend/user that post indecency on my profile.					
25	I am friendly so I can accept invitation from anybody for a friendship on SNS.					
	SECTION 5	SA	A	U	D	SD
1	Using SNS makes me feel motivated to be on campus and carry out my academic activities.					
2	Preparing for my class so early helps ease many difficulties with my academic activities					
3	I have developed a close offline personal relationship with at least a faculty member since coming to this University.					
4	As a result of using SNS I found difficulties in conducting and submitting my assignments in time.					
5	Since coming to this university I have developed close offline personal relationships with other students.					
6	I can discuss on my academic activities through Interaction informally with the faculty members on SNS.					
7	Some of the lecturers I have had contact with are genuinely interested in SNS and refer us to use					

	SNS.					
8	Some of the comments I come across on SNS change my feelings positively about being a student.					
9	Using SNS is important to me in the university life because it increases my relationship with lecturers.					
10	Using SNS makes me depressed that I tend to forget time and even miss classes.					
11	I study early in the morning rather than in the night which helps my intellectual development since I enroll at this university.					
12	The rules in this university prevent proper use of SNS by the students.					
13	SNS usage makes my courses intellectually stimulating because we can discuss them on the SNS.					
14	SNS makes one integrated into university system by participating in academic events.					
15	I use to get some of my study related items (course outline) from SNS e.g. from YouTube.					
16	SNS usage makes me Isolated from the normal academic activities I need to control it because it may reduce my CGPA.					
17	Frequent SNS usage makes it difficult for me to find, make, or meet new offline friends in the University.					
18	SNS allows me to establish new friends which may boost my relations and popularity.					
19	Getting in touch with my old friends and family members on SNS.					
20	SNS makes ease the possibility of students organizing meetings, group discussions and other gathering in this University.					
21	Using SNS helps me perform academically well as I anticipated.					
22	Most of the lecturers I have had contact with are interested in helping students grow in extracurricular areas through using SNS.					
23	Using SNS makes me feel confident and be contributive in class.					
24	Using SNS helps solve many of the students' academic problems.					

25	Frequent SNS usage is detrimental to my intellectual and social values.					
	SECTION 6	SA	A	U	D	SD
1	I have negative attitudes and values towards SNS different from that of other students in this university.					
2	My interpersonal offline relationships with other students have had a positive influence on my personal growth, values and attitudes.					
3	Since coming to this University, I have developed a close personal offline relationship with at least one lecturer.					
4	My faculty/university is on SNS which has positive influence on my studentship, personality and attitudes.					
5	My SNS interactions have had a positive influence on my personal growth, values, and attitudes.					
6	Using online social networking site allows me to express my feelings clearly.					
7	I feel SNS can be use to communicate exam leakage and exam malpractice activities.					
8	I like SNS because I seek assistance from online friends about my assignments.					
9	I like being independent of others when browsing SNS.					
10	It has been difficult for me to contact and make friendship with other students.					
11	I prefer to always share and study with other students.					
12	Among my friends on SNS are my lecturers who teach me in a class.					
13	I am very sociable among colleagues both online and offline.					
14	Few of the students I know would be willing to listen to me and help me if I had a personal problem.					
15	I make friends very easily and quickly on SNS more than face to face.					
16	I use to be shy with online friends so I control my interaction with them.					
17	I consider myself un popular offline.					

18	Using SNS has a place in my religious rules, regulations and injunctions.					
19	I prefer interaction with my old friends and family members on SNS than others.					
20	I dislike using SNS often especially during class hours.					
21	In my opinion there is a need to control SNS usage during class hours in this University.					
22	SNS can be use as teaching/lecturing medium in this university.					
23	I am not interested in using SNS because it can be use for Internet scam, dupe and fraud					
24	Seldom use of SNS may dehumanize and demoralize individual students.					
25	Using SNS by university students has grown wide that will become inevitable in the near future					
		SA	A	U	D	SD

Thank you for answering all the questions.

APPENDIX E:

The tables

Data Explored

The Extreme Values on the data after explored for error.

			Case Number	ID	Value
SNSU	Highest	1	46	46.00	121.00
		2	171	171.00	118.00
		3	169	169.00	117.00
		4	58	58.00	114.00
		5	356	356.00	113.00
	Lowest	1	188	188.00	30.00
		2	201	201.00	32.00
		3	237	237.00	39.00
		4	199	199.00	39.00
		5	211	211.00	44.00
SSB	Highest	1	146	146.00	120.00
		2	171	171.00	119.00
		3	169	169.00	118.00
		4	356	356.00	118.00
		5	58	58.00	116.00
	Lowest	1	184	184.00	38.00
		2	24	24.00	45.00
		3	188	188.00	47.00
		4	316	316.00	52.00
		5	141	141.00	54.00(a)
SAA	Highest	1	169	169.00	120.00
		2	146	146.00	119.00
		3	356	356.00	117.00
		4	160	160.00	116.00
		5	76	76.00	114.00
	Lowest	1	345	345.00	43.00
		2	198	198.00	47.00
		3	188	188.00	48.00
		4	16	16.00	48.00
		5	316	316.00	50.00(b)
SATT	Highest	1	143	143.00	118.00
		2	169	169.00	116.00
		3	146	146.00	115.00
		4	356	356.00	114.00
		5	160	160.00	112.00(c)
	Lowest	1	188	188.00	48.00
		2	23	23.00	50.00
		3	209	209.00	53.00
		4	25	25.00	55.00

		5	24	24.00	55.00
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a Only a partial list of cases with the value 54.00 are shown in the table of lower extremes.

b Only a partial list of cases with the value 50.00 are shown in the table of lower extremes.

c Only a partial list of cases with the value 112.00 are shown in the table of upper extremes.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.846
Bartlett's Test of Sphericity	Approx. Chi-Square	14046.820
	df	4950
	Sig.	.000

Total Variance Explained (Principal Component Analysis)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14.468	14.468	14.468	14.468	14.468	14.468
2	6.447	6.447	20.915	6.447	6.447	20.915
3	3.188	3.188	24.103	3.188	3.188	24.103
4	2.999	2.999	27.102	2.999	2.999	27.102
5	2.114	2.114	29.216	2.114	2.114	29.216
6	1.980	1.980	31.196	1.980	1.980	31.196
7	1.912	1.912	33.108	1.912	1.912	33.108
8	1.780	1.780	34.888	1.780	1.780	34.888
9	1.749	1.749	36.637	1.749	1.749	36.637
10	1.662	1.662	38.299	1.662	1.662	38.299
11	1.587	1.587	39.886	1.587	1.587	39.886
12	1.555	1.555	41.441	1.555	1.555	41.441
13	1.538	1.538	42.978	1.538	1.538	42.978
14	1.480	1.480	44.459	1.480	1.480	44.459
15	1.435	1.435	45.893	1.435	1.435	45.893
16	1.395	1.395	47.288	1.395	1.395	47.288
17	1.345	1.345	48.634	1.345	1.345	48.634
18	1.300	1.300	49.934	1.300	1.300	49.934
19	1.267	1.267	51.201	1.267	1.267	51.201
20	1.246	1.246	52.448	1.246	1.246	52.448
21	1.227	1.227	53.675	1.227	1.227	53.675
22	1.196	1.196	54.871	1.196	1.196	54.871
23	1.185	1.185	56.056	1.185	1.185	56.056
24	1.165	1.165	57.221	1.165	1.165	57.221
25	1.138	1.138	58.359	1.138	1.138	58.359
26	1.125	1.125	59.484	1.125	1.125	59.484
27	1.066	1.066	60.550	1.066	1.066	60.550
28	1.047	1.047	61.597	1.047	1.047	61.597
29	1.029	1.029	62.626	1.029	1.029	62.626

30	1.015	1.015	63.641	1.015	1.015	63.641
31	.996	.996	64.637			
32	.989	.989	65.626			
33	.969	.969	66.596			
34	.952	.952	67.548			
35	.935	.935	68.483			
36	.888	.888	69.371			
37	.873	.873	70.243			
38	.860	.860	71.104			
39	.839	.839	71.942			
40	.806	.806	72.749			
41	.792	.792	73.541			
42	.785	.785	74.326			
43	.775	.775	75.101			
44	.762	.762	75.863			
45	.747	.747	76.610			
46	.722	.722	77.333			
47	.703	.703	78.035			
48	.699	.699	78.735			
49	.688	.688	79.422			
50	.686	.686	80.108			
51	.658	.658	80.767			
52	.646	.646	81.413			
53	.639	.639	82.052			
54	.617	.617	82.669			
55	.602	.602	83.271			
56	.591	.591	83.862			
57	.583	.583	84.445			
58	.577	.577	85.023			
59	.562	.562	85.585			
60	.551	.551	86.136			
61	.530	.530	86.666			
62	.525	.525	87.191			
63	.514	.514	87.706			
64	.512	.512	88.218			
65	.497	.497	88.715			
66	.485	.485	89.200			
67	.474	.474	89.674			
68	.465	.465	90.138			
69	.459	.459	90.597			
70	.445	.445	91.042			
71	.444	.444	91.486			
72	.436	.436	91.921			
73	.419	.419	92.340			
74	.396	.396	92.735			

75	.389	.389	93.124			
76	.380	.380	93.504			
77	.376	.376	93.879			
78	.364	.364	94.243			
79	.359	.359	94.602			
80	.352	.352	94.954			
81	.340	.340	95.295			
82	.329	.329	95.624			
83	.312	.312	95.936			
84	.308	.308	96.244			
85	.295	.295	96.539			
86	.292	.292	96.830			
87	.289	.289	97.119			
88	.276	.276	97.395			
89	.266	.266	97.661			
90	.256	.256	97.917			
91	.249	.249	98.166			
92	.241	.241	98.407			
93	.232	.232	98.639			
94	.222	.222	98.861			
95	.214	.214	99.075			
96	.204	.204	99.279			
97	.202	.202	99.481			
98	.195	.195	99.676			
99	.178	.178	99.855			
100	.145	.145	100.000			

Extraction Method: Principal Component Analysis.

Reliability

Reliability Statistics

		N	%
Cases	Valid	400	100.0
	Excluded(a)	0	.0
	Total	400	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics specific variables value

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SNSU	252.0075	1113.601	.665	.843
SSB	247.2250	1182.210	.743	.809
SAA	247.9825	1063.957	.767	.796
SATT	247.5700	1280.286	.673	.838

Reliability Statistics total value

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.932	.933	100

Skew and Kurtosis

Case Processing Summary total sample subjected to skew analysis

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
SNSU	400	100.0%	0	.0%	400	100.0%
SSB	400	100.0%	0	.0%	400	100.0%
SAA	400	100.0%	0	.0%	400	100.0%
SATT	400	100.0%	0	.0%	400	100.0%

The summary of the descriptive analysis of the demographic distribution

		FACULTY	GENDER	AGE	ETHNIC	RELIGION	SEB	LEVEL
N	Valid	400	400	400	400	400	400	400
	Missing	0	0	0	0	0	0	0
Mean		2.1900	1.2725	1.0375	2.7750	1.6250	1.9475	1.8150
Median		2.0000	1.0000	1.0000	3.0000	2.0000	2.0000	2.0000
Mode		1.00	1.00	1.00	3.00	2.00	2.00	2.00
Std. Deviation		1.38878	.44580	.24748	.97043	.50993	.49025	.52580
Variance		1.929	.199	.061	.942	.260	.240	.276
Skewness		.858	1.026	7.018	-.181	-.232	-.125	-.178
Std. Error of Skewness		.122	.122	.122	.122	.122	.122	.122
Kurtosis		-.654	-.953	50.192	-.838	-1.282	1.126	.083
Std. Error of Kurtosis		.243	.243	.243	.243	.243	.243	.243
Range		4.00	1.00	2.00	4.00	2.00	2.00	2.00
Minimum		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum		5.00	2.00	3.00	5.00	3.00	3.00	3.00
Percentiles	25	1.0000	1.0000	1.0000	2.0000	1.0000	2.0000	2.0000
	50	2.0000	1.0000	1.0000	3.0000	2.0000	2.0000	2.0000
	75	3.0000	2.0000	1.0000	4.0000	2.0000	2.0000	2.0000

The level of Skew and Kurtosis on the main variables

		Statistic	Std. Error
SNSU	Mean	79.5875	.72720

	95% Confidence Interval for Mean	Lower Bound	78.1579	
		Upper Bound	81.0171	
	5% Trimmed Mean		79.7250	
	Median		79.0000	
	Variance		211.526	
	Std. Deviation		14.54394	
	Minimum		30.00	
	Maximum		121.00	
	Range		91.00	
	Interquartile Range		20.00	
	Skewness		-.153	.122
	Kurtosis		.291	.243
SSB	Mean		84.3700	.62079
	95% Confidence Interval for Mean	Lower Bound	83.1496	
		Upper Bound	85.5904	
	5% Trimmed Mean		84.3889	
	Median		85.0000	
	Variance		154.153	
	Std. Deviation		12.41586	
	Minimum		38.00	
	Maximum		120.00	
	Range		82.00	
	Interquartile Range		15.00	
	Skewness		-.088	.122
	Kurtosis		.776	.243
SAA	Mean		83.6125	.70655
	95% Confidence Interval for Mean	Lower Bound	82.2235	
		Upper Bound	85.0015	
	5% Trimmed Mean		83.6694	
	Median		83.0000	
	Variance		199.687	
	Std. Deviation		14.13105	
	Minimum		43.00	
	Maximum		120.00	
	Range		77.00	
	Interquartile Range		18.00	
	Skewness		-.072	.122
	Kurtosis		-.069	.243
SATT	Mean		84.0250	.57813
	95% Confidence Interval for Mean	Lower Bound	82.8884	

		Upper Bound	85.1616	
	5% Trimmed Mean		83.9333	
	Median		84.0000	
	Variance		133.694	
	Std. Deviation		11.56260	
	Minimum		48.00	
	Maximum		118.00	
	Range		70.00	
	Interquartile Range		14.00	
	Skewness		.125	.122
	Kurtosis		.529	.243

Descriptive statistics

Test of Normality on the main variables.

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SNSU	.034	400	.200(*)	.996	400	.451
SSB	.051	400	.016	.991	400	.016
SAA	.045	400	.055	.995	400	.264
SATT	.060	400	.002	.990	400	.007

* This is a lower bound of the true significance.

a Lilliefors Significance Correction

Frequency distributions of main variables:

		SNSU	SSB	SAA	SATT
N	Valid	400	400	400	400
	Missing	0	0	0	0
Mean		79.5875	84.3700	83.6125	84.0250
Median		79.0000	85.0000	83.0000	84.0000
Mode		78.00	84.00	83.00	84.00
Std. Deviation		14.54394	12.41586	14.13105	11.56260
Variance		211.526	154.153	199.687	133.694
Skewness		-.153	-.088	-.072	.125
Std. Error of Skewness		.122	.122	.122	.122
Kurtosis		.291	.776	-.069	.529
Std. Error of Kurtosis		.243	.243	.243	.243
Range		91.00	82.00	77.00	70.00
Minimum		30.00	38.00	43.00	48.00
Maximum		121.00	120.00	120.00	118.00
Percentiles	25	70.0000	77.0000	75.0000	77.0000
	50	79.0000	85.0000	83.0000	84.0000
	75	90.0000	92.0000	93.0000	91.0000

T. Test

Group Statistics T-Test results for the SNS Usage in terms of gender

	GENDER	N	Mean	Std. Deviation	Std. Error Mean
SNSU	FEMALE	291	81.1409	14.07948	.82535
	MALE	109	75.4404	15.01076	1.43777

One Way ANOVA

One Way ANOVA Descriptive in terms of Age
SNSU

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
15-30	390	79.4000	14.53704	.73611	77.9527	80.8473	30.00	121.00
31-45	5	87.0000	16.03122	7.16938	67.0946	106.9054	63.00	102.00
=<45	5	86.8000	12.41773	5.55338	71.3814	102.2186	70.00	101.00
Total	400	79.5875	14.54394	.72720	78.1579	81.0171	30.00	121.00

One Way ANOVA Test of Homogeneity of Variances in terms of Age

SNSU

Levene Statistic	df1	df2	Sig.
.110	2	397	.896

One Way ANOVA in terms of Age

SNSU

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	548.537	2	274.269	1.299	.274
Within Groups	83850.400	397	211.210		
Total	84398.938	399			

One Way ANOVA Post Hoc Tests Multiple Comparisons in terms of Age

Dependent Variable: SNSU

Scheffe

(I) AGE	(J) AGE	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
15-30	31-45	-7.60000	6.54092	.510	-23.6711	8.4711
	=<45	-7.40000	6.54092	.528	-23.4711	8.6711
31-45	15-30	7.60000	6.54092	.510	-8.4711	23.6711
	=<45	.20000	9.19152	1.000	-22.3837	22.7837
=<45	15-30	7.40000	6.54092	.528	-8.6711	23.4711

	31-45	-.20000	9.19152	1.000	-22.7837	22.3837
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One Way ANOVA Homogeneous Subsets in terms of Age

SNSU
Scheffe

AGE	N	Subset for alpha = .05
		1
15-30	390	79.4000
=<45	5	86.8000
31-45	5	87.0000
Sig.		.601

Means for groups in homogeneous subsets are displayed.

a Uses Harmonic Mean Sample Size = 7.452.

b The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

One Way ANOVA Descriptive SNSU in terms of Faculty

SNSU

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
SCIENCE	182	79.8791	13.60357	1.00836	77.8895	81.8688	48.00	121.00
SOC SCIENCE	91	80.4725	15.00247	1.57269	77.3481	83.5969	30.00	114.00
ARTS	37	84.0000	15.56706	2.55921	78.8097	89.1903	56.00	118.00
MEDICAL	49	76.3673	14.90483	2.12926	72.0862	80.6485	39.00	109.00
LAW	41	76.1951	15.38866	2.40331	71.3379	81.0524	32.00	99.00
Total	400	79.5875	14.54394	.72720	78.1579	81.0171	30.00	121.00

One Way ANOVA Group Difference SNSU in terms of Faculty

Dependent Variable: SNSU

	(I) FACULTY	(J) FACULTY	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Scheffe	SCIENCE	SOC SCIENCE	-.59341	1.85672	.999	-6.3397	5.1529
		ARTS	-4.12088	2.60800	.646	-12.1923	3.9505
		MEDICAL	3.51177	2.32753	.685	-3.6916	10.7151
		LAW	3.68400	2.50004	.704	-4.0533	11.4213
	SOC SCIENCE	SCIENCE	.59341	1.85672	.999	-5.1529	6.3397
		ARTS	-3.52747	2.81972	.815	-12.2541	5.1992
		MEDICAL	4.10518	2.56252	.633	-3.8255	12.0358
		LAW	4.27741	2.72018	.650	-4.1411	12.6960
	ARTS	SCIENCE	4.12088	2.60800	.646	-3.9505	12.1923
		SOC SCIENCE	3.52747	2.81972	.815	-5.1992	12.2541
		MEDICAL	7.63265	3.14973	.211	-2.1153	17.3806

		LAW	7.80488	3.27927	.228	-2.3440	17.9537
	MEDICAL	SCIENCE	-3.51177	2.32753	.685	-10.7151	3.6916
		SOC SCIENCE	-4.10518	2.56252	.633	-12.0358	3.8255
		ARTS	-7.63265	3.14973	.211	-17.3806	2.1153
		LAW	.17222	3.06093	1.000	-9.3009	9.6454
	LAW	SCIENCE	-3.68400	2.50004	.704	-11.4213	4.0533
		SOC SCIENCE	-4.27741	2.72018	.650	-12.6960	4.1411
		ARTS	-7.80488	3.27927	.228	-17.9537	2.3440
		MEDICAL	-.17222	3.06093	1.000	-9.6454	9.3009
Bonferroni	SCIENCE	SOC SCIENCE	-.59341	1.85672	1.000	-5.8347	4.6479
		ARTS	-4.12088	2.60800	1.000	-11.4830	3.2412
		MEDICAL	3.51177	2.32753	1.000	-3.0586	10.0821
		LAW	3.68400	2.50004	1.000	-3.3734	10.7413
	SOC SCIENCE	SCIENCE	.59341	1.85672	1.000	-4.6479	5.8347
		ARTS	-3.52747	2.81972	1.000	-11.4872	4.4323
		MEDICAL	4.10518	2.56252	1.000	-3.1285	11.3389
		LAW	4.27741	2.72018	1.000	-3.4014	11.9562
	ARTS	SCIENCE	4.12088	2.60800	1.000	-3.2412	11.4830
		SOC SCIENCE	3.52747	2.81972	1.000	-4.4323	11.4872
		MEDICAL	7.63265	3.14973	.158	-1.2587	16.5240
		LAW	7.80488	3.27927	.178	-1.4521	17.0619
	MEDICAL	SCIENCE	-3.51177	2.32753	1.000	-10.0821	3.0586
		SOC SCIENCE	-4.10518	2.56252	1.000	-11.3389	3.1285
		ARTS	-7.63265	3.14973	.158	-16.5240	1.2587
		LAW	.17222	3.06093	1.000	-8.4685	8.8129
	LAW	SCIENCE	-3.68400	2.50004	1.000	-10.7413	3.3734
		SOC SCIENCE	-4.27741	2.72018	1.000	-11.9562	3.4014
		ARTS	-7.80488	3.27927	.178	-17.0619	1.4521
		MEDICAL	-.17222	3.06093	1.000	-8.8129	8.4685

One Way ANOVA Homogeneous Subsets / Group Difference SNSU in terms of Faculty

SNSU

		N	Subset for alpha = .05
			1
Scheffe(a,b)	LAW	41	76.1951
	MEDICAL	49	76.3673
	SCIENCE	182	79.8791
	SOC SCIENCE	91	80.4725
	ARTS	37	84.0000

	Sig.		.085
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Means for groups in homogeneous subsets are displayed.

a Uses Harmonic Mean Sample Size = 56.619.

b The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

One Way ANOVA Descriptive SNSU in terms of ethnicity
SNSU

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
IGBO	42	80.8571	11.77341	1.81668	77.1883	84.5260	55.00	105.00
YORUBA	114	77.8421	17.10849	1.60236	74.6675	81.0167	32.00	118.00
HAUSA	139	83.0288	13.05170	1.10703	80.8398	85.2177	53.00	121.00
OTHERS	102	76.0882	13.12326	1.29940	73.5106	78.6659	30.00	113.00
NON NIGN	3	87.6667	24.82606	14.33333	25.9953	149.3380	59.00	102.00
Total	400	79.5875	14.54394	.72720	78.1579	81.0171	30.00	121.00

One Way ANOVA Group Difference on Post Hoc Tests Multiple Comparisons on SNSU in terms of ethnicity

Dependent Variable: SNSU

	(I) ETHNIC	(J) ETHNIC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Scheffe	IGBO	YORUBA	3.01504	2.58311	.851	-4.9793	11.0094
		HAUSA	-2.17163	2.51979	.946	-9.9700	5.6268
		OTHERS	4.76891	2.62370	.509	-3.3511	12.8889
		NON NIGN	-6.80952	8.55220	.959	-33.2774	19.6583
	YORUBA	IGBO	-3.01504	2.58311	.851	-11.0094	4.9793
		HAUSA	-5.18667	1.80825	.086	-10.7829	.4096
		OTHERS	1.75387	1.95043	.937	-4.2824	7.7902
		NON NIGN	-9.82456	8.37022	.848	-35.7292	16.0801
	HAUSA	IGBO	2.17163	2.51979	.946	-5.6268	9.9700
		YORUBA	5.18667	1.80825	.086	-.4096	10.7829
		OTHERS	6.94054(*)	1.86577	.009	1.1663	12.7148
		NON NIGN	-4.63789	8.35090	.989	-30.4827	21.2069
Bonferroni	OTHERS	IGBO	-4.76891	2.62370	.509	-12.8889	3.3511
		YORUBA	-1.75387	1.95043	.937	-7.7902	4.2824
		HAUSA	-6.94054(*)	1.86577	.009	-12.7148	-1.1663
		NON NIGN	-11.57843	8.38284	.753	-37.5221	14.3652
	NON NIGN	IGBO	6.80952	8.55220	.959	-19.6583	33.2774
		YORUBA	9.82456	8.37022	.848	-16.0801	35.7292
		HAUSA	4.63789	8.35090	.989	-21.2069	30.4827
		OTHERS	11.57843	8.38284	.753	-14.3652	37.5221
	IGBO	YORUBA	3.01504	2.58311	1.000	-4.2768	10.3069
		HAUSA	-2.17163	2.51979	1.000	-9.2847	4.9415
		OTHERS	4.76891	2.62370	.699	-2.6375	12.1753
		NON NIGN	-6.80952	8.55220	1.000	-30.9515	17.3324
	YORUBA	IGBO	-3.01504	2.58311	1.000	-10.3069	4.2768
		HAUSA	-5.18667(*)	1.80825	.043	-10.2912	-.0822

		OTHERS	1.75387	1.95043	1.000	-3.7520	7.2597
		NON NIGN	-9.82456	8.37022	1.000	-33.4528	13.8037
	HAUSA	IGBO	2.17163	2.51979	1.000	-4.9415	9.2847
		YORUBA	5.18667(*)	1.80825	.043	.0822	10.2912
		OTHERS	6.94054(*)	1.86577	.002	1.6737	12.2074
		NON NIGN	-4.63789	8.35090	1.000	-28.2116	18.9358
	OTHERS	IGBO	-4.76891	2.62370	.699	-12.1753	2.6375
		YORUBA	-1.75387	1.95043	1.000	-7.2597	3.7520
		HAUSA	-6.94054(*)	1.86577	.002	-12.2074	-1.6737
		NON NIGN	-11.57843	8.38284	1.000	-35.2423	12.0854
	NON NIGN	IGBO	6.80952	8.55220	1.000	-17.3324	30.9515
		YORUBA	9.82456	8.37022	1.000	-13.8037	33.4528
		HAUSA	4.63789	8.35090	1.000	-18.9358	28.2116
		OTHERS	11.57843	8.38284	1.000	-12.0854	35.2423

* The mean difference is significant at the .05 level.

One Way ANOVA Group difference of homogeneous subsets on SNSU in terms of ethnicity
SNSU

	ETHNIC	N	Subset for alpha = .05
			1
Scheffe(a,b)	OTHERS	102	76.0882
	YORUBA	114	77.8421
	IGBO	42	80.8571
	HAUSA	139	83.0288
	NON NIGN	3	87.6667
	Sig.		.372

Means for groups in homogeneous subsets are displayed.

a Uses Harmonic Mean Sample Size = 13.058.

b The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

One Way ANOVA Descriptive SNSU in terms of SEB

SNSU

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
UPPER	59	83.0847	15.99492	2.08236	78.9164	87.2530	30.00	121.00
MIDDLE	303	78.7954	14.32676	.82305	77.1757	80.4150	32.00	118.00
LOWER	38	80.4737	13.38764	2.17176	76.0733	84.8741	48.00	108.00
Total	400	79.5875	14.54394	.72720	78.1579	81.0171	30.00	121.00

One Way ANOVA Group Difference on Post Hoc Tests Multiple Comparisons of SNSU in terms of SEB

Dependent Variable: SNSU

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
	(I) SEB	(J) SEB				Lower Bound	Upper Bound
Scheffe	UPPER	MIDDLE	4.28937	2.06321	.117	-.7800	9.3587
		LOWER	2.61106	3.01582	.688	-4.7988	10.0210
	MIDDLE	UPPER	-4.28937	2.06321	.117	-9.3587	.7800

		LOWER	-1.67830	2.49518	.798	-7.8090	4.4524
	LOWER	UPPER	-2.61106	3.01582	.688	-10.0210	4.7988
		MIDDLE	1.67830	2.49518	.798	-4.4524	7.8090
Bonferroni	UPPER	MIDDLE	4.28937	2.06321	.115	-.6709	9.2497
		LOWER	2.61106	3.01582	1.000	-4.6395	9.8616
	MIDDLE	UPPER	-4.28937	2.06321	.115	-9.2497	.6709
		LOWER	-1.67830	2.49518	1.000	-7.6771	4.3205
	LOWER	UPPER	-2.61106	3.01582	1.000	-9.8616	4.6395
		MIDDLE	1.67830	2.49518	1.000	-4.3205	7.6771

One Way ANOVA Group Difference on Homogeneous Subsets of SNSU in terms of SEB

SNSU

			Subset for alpha = .05
	SEB	N	1
Scheffe(a,b)	MIDDLE	303	78.7954
	LOWER	38	80.4737
	UPPER	59	83.0847
	Sig.		.245

Means for groups in homogeneous subsets are displayed.

a Uses Harmonic Mean Sample Size = 64.426.

b The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

One Way ANOVA Descriptive SNSU in terms of Level

SNSU

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
FRESHER	99	80.1616	14.92068	1.49958	77.1857	83.1375	39.00	110.00
OLDER	276	79.2101	14.37824	.86547	77.5064	80.9139	30.00	121.00
POSTGRADUATE	25	81.4800	15.23187	3.04637	75.1926	87.7674	55.00	113.00
Total	400	79.5875	14.54394	.72720	78.1579	81.0171	30.00	121.00

One Way ANOVA Group Difference on Post Hoc Tests Multiple Comparisons of SNSU in terms of Level

Dependent Variable: SNSU

	(I) LEVEL	(J) LEVEL	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Scheffe	FRESHER	OLDER	.95147	1.70648	.856	-3.2414	5.1443
		POSTGRADUATE	-1.31838	3.26047	.922	-9.3294	6.6926
	OLDER	FRESHER	-.95147	1.70648	.856	-5.1443	3.2414
		POSTGRADUATE	-2.26986	3.04240	.757	-9.7451	5.2054
	POSTGRADUATE	FRESHER	1.31838	3.26047	.922	-6.6926	9.3294
		OLDER	2.26986	3.04240	.757	-5.2054	9.7451
Bonferroni	FRESHER	OLDER	.95147	1.70648	1.000	-3.1512	5.0541
		POSTGRADUATE	-1.31838	3.26047	1.000	-9.1571	6.5203

	OLDER	FRESHER	-.95147	1.70648	1.000	-5.0541	3.1512
		POSTGRADUATE	-2.26986	3.04240	1.000	-9.5843	5.0446
	POSTGRADUATE	FRESHER	1.31838	3.26047	1.000	-6.5203	9.1571
		OLDER	2.26986	3.04240	1.000	-5.0446	9.5843

One Way ANOVA Group Difference on Homogeneous Subsets of SNSU in terms of Level SNSU

	LEVEL	N	Subset for alpha = .05
			1
Scheffe(a,b)	OLDER	276	79.2101
	FRESHER	99	80.1616
	POSTGRADUATE	25	81.4800
	Sig.		.713

Means for groups in homogeneous subsets are displayed.

a Uses Harmonic Mean Sample Size = 55.841.

b The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

One Way ANOVA Descriptive of SNSU in terms of Religion

SNSU

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
CHRISTIANITY	155	76.7742	14.99504	1.20443	74.3949	79.1535	30.00	118.00
ISLAM	240	81.5417	14.01637	.90475	79.7594	83.3240	44.00	121.00
OTHER	5	73.0000	10.70047	4.78539	59.7136	86.2864	59.00	82.00
Total	400	79.5875	14.54394	.72720	78.1579	81.0171	30.00	121.00

One Way ANOVA Group Difference of SNSU in terms of Religion Post Hoc Tests Multiple Comparisons
Dependent Variable: SNSU

	(I) RELIGION	(J) RELIGION	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Scheffe	CHRISTIANITY	ISLAM	-.476747(*)	1.48129	.006	-8.4070	-1.1279
		OTHER	3.77419	6.53165	.846	-12.2742	19.8225
	ISLAM	CHRISTIANITY	4.76747(*)	1.48129	.006	1.1279	8.4070
		OTHER	8.54167	6.49541	.422	-7.4176	24.5010
	OTHER	CHRISTIANITY	-3.77419	6.53165	.846	-19.8225	12.2742
Bonferroni	CHRISTIANITY	ISLAM	-.476747(*)	1.48129	.004	-8.3288	-1.2062
		OTHER	3.77419	6.53165	1.000	-11.9290	19.4774
	ISLAM	CHRISTIANITY	4.76747(*)	1.48129	.004	1.2062	8.3288
		OTHER	8.54167	6.49541	.568	-7.0744	24.1577
	OTHER	CHRISTIANITY	-3.77419	6.53165	1.000	-19.4774	11.9290

	ITY					
	ISLAM	-8.54167	6.49541	.568	-24.1577	7.0744

* The mean difference is significant at the .05 level.

Regression

Variables Entered/Removed (b) on the moderating effect of SATT on SNSU and SSB

Model	Variables Entered	Variables Removed	Method
1	SATT(a)	.	Enter
2	SNSU(a)	.	Enter

a All requested variables entered.

b Dependent Variable: SSB

ANOVA (b) on the moderating effect of SATT on SNSU and SSB

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19668.589	1	19668.589	187.102	.000(a)
	Residual	41838.651	398	105.122		
	Total	61507.240	399			
2	Regression	30191.306	2	15095.653	191.371	.000(b)
	Residual	31315.934	397	78.881		
	Total	61507.240	399			

a Predictors: (Constant), SATT

b Predictors: (Constant), SATT, SNSU

c Dependent Variable: SSB

Coefficients (a) on the moderating effect of SATT on SNSU and SSB

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	33.348	3.765		8.857	.000
	SATT	.607	.044	.565	13.679	.000
2	(Constant)	22.649	3.391		6.680	.000
	SATT	.347	.045	.323	7.782	.000
	SNSU	.409	.035	.479	11.550	.000

a Dependent Variable: SSB

Variables Entered/Removed(b) on the moderating effect of SATT on SNSU and SAA

Model	Variables Entered	Variables Removed	Method
1	SATT(a)	.	Enter
2	SNSU(a)	.	Enter

a All requested variables entered.

b Dependent Variable: SAA

ANOVA (b) on the moderating effect of SATT on SNSU and SAA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37463.366	1	37463.366	353.231	.000(a)
	Residual	42211.571	398	106.059		
	Total	79674.938	399			
2	Regression	43877.920	2	21938.960	243.310	.000(b)
	Residual	35797.018	397	90.169		
	Total	79674.938	399			

a Predictors: (Constant), SATT

b Predictors: (Constant), SATT, SNSU

c Dependent Variable: SAA

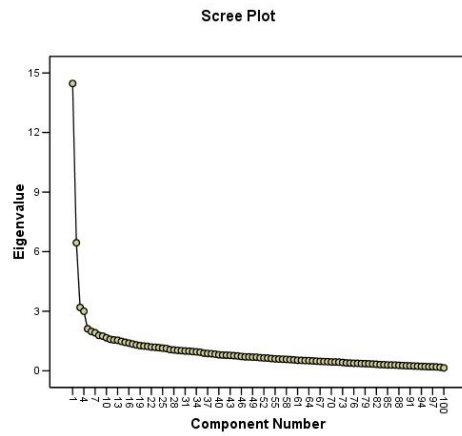
Coefficients (a) on the moderating effect of SATT on SNSU and SAA

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.197	3.782		3.489	.001
	SATT	.838	.045	.686	18.794	.000
2	(Constant)	4.843	3.625		1.336	.182
	SATT	.635	.048	.519	13.320	.000
	SNSU	.320	.038	.329	8.434	.000

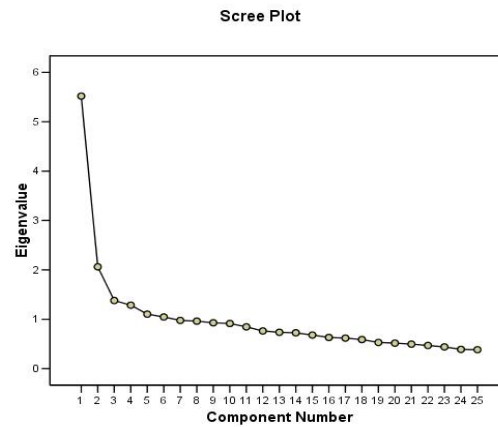
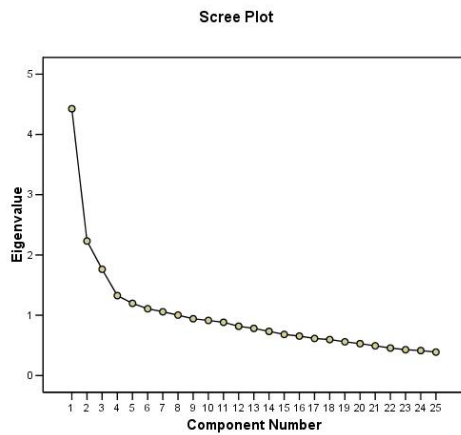
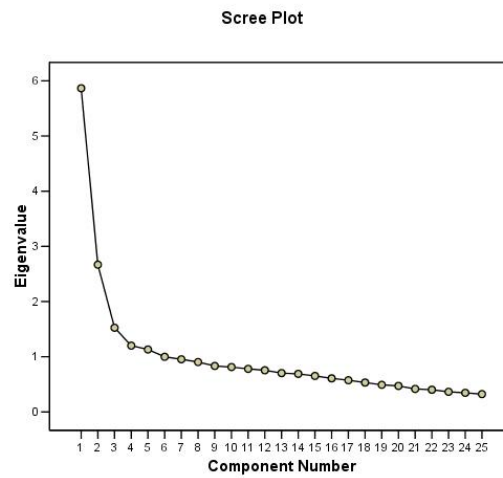
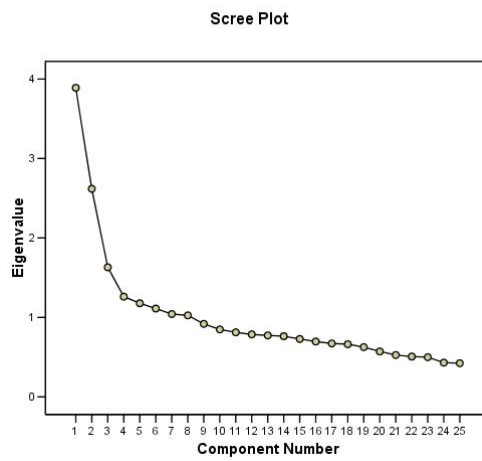
APPENDIX: F

Figures

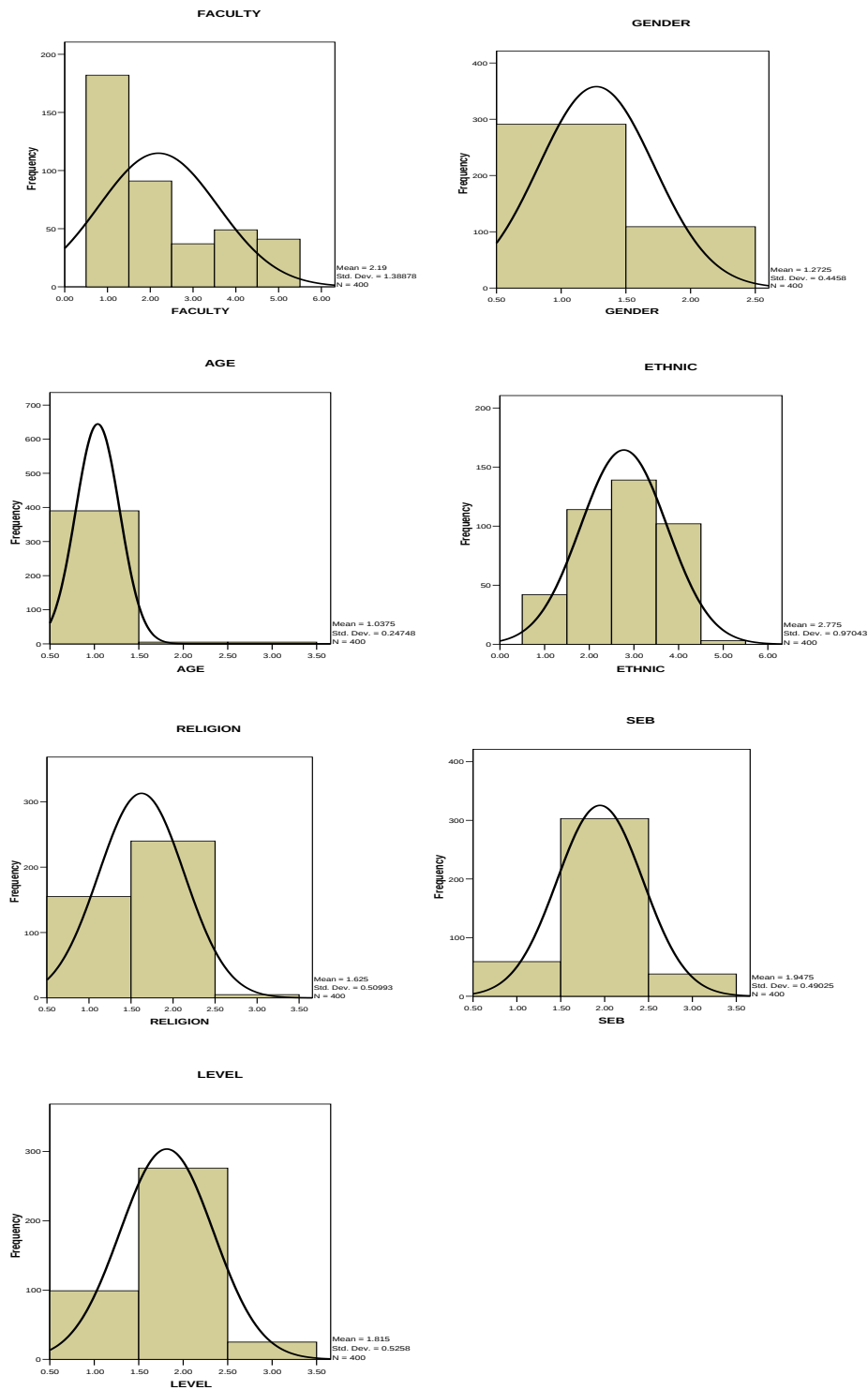
Scree Plot component factors.



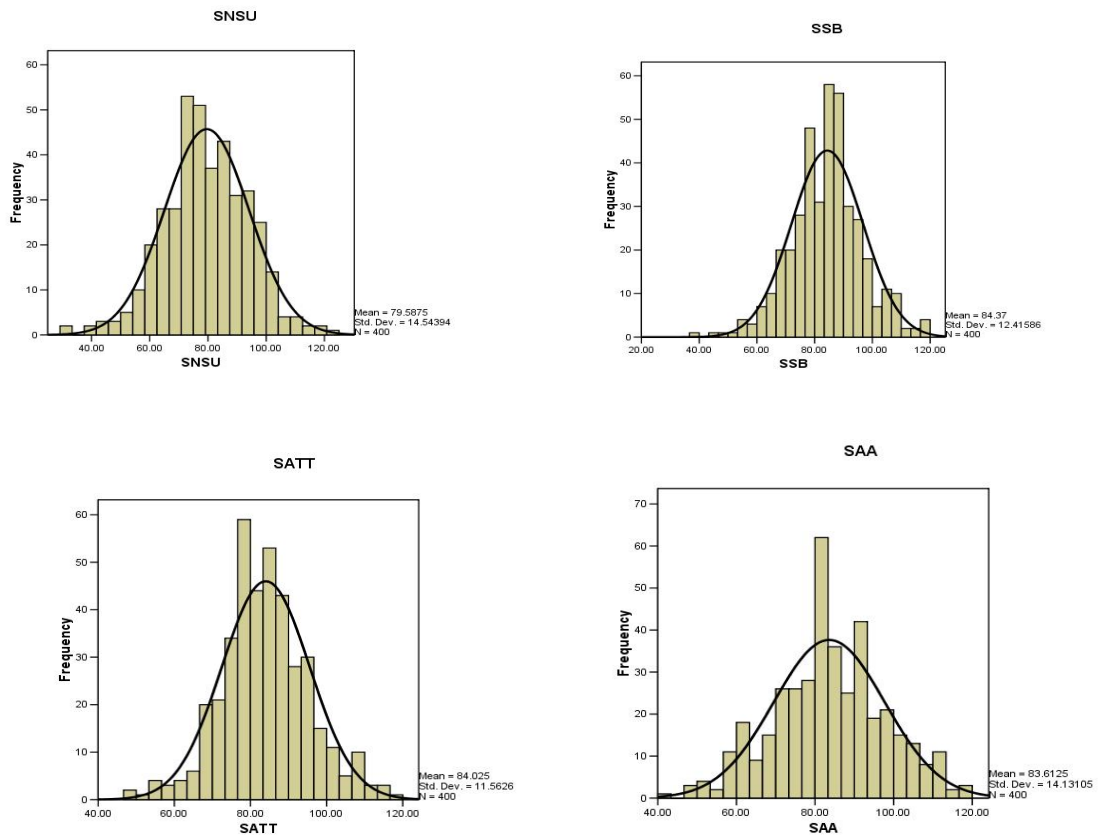
Scree Plot component factors SNS SSB, SAA and SATT



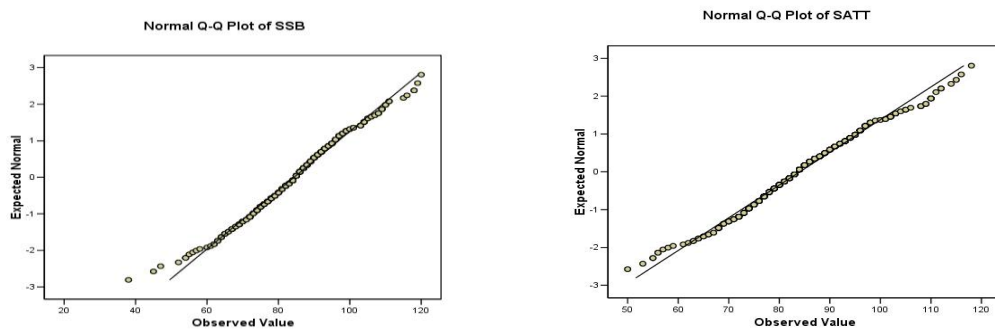
Histogram on demography distribution

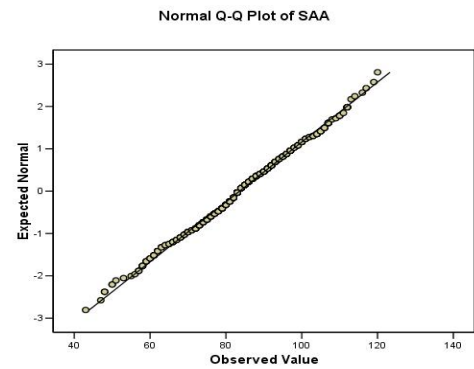
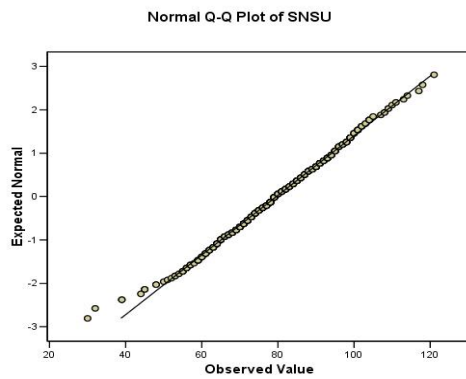


Histogram of main variables distribution (SNSU, SSB SAA and SATT)

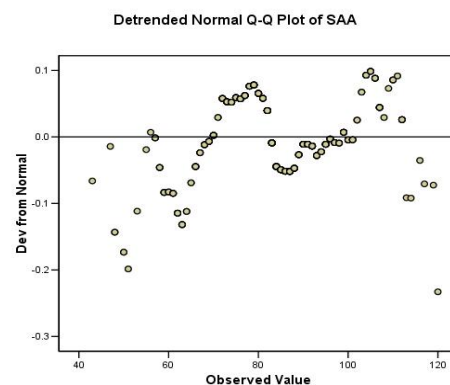
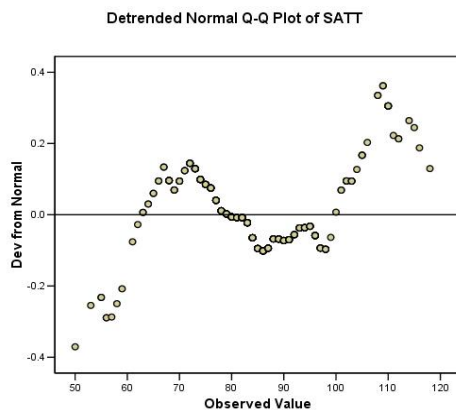
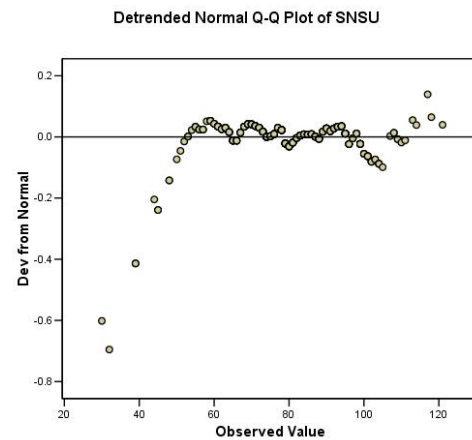
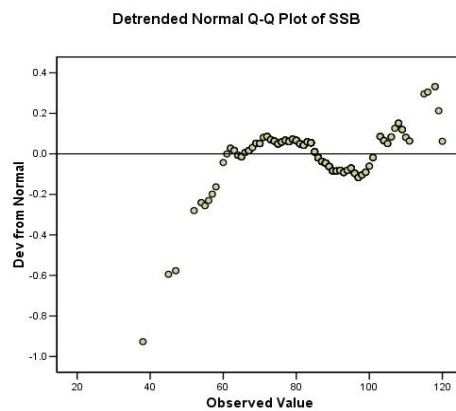


The normal QQ Plot of SNSU, SSB, SAA and SATT

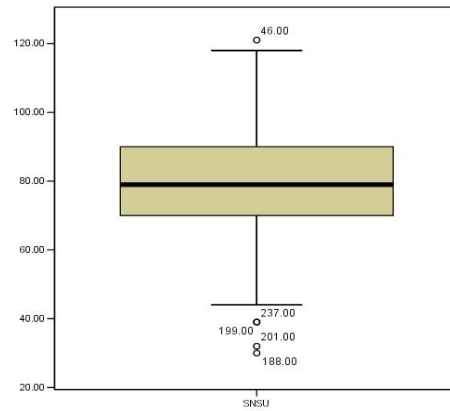
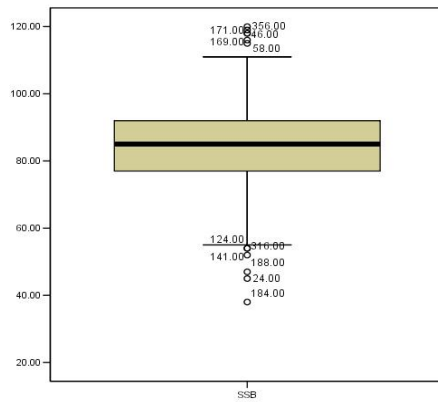
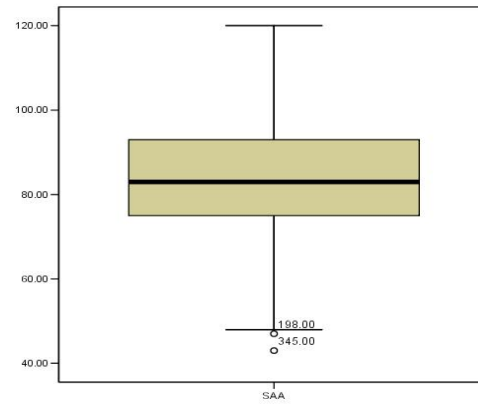
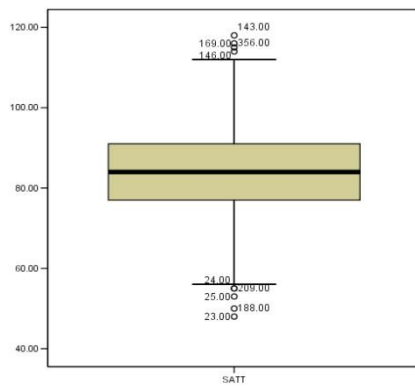




The Deterrent normal QQ Plot of SNSU, SSB, SAA and SATT



The Skew Plot of SNSU, SSB SAA and SATT



APPENDIX: G

Table 4.4.1

The focus group respondents' profiles

	Names	Religion	Age	Faculty	Ethnicity
FG1	University of Abuja			13th December 2009	
1	Shami	Christian	23 years	M. Science	Yoruba
2	Abbas	Muslim	28 years	Science	Yoruba
3	Bola	Christian	20 years	Science	Other
4	Sadiney	Christian	21 years	Science	Other
FG2	University of Ilorin			17th December 2009	
1	Adodo	Christian	20 years	Education	Yoruba
2	Dare	Muslims	29 years	Arts	Igbo
3	Liza	Christian	20 years	S/Science	Other
4	Risikatu	Christian	22 years	S/Science	Yoruba
FG3	Usman Danfodio University Sokoto			6th January, 2010	
1	Habu	Muslim	25 years	Science	Yoruba
2	Chinyere	Christian	23 years	Science	Igbo
3	Mujitaba	Muslim	24 years	S/Science	Yoruba
4	Zumawa	Christian	27 years	Law	Other
FG4	Bayero University Kano			9th January, 2010	
1	Ajibola	Christian	29 years	Arts	Yoruba
2	Titus	Christian	24 years	Science	Igbo
3	Kingsley	Christian	28 years	Science	Igbo
4	Kunama	Muslim	22 years	Medical	Other
FG5	University of Maiduguri			20th January, 2010	
1	Dale	Christian	25 years	Science	Yoruba
2	Abdullahi	Muslim	20 years	S/science	Hausa
3	Asiya	Muslim	21 years	Medicine	Other
4	Bala	Muslim	21 years	Arts	Hausa
FG6	Ahmadu Bello University Zaria			28th January 2009	
1	Adebo	Christian	27 years	Law	(other)
2	Kanu	Christian	22 years	Arts	Igbo
3	Mohd	Muslim,	23, years	Computer	Hausa,
4	Binta	Muslim	20, years	Maths,	Hausa,

APPENDIX: H

Approval Letters

The data collection from CAS/UUM and approval for data collection letter from one of the institutions (ABU Zaria)



AHMADU BELLO UNIVERSITY, ZARIA - NIGERIA

Vice Chancellor's Office
(STUDENTS' AFFAIRS DIVISION)

Vice Chancellor: **Prof. A. Mustapha**
Dean: **Professor Bashir A. Raji**, B.Sc, M.Sc, PG Diploma (ITC), Ph.D. (ABU) (GSM 08060422285)

Our Ref.....VC/S/STU/1.....

Your Ref.....

1st June, 2010.....

Suleiman Alhaji Ahmad,
College of Arts and Social Sciences,
University of Utara,
Malaysia.

Dear Sir,

RE: REQUEST FOR DATA COLLECTION

Your letter dated 1st March, 2010 in respect to the above subject matter, refers.

I have been directed to convey the approval of the Dean of Students to your request for permission to administer some questionnaires to students in the University. In doing so, you are advised to liaise with the University Security Services.

Thank you.

Yours faithfully,

Aliyu Sule

For: Dean of Students

Tel: Zaria + 234 - 069 - 550501, Fax: 234 (069) 550022, Telegram: UNIBELLO Zaria, E-mail: sad@abu.edu.ng

Deputy Dean, Main Campus
Dr. M. K. Aliyu B. A (ABU), M.Sc. (Ibadan), Ph.D (Nusukka)
GSM 08060422304

Deputy Dean, Kongo Campus
Dr. Y. Y. Bambale, LL.B, LL.M, Ph.D (ABU) SL (Lagos)
GSM 08060412508