

**ATTITUDE TOWARDS THE USE OF RESEARCH SOCIAL MEDIA AMONG
ACADEMICS AND POSTGRADUATE STUDENTS IN SELECTED FEDERAL
UNIVERSITIES IN SOUTHWESTERN NIGERIA**

BY

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CERTIFICATION

I certify that this thesis was carried out by Abigail Olubukola Irele in the Cultural and Media Studies Programme of the Institute of African Studies, University of Ibadan.

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DEDICATION

TO THE ALMIGHTY GOD

It is by His Grace that I am able to accomplish this work.

To the memories of my parents **Prince** and **Princess Olawumi** and **Arinola Agunsoye**, my sister **Funmilayo**, and my brother in-law **Professor Francis Abiola Irele (Olohun- Iyo)** who left before seeing this work accomplished.

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ABSTRACT

Social media, which refers to an online environment used for the purposes of mass collaborative communication, where participants can create, post, rate, consume and share content without a direct intermediary, have been shaping and redefining the academic space. Previous studies have shown the impact of social media on students' academic performance, but very little has been said about specific attitudes towards the use of social media platforms in the Nigerian academia. Therefore, this study examined the attitude of academics and postgraduate students in federal universities in Southwestern Nigeria to social media use. This was with a view to determining the significance of social media platforms for academic purposes.

Katz *et al.*'s Uses and Gratifications Theory was adopted as explanatory framework. Survey research design, adjusted to the qualitative approach, was applied. University of Ibadan (UI) and Federal University of Technology, Akure (FUTA), were purposively selected. Quantitative data were collected using questionnaire randomly administered on 317 students from UI, 379 from FUTA, 209 academics from UI and 163 from FUTA. In-depth interviews were conducted with five each of academics and postgraduate students from the two universities. Two research social media platforms, namely, Academia.edu and ResearchGate were used. Data were analysed using simple percentages and qualitative discussion of interview themes.

The respondents exhibited three main attitudes towards the two research social media platforms: positive, negative and indifferent. A few (22.4%) of UI students and 20.8% of FUTA agreed that Academia.edu is of beneficial use, while 13.8% of UI and 16% of FUTA students were undecided. Some UI (13.8%) and FUTA (13.1%) students disagreed on the usefulness of the platform. As for academics, 8.3% of UI and 9.6% of FUTA agreed, while 15.6% of UI and 14.4% of FUTA were undecided. Of UI and FUTA academics, 26.2% and 25.9% respectively disagreed. Regarding the benefits of using ResearchGate, 6.8% of UI students and 9.2% of FUTA agreed, while 28% (UI) and 26.7% (FUTA) disagreed. For UI and FUTA students, 16.2% and 13%, respectively were undecided and 2.5% of UI academics as well as 3.3% of FUTA agreed that ResearchGate is of beneficial use, while 35.9% UI academics and 40.1% of FUTA disagreed. A total of 8.8% of UI academics and 9.3% of FUTA were undecided. Overall frequency of use of Academia.edu among UI and FUTA students were 36% (always), 32% (sometimes), and 32% (never), while that of UI and FUTA academics were 17% (always), 31% (sometimes), and 52% (never). Overall frequencies of use of ResearchGate among UI and FUTA students were 9% (always), 23% (sometime), and 68% (never). While that of UI and FUTA academics were 4% (always), 21% (sometimes), and 75% (never). Cognitive needs were the most advanced reasons indicated by respondents for the use of both platforms. This was followed by social integrative needs.

There is a poor attitude towards research social media use among postgraduate students and academics at the University of Ibadan and the Federal University of Technology, Akure. The use of research social media platforms should be encouraged.

Keywords: ResearchGate, Academia.edu, Academics, Postgraduate students, Uses and gratifications.

Word count: 499

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Information Technology has had an enormous effect on the modern world, and advances in telecommunications have affected every aspect of human endeavour all over the world. We now live in a technology driven world which is fast shrinking into the proverbial global village. The concept of the global village is a reality and it is now accepted that the world has transformed from the industrialized age to the knowledge age. One area that has been most affected by advances in Information Technology (I.T.) is the educational sector.

Technology has significantly changed the way people interact with one another and the world around them. It has dramatically transformed people's relationships with others, their families, and communities (Murad Ali, Raja Ahmad Yacoob, Mohd Nuri Bin Endut, Naseb Ullah Langove, 2016). The world is technology-driven at the level of information dissemination, which is why most people in the academic and business world hook up to the internet to gather information and communicate with themselves. Communication technology development is widely recognized as a salient feature of modern society in the so-called 'information age', as more and more people are connected with computers and mobile devices, especially the internet and social media (Bradley and McDonald, 2011; Westera, 2012).

The importance of the Internet as a mass communication medium has increased significantly. It has made information available throughout the world. By making information available it has compressed the world into a global village because there is no more space and time. Societies all over the world have become knowledge society because knowledge production has become the norm throughout the world. The Internet has a number of unique characteristics that set it apart from traditional media. It is interactive (Rafaeli and Sudweeks, 1997; Tutkun, 2011) and it has global reach (Berthon, Pitt and Watson, 1996; Johnson, 2011). To establish a presence on the Internet is relatively cheap and easy (Berthon, and Watson, 1996) and it allows for more sophisticated audience segmentation (Ko, Cho and Roberts, 2005: 57). These characteristics have turned the Internet into a 'virtual marketplace' (Ko *et al.*, 2005: 57) where interactive tools can be used to build and strengthen relationships.

Through the Internet, a number of web technologies emerged and one technology that is making significant impact with regard to information sharing and communication is the social

media networks. By the adoption of social media in the academia, social media technologies which were initially used for socializing and entertainment have, in recent years, expanded their reaches into learning activities providing an open space for academic engagement. The effect of such technologies on pedagogy is to create an environment for collaborative learning where academics and students communicate and collaborate electronically (Junco, Heiberger, and Loken, 2010).

Social media has transformed and impacted on communication, learning, research and education in general. Among the vast variety of online tools which are available for communication, social networking sites (SNS) have become the most modern and attractive tools for connecting people throughout the world (Aghazamani, 2010). Davis, Canche, Deil-Amen, and Rios-Aguilar, (2012), refer to social media technology (SMT) as “web-based and mobile applications that allow individuals and organizations to create, engage, and share new user-generated or existing content, in digital environments through multi-way communication.” Through this platform, individuals and organizations create profiles, share and exchange information on various activities and interests. An interesting aspect of social media is that they are not limited to desktop or laptop computers but could be accessed through mobile applications and smart phones making it very accessible and easy to use. There is no doubt that social media have drastically changed the way the world communicate, connect, and conduct business (Moody, 2010). Social media are known to play essential roles in collaboration, community building, participation and sharing. One vital aspect of social media is that they use mobile and web-based technologies to create highly interactive platforms through which individuals and communities share, discuss, and modify user-generated content (Jan and Hermkens, 2011).

The advents of social media have transformed Web users from passive consumers of information into active co-producers of social content. Next to their wide usage for social interactions among people, social media have also been increasingly used in the academic community to support research activities. A growing number of research social media platforms such as ResearchGate and Academia.edu have enabled scholars worldwide to build professional connections, share research resources, and foster collaboration. Not only do social media provide users with a global audience, they also assist in creating, sharing, and editing content which is incredibly easy to do and occurring in real time.

According to Tarantino and McDonough, (2014: 3), “the rapid development of information and communication technologies has sparked the creative incorporation of social media into current pedagogical applications and processes.” This is corroborated by Badge, Saunders, and Can, (2012: 2) who argue that social networks are rapidly moving beyond their original purpose and are inevitably becoming part of the learner experience. Jones and Yu, (2010) are of the opinion that they allow people “to communicate much faster and more effectively.” This is also noted by Moody, (2010), “social media can even be powerful tools for engaging, teaching and learning in the college classroom” (p. 1). As Imbernón, Silva and Guzmán, (2011) have put it They permit and favour the publication and sharing of information, self-learning, teamwork, and also facilitate communication, between students and between pupil-teacher, ..., access to other sources of information that support or even facilitate constructivist learning and collaborative learning, and contact with experts. As a whole, all of these applications and resources make learning more interactive and significant and above all allow it to develop in a more dynamic environment.

They are also defined as interactive digital tools that employ mobile and web-based technologies to create highly interactive platforms through which individuals and communities share, co create, discuss, and modify user-generated content. They are conducive to timely interactive communication and foster dialogue and content exchange among message consumers and creators (Seltzer and Mitrook, 2007; Taylor and Perry, 2005; Wright and Hinson, 2009). They are used to share ideas with a broader audience. Researchers use social media as a means of sharing their research and supporting their networking and public engagement activities, they openly discuss their research in the public domain. Academics and students use social media tools in research and scholarship. For instance a researcher can boost his or her career with social media. As Bradley and McDonald, 2011, have noted “... if you are passionate about a topic and argue your perspective in a compelling manner, you can begin to generate a following...If people find your opinions and perspective interesting, they will do a lot of the work for you. By design, social media are conversational.” When information is posted on social media, people can like them and comment on the thoughts in the information. They can also forward them to other people.

According to Harvard Business Review Management Tip, (2012), one needs to know the basics of putting ones’ professional -self online:

Social media is not just for socializing. When handled correctly, you can use it to enhance your personal brand, establish your expertise, or demonstrate your digital fluency. Commit to using social media for professional reasons and be proactive about managing your activity and image. Consider what potential employers or colleagues will see – you don't want them to discover only pictures of you and your dog, or worse. Make sure at a minimum you have a LinkedIn account with a completed profile. Try tweeting or blogging about your area of expertise, thereby creating content that others can forward, retweet, or repost. This can help you establish yourself as an expert in your field.

Research social media can also be referred to as internet sites where people interact freely, sharing and exchanging information and ideas in virtual communities and networks using a multimedia mix of personal words, pictures, videos and audio. At these websites, individuals create and exchange content and engage in person to person conversations. They are new forms of communication that are changing behaviour and expectations of researchers because these technologies are used for research dialogues. They appear in many forms including blogs and micro blogs, forums, social networks, wikis, virtual worlds, tagging and news, writing communities, digital story-telling and scrapbooking, image and video sharing, portals and many others. Kaplan and Haenlein, (2010) define social media as a group of internet based applications that build on the ideological and technological foundations of Web 2. 0 and that allow the creation and exchange of user- generated content. Further they opine that social media have taken the millennial generation by storm.

According to Lenhart, Purcell, Smith and Zickuhr, (2010:5) “in 2009, approximately 93% of young adults aged between 18-29 years reported going online, with 72% of them active on at least one social media site.” They are means of connecting and interacting actively through the internet. In other words, as Nunes, (2006) puts it, “technology produces social space.” Social media allow people who are separated in time and space to connect and to do so, on an immediate basis. With the creation of increasingly powerful mobile devices, numerous social media applications have gone mobile. Mobile devices such as cellular phones, iPhones and tablet computers have become such an essential part of our lives that it is hard to imagine functioning without them.

Social media are popular throughout the world. Their multidimensional uses and specification increase every day. Through these networks, people can communicate and share

knowledge. These social media platforms have gained popularity all over the world. They have been able to make a revolution in the fields of communication, (Espuny, Gonzalez, Llexia, and Gisbert, 2011) and information and knowledge sharing (Grosseck, 2009). In particular,

they have attracted the attention of the young generation, such as university students, because of their interactive and multidimensional characteristics, and also because of the growing world of technology and internet, to freely and quickly share, with their family, friends and colleagues, the most significant moments of their lives, in addition to their ideas, opinions and beliefs” (Brady, Holcomb and Smith., 2010:154).

The word social media is now a buzz-word in the communication industry. They are the current label for digital technologies that allow people to connect, interact, produce and share content. These technologies have donned many labels including social networking, peer media, new media, digital media, NextGen PR, and Web 2.0 (Lewis, 2010). Among the most popular social network services include Facebook, MySpace, Twitter, LinkedIn, Instagram and Flickr. While these are the most recognized, there are more than 150 social networking websites listed on the Wikipedia, and the list is not exhaustive (Greenhow, 2009). Mobile telecommunications network technology and smartphones equipped with operating system software and internet capabilities have provided the opportunity to stay connected to others through social media networks while on the move.

Social media are used for personal needs to connect with old and new friends, build on existing relationships, and gather information and community knowledge. In addition to personal interaction and entertainment value, social media have become a powerful tool in the arsenal of marketers, entrepreneurs, advertisers and public relations professionals (Bernoff, 2009). Most of these social media share most or all of the following characteristics:

Participation – social media encourage contributions and feedbacks from everyone who is interested.

Openness – most social media services are open to feedback and participation. They encourage comments and sharing of information. There are rarely any barriers to accessing and making use of content – password, protected content is frowned on.

Conversation – whereas traditional media are about broadcast (content transmitted or distributed to an audience) social media are seen as a two way conversation.

Community – social media allow communities to form quickly and communicate effectively. These communities share common interests such as political issue, love of photography, or a favourite television program.

Connectedness – most kinds of social media thrive on their connectedness, making use of links to other sites, resources and people. Social media allow for a tighter integration of virtual and real life. With status update on Facebook and Twitter, users can know what their friends are doing at any particular moment through their Facebook and Twitter pages; they see where they are physically located and join them in their activities. In the same way that impulsiveness can lead people to post messages on social media, such messages can evoke the impulsive decision to act on them and catch up with friends. Social networking sites are frequently used to stay in touch with old work colleagues or high school friends. Social network web site allows a user to: create a profile – set up an account to create a digital representation of self, select other members of the site as contacts or connections, communicate and engage with these users.

Since this study focuses on the academic environment, the research social media platforms known as Academia.edu and ResearchGate among other academic research platforms will be the focus in this study. These platforms are research focused and are important in fostering networking among researchers within the academic community.

Academia.edu is a site where researchers set up their professional presence on the web. Here they can convey information about their research backgrounds and pursuits. Further, the site enables researchers to connect people with whom they are collaborating or with colleagues in similar research area. If a researcher is on Twitter or LinkedIn, he/she can be receiving updates from other researchers from any of these social media platforms through their connections. The connections receive updates from one another via Twitter/LinkedIn, and in this way, they are made aware of one another's research activities. Being on academia.edu helps a researcher to know if another researcher in his or her area of specialization has uploaded any paper or papers; the site also keeps researchers informed about who is following their works and who has downloaded his/her papers. The researcher keeps the site updated with the research ideas and events in his/her area of specialization. Academia.edu could also be described as a place to have a web presence for researchers' works.

A researcher has to open an account to be able to be on academia.edu. It was launched in September 2008 and the site now has over 21 million registered users as at April, 2015

(Academia.edu “About”) and the platform can be used to share papers, monitor their impact, and follow a research in a particular field (Cutler, 2012). Academia.edu was founded by Richard Price. TechCrunch, (2012) remarked that Academia.edu gives academics a "powerful, efficient way to distribute their research" and that it "will let researchers keep tabs on how many people are reading their articles and also a platform to show the researcher’s work in progress with specialized analytics tools", and "also does very well in Google search results." Academia.edu seems to reflect a combination of social networking norms and academic norms (Thelwall and Kousha, 2014).

ResearchGate is a social network site for academics to create their own profiles, list their publications and interact with each other. Like Academia.edu, it provides a new way for scholars to disseminate their publications and hence potentially changes the dynamics of informal scholarly communication. The Web has introduced many new ways in which academics can publicize their works and communicate with each other at a distance. These two activities seem to have been separated to some extent, however, with articles publicized via links on author home pages (Mas Bleda, Thelwall, Kousha, and Aguillo, 2014) and in preprint archives (Shuai, Pepe, and Bollen, 2012), the sites - Academia.edu and ResearchGate now combine communication and dissemination by incorporating a repository for academics' publications within a social network site for researchers (Gewin, 2010; Lin, 2012; Madisch, 2008; Mangan, 2012). According to Alexa.com, both sites were moderately popular by November 2013, with ResearchGate.net being ranked 3,947 and Academia.edu 2,243 for popularity amongst all websites. Founded in 2008, ResearchGate apparently has more than 3 million users (www.researchgate.net/aboutus>About Us.html), with about a third visiting monthly (Dembosky, 2013).

ResearchGate allows individuals to list or upload their publications into their profiles. For example, a researcher could use keyword searches in general, local or disciplinary digital libraries to find relevant articles in the hope that this method will not miss many relevant papers. In addition, they may recall relevant articles from previous studies, or from previous literature scanning or conference presentations attended. They may also use email, listservs or even face-to-face communication in order to ask others to suggest relevant articles – harnessing their invisible college (Crane, 1972). A consequence of the way in which scholars find relevant articles is that papers that are easier to find or access seem likely to be more cited than other

papers with similar topics and quality. Given that citations confer recognition on the cited author (Merton, 1973) and that this recognition is important for academic careers and evaluations (Moed, 2005), authors and institutions should benefit from making their publications easier to find and access. Sites like Academia.edu and ResearchGate appear to be primarily spaces for academics to describe themselves and their works and to connect with others.

The aforementioned information about Academia.edu and ResearchGate make them the ideal social media platforms for research because of their widespread distribution and ability to facilitate communication, collaboration, and information sharing among academics and postgraduate students that are aware of their existence. Given the importance of these particular social media platforms in sourcing or deriving information and disseminating critical research materials, it should be noted that these research social media platforms would be useful for academics and postgraduate students in networking with a specifically relevant worldwide academic base that are important to them in terms of their academic works and research. This study would thus focus on how Nigerian academics and postgraduate students are making use of these research social media platforms for academic works and research purposes.

1.2 Statement of the Problem

A number of studies have attempted an investigation of the impact of social media on academic performance of students (Roberts and Foehr, 2008; Ahmed and Qazi, 2011; Veletsianos and Navarrete, 2012; Mehmood and Tawir, 2013; Negussie and Ketema, 2014) while neglecting an analysis of the attitude (or behavioural patterns) of people towards the use of these sites as well as the gratifications they seek in using them. Although the use of social media platforms such as Facebook, twitter, and whatsApp for academic purposes has received much research attention (e.g. Chen and Bryer, 2010; Lenhart, Purcell, Smith, and Zickuhr, 2010; Tiryakioglu and Erzurum, 2010; Cassidy, Griffin, Manolovitz, Shen, and Turney, 2011; Browning, Gerlich, and Westermann, 2011; Chen and Bryer, 2012), very little scholarly consideration has been given to the specific ways in which users' attitudes intertwine with the patterns of use of these social media platforms for specific academic purposes. More crucially, there is scanty literature on how academics use (and their attitude towards) specialized platforms like Academia.edu, Mendeley, Zotero and ResearchGate which are specifically designed for academic uses (Veletsianos 2012; Fransman's 2013; Löfgren, 2014; Veletsianos, 2013; Vostal, 2014; Selwyn, 2014; Lim, Agostinho, Harper and Chicharo, 2014).

Finally, although existing works have examined the nexus between attitude and academic research (Turkle, 2004; Waycott, Bennett, Kennedy, Dalgarno, and Gray, 2010; Lederer, 2012), scholars have been more particular about students' attitude to specific academic subjects and the relationship between attitude and academic performance while neglecting to look at the attitude of academics and students, specifically, postgraduate students, towards the use of specific social media platforms designated for academic purposes. This is the gap which this study intends to fill. The study will, in addition, investigate the extent to which scholars are responding to these sites and what expectation or gratifications inform their responses. Ultimately, the attempt here is to determine the extent to which these specialized research social media sites are meeting the needs of academics for which they are specifically designed.

1.3 Aim and Objectives of the Study

The aim of the study is to examine the attitude towards the use of research social media among academics and postgraduate students in selected Federal Universities in southwestern Nigeria.

The following specific objectives seek to:

- 1) Examine the attitude of academics and postgraduate students towards Academia.edu and ResearchGate in the selected universities.
- 2) Investigate the use of Academia.edu and ResearchGate by academics and postgraduate students in the universities.
- 3) Interrogate the gratifications sought and obtained from using academia.edu and ResearchGate by academics and postgraduate students in the selected universities.
- 4) Find out the way the attitude of academics and postgraduate students influence the use of Academia.edu and ResearchGate in the selected universities

1.4 Research Questions

The following research questions are hereby formulated in respect of the problem:

1. What is the attitude of academics and postgraduate students towards Academia.edu and ResearchGate in the selected academic institutions?
2. How frequent is the use of Academia.edu and ResearchGate among academics and postgraduate students in the selected academic institutions?

3. What are the gratifications sought and obtained for using Academia.edu and ResearchGate by academics and postgraduate students in the selected academic institutions?
4. In what way does the attitude of academics and postgraduate students influence the use of Academia.edu and ResearchGate in the selected academic institutions?

1.5 Scope of the Study

In regard to physical coverage, this study is limited to the southwest geopolitical zone of Nigeria. The choice of this zone is predicated on two factors: first, it is the zone with the highest concentration of academic institutions offering degrees and diploma programs. This zone has approximately about 50 Universities, 15 Polytechnics, and 10 Colleges of Education. This range of institutions allows for a wide opportunity to make a suitable choice of institutions for a wide range of disciplines for students seeking admission to higher institutions. The other factor which makes the southwest suitable for this research is that this concentration of higher institutions in the southwest makes it appropriate for reaching a large number of researchers that are relevant to this study which are not available in other zones in Nigeria.

Two universities were selected from the southwest of Nigeria, namely, the University of Ibadan and Federal University of Technology, Akure. These institutions are both owned by the federal government of Nigeria. The reason for the choice of these two institutions is twofold: the first and the most obvious is the fact that they are both ‘premier’ universities, while the University of Ibadan is the first to be established in Nigeria, the Federal University of Technology Akure is the first specialized university (a science and technology based university) in the country. There is a need for foundational research on unique institutions such as these two universities. Their suggested strategic plans are indicative of their wish to position themselves as templates in the way they are labeled: ‘the first and the best’ and also the ‘premier’ university as University of Ibadan is referred to, and ‘technology for self-reliance’ as Federal University of Technology Akure is also referred to. Federal University of Technology Akure is not just the first university of technology in southwestern Nigeria, but over the years, has been accredited as the leading IT institution with the capacity of winning several awards. University of Ibadan, on the other hand, with her current structural initiative in technology structure and programme delivery, is also justifying the claim. This is exhibited in the process that has culminated into University of Ibadan merger of different units aimed at achieving unified and organic structure

comprising four ancillary fields. They are UMC- University Media Centre, TRD- Training, Research and Development, MIS- Management Information Science and ITNH- Information Technology Network and Hardware.

The vision of the University of Ibadan is “to be a world-class institution for academic excellence geared towards meeting societal needs” while its mission statement reads as follows:

- To expand the frontiers of knowledge through provision of excellent conditions for learning and research;
- To produce graduates who are worthy in character and sound judgment;
- To contribute to the transformation of society through creativity and innovation;
- To serve as a dynamic custodian of society’s salutary values and thus sustain its integrity.

The selection of the two institutions is also the function of their avowed commitments to post graduate studies. Indeed, the University of Ibadan’s aspiration is to become the first full-fledged postgraduate university in Nigeria in the nearest future (see www.ui.edu.ng). As for the Federal University of Technology, Akure, the commitment to postgraduate studies makes it the ‘best destination for postgraduate studies in Nigeria today among universities offering programs in science and technology’ (Adeagbo, 2016).

The study is limited to faculty members (academics) and postgraduate students of the two selected universities. This is, first, in keeping with the focus of the research in terms of the second reason given for the choice of the two institutions (namely, that they are both committed to postgraduate studies), and second, because the two research social media platforms selected for this study are mostly designed for the use of academics and research students. Although undergraduate students are not entirely exempt from research, it is mostly faculty and post graduate students that construct a significant part of their work and training around research, and for this, they often rely on a variety of library and archival sources, as well as research social media platforms such as Academia.edu and ResearchGate.

1.6 Significance of the Study

Findings from this research suggest that it will contribute to knowledge particularly about the use of research social media among academics and postgraduate students in carrying out their research in Nigerian universities. It will help the academic community in Nigeria to appreciate the need for personal development by being computer literate alongside the use of the internet

both for research work and other academic activities. The findings will inform researchers, educators, and policy makers who strive to understand the use and value of social media in the context of scholarship (e.g., Gruzd, Staves, and Wilk, 2012; Holmberg and Thelwall, 2014). The implications of this study suggest that people who are more active on social networks are more likely to gratify their need of feeling connected which is one of the goals of media use as explicated in the Uses and Gratifications Theory. It is expected that the outcome of this study will positively influence the decisions of the policy makers in the educational sector, as well as university administrators, about the need to adjust their curricula in compliance with developments in information and communication technology world.

It will also act as an eye opener to Nigerian academics on the need to include their research works on the internet and invariably help to enhance the ratings of Nigerian universities on the web.

1.7 Definition of Terms

The following operational definitions are used in this study:

Attitude: This is an evaluative reaction to persons, objects, and events. This includes your beliefs, positive and negative feelings about the attitude object.

Social media: These are online environments used for the purpose of mass collaboration, where all participants can create, post, rate, enhance, discover, consume and share content without a direct intermediary.

Social Networking: This implies establishing many-to-many connections for the purposes of sharing information with the networks or subsets of the networks. Although one – to - one connection is possible on social networking sites, the main activity is engaging with a broader range of participants in the network.

Academia.edu: This is a research site where researchers set up their professional presence on the web and also a platform to show the researcher's work in progress. The site enables researchers to connect to people with whom they are collaborating or with colleagues in similar research area.

ResearchGate: This is a research social network site for academics to create their own profiles, list their publications and interact with each other. It provides a new way for scholars to disseminate their publications and hence potentially changes the dynamics of informal scholarly communication.

Academics: These are lecturers by profession in tertiary institutions who hold positions from assistant lecturer to full professorship.

Postgraduate students: These are graduate students in the university pursuing higher education for instance, postgraduate diploma, masters' degree or a doctoral degree.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

This chapter discusses in a comprehensive and systematic way the relevant literature on social media and will also focus on the literature on research social media platforms. It will also analyze the concepts of attitude and the uses and gratifications theory upon which this research is anchored. The chapter is structured in such a way that it cuts across many areas of social media research works as well as drawing upon many research works that are relevant to the study.

2.1 A Pretext on Information and Communication Technology (ICT)

Information and Communication Technologies (ICTs) are broadly defined as technologies used to convey, manipulate and store data by electronic means (Open University, 2015). This can include e-mail, SMS text messaging, video chat (e.g., Skype), and online social media (e.g., Facebook). It also includes all the different computing devices (e.g., laptop computers and smart phones) that carry out a wide range of communication and information functions. ICTs are pervasive in developed countries and considered integral in the efforts to transform the social, political and economic status in the developing countries. For example, the United Nations, (2006) recognizes that ICTs are necessary for helping the world achieve eight time-specific goals for reducing poverty and other social and economic problems : 1) eradicate extreme poverty and hunger; 2) achieve universal primary education; 3) promote gender equality and empower women; 4) reduce child mortality; 5) improve maternal health; 6) combat HIV/AIDS, malaria and other diseases; 7) ensure environmental sustainability; 8) develop a global partnership for development. The World Health Organization also sees ICTs as contributing to health improvement in developing countries in three ways: 1) as a way for doctors in developing countries to be trained in advances in practice; 2) as a delivery mechanism to poor and remote areas; and 3) to increase transparency and efficiency of governance, which is critical for the delivery of publicly provided health services (Chandrasekhar and Ghosh, 2001).

A historical trajectory of the development of Information Communication Technology cannot be divested from the historical development of computers (Murad *et al.*, 2016). In fact the great majority of references to “information technology” have always been concerned with computers, though the exact meaning has shifted over time (Kline, 2006). The phrase received its first prominent usage in a *Harvard Business Review* article (Haigh, 2001b; Leavitt and Whisler, 1958) and it was used to promote a technocratic vision for the future of business management.

The meaning was revived in policy and economic circles in the 1970s. Information Technology now describes the expected convergence of the computing, media, and telecommunications industries (and their technologies), understood within the broader context of a wave of enthusiasm for the computer revolution, post-industrial society, information society (Webster, 1995), and other fashionable expressions of the belief that new electronic technologies were bringing a profound rupture with the past. As it spreads broadly during the 1980s, IT increasingly lost its association with communications to become a new and more pretentious way of saying “computer.” The final step in this process is the recent surge in references to “information and communication technologies” or ICTs, a coinage which makes sense only if one assumes that a technology can inform without communicating.

In the history of information technology, as in other areas defined through reference to “information,” definitions are problematic and categories unstable. As Lionel Fairthorne observed more than forty years ago (Fairthorne, 1965, p. 10), the word’s appeal is often as “a linguistic convenience that saves you the trouble of thinking about what you are talking about.” Valiant efforts have been made to define information (Capurro and Hjørland, 2003) broad enough to capture the meaning of information science and coherent enough to be useful. Yet it is still a contested concept since there is no consensus around its actual meaning. Information, like other concepts such as progress, freedom, or democracy has become ubiquitous because it has a sort of interpretative flexibility hence it has different meanings. Information has been seized upon by many different groups, each of which has hybridized the concept hence we have notions such as “information science,” “information worker” and “information system.” Definitions of these terms have attempted to demarcate one notion of it from the other (Gieryn, 1983) for the authority of particular specialist groups, and so are frequently contested and have evolved haphazardly over time. Such phrases are rarely taken to mean what one would have expected to find by looking up their constituent words in a dictionary. This has become a problem for the researcher, since one is not certain that if one’s work using analytical categories that embed the interests and assumptions of one or another group of scholars one is writing about will be accepted by the others. It is hard even to find a vocabulary to describe long term continuities of practice across these rhetorical ruptures hence the concepts are highly contested ones.

However these definitional difficulties of the term “information” have not obstructed its common path for the scope of its application especially as it relates to social media. It is

generally believed that social media is a platform where information is shared and interactive communication achieved (Al-rahmi, Othman, and Musa, 2014).

Technology has become an integral part of learning and has strengthened it. It has also transformed the conventional pedagogical method into a new key entirely hence many aspects of learning are dominated by technology. Technologies are deployed now in advancing learning procedure in multiple formats, variety of resources, numerous delivery channels and not restricted to time, space and place hence we have global educational public sphere (Murad *et al.*, 2016). Technologies have also enhance learning, increase learning demand and offer flexibility in their delivery in terms of time, space and place (Westera, 2012). The advent of the Internet during 1990s marks a rupture in the way society functions. As a result of its wide ranging nature, Internet has given us new ideas of how information is accessed, and information services and social connectivity have led to globalized economy and cultural exchanges in the world now. In fact we live in a globalized world. Therefore globalization is a buzz word now and social media is the propellant of globalization. To use the phrase of Friedman, (2005) “The world is flat.” Internet represents the first technological invention that allows education providers to bring changes at an institutional and organizational level.

Internet has also brought about what is referred to as digital divide between young and adults as well as between the North and South hemispheres. The new generation has a more positive attitude toward the new technologies than the old ones (Westera, 2012). Internet has rapidly entered the life of the people in the 21st century and has created cosmopolitan citizens in the world. It is a fast means of communication in getting people closer to each other speedily, while also having the ability to enhance their knowledge. Educational literatures are now freely accessible, such as dictionaries, encyclopedias, references; databases etc play and they play an important role in distant learning made possible by the Internet. Collaborative projects are now undertaken by students with other students from other schools, universities, countries and also enable discussion of different problems with them through the Internet. Internet in the sphere of education is really unique and has helped in the evolvement of what is now referred to as knowledge society (UNESCO, 2003).

As earlier pointed out, Internet has become a symbol of change as it offered unlimited opportunities and choices to access information. Internet has affected the educational process, giving us a new dimension of learning, and as well as offering a creative method of learning

(Barger, 2008). In every aspect of education and learning different applications of Internet technology are spreading (Tutkun, 2011). Internet has changed the way people access information and wide ranges of learning resources are available on the Internet (Johnson, 2011).

Social media are forms of communication that have transformed the entire landscape of information access and dissemination online. These platforms consist of a range of communication channels, considerably popular among people now. They are considerably popular among scholars since they assist them in various types of communication and collaborative learning (Murad *et al.*, 2016). Social media consist of a collection of Internet websites, services, and practices that support collaboration, community building, participation, and sharing of information (Junco, Heiberger, and Loken, 2010). As defined by Bryer and Zavatarro, (2001), “Social media are technologies that facilitate social interaction, make possible collaboration, and enable deliberation across stakeholders.” These technologies now include blogs, wikis, media (audio, photo, video, text) sharing tools, networking platforms (including Facebook), and virtual worlds (Bryer and Zavatarro, 2001). These sites provide limitless opportunities to interact, socialize and share with each other (Murad *et al.*, 2016; Correa, Bachmann, and Hinsley, 2013 and O’zgu’ven and Mucan, 2013). Social media have become extremely important means of communication of the present age and connect people with similar interest and sharing of the same activities (Al-rahimi *et al.*, 2013).

According to Global Digital Statistics, (2014), there are 2.95 billion (41% of total population) people who are active Internet users with 2.03 billion penetrations of active social media users, whereas 1.56 billion of them access these social applications through their mobile devices. Social media applications are commonly used by millions of people across the world for different reasons on regular basis (Al-rahmi *et al.*, 2014). This rapid growth in the acceptance of social media applications within a short period of their introduction in the ‘90s was due to their widespread use by students especially the young ones (Kirschner and Karpinski, 2010). This increase in the use of these applications is because of its convenience, flexibility and functionalities (Al-rahimi *et al.*, 2013). These tools are helpful to students of higher education and they have modernized the process of student learning, interaction, collaboration and sharing of ideas (Chai-lee, 2013 and Al-rahmi *et al.*, 2014). Since social media are collections of websites and web-based systems they allow for mass interaction, conversation and sharing among members of a network (Murphy, Link, Childs, Tesfaye, Stern, Harwood, 2014).

As earlier pointed out social media have erased geographical barriers, and maps have disappeared in space. Today everyone can interact, comment, debate and collaboratively create knowledge, no matter where you are located. The applications assist students in many aspects and they need to manipulate and understand them because they facilitate learner integration and they become part of the platforms' community. (Andersen, 2013). Social media have become more widespread through social interaction using Internet and Web based technologies. Cyber space has become a place where people communicate now by sharing information. The importance of social media in pedagogical sector resides in the fact that they allow for integrated working partnership and in collaborating in certain projects of interest to scholars in their areas.

Information sharing through social media has effectively changed the way people learn and network (UNCTAD, 2012) and also affect universal method of information gathering in academic environments (Elkaseh, Wong, Fung, 2015). Social media platforms open valuable information and knowledge sharing among people such as Social science space, Academia. edu and ResearchGate (Kichanova, 2012). Social media applications are connecting people free of cost and facilitate the sharing of information in different formats (Elkaseh *et al.*, 2015). As noted before, social media refer to platforms such as social networks, blogs, micro-blogs, and fora where self-generated contents of users are shared among each other using such platforms. The possibility to make shared content reach more people may be increased when they are shared with popular individuals or if the shared content gains good interest. Even so, the literature on this aspect has not grown much in this part of the world and the nexus between social media usage and ICT has not been explored much as well. This is not to deny existing works on ICT and some social relationships.

With the growth of the Internet, a wide range of ICTs have transformed social relationships, education, and the dissemination of information. It is argued that *online* relationships can have properties of intimacy, richness, and liberation that rival or exceed *offline* relationships, as online relationships tend to be based more on mutual interest rather than physical proximity (Bargh, McKenna, and Fitzsimons, 2002).

The introduction of ICT into universities changed the way education is conducted. It paves the way for a new pedagogical approach – where students and lecturers are expected to play more active roles in communicating and interacting with colleagues using technology. Oduma, (2013) referred to ICT as having played a major role in education and has impacted on

the quality and quantity of teaching and learning as well as research in educational methodology to initiate a new age in education. Internet as a digital tool of ICT has empowered teaching and learning as it provides powerful resources and services for academics and students thus enabling them meet their educational needs as well as networking among students and lecturers to facilitate exchange of ideas. It also improves opportunities for connecting schools to the world, as learning has expanded beyond the classroom (Dotimi and Hamilton-Ekeke, 2013).

Dickson, (2012) has corroborated some of the statements above when he says that the Internet provided resources and services that are used for accessing, processing, gathering, and communicating information. The use of the Internet in education has been phenomenal in all parts of the world and their application has become an integral part of education all over the globe.

In the popular book *The World is Flat*, Friedman, (2005) argues that collaborative technologies –i.e., interactions between people supported by ICTs – have expanded the possibilities for forming new businesses and distributing valued goods and services for anyone in any part of the world. What this indicates is that no aspect of human endeavour has not been touched by information technology. The educational theorist and technologist Curtis Bonk in his highly insightful and influential book called *The World is Open* (Bonk, 2009) argues that with the advent of ICTs, the most remote areas of the world have opportunities to gain access to the highest quality learning resources.

Educational sector has been the most beneficial from the ICT revolution. Proceedings from the 2004 International Workshop on Improving E-Learning Policies and Programs also showed that ICTs are helping transform governments through workforce transformation, citizen education, and service optimization (Asian Development Bank Institute, 2004). Innumerable data sources demonstrate that ICTs have reduced boundaries and increased access to information and education (see Bonk, 2009; Friedman, 2005). This has led the United Nations Educational, Scientific, and Cultural Organization (UNESCO) to focus on assisting developing countries in developing robust policies in ICTs in their tertiary education (UNESCO, 2008b). Although ICTs and the growth of the Internet are not without problems, the reality is that it will remain a major force in shaping education around the world especially in developing countries. All areas in education now have recognized the importance of ICT and consider it to be a key part of professional development. For example, the National Business Education Association (NBEA)

of America has stated: "mastery of ICT is a requirement rather than an option for enhancing academic, business, as well as improvement of ones' performance" in life (NBEA, 2007, p. 88). There are resources now that emphasize the role of ICT in educational curriculum and most especially in research and pedagogical practice (Coe Regan and Freddolino, 2008; Faux and Black-Hughes, 2000; Giffords, 1998; Marson, 1997; Sapey, 1997). Some professional bodies have emphasized the use of ICT in their professions and have set certain standards regarding ICT which professionals must adhere to in order to have mastery of ICT. For instance the National Association of Social Workers (NASW) of America and Association of Social Work Boards published a set of ten standards regarding ICT and social work practice, which serves as a guide for the social work profession to incorporate ICT into their various missions (NASW, 2005).

Despite the interest in ICT, not much attention has been directed towards the study of attitude of scholars to research social media. There is therefore the need to research into this aspect of the attitude of scholars to online academic research platforms using a theoretical framework that will unmask the attitude of scholars to research social media platforms.

2.1.1 Social Media and Academic Research

As explicated above, the Internet revolution changed the information world with regard to sharing, storage, speed, and retrieval of information in whatever form regardless of the person's location (Castells, 1996). Through the Internet a number of web technologies emerged and one technology that is making impact with regard to information sharing and communication are the social media networks. The evolution of social media has cut across all facets of society with its positive and negative impacts. It has to be emphasized that social media have transformed and impacted on communication, learning, research and education in general. Among the vast variety of online tools which are available for communication, social networking sites (SNS) have become the most modern and attractive tools for connecting people throughout the world (Aghazamani, 2010).

Social media, which are a collection of Internet websites, services, and practices have made it possible for virtually infinite number of people to communicate with one another, collaborate, build community among themselves and enable people to participate and share ideas. (Junco, Heibergert, and Loken, 2010). As Bryer and Zavatarro (2001), have put this point succinctly "Social media are technologies that facilitate social interaction, make possible

collaboration, and enable deliberation across stakeholders” (p. 327). Davis, Canche, Deil-Amen, Rios-Aguilar, (2012), have also referred to social media technology (SMT) as “web-based and mobile applications that allow individuals and organizations to create, engage, and share new user generated or existing content, in digital environments through multi-way communication.” These technologies now include blogs, wikis, media (audio, photo, video, text) sharing tools, networking platforms (including Facebook), and virtual worlds. Examples of these social media platforms both on the web and mobile application include Facebook, Twitter, YouTube, Whatsapp, Instagram, blogs etc.

The uses of social media have surged globally in recent years. As of July 2011, Facebook passed 750 million users, LinkedIn had over 100 million members, Twitter had over 177 million tweets per day, and YouTube reached three billion views per day (Chen and Bryer, 2012). Despite the popularity of social media for personal use, however, a low percentage of students and faculty use them for academic practice (Lenhart, Purcell, Smith, Zickuhr, 2010; Tiryakioglu and Erzurum, 2010; Chen and Bryer, 2010).

Through these platforms, individuals and organizations have used them to create profiles, share and exchange information on various activities and interests. An interesting aspect of social media is that they are not limited to desktop or laptop computers but could be accessed through mobile applications and smart phones making them very accessible and easy to use. These platforms have specific roles, functions and modes of communication although their functions are mostly related. Kaplan and Haenlein, (2010), have said social media are “a group of Internet-based applications that build on the technological foundations of Web 2.0, and allow the creation and exchange of user-generated content.” These platforms are hooked to the Internet which could be described as essentially a network of networks. It has transmission control protocols and they are connected to each other. The web has Hypertext Transfer Protocols (http) which facilitates exchange of hypertext documents or files by a server on the World Wide Web (www). Most people think that the web is synonymous with the Internet but it is in fact a subset of it. This is summed up by Ayiah and Kumah, (2011) who opined that social network is a web platform where people from different settings are connected through the web.

This point is reinforced by Boyd and Ellison, (2007), who commented that “social networking sites are web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a

connection, and view and traverse their list of connections and those made by others within the system.” Helou and Rahim, (2010) comment that social media are virtual communities and they allow people to interact with each other. Social media have become a veritable medium especially with students to communicate with each other on a number of topics.

According to Internet usage statistics for the world, there were 3,035,749,340(3.035 billion) estimated Internet users with a penetration rate of 42.3% as at June, 2014. Also, the estimated population of Africa in 2014 was 1,125,721,038(1.125 billion), of which 297,885,898(297.886 million) were Internet users. The penetration of Internet on the continent was 26.5%. By December 2012, the number of Facebook users in Africa was 51,612,460(51.612 million). In Nigeria, the number of internet users as at June 2015 was 92,699,924(92.7million) with 51.1% Internet penetration. Out of the total Internet users in Nigeria, 21,630,420(21.630 million) users were on Facebook (Internet World Statistics, 2015).

A report by the National Communications Authority (NCA) Ghana indicated that mobile data subscribers in the country have increased exponentially with a penetration rate of 59.78%. As at the end of March, 2015, mobile data subscriber base had increased to 16,106,218 (NCA, 2015). The statistics indicates that as more people subscribe to the Internet and mobile phone, the more the increase in data subscriptions. This data subscription is used to access the Internet which in effect is used more to participate on social networks. Therefore, the number of users who are and will be using social media will therefore not slow down as more people are getting on to the bandwagon.

Banquil, Chuna, Leano, Rivero, Bruce, Dianalan, Matienzo and Timog, (2009), found a continuing drop of grades among students who use social networking sites. This was supported by Kirschner and Karpinski (2010), who found a significant negative relationship between Facebook use and academic performance. They concluded that students who use Facebook spend fewer hours per week studying on an average than Facebook non-users and this resulted in lower mean grade point averages (GPAs). Junco, (2012), examined the relationship among numerous measures of frequency of Facebook use with time spent preparing for class and overall GPAs. Hierarchical linear regression analysis from the study by Junco, (2012), indicates that time spent on Facebook was strongly and significantly negatively correlated with overall GPA. There is considerable literature on the nexus between social network sites and educational use and it is necessary that we consider them briefly.

2.1.2 Educational Use of Social Networks

Higher Education in the 21st Century is heavily driven by digital technology as it plays the role as a catalyst for pedagogical change and engagement (Lim, Agostinho, Harper and Chicharo, 2013). More specifically, calls for academics to use social media tools and platforms have emerged in the past few years. Several accounts on blogs and websites such as the LSE Impact of the Social Sciences, (2014) have been published on the benefits and possibilities of using social media as part of academic work for collection of relevant materials (Carrigan, 2014; Miah, 2014). Some academic publications on how academics can use social media have also begun to appear (Bik and Goldstein, 2013; Goodier and Czerniewicz, 2012; Minocha and Petres, 2012; Veletsianos and Kimmons, 2012).

A number of scholars have written on the importance of social media and its relevance in academia. Martin Weller, (2011), an academic specializing in educational technology, introduced the concept of ‘the digital scholar’ in detail in his book bearing this title, with the subtitle “How technology is transforming scholarly practice.” His position is that a scholar must master modern day technological tools properly for the scholar’s research if the scholar wants to make an impact. Neal, (2012) in his book entitled *Social Media for Academics: A Practical Guide* which gives us the relevance of social media for research works. Other research works suggest that there are many benefits to academics of using social media for their works. Veletsianos, (2013) has also given us an auto-ethnography of his own social media use as a digital scholar and his observations of those other academics with whom he interacted on these media. He describes the importance of the culture of sharing for participants, in which sharing is portrayed as a scholarly and educational practice. He notes that these new ways of academic practice such as asking for help for references from colleagues on social media and circulating draft forms of manuscripts for comments could help scholars in their research works. The most-often mentioned benefits of using social media for research were establishing new connections and strengthening existing ones, keeping up to date with topics in their field of research and promoting their own scholarly works.

Social networks have also become an integral part of students’ academic life (Tavares, 2013). These networks have become important as they serve as platforms for users to interact and relate with their peers. Social networks are now being seen as learning platforms or communities that could be utilized to enhance student engagement and performance and a

number of researchers have found several positive outcomes in online community engagement among students and their peers. A study by Tiene, (2000) showed that “written communication on cyberspace enables students to take part in discussions at a time convenient to them and articulate their ideas in more carefully thought-out and structured ways.” In support of Tiene’s, (2000) findings, Deng and Tavares, (2013) also concluded that “Web-based discussions can contribute to the development of students’ reflective ability and critical thinking skills. Also, compared to face-to-face interaction, students are more willing to voice their views or even disagreement and are more attuned to others’ opinions in online discussions.” According to Apeanti and Danso (2014), students believed that the impact social media have on them is huge if their lecturers use it as an instructional device. It is also noticed that students who contact their lecturers through social media have higher grades in their works. This was revealed in their study among students of the University of Education, Winneba, Ghana.

Social network participation have improved students academically. Yunus, Nordin, Salehi, Embi and Salehi, (2013), have pointed out that students gained more vocabulary and improved their writing skills as a result of their participation on social networks that are academic in nature. This position is reinforced by Asad, Mamun and Clement, (2012) who stated that social media facilitate the exchange of ideas among students on academic matters. According to Salvation and Adzharuddin, (2014), students are able to formulate group discussions, exchange ideas and communicate with their teachers as well as discuss assignments on social network sites. They indicated that teachers share course related materials with their students and create student groups to collaborate on projects and communicate with their fellow lecturers from other universities through social network sites, thus facilitating teaching and learning process and the enhancement of academic performance. English and Duncan-Howell, (2008) also noticed that when they were training students social media as a tool was used to enhance peer support among business education students and detected that those students’ exchanges were mostly of the affective type facilitating group cohesiveness through encouragement and support found among the students.

2.1.3 Social Networks and Academic Performance

There is no consensus among academics and researchers with regard to the impact of social networks and how they affect students’ performance. Studies have found that the participation of students and young people on social networks may have both positive and

negative impact on their studies and for that matter their academic performance. Tuckman, (1975) defined performance as “the apparent demonstration of understanding, concepts, skills, ideas and knowledge of a person and proposed that grades clearly depict the performance of a student.” Hence, their academic performance must be managed efficiently keeping in view all the factors that can positively or negatively affect their educational performance. According to Mehmood and Tawir, (2013), the use of technologies such as social media networks and the Internet is one of the most important factors that can influence educational performance of students positively or adversely.”

A study conducted by Roberts and Foehr, (2008), in the United States about students’ extracurricular activity, rather suggested that new media, such as Facebook, Twitter etc. replace or enhance leisure activities, but do not take away time from the youths in their academic activities. In other words, they were of the view that the time spent by students on social network sites on extracurricular activities do not take away their productive time for studies. Negussie and Ketema, (2014), study in Ethiopia also indicated that there is no significant relationship between times spent on social networks such as Facebook with students’ grade point average (GPA). This was also consistent with a study by Ahmed and Qazi, (2011) who conducted a study in Pakistan among six universities. They discovered that there is no much difference between times spent on social media networks and students’ academic performance.

Conversely, a number of researchers in their studies have also found a negative impact that social network participation has on students’ academic performance. In the study of Kirschner and Karpinski, (2010), they found a “significant negative relationship between Facebook use and academic performance. Facebook users reported lower mean GPAs and also reported spending fewer hours per week studying on average than Facebook non-users. A majority of students claimed to use Facebook accounts at least once a day.” Malaney, (2005), found that 8.9% of students in 2000, and 4.4% in 2003, reported that their grades had suffered as a result of too much time spent on the Internet as well as on social media networks.

Despite the body of literature, there is still a lacuna as to the dispositional approach of people to social media sites for academic purposes. To what extent are people ordinarily predisposed to engaging social media sites for academic purposes? Whilst social media sites impact greatly on the academic life of students as the literature shows, do these students participate primarily in social media communications for academic reasons and if they do, what

informs this? Answers to these probing questions pose a challenge for further research. However, it must be noted that certain academic social media sites such as Academia.edu and ResearchGate have emerged to provide direct or primary platforms for academic activities. Yet, little or nothing has been done from the body of literature on these two platforms in terms of critical discourse as to the attitude or nexus between disposition and gratification sought with regards to the use of these social media sites and academic research. This research work will consider this and fill this gap.

As educators look for ways to engage and motivate students, social media technologies have become a viable supplement to the traditional learning process (Ebner, Lienhardt, Rohs, and Meyer, 2010). Also, educators are examining the combination of distance education delivery with instructional social media, thus, providing new approaches to teaching and learning that combine pedagogy and technology (Brady, Holcomb, and Smith, 2010; Lee and McLoughlin, 2010; Veletsianos and Navarrete, 2012). It would be instructive at this point to examine the use of social media properly in higher education and this includes: (a) the use of social media by students and faculty; (b) the use of social media for academic practice in both traditional and distance learning formats; and (c) the pros and cons of using social media for academic practice. Some scholars have suggested that access to technology in education is inequitable (Jackson, Ervin, Gardner, and Schmitt, 2001; Morgan and VanLegen, 2005) and that some students from less privileged homes are less likely to use technology, and therefore, have fewer opportunities to use social media tools than their privileged peers (Volman and van Eck, 2001). As such, this part will look at recent research on the use of technology and social media by various classes of students, and potential inequities in the use of social media for academic practice. This is essential considering the fact that the population of students being examined in this thesis is mainly Nigerian students in selected Nigerian universities and some of which may not have had access to social media before coming to the university.

2.1.4 Social Media Use by Students

Today's college students especially in the developed world are exposed to all types of technologies in many aspects of their lives (Browning, Gerlich, and Westermann, 2011). On a daily basis they use desktop computers, laptops, e-readers, tablets, and cell phones to actively engage in social networking, text messaging, blogging, content sharing, online learning, and much more (Cassidy, Griffin, Manolovitz, Shen, and Turney, 2011). As documented in recent

research, students and faculty are using these technologies and platforms in all facets of their daily lives, specifically social media (Browning *et al.*, 2011; Chen and Bryer, 2012). However, a low percentage of users engage in them for academic practice (Chen and Bryer, 2010; Lenhart, *et al.*, 2010; Tiryakioglu and Erzurum, 2010).

A recent report from the Pew Research Center's Internet and American Life Project (Lenhart, Purcell, Smith, and Zickuhr, 2010) gives us a glimpse on the use of social media in the United States. A group of 2,253 students (18 years and older) was surveyed in September, 2009. The findings indicate that 72% of survey respondents use social networking sites with an increase in the number of profiles maintained on multiple sites compared to the prior year. Among profile owners, Facebook is currently the social network of choice (73%), whereas only 48% and 14% maintain profiles on MySpace and LinkedIn, respectively. Additionally, 19% of the survey respondents use Twitter while only 4% use virtual worlds such as Second Life. A number of survey respondents reported participating in content creation activities with 30% "*sharing*" self-created content such as photos, videos, and artwork; 15% "*remixing*" material such as songs or images to showcase their artistic abilities; and 11% "*blogging*" to inform, update, or notify readers about specific topics and/or events.

Also Liu, (2010) in Singapore investigated students' use of different social media tools and their attitudes and perceptions towards these tools. The author sought to identify the knowledge and trends of using 16 social media tools that included Facebook, Wiki, YouTube, Bulletin Board, LinkedIn, Blogs, Twitter, Podcasts, Virtual Worlds, RSS, StumbleUpon, Netlog, Delicious, Digg, Plurk, and Jaiku. Through an online survey, 221 students were asked to rate their knowledge level of each social media tool using a Likert scale of 1- 4 (1= not at all knowledgeable, 2 = somewhat knowledgeable, 3 = knowledgeable, and 4 = very knowledgeable). The results revealed the following: (a) 82%, 77%, and 70% were either "very knowledgeable" or "knowledgeable" about YouTube, Wiki, and Facebook, respectively; (b) 42%, 41%, and 39% were "somewhat knowledgeable" about podcasts, blogs, and forums, respectively; and (c) 42%, 40% and 25% were "not at all knowledgeable" about virtual worlds, RSS, and Twitter, respectively.

The study results showed the top four reasons why students use social media tools. As reported, 85% use such tools for social engagement, 56% use them for direct communications, 48% use them for speed of feedback/results, and 47% use them for relationship building;

however, fewer than 10% of the students mentioned using social media tools for academic practice. In a similar study, Browning *et al.*, (2011) in America surveyed 141 undergraduate students regarding their perceptions and beliefs about social media. The survey revealed strong favourable perceptions of social media in general and a high degree of readiness to embrace social media portals as a way to deliver course content.

Poellhuber and Anderson, (2011) in the United States conducted a study aimed at describing the use of and interest in social media. A 90-item online questionnaire was completed by 3,462 students between July, 2009 and February, 2010. The demographic characteristics constitute a large percentage of females (75.3%) and students of varying ages categorized by five 8-year spans: Generation Z, 16-24 (37.2%); Generation Y, 25-32 (27.2%); Generation X2, 33-40 (16.1%); Generation X1, 41-48 (10.5%); and Baby Boomers, 49 and over (5.3%). In terms of user proficiency, the results showed that a significant percentage of study respondents reported being either advanced or expert users of social networking (69.5%), video sharing (52.9%), photo sharing (33.7%) and blogging (25.4%) tools. Quite the reverse was reported for social bookmarking, virtual worlds, electronic portfolios, tweeting, Web conferencing, podcasting, and wikis, as respondents confessed lower levels of proficiency with such tools. In terms of interest in using social media for academic practice, the study respondents demonstrated a higher interest in using those social media tools for which they were most familiar. Ranked by the percentage of interested respondents, the list includes the following: video sharing (58.2%), social networking (52.8%), Web conferencing (42.6%), blogging (40.2%), photo sharing (36.4%), podcasting (33.7%), wikis (31.3%), electronic portfolios (28.5%), virtual worlds (19.4%), tweeting (18.5%), and social bookmarking (18.1%).

Boyd and Ellison, (2007) in the United States conducted studies to determine if digital divides of access and use exists. In their ethnographic research on social networking sites found that less privileged students were just as likely to join sites as students from wealthier backgrounds.

Ahn, (2011) in the United States also conducted a research to determine if traditional digital divide indicators such as Internet access or parent education precluded the use of social media technologies by students from less privileged homes. The results showed that such indicators were not significant predictors of social media use by these students. However, the

frequency of use by less privileged students remained lower than those students from privileged homes.

Guy, (2011) focused on the use of social media by students of community colleges in the United States. The first study questioned 261 undergraduate students regarding their personal use of social networking sites. Eighty-seven percent of the study participants surveyed reported having subscribed to either Facebook or MySpace while only 13% said they participate on Web sites as bloggers. Students were also asked to report their frequency of use with specific online activities relating to social networking. The results revealed that 53% of the students reported using Facebook and/or MySpace on a daily basis. Blogging was the activity students reported performing the least at 5% daily. A second, separate but related study surveyed 155 students to determine the likelihood of students going online to actively engage in the use of a social networking site. The results showed that 5.5% were not at all likely, 7.1% not very likely, 11.6% somewhat likely, 23.2% likely, and 42.6% were almost certain of going online to use social networking sites. The same study reported that the majority of students (68%) subscribe to either Facebook and/or MySpace, 53% access these sites daily, and 18% reported frequent usage.

In summary, specific indicators have emerged with respect to student use of social media technologies and this review has shown the following:

- Use of social media by students for academic practice is surpassed by its use for social engagement, direct communications, and relationship building (Lenhart, Purcell, Smith, and Zickuhr, 2010).
- Larger percentage of female students use social media technologies (Poellhuber and Anderson, 2001) despite past studies that have reported that male students generally demonstrate more competence and a favourable attitude toward the use of technology (Jackson, Ervin, Gardner, and Schmitt, 2001; Miller, Schweingruber, and Brandenburg, 2000).
- A large percentage of social media use and expertise lies with college students between the ages of 18-24, also known as Generation Z (Poellhuber and Anderson, 2011).
- Facebook and YouTube are the two most commonly used social media technologies among all students (Guy, 2011; Poellhuber and Anderson, 2011).

2.1.5 The Use of Social Media in Traditional and Distance Learning Environments

The growing interest in social dimensions of learning has led educators and instructional designers to examine the integration of social media in both traditional and distance learning environments. The following sections examine the current research literature on the use of social media by faculty, and the use of social media for academic practice in a variety of ways that include sharing of resources, collaborative learning, inquiry-based learning and reflective learning.

Social Media and Faculty

Despite the worldwide growth of social media for personal use, educators have been slow to embrace some social media technologies for academic practice in some disciplines. The Faculty Survey of Student Engagement (FSSE, 2010) investigated 4,600 faculty members from 50 U.S. colleges and universities and discovered that over 80% of the faculty had never used social media technologies such as blogs, wikis, Google docs, video conferencing, video games, or virtual worlds.

Through telephone interviews, Chen and Bryer, (2012) documented the opinions and experiences regarding social media of 57 faculty members from 28 universities across the United States. The results showed 100% use social media either for personal, academic, research, or professional purposes, with the majority using Facebook for personal communication and LinkedIn for professional connections. Further investigation regarding social media use for academic practice indicated that activities were designed as informal, open, and self-regulated reinforcements to classroom teaching. That is, participation in such activities was an option and the use of conventional assessment (e.g. quizzes, tests) was still much in use. Major problems prohibiting further use of social media for academic practice point to time constraints and faculty workloads, cyber security and privacy issues, and assessment strategies.

The most cited constraints as noted above by faculty members were cyber security, and faculty workloads for the lack of innovative practice; moreover, when used by faculty as a supplemental tool, social media activities were informal, open, and self-regulated (Chen and Bryer, 2012). Similar to student use, faculties are using social media technologies for personal communication, information sharing, and professional connections (Chen and Bryer, 2012; Tiryakioglu and Erzurum, 2010).

Traditional Learning Environments and Social Media

Junco, Heiberger, and Loken, (2010) in the United States examined the link between social media use and student engagement. The semester-long investigation consisted of two groups, one was code named experimental and the other code named control. With the experimental group, Twitter was used for various types of academic and co-curricular discussions, class and campus event reminders, faculty and student connections, providing academic and personal support, and organizing service learning projects and study groups for 70 students. Ning, a social networking site, was used to deliver the same course information to the control group of 55 students. Analyses of Twitter exchanges and survey responses showed that: (1) the experimental group had significantly greater increase in engagement and (2) both faculty and students were highly engaged in the teaching and learning process.

George, (2011) developed a course for 15 healthcare students at Penn State. The course used a variety of social media tools as a means to provide participants with content through anecdotes and examples. For instance:

- Really Simple Syndication (RSS) readers – were used to track clinical trial data from multiple journals, to follow blogs originated by researchers, and to receive news and relevant literature regarding the latest trends in the healthcare industry.
- Twitter – was used to share and receive information from colleagues, health organization, and patients.
- Facebook and LinkedIn – were used as the course platform for networking among peers, faculty and medical professionals.
- Google Resources (Alerts, Mail, and Realtime) – were used as search tools that indexed Facebook posts and Twitter tweets and provided social updates on healthcare topics from around the world. The course evaluation showed that the majority of the participants were satisfied with the course in terms of the deployment of social media tools.

Deng and Yuen, (2010) investigated the role of academic blogs in supporting a group of 19 pre-service teachers in Hong Kong. The purpose of the study was to investigate the pros and cons of using blogs to support self-reflection, social interaction, and reflective dialogue among pre-service teachers. Xanga, a free commercial blogging platform, was used as a tool of documenting, sharing, and reflecting on their teaching practice experiences. Quantitative and qualitative data were gathered through questionnaire and interviews. The investigation showed

that the participants were favourably disposed to the use of the social media platforms when compared with previous teaching practice.

Distance Learning Environments

Distance learning education occurs when the lecturers and students are separated by physical distance. Therefore educationists have suggested that social media tools can be used to bridge the gap. In view of this fact distant learning have come under the purview of educationists who have suggested the use of social media technologies. They have examined the role that social media would play in distant learning education. They believed that distant learning education could be helped by social media thus providing a new approach to teaching and learning that combine pedagogy and technology in distant learning. By using social media for distant learning this will enable learners to have information from their instructors more quickly than any other means of instructional process. Distant learning students could get messages at their convenience from their instructors and could easily act on them and send answers back to their instructors.

In most developed countries which have adopted this method they have found out that education have reached all parts of their country where distant learning students are. In the United States for instance, social media platforms are deployed for distant learning education. Brady, Holcomb, and Smith, (2010) at North Carolina State University used Ning as an online course platform. They found that students' attitudes and perceptions of the social media were favourable. It served as the venue for sharing and discussing course-related topics and for fostering collaborative connections across content areas. An online survey revealed that 70% of study participants "agreed" that Ning allowed for more frequent collaboration compared to a face-to-face course and 82% "agreed" that the use of Ning was beneficial when communicating outside of the classroom. When comparing the Ning-enhanced courses to traditional face-to-face courses, participants agreed that the social media platform Ning was more effective.

In Malaysia Manan, Alias, and Pandian, (2012) used an online platform as an instructional method in teaching an Introduction to Critical Thinking course. The majority of students were enthusiastic about the teaching method used. In other words they agreed that the online platform was more effective in imparting the knowledge of critical thinking to them than classroom instructional method. Additionally, students agreed that the platform enhanced their understanding of theories and concepts relative to critical thinking.

Similarly, McCarthy, (2009) in the United States combined virtual and physical learning environments to enhance the experiences of some newly admitted students through social and academic interaction. The researcher used a social media platform to facilitate interaction and for submitting assignments. The findings of the investigation confirm that “students were able to develop academic relationships freed from the constraints of the classroom and their own inhibitions, and over the semester online discussions evolved from formal academic critiques to informal social interactions” (McCarthy, 2009, p. 732). Veletsianos and Navarrete, (2012) in the United States also confirm the enthusiastic reception of 10 graduate students in an online course facilitated through Elgg, an open source framework that consists such tools as blogs, social bookmarks, collaborative document authoring, and micro blogging. The study was conducted at a large public university in the United States and falls within the broad framework of the interpretive research paradigm in which the case study method was employed. As part of the course requirements, students watched and listened to video resources shared by the instructor and responded to self-reflective questions and comments on blogs and social bookmarks.

Additionally, students created personal profiles and “friend” lists, posted status updates, followed activity streams, and subscribed to be notified of other users’ actions within the environment. The data consisted of personal interviews and survey responses. The results revealed the complexities of implementing social networking technologies in online environments in which the study participants (a) predominantly found value in peer collaboration and support, yet, (b) limited their participation to course-related and graded activities, exhibiting little use of social networking and sharing.

In some developing countries distant learning centres have been created in some universities and the idea is that social media platforms will be used in future as instructional method. This is the vision of some tertiary educational centres in Nigeria.

In conclusion, educators are using social media as an instructional medium to incorporate informal learning into formal learning environments (Brady, Holcomb, Smith, 2010; Deng and Yuen, 2010; George, 2011; Junco, *et al.*, 2010; Manan, Alias, Pandian, 2012; McCarthy, 2009; Veletsianos and Navarrete, 2012). Additionally, participatory culture is being fostered among students by the use of social media and also providing opportunities self-reflection (Brady, *et al.*, 2010; Junco, *et al.*, 2010; Manan, *et al.*, 2012), and social interaction in both traditional and

distance learning environments (Deng and Yuen, 2010; McCarthy, 2009; Velestianos and Navarrete, 2012).

2.1.6 Social Media Use for Academic Practice—Proponents and Critics

The use of social media in academic environment has triggered controversy among some scholars despite the fact that the 21st century is been described as digital age. Advocates of social media usage point to the benefits of using social media for academic practice while critics are calling for regulations and/or the removal of such online technologies in the classroom. Finding middle ground has become a challenge.

Proponents of Social Media Platforms

Proponents argue that contemporary college students have become enamored to a world where social media are the norms. As an educational tool, social media enriches the learning experience by allowing for an open exchange of ideas between students and instructors. They also foster collaboration and discussion, as well as encourage interaction through the social media platforms (Lederer, 2012; Turkle, 2004). Lederer, (2012) gives us several benefits for using social media in education. First, she contends that social media is an effective way to increase student engagement and allow them to be creative as well as comfortable by expressing themselves freely. Secondly, Lederer argues that social media can foster communication bond between students and instructors, and while the instructors can answer students' questions, give them homework assignments and lesson plans, send messages and updates, announce upcoming events, and share Web sites. Lederer points to the social networking which social media platforms afford the students in seeking employment after graduation.

Critics of Social Media Platforms

Despite the aforementioned benefits, critics have argued that there are educational risks in the deployment of social media in pedagogy. Furthermore critics have argued that they are not proper vehicles for teaching and learning activities (Waycott, Bennett, Kennedy, Dalgarno, and Gray, 2010). Some critics complained that they are distractions to both students and instructors in their academic pursuit. They also complained that they divert students' attention from real academic work especially in the classroom and as such they are disruptive to students' learning process. They believe also that social media kill creativity. They also destroy students' autonomy because they rely on social media for every assignment. They also crowd out the

individuality of the student because they integrate more with social media in terms of social integration with others on social media platforms. They also claimed that social media discourage face-to-face communication, that is, “while real-time digital stream may create a safe harbor for students who are uncomfortable expressing themselves, students are missing valuable lessons in real-life social skills” (Lederer, 2012, p. 2).

Additional challenges of using social media platforms include work load concerns for faculty and students, lack of trust in peer feedback, ownership issues regarding public and collaborative spaces, and difficulty in adapting publicly available tools (Schroeder, Minocha, Schneider, 2010). Another challenge concerns the suitability and appropriate integration of social media technologies into curriculum. For successful inclusion, social media technologies should become a whole part of the curriculum and not just an appendage to the curriculum. (Lester and Perini, 2010). Another complaint is that most of the web sites are based outside the universities and this might not guarantee the security of the works of the lecturers and students; yet, an alternative arrangement such as the citing of the web server within the universities would be too expensive for most universities especially in the developing countries. (Lester and Perini, 2010). While the debate continues between the proponents and the critics of using social media for academic practice no one can dismiss their importance in today’s pedagogy. (socialization, engagement of students, development of a community, collaborative and reflective learning, peer-to-peer support and feedback, employment resource, and information management) and cons (cyber bullying, ownership issues, workload issues, lack of student engagement, lack of trust in peer feedback, and technology infrastructure issues) of using social media for academic practice, no one can argue against the influence that social networking has on today's students (Lederer, 2012; Lester and Perini, 2010; Schroeder, *et al.*, 2010; Turkle, 2004).

2.1.7 Attitude and Academic Research

Many definitions of attitude have been proffered by scholars. Schneider, (1988), posits that “attitudes are evaluative reactions to persons, objects, and events. These include your beliefs, positive and negative feelings about the attitude object.” He goes further to say that attitude can guide our experiences and decide the effects of experience on our behaviours. Likewise Baron and Byrne, (1987), define attitude as lasting, general evaluations of people (including oneself), objects, or issues. It is a lasting phenomenon because it exists across time. A feeling that is on the spur of the moment or emotion cannot count as an attitude. This is a

position shared by Vaughan and Hogg, (1995), who say that an attitude is permanent and persist across time and situation. A momentary feeling could not count as an attitude. Therefore, a brief feeling about something, could not count as an attitude.

Explaining further, Vaughan and Hogg, (1995: 183) say that attitude is:

relatively enduring organization of beliefs, feelings and behavioural tendencies towards socially significant objects, groups, events or symbols or a general feeling or evaluation (positive/negative) about some person, object or issue. Attitude is either positive or negative towards a particular subject.

Comprehensive definition of attitude must encompass emotions, beliefs, behaviours and their interaction (Zan and Martino, 2007).

An attitude is some state of mind about an object, fact or situation. Some attitudes are revealed through our behaviour, and our state of mind gives out our attitude. Attitudes could also be shown through the way we behave towards others or ourselves, and they can both be positive and negative. As (Ratliff and Nosek, 2011) say “they are affective on an emotional level and affect one’s behaviour in future. A positive emotional response contributes to a positive attitude, which impacts on an individual’s behaviour while in the same vein a negative emotional response also contributes to a negative attitude.”

An attitude is a dynamic phenomenon and it influences our behaviour. Bem, (1970) points out that attitudes are likes and dislikes. Further, Walley, (2009) submits that attitudes may be positive, negative, or neutral. Attitude influences how we evaluate a particular entity whether in favour or disfavour (Eagly and Chaiken 1993). When we refer to a person’s attitude we are referring to his/her behaviour. Furthermore when we refer to attitudes we are referring to complex combination of things we tend to call personality, beliefs, values, behaviours, and motivations. In some cases when we speak of someone’s attitude, we are referring to the person’s behaviours. An attitude consists of three components: an affect (a feeling), cognition (a thought or belief), and behaviour (an action), (Olson and Zanna, 1993).

Attitudes define how we *see* situations, and how we behave towards a situation or object. The formation of an attitude is a result of learning, and our direct experiences with people and situations. Attitudes influence our decisions, and behaviour, as well as what we want to remember. Attitudes come in different forms, and like most things that we learn or influenced

through experience, they can be changed. Every individual has some peculiar attitude being a psychological phenomenon, attitude is invisible.

Research plays a significant role in our daily life. All inventions have been possible with the help of research. With the help of research human beings have been able to make scientific and technological progress. Progress depends on human mind and this finds expression in research. The industrial revolution was brought about by research and there have been waves of human inventions through research. Technology has also been propelled by research. With the help of research human beings have been able to find cure for different diseases. Indeed research has helped a lot in technology. For example, talking to long distance relatives is the outcome of research in technology (Gross, 2001).

Research is the process of collecting and analyzing information to increase our understanding of the phenomenon under study (Swindoll, 2012). The aim of any research is to contribute towards the understanding of phenomenon under study and then to communicate that understanding to others.

Attitude towards research basically means the researcher's thinking, feeling and behaviour towards a particular research. According to Papanastasiou, (2005), it is important to identify the attitudes towards research so that a positive attitude can be developed among students and hence their learning can be facilitated in turn. A number of researches have been conducted to explore the attitude towards research and the results showed that attitudes towards research are generally not positive. Pertaining to students in particular, some students think that it is tough and dry to engage in research (Adams and Holcomb, 1986). They do not understand the concept of research and its importance in academic life. In a study by Siemens, Punnen, Wong, and Kanji, (2010) they conducted a research on medical students to explore their attitudes towards research and found that though majority of the students felt that the research would be beneficial in their career, fewer than half of the students were not significantly involved in any research activity during their medical school. Students who realize the need of spending more time on research activities are even fewer. About one fourth of the student reported no interest in any such activity. Sabzwari, Kauserand Khuwaja, (2009) conducted a study on junior faculty in the medical profession in Pakistan and found that though majority of them perceive research a difficult endeavour but they have positive attitude towards research.

Shkedi, (1998) in India found that teachers are not much interested in research because their attitude towards research is not favourable. Also the reasons for this are lack of time, non-availability of suitable literature, and lack of trust in research findings. In another case study on research and attitude Butt and Shams, (2013) in India observed negative attitude towards research among prospective teachers. However, they found that students who were admitted for evening programs have better attitude towards research than those who enrolled in morning programs. The reason might be that evening students come to this program with more determination. Similarly, the prospective students with premedical background were found to have significantly better attitude towards research than those who have arts and computer science as their previously studied subjects at higher secondary level. The reason according to Butt and Shams, (2013) might be that experimentation during their previous pre-medical study might have helped them in developing a positive attitude towards research.

Many scholars have posited many reasons for either positive or negative attitude towards research Papanastasiou, (2005) in Greece found negative attitude towards research among undergraduate students because of their low level educational background before coming to the university. However in another study Siemens, Punnen, Wongand Kanji, (2010) in Singapore found that involvement in research was appreciated by the fourth year medical students compared to the second year medical students because the fourth year students know the importance of research hence their positive attitude. Zan and Martino, (2007) in the United States also found that the attitude of postgraduate students towards research in mathematics was favourable this may be ascribed to the fact that at that level postgraduate students would appreciate research and their attitude towards it would be positive.

It could be canvassed that the negative attitude towards research might be due to the discipline involved in research and non-understanding of the concept of research in academic life. However some students and faculty members have positive attitude towards research because it would help them in their professional life (Papanastasiou, 2005).

From literature, it was found that some scholars developed a theory that could be used to explain the relationship between attitude and academic research. Fishbein and Ajzen, (1975) propounded the value-expectancy model by arguing that a person's attitude determined his/her intended behaviour, which could ultimately affect the outcome. Based on this model, they stated that a person would hold certain attitudes towards an object by evaluating it. After going through

the evaluation process, the person would then decide whether to hold a favourable or unfavourable view towards it. The attitude that would be formed whether positive or negative would then influence the person's attitude to engage in various behaviours with regard to that particular object (Fishbein and Ajzen, 1975). Based on the person's intended behaviour, this would then influence the final outcome.

In a research conducted in the U.S., the researchers studied the relationship between students' attitudes and research in college mathematics by inviting 218 higher degree students to complete a set of questionnaire. The result indicated that the performance of the students was good because of their attitudes to mathematics research was favourable (House, 1995).

In another study also conducted in the U.S., the researchers assessed the relationship between attitude towards mathematics and achievement in mathematics. It was found that attitude had a powerful influence on students' academic achievement (Reynolds and Walberg, 1992, p. 307). Even though most of the studies suggested that there was a positive relationship between attitude and academic achievement, there were other researchers arguing that students' attitude might not be a significant predictor of their academic achievement. In a study conducted by Mickelson, (1990), he stated that whether attitude could significantly predict one's academic achievement depended on a number of variables, particularly ones' background.

As shown above it has been established in many research works on attitude and research that there is a correlation between attitude and research whether positive or negative. Most of these researches illustrated the more positive one's attitude towards an academic research, the higher the possibility for the person to perform well academically.

However some scholars like Ma and Kishor, (1997) have argued that attitude does not necessarily influence research and as such there is no correlation between attitude and research. But countless studies have shown a correlation between attitude and research and the ones we have used above support this claim. In academia there must always be a controversy about any position and this is what fuels progress in the academic environment. The controversy on attitude and research relationship is no exception to this academic characteristic.

In conclusion research as an important aspect of academic life is important and the attitude of scholars to it enlarges the frontiers of knowledge. From extant literature there has not been any significant study that measures the attitude of academics and students on ResearchGate and academia.edu. Therefore, this research focuses on this.

2.1.8 Academia.edu and ResearchGate

Technology has introduced many new ways through which academics can publish their works and thereby communicating their ideas to other scholars in their area of specialization. When an article is published via links on authors' home page (Kousha and Thelwall, 2014; Mas Bleda, Thelwall, Kousha, and Aguillo, 2014) and in preprint archives (Shuai, Pepe, and Bollen, 2012), communication and connections seem to occur more naturally. In listservs this is also the case (Cronin, Snyder, Rosenbaum, Martinson, and Callahan, 1998; Schoch and Shooshan, 1997) and also in general social network sites, such as Facebook and LinkedIn (Allen, Stanton, Di Pietro, and Moseley, 2013; Mas Bleda *et al.*, 2014). The sites Academia.edu and ResearchGate now combine communication and dissemination as well as being a data storage or repository for academics' publications which researchers could consult for information on any field of interest (Gewin, 2010; Lin, 2012; Madisch, 2008; Mangan, 2012). According to Alexa.com, both sites have become popular by November 2013, with ResearchGate.net being ranked 3,947 and Academia.edu 2,243 for popularity amongst all websites. If academic social network sites like these are changing patterns of scholarly communication by providing an alternative method to discover publications then it is important to find out what the implications are for stakeholders in the academic community.

Founded in 2008, ResearchGate apparently has more than 3 million users (www.researchgate.net/aboutus>AboutUs.html), with about a third visiting it monthly (Dembosky, 2013). ResearchGate as well as academia.edu allow scholars to list or upload their publications into their profiles, which can potentially give an extra access point to research. A survey of 160 University of Delhi researchers found many users for ResearchGate (64%), Academia.edu (62%), LinkedIn (39%) and CiteULike (35%) (Madhusudhan, 2012) and a survey of 71 bibliometricians found that 60% used ResearchGate as well as Academia.edu, with Mendeley being less popular (21%) and LinkedIn being much less popular (18%), among academic users (Haustein, Peters, Sugimoto, Thelwall, and Lariviere, 2013). A survey of 100 researchers in one Indian university (Chakraborty, 2012) found common reasons for using ResearchGate to be finding out about others' research (24%), keeping up-to-date (31%) and forming study groups (37%), with some social scientists.

A study of the Internet showed that about 1,500 highly cited scientists working at European institutions, found that these scientists use these major sites: some had LinkedIn

profiles and much more had Academia.edu and Mendeley profiles, although ResearchGate was not checked (Mas Bleda, Thelwall, Kousha, and Aguillo, 2013). However little research has been done on the attitude of scholars towards the use of Academia.edu and ResearchGate within the academic environment especially in Nigeria. This is what this thesis is all about. Some research has been done on some other social media platforms. A study on Mendeley shows that success for individual academics reflects a combination of academic capital and social networking but it also shows a correlation between attitude and research on the part of these scholars in their area of specialization (Mas Bleda *et al.*, 2013).

Research social network platforms are a genuine addition to scholarly information infrastructure. As earlier pointed out there has been not much scholarly discourse on this important academic phenomenon in Nigeria where the use of technology in pedagogy is still not at an advanced stage. To repeat again this study will look at two research social media platform - Academia.edu and ResearchGate in terms of the attitude of Nigerian scholars in two selected Nigerian universities towards them.

From the literature review it would have been obvious that research social media platforms are important for academics and research students because it will allow them to be current in their area of specialization. It will connect them to other scholars working in their field of interest thereby establishing a network with others .However as it has been shown there must be a correlation between attitude and interest in research before this could happen.

2.2 THEORETICAL FRAMEWORK - USES AND GRATIFICATIONS THEORY

The origin and characteristics of the Uses and Gratifications Theory

The 1940s and early 1950s marked the rise of the uses and gratifications theory, based on widespread dissatisfaction with research results aiming to determine the short-term effects of viewer exposure to the mass media. A need to move away from the traditional effects theories, such as the stimulus-response theory and the related theories, to a more receiver oriented theory supported the development of the uses and gratifications theory (Pitout, 1989:37).

The uses and gratifications theory originated as a simple and straight forward method to determine the relation between the popularity and attraction of radio quiz programs and day-time serials on the one hand, and personality and social factors on the other (Bryant and Heath, 2000:360). This theory is concerned with how audiences actively pick a specific medium to satisfy their needs and gratification (Baran and Davis, 2012; McQuail, 2010). The theory

concerns the relationship between the medium and the audience (Herzog, 1944; Katz, 1959; Clapper, 1963; Lin, 1999; Stafford, Stafford, and Schkade, 2004). The premise of the theory focuses on more knowledge about the audience, the acknowledgement of the importance of individual differences in the audience experience – yet not denying the power of the media to attract and hold the audience – and a focus on case studies to provide aid in exploring psychological factors relating to audience experience (McQuail, 1998:151).

The first research regarding the uses and gratification theory (U and G) began in the 1940s. Harrell, (2000) observed that “early uses and gratifications studies in the 1940s, 50s, 60s typically researched why people used certain media types, instead of examining audience stimulation for using a particular medium” (p.36).

McQuail, (2010) summarized the studies of 1960s and 1970s as follows:

- 1) Media and content choice is generally rational and directed towards certain specific goals and satisfactions (thus the audience is active and audience formation can be logically explained).
- 2) Audience members are conscious of the media-related needs which arise in personal and social (shared) circumstances and can voice these in terms of motivation.
- 3) Cultural and aesthetic features play much less part in attracting audiences than the satisfaction of various personal and social needs (e.g., for relaxation, shared experience, passing time, etc).
- 4) All or most of the relevant factors for audience formation (motives, perceived or obtained satisfactions, media choices, background variables) can, in principle, be measured.

According to McQuail, (1998:152), the appeal of the approach lay in the possibility to differentiate and provide “variables of attention to television”, which could in turn provide valuable answers to the “causes of addiction or to the consequences of over-indulgence” in media exposure. By re-defining the media audience from passive to active (active meaning purposive), the question that the uses and gratifications theory asks is what people do with the media, instead of the traditional question of what the media do to the people (Schroder, 1999:39). Katz and Klapper are two of the most prominent theorists considered to have made an important contribution to the development of the uses and gratifications theory (Lane, 2003).

The 1970s introduced the rediscovery and elaboration of the uses and gratifications theory. Another question was then embraced by this school of research, not only questioning

what people do with the media, but also why and for what exactly audiences use the media for (Chandler, 2004). The 1974 publication of the classic work of Blumler and Katz: *The Uses of Mass Communication* was an important phase in uses and gratifications research as it was instrumental in conceptualizing the focus of the uses and gratifications theory (Bryant and Heath, 2000:361).

In their comprehensive evaluation, Katz, Blumler and Gurevitch, (1974:21) identified five basic assumptions of the uses and gratifications theory namely:

- Audiences are viewed as active participants in the communication process. Media use generally tends to be a purposeful and goal-directed activity, however, not denying that coincidental media use does exist at times.
- Viewers make specific media choices to meet their needs and therefore the initiative lies with the audience to link need gratification and media choice.
- Various sources of need gratification exist, thereby creating direct competition for the media. Mass communication meets the needs of only a “segment of a wider range of human needs” and the degree to which the mass media fulfills these needs varies.
- Viewers are able to identify and recognize their needs, and to articulate them verbally.
- Value judgments relating to cultural significance and meaning should be subordinated to the exploration of audience orientation. Therefore, in order to understand cultural significance, it is crucial to comprehend interpersonal reasons for media use first.

In an attempt to make the uses and gratifications theory more complete, another dimension was introduced to this research field emphasizing that a distinction be made between gratifications sought before exposure and gratifications obtained after exposure (Bryant and Heath, 2000:363). Palmgreen, Wenner and Rayburn, (1980:183) contributed valuable information to this dimension by conducting a study between the relations of the gratifications sought and gratifications obtained, specifically relating to television news. The findings of the study led to three important conclusions, the first being that “individual gratifications sought are moderately to strongly relate to corresponding gratifications obtained.” The lack of a perfect match between expectations and perceived gratifications therefore implies that not every gratification will necessarily be gratified (Palmgreen *et al.*, 1980).

The second conclusion according to Palmgreen *et al.*, (1980:183) is that the “degree of dependence on a particular program is positively related to the strength of the GS [gratifications

sought] versus GO [gratifications obtained] relationship.” The degree of dependence relates strongly to the availability of functional alternatives to provide gratifications. In other words, gratifications sought from viewers who watch only one news programme will be shaped more strongly by the gratifications obtained from the programme than viewers who watch more than one news programme. Those viewers who watch more than one news broadcast obtain gratifications from a wider variety of sources and therefore a single news programme will be inadequate in needs gratification. The final conclusion drawn from the study is that even though the dimensions of seeking and obtaining gratifications are similar, differences do exist.

Further studies also proved that the expectations and perceptions held about media characteristics influence the motivation to search for that gratification that ultimately impacts on audiences’ media consumption. Consumption will in turn influence the perception of gratifications obtained and will either reinforce or challenge the existing expectations and perceptions about the ability of the specific media source to meet certain needs (Rosengren *et al.*, 1985:22). For example, if a viewer is seeking information about a specific topic, the motivation exists to seek that information by watching a documentary channel. The expectation exists that the documentary channel possesses the necessary information to contribute to existing knowledge and perhaps answer some questions. If the channel meets the expectations of the viewer, this outcome will feed back to confirm the original belief that the documentary channel will provide the necessary information.

On the other hand, the channel may not be as informative as expected, which will then challenge the viewer’s belief and consequently change the motivation to seek gratification from that specific channel again. It is therefore important to distinguish between the gratifications sought by audiences and the gratifications they perceive to have obtained. According to Palmgreen *et al.*, (1980:184), the gratifications sought refer to the audience member’s motives for mass media consumption. The gratifications perceived to be obtained refer to the subjective probability of a mass medium or programme content to provide audience members with the required gratifications.

‘Expectancy’ is a central concept to the uses and gratifications theory, especially in relation to the assumption of an active audience. The media itself offers various sources and alternatives for needs gratification, not to mention non-media alternatives, implying that the

audience must have certain perceptions and expectations about the potential of each alternative to meet a required need (Rosengren, Wenner and Palmgreen, 1985:22).

The beginning of the 21st century again marked the revival of the uses and gratifications theory and research. The technological revolution resulted in scholars such as Johnson and Kaye, (2002:54); Luo, (2002:4) and Stafford, (2004:3) advocating the value of the uses and gratifications theory in interactive technology research. According to Johnson and Kaye, (2002:54): “The calls for the uses and gratifications approach to studying the Internet echo the pleas of several uses and gratifications scholars to adapt that approach to the study of emerging communication technologies.”

Although the uses and gratifications approach was traditionally linked to television audiences, many researchers have found the approach very well suited for Internet research, in particular. It is specifically the assumption of active involvement in media usage that has made the uses and gratifications theory applicable to interactive research (Luo, 2002:4).

Severin and Tankard, (1992) indicated “different people can use the same mass communication medium for different purposes” (p. 270). Now the Internet is booming, “U and G provide the theoretical framework for understanding the specific reasons that bring consumers to online marketplaces where commerce transpires” (Stafford, T. F., Stafford, M. R. and Schkade, L. L. 2004, p. 267). Because uses and gratifications can be flexible in researching specific motivations and features of social activities of audience, researchers can apply it to new media (Ruggiero, 2000). In the case of Internet, uses and gratifications researchers’ aim is finding out what kind of needs and gratification audiences are seeking and obtaining (Baran and Davis, 2012; Charney and Greenberg, 2002). Knowing how audiences use the Internet not only helps researchers understand this market, but it also means that media managers can think more about what their users want (Charney and Greenberg, 2002).

The uses and gratification theory is useful to illustrate why media users choose specific media to seek relaxation, entertainment, or social interaction (Charney and Greenberg, 2002; Rubin, 1981). Therefore, uses and gratifications is an appropriate theory to study the response of the audience to media (Ruggiero, 2000). Media consumers now are more actively finding ways to control what kind of information they want to use in terms of the gratifications they will obtain from the media content (Eastman and Ferguson, 2012; Harrell, 2000; Luo, 2002).

In addition, Katz, (1959) suggested that individuals will use different kind of media under different circumstances to fulfill their needs (Katz *et al.*, 1973; 1974). Ruggiero, (2000) has pointed out that “emerging technologies provide users with a wider range of source selection and channels of information, individuals are selecting media repertoire in those areas of most interest to them.”

Within television research, needs gratifications take place by simply switching on the television and choosing a channel. Needs gratifications within interactive technology such as the Internet however, require more advanced input and activity. The seemingly insignificant act of pointing to, and clicking on, a link actually indicates how active the web user really is. Unlike television channel surfing where the viewer is merely searching for an appealing image, web surfing requires the surfer to read actively and comprehend the information presented by a link in order to determine where he is going next (Hunter, 2005). The assumption is that web use is a goal-directed activity and users utilize the Internet in an attempt to satisfy specific needs (Johnson and Kaye, 2002:54).

Categories of Needs Gratification

Numerous studies have been conducted in order to determine and categorize the needs gratifications obtained from media consumption. Since this study is not focusing on television but on the Internet, the categories applied in current Internet uses and gratifications research are adopted for the purposes of this study. Many scholars such as Lin, (1999:79), Bryant and Heath (2000:362) and Hunter, (2005) elect to apply the five categories of needs as identified by Katz, Gurevitch and Haas, (1973). This will therefore be adapted for this study. They are:

Cognitive needs

Cognitive needs involve the need for information, the acquisition of knowledge and the need to understand the Internet environment. Another dimension that is also satisfied in obtaining information is curiosity and exploratory drives (Bryant and Heath, 2000:362). The interactive experience generated by Internet provides various avenues of knowledge acquisition and is certainly able to gratify the cognitive needs of the Internet users. By downloading uploaded papers by scholars this provides opportunities for knowledge acquisition and the cognitive needs of scholars are gratified.

Affective needs

Affective needs refer to emotional experiences and the strengthening of aesthetic and pleasurable experiences in acquiring information when surfing the Internet. The knowledge acquired satisfies the affective needs of the scholar. The scholar finds satisfaction in linking up with other scholars in his/her area of specialization. Affective needs also allows for the Internet users to get the opportunity to comment and get involved with any scholarly work through feedback which these two research platforms provide for scholars using them.

Personal integrative needs

Personal integrative needs make the scholar in the Internet environment to be an actively engaged communication participant in the cyber space when he/she participates in the dialogical conversation in the Internet (Ruggiero, 2000). Scholars choose any of these research platforms in order to enter into discussions with other members on the web site and through this they test and confirm their opinions about different research works.

Social integrative needs

Social integrative needs are the desire to be affiliated and make contact with other scholars. One of the ways which these research platforms make this possible is by encouraging scholars to add other scholars to their contact and follow their works, send messages to them, so that they can have a dialogical conversation with them about their works as well as get feedbacks on their research works. Hence social contact is established among scholars. (Bryant and Heath, 2000:362).

Escapist needs

The fifth needs gratification, escapist needs, refers to the desire to escape, to release tension and seek diversion (Severin and Tankard, 1992:273). It means that there is an escape from one's personal identity into another identity which one desires. In downloading, uploading and reading scholarly works on the web site the scholar escapes from the pressures of everyday life.

From the above discussion the categories of needs provides the underlying theory for the motivation of the members of the two research platforms in having accounts on the web sites. The underlying assumption here is that it is possible in classifying the motivations for having an account on either of the two research platforms under cognitive, affective, personal integrative, social integrative as well as escapist needs.

2.2.1 Application of Uses and Gratifications Theory

At this juncture, it is important to distinguish between the theory and its application as a theoretical method. When applied as a research method, the uses and gratifications theory provides researchers with a research method that assists with data collection. This is evident in many Internet studies that have been conducted. In a research conducted by Payne, Dozier, Nomai and Yagade, (2003) they compared the uses and gratifications of the Internet and newspapers (Payne *et al.*, 2003:115). In the study, Payne *et al.*, (2003) examined “interaction, surveillance, and diversion as uses associated with the Internet and newspapers” through quantitative research methods. The aim was to determine the strengths and weaknesses of both newspapers and the Internet to provide the gratifications sought by the users. The respondents were asked to complete questionnaire with items that were operationalized on a three-point scale. The quantitative data was entered into an SPSS data file for analysis. Quantitative data analysis allowed the researchers to determine correlations between the uses and gratifications for the Internet in comparison to newspapers.

Another application of the method of the uses and gratifications study was conducted by LaRose and Eastin, (2004). They investigated the correlation between self-regulation, Internet self-efficacy, habit strength and Internet usage (LaRose and Eastin, 2004:364). The participants completed an on-line questionnaire that applied structural equation modeling techniques. A quantitative sampling method i.e. random sampling was applied to pick respondents. The data was analyzed statistically to provide answers to the hypotheses.

The above mentioned studies applied the uses and gratifications theory as a research method mainly to determine correlations between variables and their findings were successful. However, for the purposes of this study, the uses and gratifications theory is applied as a theoretical component to the study, i.e. the assumptions of this theory serve as the theoretical approach to obtain data and support the interpretation of the data. Therefore, the theory is adapted to both quantitative and qualitative design and research methods.

2.2.2 Theoretical and Practical Implications

Uses and gratifications theory is useful to this research because it can help to explain the reasons behind respondents’ activeness on different academic research platforms and their derived gratifications. Although the uses and gratifications approach was traditionally linked to

television audiences, many researchers have found the approach very well suited for Internet research in particular, hence its adoption here.

The key assumptions from the uses and gratifications theory that form the theoretical foundation of this study are summarized as follows: users of the selected research social media platforms of this study are active and non-active; and those having an account with the platform(s) are purposeful and goal directed. As a result, the quantitative nature of this study aims to determine what factors motivate scholars and students to use the research social media platforms, what gratifications the participants sought from interactive participation and whether the perception existed that the gratifications sought had been obtained. The result of the findings of this research will provide answer to this.

From the foregoing section on the application of the theory, it is possible to conclude that the uses and gratifications theory has made a valuable contribution to social media studies. The recent trend to apply this theory to technological and Internet research validates the legitimacy of utilizing this theory in examining the combination of Internet social networks and scholars (Ruggiero, 2000).

2.2.3 Criticism of Uses and Gratifications Theory

Although uses and gratifications approach has been deployed and its significance noted in communication research, the theory and its methodology have been criticized by some mass media scholars. Critics have pointed out some flaws in the uses and gratifications theory. Swason, (1970) criticized lack of clarity in key terms of the paradigm especially those of the needs gratifications. Some critics, among them McQuail, (1994) have also said that it is highly individualistic focusing only on the individual psychological gratification needs. However these criticisms are not damaging to the theory as it is used here since the uses and gratifications theory is being applied within the context of the Internet. The criticisms are directed at the old media paradigm.

CHAPTER THREE

METHODOLOGY

3.1 Research Design

This study utilized survey design covering a cross-section of academics and postgraduate students in the selected universities. A survey is a data gathering method that is utilized to collect, analyze and interpret the views of people from a target population. It adopted a combination of both quantitative and qualitative methods of data collection. This approach is adopted because both of these methods will complement each other and hence elicit more information from the respondents.

3.2 Study Area

The study was carried out in two federal universities in southwestern Nigeria, namely – University of Ibadan which is the premier university in Nigeria and it is owned by the federal government. University of Ibadan has a long list of scholars dating back to the beginning of university education in Nigeria as far back as 1948. Federal University of Technology Akure was founded in 1981 under a drive by the federal government of Nigeria to create universities that specialized in producing graduates with practical as well as theoretical knowledge of technologies. It is the first university of technology in the southwestern Nigeria. The choice of this zone is predicated on two factors: first, it is the zone with the highest concentration of academic institutions offering degrees and diploma programs. In this zone there are many tertiary institutions scattered across it - about fifty Universities, twenty Polytechnics, and ten Colleges of Education. This range of institutions allows for a wide opportunity to make a suitable choice of institutions for this sort of study as well as academics of various stripes.

3.3 Study Population/Sample Size

The study population comprised academic staff and postgraduate students of the University of Ibadan and Federal University of Technology Akure. The academic staff population of University of Ibadan as at 2013/2014 academic session when this research was started was 1573 while the postgraduate student population was 12,661. Federal University of Technology Akure had academic staff population of 850 while the postgraduate student population was 3705. After the sample size determination a total of 1338 respondents were used for this study from the two universities. The study is limited to faculty members (academics) and postgraduate students of the two selected universities. This is, in keeping with the focus of the

research in terms of the choice of the two institutions that they are both committed to postgraduate studies and because the two research social media platforms selected for this study are mostly designed for the use of academics and research students. It is mostly academics and postgraduate students that construct a significant part of their work and training around research, and for this reason, they often rely on a variety of library and archival sources, as well as research social media platforms such as Academia.edu and ResearchGate.

Sample size determination

$$n = \frac{N}{[1 + N(e)^2]} \quad (\text{Yamane, 1967})$$

Where:

n = required sample size

N = estimated population

e = degree of error tolerance (0.05%)

Estimated population of academics and postgraduate students of University of Ibadan and FUTA

- University of Ibadan
 - Academics (N_{UIa})-1573
 - Postgraduate students (N_{UIp}) -12661
- FUTA
 - Academics (N_{FUTAa}) – 850
 - Postgraduate students (N_{FUTAp}) – 3705

$$n = \frac{N_{UIa}}{[1 + N_{UIa}(e)^2]} + \frac{N_{UIp}}{[1 + N_{UIp}(e)^2]} + \frac{N_{FUTAa}}{[1 + N_{FUTAa}(e)^2]} + \frac{N_{FUTAp}}{[1 + N_{FUTAp}(e)^2]}$$

$$n = \frac{1573}{4.93} + \frac{12661}{32.65} + \frac{850}{3.13} + \frac{3705}{10.26}$$

$$n = 319.07 + 387.78 + 271.57 + 361.11$$

$$n = 1339.53$$

Therefore, adjusting for 10% attrition

$n = 1473.483$

$n = 1474$

3.4 Sampling Technique

Purposive sampling technique was used to select two federal universities in southwestern Nigeria namely University of Ibadan and Federal University of Technology Akure. A multi-stage proportional sampling technique was employed to select the participants from institutes/faculties, and departments. The research was carried out on the campuses of these two institutions. The choice of the two institutions is because of their avowed commitments to postgraduate studies. Indeed, the University of Ibadan's aspiration is to become the first full-fledged postgraduate university in Nigeria in the nearest future (see www.ui.edu.ng). As for the Federal University of Technology, Akure, it is the first specialized university (a science and technology based university) its commitment to postgraduate studies makes it the 'best destination for postgraduate studies in Nigeria today among universities offering programs in science and technology' (Adeagbo, 2016). Over the years, it has been acknowledged as one of the leading IT institutions and it has won several awards in IT.

Twenty respondents were purposively selected to be interviewed in the course of the study comprising five academics from University of Ibadan and also five academics from Federal University of Technology, Akure. Also five postgraduate students were chosen from each of the universities. The participants were chosen with the criterion that ten of them use the two research social media platforms and have positive attitude towards the two research social media platforms while the other ten do not use the platforms and have negative attitude to the two research social media networks. It then becomes easier to do a comparative analysis of participants with positive attitude and negative attitude and find out how these attitudes have influenced the use of both research social media platforms.

3.5 Instrument of Data Collection

Two major research instruments were used to collect quantitative and qualitative data for the study. These are:

- i. Questionnaire

ii. In-depth interviews.

The questionnaire consisted of four sections. Section A has four items and it provides the demographic information of respondents. Section B contains 22 items and assessed information on participants' attitude towards Academia.edu and ResearchGate. Section C contains 22 items and assessed information on participants' use of Academia.edu and ResearchGate while section D contains 14 items and assessed information on participants' gratifications sought and obtained from using Academia.edu and ResearchGate. The questionnaire is structured to avoid ambiguity and simple to understand.

Likert or summative four point rating scale was employed. Each respondent was expected to choose one out of the options of strongly agree, agree, strongly disagree and disagree.

The interview guide contains twelve items. The questions relate to respondents' familiarity with any academic research website, and of what use are these websites to them. Questions were also asked on whether these sites facilitate research work or teaching. In-depth interviews were conducted on samples from both academics and postgraduate students of the two universities of study.

3.6 Validity and Reliability of Research Instruments

In order to ensure the relevance, validity, reliability and general comprehension of the questionnaire, face validation was carried out. The validation of the survey was checked through a pilot test implemented at the Federal University of Agriculture Abeokuta before the actual implementation. The questionnaire was randomly administered on some selected academic staff and postgraduate students of the institution. This helped to detect questions that were not properly stated and misunderstood by the respondents. At the end of the pilot test it was observed that the focus of the work needed to be realigned and tailored towards specific questions on attitude and use of research social media platforms. The research instruments were given to experts for face, content and construct validity. Apart from the pilot test assuring the validity of the questionnaire, it can also ensure that the questions are clearly worded, and that the respondents comprehend the questionnaire in the right way (Dahlberg and McCaig, 2010, p.181).

3.7 Method of Data Collection

As soon as corrections were made on the questionnaire after the pilot test, final copies were made. A total of 1,338 copies of questionnaire were shared among the two universities. In all 1,068 were found usable for analysis which comprised 317 postgraduate students and 209

academics from University of Ibadan and 379 postgraduate students and 163 academics from Federal University of Technology Akure. In addition to the survey, twenty interviews were conducted among the participants, five from each category in both universities. Each of the interviewees was contacted personally at different times. An interview guide questions was developed through conversation with the participants. The format included detailed probes, elaboration probes and clarification probes to enhance the understanding and clarity of statements as appropriate. Open-ended questions were used to obtain data from the participants. This gave the participants opportunity to express themselves to their satisfaction as regards the phenomenon under study. In addition to notes taken during the interview, all discussions were audio taped with the consent of the interviewees and later transcribed for qualitative analysis. These in-depth interviews were used to generate qualitative data to supplement the quantitative data from the survey. This was necessary to elicit information on all aspects of the study which dealt with attitude, use, gratifications sought and obtained from using research social media.

3.8 Method of Data Analysis

All the data collected for this study were subjected to content and descriptive analysis. The quantitative data were organized using frequency distribution tables, bar charts and pie charts.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

This chapter is concerned with the presentation and analysis of data gathered through the use of questionnaire distributed to respondents and interviews conducted while on the field. As earlier indicated in the research methodology, the research is a survey. Questionnaire administered and interviews conducted on respondents in the two universities of study - University of Ibadan and Federal University of Technology, Akure. In all, one thousand three hundred and thirty eight (1338) copies of questionnaire were distributed. However, out of the numbers retrieved one thousand and sixty eight (1068) copies were found to be useful. This gave a response rate of usefulness of 79.8% ($1068/1338 \times 100/1$). Hence, the analyses of data were based on the usable 1068 (79.8%) copies of the questionnaire.

Data collected were analyzed using descriptive statistics, frequency count, and percentages.

SECTION A

Respondents' Information

Table 4.1 Age Distribution of the Respondents

| Age | NO | % |
|---------------|------|-----|
| <= 30 years | 366 | 34 |
| 31 – 40 years | 315 | 30 |
| 41 – 50 years | 173 | 16 |
| 51 – 60 years | 147 | 14 |
| 61 + years | 67 | 6 |
| Total | 1068 | 100 |

Source: Field survey 2016

Table 4.1 above provides details of the age distribution of the respondents. From the table, majority fell within the age bracket of 20 to 30 years followed by 31 to 40 years bracket, which represent 34% and 30%, respectively.

Table 4.2 Sex Distribution of the Respondents

| Sex | NO | % |
|--------------|-------------|------------|
| Male | 652 | 61 |
| Female | 416 | 39 |
| Total | 1068 | 100 |

Source: Field survey 2016

Table 4.2 above shows that 61% of respondents were male while 39% were female.

Table 4.3 Income Distribution of the Respondents

| Income per Month | NO | % |
|-------------------------|-------------|------------|
| N5,000 – N10,000 | 149 | 14 |
| N20,000 – N30,000 | 201 | 19 |
| N40,000 – N100,000 | 245 | 23 |
| ABOVE 100,000 | 473 | 44 |
| Total | 1068 | 100 |

Source: Field survey 2016

As regards the income status of respondents, the study showed that 44% of the respondents were earning above 100,000 naira while 56% were earning below 100,000 naira.

Table 4.4 Highest Level of Education Distribution of all the Respondents

| Level of Education | NO | % |
|---------------------------|-------------|------------|
| B.Sc or B.A. | 530 | 50 |
| M.Sc or M.A. | 166 | 16 |
| PhD | 372 | 34 |
| Total | 1068 | 100 |

Source: Field survey 2016

Education is one of the vital tools in determining the level of the understanding of a society. From the above table, all respondents indicated they have attained tertiary education. Respondents who are currently on a postgraduate course constituted a larger proportion of the sampled population numbering 696 with 50% currently running a master programme and 16% a doctoral programme while 372 respondents who have completed their PhD programme

constituted 34% of the overall respondents. Respondents who have completed their PhD programme constituted the population for academics in the study, hence, depicting the quality of manpower found in academia.

Table 4.5: Distribution of Respondents by University

| University | Academics | Postgraduate Students | NO | % |
|---|------------|-----------------------|-------------|------------|
| University of Ibadan | 209 | 317 | 526 | 51 |
| Federal University of Technology, Akure | 163 | 379 | 542 | 49 |
| Total | 372 | 696 | 1068 | 100 |

Source: Field survey 2016

After discarding erroneous and incomplete copies of the questionnaire, the final copies of the questionnaire collected from the field was 1068 of the 1338 initial sample size. From the above, the distribution of respondents by university is: FUTA- 542 respondents (51%) comprising 379 postgraduate students and 163 academics, and UI- 526 respondents (49%) comprising 317 postgraduate students and 209 academics. Hence, distribution of respondents by scholar type is: postgraduate students = 696 and academics = 372

Table 4.6: Academics' Status and Institutions

| Academic Status | Institution | | | |
|-------------------------------|---------------|---------------|------------|------------|
| | Federal | | Total | % |
| | FUTA | UI | | |
| Professor | 10 (43.4%) | 13 (56.6%) | 23 | 6 |
| Reader or Associate Professor | 3 (30%) | 7 (70%) | 10 | 3 |
| Senior Lecturer | 58 (62.4%) | 35 (37.6%) | 93 | 25 |
| Lecturer 1 | 22 (33.4%) | 44 (66.6%) | 66 | 18 |
| Lecturer 11 | 8 (17.4%) | 38 (82.6%) | 46 | 12 |
| Assistant Lecturer | 37 (38.6%) | 59 (61.4%) | 96 | 26 |
| Graduate Assistant | 25 (65.7%) | 13 (34.3%) | 38 | 10 |
| Grand total | 163 | 209 | 372 | 100 |

Source: Field survey 2016

Table 4.6 presents the distribution of academic status of the two universities. Out of 372 academics that participated in the study, 6% were Professors, 3% were Associate Professors, 25% were Senior Lecturers, 18% were Lecturer I, 12% were Lecturer II, and 26% were Assistant Lecturer while 10% were Graduate Assistant. This has no implication to the study as respondents were randomly selected.

Table 4.7: Postgraduate Students' Status and Institutions

| Postgraduate Students' Status | Institution | | | |
|-------------------------------|----------------|----------------|------------|------------|
| | Federal | | Total | % |
| | FUTA | UI | | |
| Postgraduate Diploma (PGD) | 74 (66.1%) | 38 (33.9%) | 112 | 16 |
| Master's Programme | 218 (52.1%) | 200 (47.9%) | 418 | 60 |
| PhD Programme | 87 (52.5%) | 79 (47.5%) | 166 | 24 |
| Total | 379 | 317 | 696 | 100 |

Source: Field survey 2016

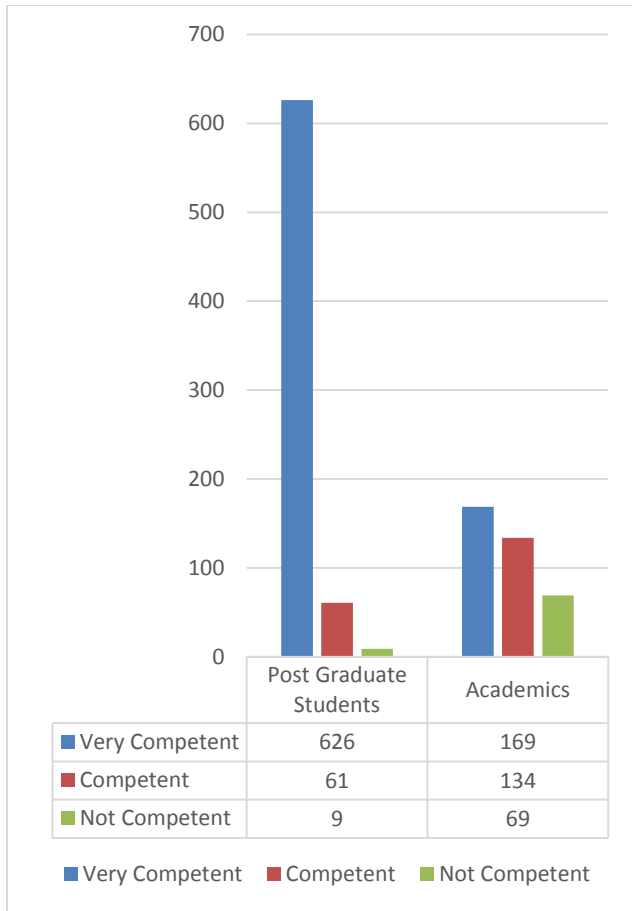
Table 4.7 presents the distribution of post graduate status of the two universities. Out of 696 postgraduate students that participated in the study, 16% were postgraduate diploma students, 60% were still running their master's programme and 24% were currently running a PhD programme in both universities.

4.0 Analysis by Research Questions

4.1 What is the attitude of academics and postgraduate students towards Academia.edu and ResearchGate in the selected academic institutions?

In order to examine the attitude of academics and postgraduate students towards Academia.edu and ResearchGate, respondents' extent of computer literacy and competency in surfing the internet were first measured.

Figure 4.1 Respondents' Level of Computer Literacy and Internet Surfing



Source: Field survey 2016

Figure 4.1 reveals that 626 postgraduate respondents and 169 academics indicated being very competent in using the internet; 61 postgraduate students and 134 academics indicated being competent while 9 postgraduate students and 69 academics indicated not competent in using the internet. From the above, majority of respondents, were competent in using the internet, this may be attributed to the importance of computer and internet literacy in modern society as the nerve of development and academic relevance in the world (Bamiro, O. A., Oluleye, A. E., and Tihamiyu, M. A. 2005; Bussiek 2005; Jarideh, S., Ghasempour M., Mortazavi S., and Mohagbehzadeh M.; Alli, R., Hassan, N. A., Daud, M. Y. M., and Jusoff, K. 2016). In confirmation to the above result, a senior male lecturer from FUTA, who indicated being a computer literate, in the course of the in-depth oral interview said:

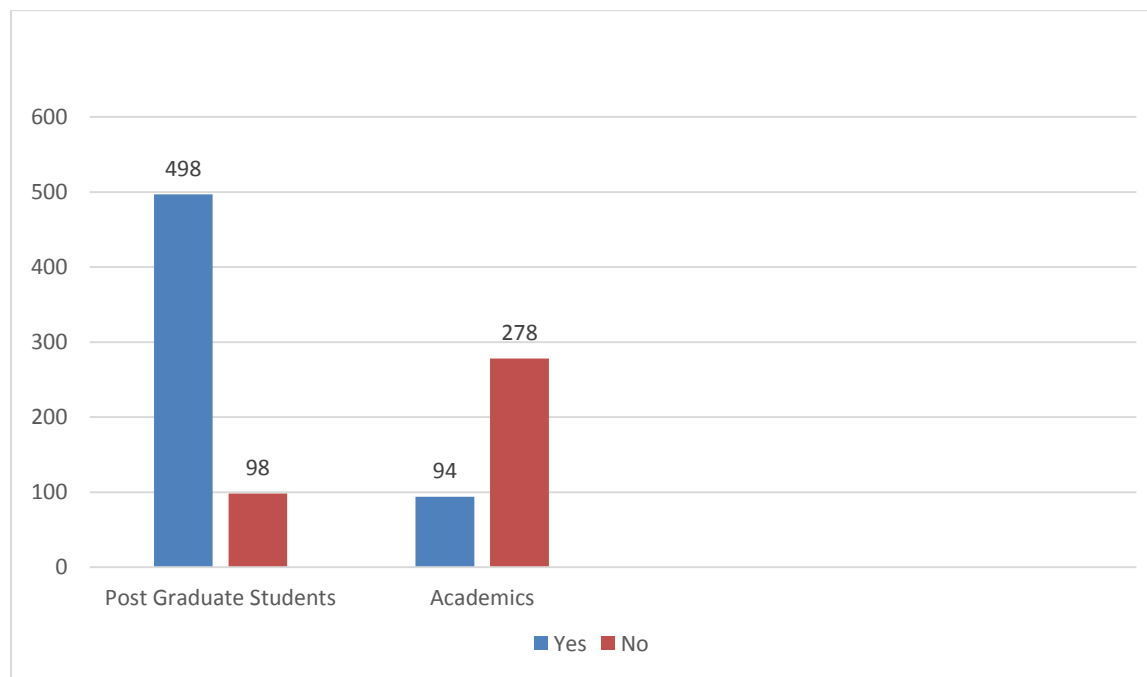
To me, being computer literate is synonymous to being educated. I can't imagine that we still have academics who are lecturing not being

able to use the computer or internet services. No, because computer literacy and surfing the internet for academic purposes is very important for any serious-minded researcher, especially in this age and time. (IDI/academic staff/2016).

The implication here is that majority of the academics and postgraduate students have embraced computer literacy and internet services. Stephens and Shotic, (2007) argued that the need for computer literacy has become widely accepted as technological necessity of modern life. Lending credence to this view, Tella and Mutula, (2008) discussed the importance of computer literacy in higher education as being overwhelmingly necessary for using e-resources and word processing. Computer literacy is a tremendous asset that will assist in retrieving relevant information needed by scholars within the academic environment.

The levels of awareness of each respondent was measured in the charts below to ascertain if respondents have heard about, and have accounts with the two research social media platforms.

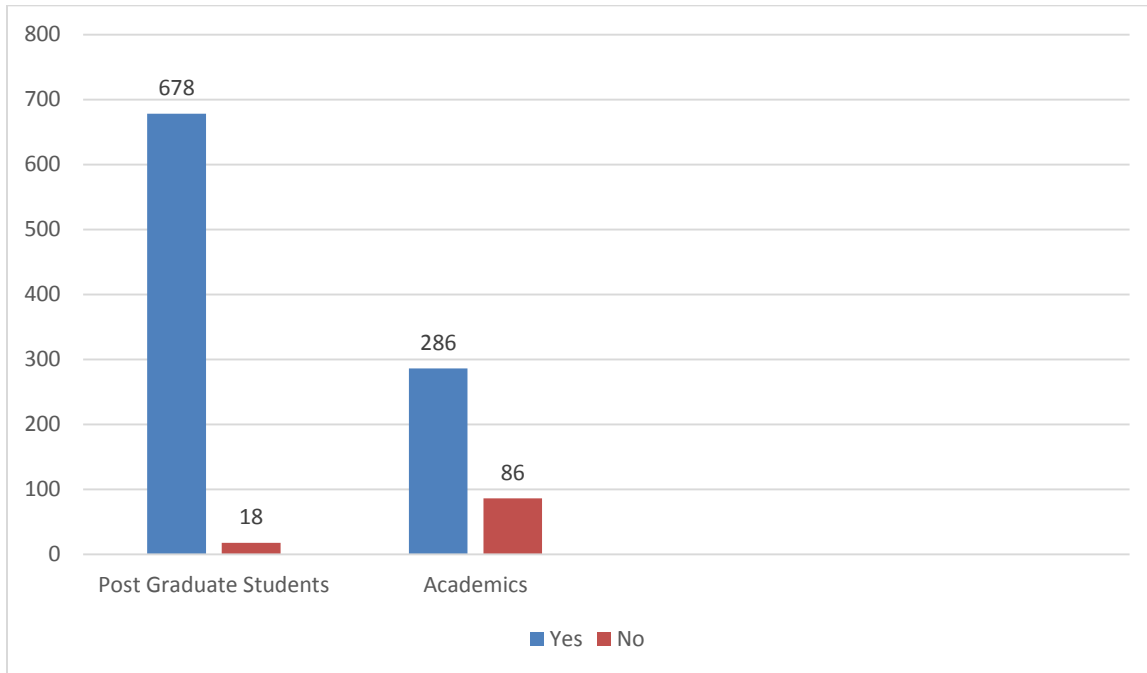
Figure 4.2 Respondents' Level of Awareness of ResearchGate



Source: Field work 2016

Figure 4.2 above reveals that 498 postgraduate students and 94 academics are aware of ResearchGate while 98 postgraduate students and 278 academics are not aware of the network.

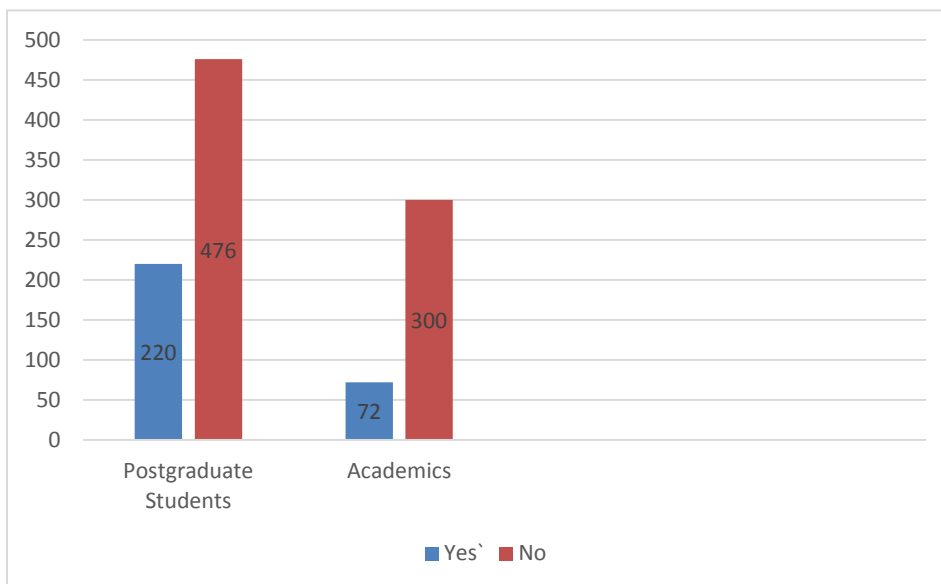
Figure 4.3 Respondents' level of Awareness of Academia.edu



Source: Field work 2016

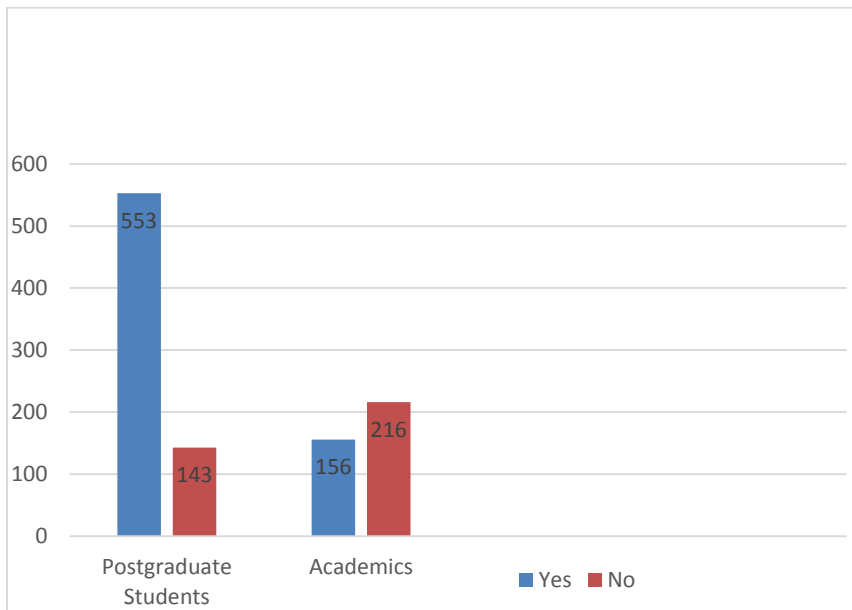
For Academia.edu, 678 postgraduate students and 286 academics are aware of the research social media platform while only few of the respondents, 18 postgraduate students and 86 academics respectively are not aware of the platform. Figure 4.2 and 4.3 reveal therefore that respondents for this study are more aware of Academia.edu than ResearchGate.

Figure 4.4 Respondents' responses on having an Account with ResearchGate



In measuring how many respondents have accounts with ResearchGate, respondents were asked to indicate this by either indicating ‘yes’ or ‘no’ in the questionnaire. Figure 4.4 reveals that 220 of 696 postgraduate students’ respondents and 72 of 372 academics have accounts with the research social media platform while significant number of respondents, 476 and 300 representing postgraduate students and academics respectively do not have accounts with the platform.

Figure 4.5: Respondents’ Responses on having an account with Academia.edu



Source: Field work 2016

Figure 4.5 reveals that a significant number of respondents have access to academia.edu by having an account on the research social media platform as 553 postgraduate students and 156 academics indicated having an account.

In assessing respondents’ attitude towards Academia.edu and ResearchGate, and their level of uses, a five-point Likert scale questionnaire was administered to respondents. In the questionnaire, respondents were asked to decide the level they agreed with the questions given to them. The scale 1 to 5 represented the following:

- 1= strongly disagree
- 2= disagree
- 3= undecided
- 4= agree
- 5= strongly agree

Responses were at the end regrouped into ‘agree’, ‘undecided’ and ‘disagree’ as scale 1 and 2 were classified into disagree, 3 into undecided and 4 and 5 into agree. It is worthy of note that questions asked to assess respondents’ attitude towards the two social networks focused on the benefits and usefulness of the social networks. Hence, disagreeing with such questions indicates a negative attitude to the network while agreeing with the questions indicates a positive attitude.

The following tables represent respondents’ responses.

4.1.1 Attitudes towards Academia.edu

Table 4.8: Postgraduate students’ attitude towards Academia.edu

| Questions | Disagree | | Undecided | | Agree | |
|---|-------------|-------|-------------|-------|-------------|-------|
| | UI% | FUTA% | UI% | FUTA% | UI% | FUTA% |
| I feel out of touch when I haven’t logged onto Academia.edu for a while | 17.2 | 15.9 | 6.7 | 8 | 24 | 28.2 |
| Academia.edu has become part of my daily routine | 15.4 | 13.3 | 13.0 | 11.3 | 24.2 | 22.8 |
| Academia.edu helps me join new and interesting research groups | 16 | 11 | 10.7 | 15 | 25.1 | 22.2 |
| I feel very satisfied when I am on Academia.edu | 14.3 | 13 | 10 | 23 | 22.5 | 17.2 |
| Academia.edu is resourceful | 11.2 | 20.5 | 19 | 14 | 18.3 | 17 |
| Academia.edu has helped me solve many scholarly problems | 16 | 11.5 | 12.5 | 16 | 25.5 | 18.5 |
| Using Academia.edu is not expensive | 15 | 13 | 14 | 16.9 | 19.6 | 21.5 |
| Academia.edu gives free access to scholarly literature around the world | 15 | 11 | 15 | 20 | 19 | 20 |
| Academia.edu is important and indispensable to academic research | 10 | 12 | 17 | 17 | 24 | 20 |
| Academia.edu is educative | 11 | 12 | 16 | 17 | 24 | 20 |
| Academia.edu is useful for publication of research works for scholars in developing countries | 11 | 11 | 18 | 18 | 20 | 22 |
| Total | 13.8 | 13.1 | 13.8 | 16 | 22.4 | 20.8 |
| Overall Mean | 26.9 | | 29.8 | | 43.2 | |

Source: Field work 2016

Table 4.8 represents postgraduate students’ attitude towards Academia.edu. The scale was regrouped into ‘agree’, ‘undecided’ and ‘disagree’. The overall mean of postgraduate

students' attitude indicated that a significant number of postgraduate students, 43.2% agreed with the benefits of Academia.edu as listed in the questionnaire. Also, 29.8% of postgraduate students indicated 'undecided' as their attitude towards Academia.edu, while 26.9% disagreed with the benefits listed.

The results therefore show that a significant number of postgraduate students are of the opinion that Academia.edu is a research social media platform of benefits to their research works. The agreement with these questions shows a positive attitude while the disagreement with the questions indicated a negative attitude towards the platform. Hence, postgraduate students indicated a higher positive attitude towards Academia.edu.

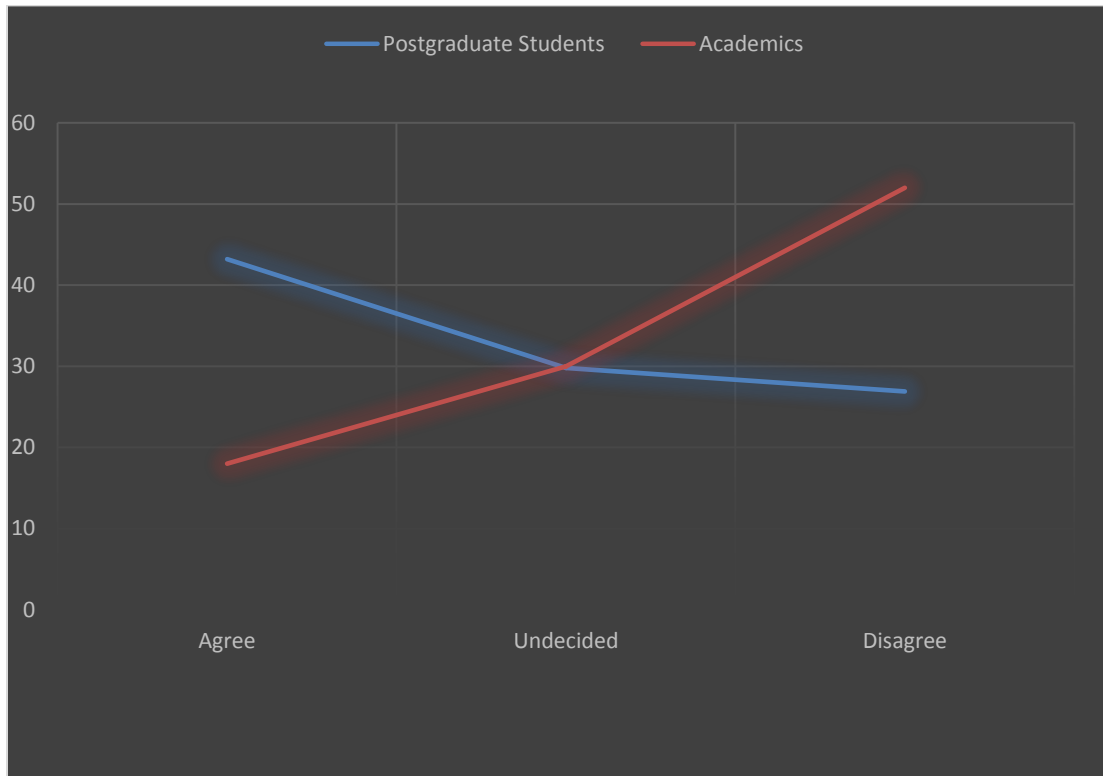
Table 4.9: Academics' Attitude towards Academia.edu

| Questions | Frequency (%) | | | | | |
|---|---------------|-------|-----------|-------|-----------|-------|
| | Disagree | | Undecided | | Agree | |
| | UI% | FUTA% | UI% | FUTA% | UI% | FUTA% |
| I feel out of touch when I haven't logged onto Academia.edu for a while | 28.6 | 24.7 | 15 | 15 | 8.1 | 8.6 |
| Academia.edu has become part of my daily routine | 22.5 | 25.9 | 20.9 | 11.2 | 8.5 | 11 |
| Academia.edu helps me join new and interesting research groups | 34.6 | 22 | 15.6 | 10.4 | 7.4 | 10 |
| I feel very satisfied when I am on Academia.edu | 28 | 22 | 11.2 | 15.6 | 12.2 | 11 |
| Academia.edu is resourceful | 25.3 | 28 | 13.5 | 11 | 2.2 | 20 |
| Academia.edu has helped me solve many scholarly problems | 27.3 | 26 | 15 | 11.3 | 9.4 | 11 |
| Using Academia.edu is not expensive | 25.8 | 32.2 | 15.5 | 22.7 | 2.2 | 1.6 |
| Academia.edu gives free access to scholarly literature around the world | 20.5 | 28 | 17 | 20.1 | 10 | 4.4 |
| Academia.edu is important and indispensable to academic research | 19.2 | 26.5 | 20.2 | 15.6 | 11 | 7.5 |
| Academia.edu is educative | 28 | 24.2 | 12.4 | 14.4 | 6.2 | 14.8 |
| Academia.edu is useful for publication of research works for scholars in developing countries | 25 | 29 | 14.9 | 11.1 | 14 | 6 |
| Total | 25.9 | 26.2 | 15.6 | 14.4 | 8.3 | 9.6 |
| Overall Mean | 52 | | 30 | | 18 | |

Source: Field work 2016

Table 4.9 represents Academics' attitude towards Academia.edu. The overall mean of academics' attitude indicated that a significant number of academics, 52% disagreed with the benefits of Academia.edu as listed in the questionnaire. Also, 30% indicated 'undecided' as their attitude towards Academia.edu, while few respondents, 18%, agreed with the benefits listed. The above result shows that a significant number of academics are of the opinion that Academia.edu is not of benefits to their research works. The disagreement with these questions shows a negative attitude while the agreement with the questions indicates a positive attitude towards the platform. Hence, academics indicated a higher negative attitude towards Academia.edu than postgraduate students. This may be because Academia.edu is linked to the user's Facebook account and Facebook, like most other social media platform, is mostly viewed as frivolous and less secured. However, most graduate students, who have not begun regular and rigorous publishing, may be less concerned about the fact that Facebook not being a secured social media site and given to frivolity.

Figure 4.6: Line Graph showing the overall mean scores of Postgraduate Students and Academics' Attitude towards the benefits of Academia.edu



Source: Field work 2016

The graph above compares the overall mean scores of postgraduate students' and academics' attitude towards Academia.edu. It becomes obvious that a significant number of academics disagreed with the benefits of Academia.edu compared to postgraduate students while a significant number of postgraduate students agreed with the benefits of Academia.edu. This implies that more postgraduate students believe the research social media platform is of benefit to their research compared to Academics.

4.1.2 Attitudes towards ResearchGate

Table 4.10: Postgraduate Students' Attitude towards ResearchGate

| Questions | Frequency (%) | | | | | |
|---|---------------|-------|-----------|-------|-----------|-------|
| | Disagree | | Undecided | | Agree | |
| | UI% | FUTA% | UI% | FUTA% | UI% | FUTA% |
| I feel out of touch when I haven't logged onto ResearchGate for a while | 36.6 | 31 | 13.7 | 15 | 2.1 | 1.6 |
| ResearchGate has become part of my daily routine | 22.5 | 25.9 | 21.7 | 10.4 | 8.5 | 11 |
| ResearchGate helps me join new and interesting research groups | 34.6 | 27 | 10.6 | 18.4 | 4.4 | 5 |
| I feel very satisfied when I am on ResearchGate | 32 | 27 | 12.2 | 8.6 | 5.2 | 15 |
| ResearchGate is resourceful | 30.3 | 23 | 15.4 | 6 | 8.3 | 17 |
| ResearchGate has helped me solve many scholarly problems | 20.3 | 35 | 11 | 15.3 | 9.4 | 9 |
| Using ResearchGate is expensive | 27.8 | 15.2 | 21.5 | 32.7 | 1.2 | 1.6 |
| ResearchGate gives free access to scholarly literature around the world | 30 | 25 | 17 | 1 | 13 | 14 |
| ResearchGate is important and indispensable to academic research | 20 | 32.5 | 17 | 12 | 8 | 10.5 |
| ResearchGate is educative | 16 | 28.2 | 24.1 | 10.7 | 11.2 | 9.8 |
| ResearchGate is useful for publication of research works for scholars in developing countries | 38 | 24 | 13.9 | 13.1 | 4 | 7 |
| Total | 28 | 26.7 | 16.2 | 13 | 6.8 | 9.2 |
| Overall Mean | 55 | | 29 | | 16 | |

Source: Field work 2016

Table 4.10 focused on postgraduate students' attitude towards ResearchGate. The result in the table depicts that a significant number of students disagree with the benefits of the research social media platform as 55% of the students indicated a negative attitude towards the social network while 29% were undecided. It has earlier been stated that disagreeing with the benefits listed in the questionnaire indicates a negative attitude while agreeing with the questions shows a

positive attitude. Hence, only few students agreed with the benefits of the platform as 16% agreed with the questions regarding the benefits of ResearchGate. The result therefore reveals that postgraduate students are more familiar with Academia.edu than ResearchGate.

Table 4.11: Academics' Attitude towards ResearchGate

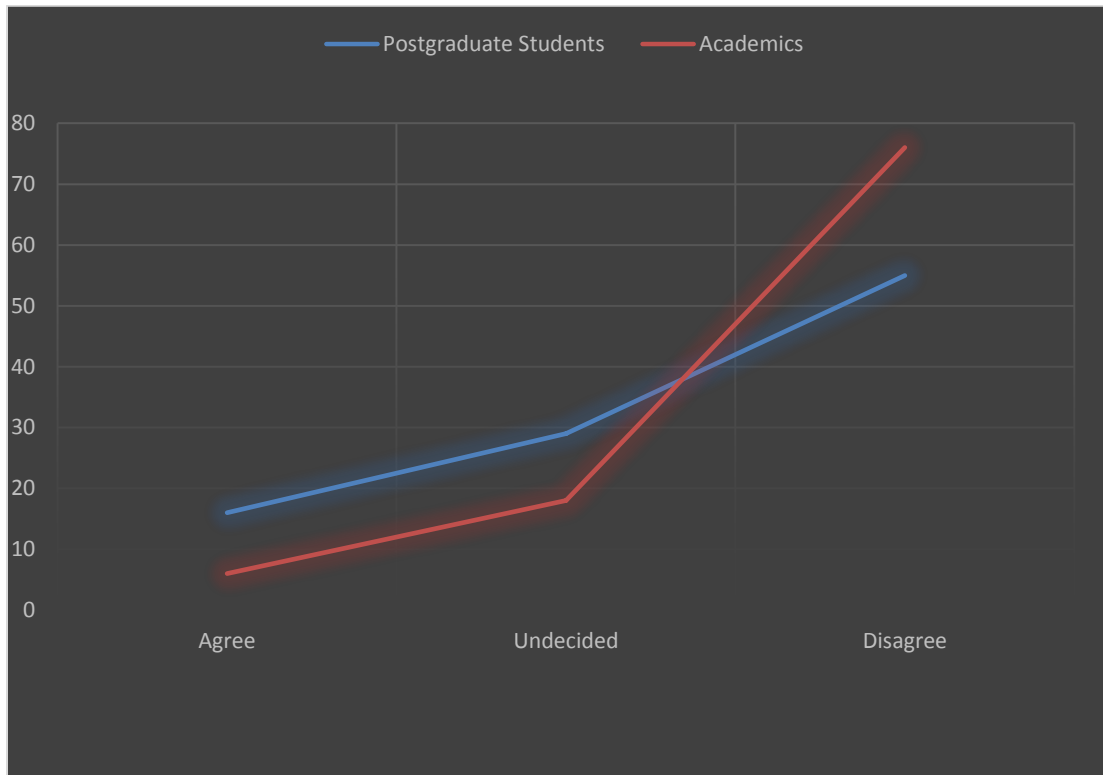
| Questions | Frequency (%) | | | | | |
|---|---------------|-------|-----------|-------|----------|-------|
| | Disagree | | Undecided | | Agree | |
| | UI% | FUTA% | UI% | FUTA% | UI% | FUTA% |
| I feel out of touch when I haven't logged onto ResearchGate for a while | 27 | 40 | 12 | 18 | 2 | 1 |
| ResearchGate has become part of my daily routine | 35.5 | 40.4 | 13 | 8 | 1.6 | 1.5 |
| ResearchGate helps me join new and interesting research groups | 44.6 | 40 | 4 | 7.4 | 1.4 | 2.6 |
| I feel very satisfied when I am on ResearchGate | 48 | 37 | 6 | 5.6 | 1.4 | 2 |
| ResearchGate is resourceful | 33 | 33.5 | 12.5 | 10 | 4 | 7 |
| ResearchGate has helped me solve many scholarly problems | 37.3 | 38 | 6.9 | 9.8 | 3 | 5 |
| Using ResearchGate is expensive | 24.8 | 59.7 | 6.5 | 9 | - | - |
| ResearchGate gives free access to scholarly literature around the world | 35 | 30.5 | 8 | 12 | 7 | 7.5 |
| ResearchGate is important and indispensable to academic research | 40.7 | 44.9 | 5.2 | 9.2 | - | - |
| ResearchGate is educative | 30 | 37.5 | 10.1 | 5.4 | 7 | 10 |
| ResearchGate is useful for publication of research works for scholars in developing countries | 39.1 | 39.9 | 13 | 8 | - | - |
| Total | 35.9 | 40.1 | 8.8 | 9.3 | 2.5 | 3.3 |
| Overall Mean | 76 | | 18 | | 6 | |

Source: Field work 2016

Table 4.11 shows academics' attitude towards ResearchGate. A very significant number of Academics (76%) disagreed with the benefits of ResearchGate while 18% were undecided. Only 6% of Academics agreed with the benefits of the research social media platform. This

shows that negative attitude towards ResearchGate was rated higher compared to positive attitude by academics.

Figure 4.7: Line Graph showing the overall mean scores of Postgraduate Students and Academics' Attitude towards the benefits of ResearchGate



Source: Field work 2016

From figure 4.7, it is clear that a significant number of postgraduate students, 55%, and a very significant number of academics, 76%, disagreed with the benefits of ResearchGate, 29% of postgraduate students and 18% of academics were undecided while only 16% of postgraduate students and 6% of academics agreed with the questions respectively. This implies that both respondents indicated more negative attitude towards ResearchGate.

Instructively, the issue of trustworthiness was raised by some academics respondents during the course of the interview on both research social media platforms. Some of them pointed out that both networks are not to be trusted on the basis that articles published are not peer reviewed; and research published could be plagiarized. This was further elaborated by

two academic staff of the University of Ibadan in the course of the interview for this study. The two respondents argued that:

I don't trust Academia.edu at all despite having an account on the academic site. What I do mostly on the net is to get articles that can give me insight to a particular field of interest I am researching. I am also very careful citing articles I get there because the academic network is not a peer reviewed academic network, hence, I am not sure of the richness of the research. Secondly, I don't upload any unpublished work on my page until I publish it in a reputable journal in order to avoid the issue of copy right (**IDI/academic staff/ 2016**) Trustworthy? No! If my article is not published, it cannot be seen on my Academia.edu page. I rather express myself first in a traditional academic publication outlets and move the published work to Academia.edu than express myself first on Academia.edu. I can't stand seeing my ideas plagiarized (**IDI/academic staff/ 2016**)

In agreement with these findings, Lupton's (2014) study on the academic use of social media discovered that getting academic information on research social media is like a double-edged sword. At one side is the openness and opportunities it creates, at the other side are the challenging elements of copyrights issues, plagiarism and the ability to maintain the boundaries between one's personal and professional personae. As earlier mentioned, respondents disagreement with questions in the questionnaire will be coded as negative attitude while agreeing with the benefits of the social network will be coded as a positive attitude. Hence, the study reveals that there are three types of attitude towards the two social networks: positive, negative and indifferent attitudes.

Positive Attitude: As earlier mentioned, the 'agree' section of the administered questionnaire was used to measure the positive attitude of respondents towards the two research social media platforms. From the findings, Academia.edu had the highest positive responses as 43.2% of postgraduate students respondents indicated 'agree' on the benefits its' gives. They are of the opinion that the social network is useful and resourceful to their research works, hence, it impacts on their behaviours. This is analogous to Ratliff and Nosek (2011) findings on the nexus between behaviour and attitude where they concluded that positive emotional response contributes to a positive attitude. However, for ResearchGate, only 16% postgraduate students, and 6% academics indicated enjoying some benefits from it.

Indifferent Attitude: With this type of attitude, respondents neither see the excessiveness nor inadequate impact of both research social networks. 'Undecided' was used to measure this type

of attitude in the questionnaire and from the findings, 29.8% of postgraduate students displayed indifferent attitude towards Academia.edu while 30% of academics displayed the same attitude towards the network. On the other hand, 29% of postgraduate students had indifferent attitude towards ResearchGate while 18% of academics had indifferent attitude towards the same network.

Negative Attitude: Respondents with this type of attitude have an antagonistic emotional response, hence, disagreed with most of the questions coded on the questionnaire. From the findings, 26.9% of the postgraduate students disagreed with the questions on the questionnaire for Academia.edu while 52% of academics also disagreed. However for ResearchGate, 55% of postgraduate students disagreed with the questions on the questionnaire while 76% of academics also disagreed.

From the foregoing, it can be concluded that respondents' attitude towards both research social networks vary as respondents' are more receptive to Academia.edu than ResearchGate, but user's attitudes to the two are generally poor. The reason(s) for these attitudes (mildly positive, indifference and outright negative) may have arisen from the fact that it (the site) does not enjoy appreciable level of popularity in the Nigerian academic community and thus only a few scholars have actually bothered to explore how it works and what advantages it can bring to their work. Also, the negative attitude towards both research social networks might be as a result of the issue of trustworthiness raised by some respondents during the interview as also alluded to by Deborah (2014) who pointed out "those challenging elements of plagiarism and copy right issue" which can lead to a negative reception of some academic social networks.

4.2 How Frequent is the use of Academia.edu and ResearchGate among academics and postgraduate students?

4.2.1 Frequency of Use of Academia.edu

This section discusses the level of frequency of the use of the research social media network sites (Academia.edu and ResearchGate). Respondents were asked to decide at which level they agreed with the questions related to the frequency of using both research social media networks with a five-point Likert scale questionnaire. The scale 1 to 5 represented the following:

- 1= never
- 2= rarely
- 3= sometimes

4= often

5= always

Responses were at the end regrouped into ‘never’, ‘sometimes’ and ‘always’ as scale 1 was classified as ‘never’, 2, 3 and 4 were classified into ‘sometimes’ while 5 into ‘always’. The following tables represent respondents’ responses.

Table 4.12: Postgraduate Students’ Uses of Academia.edu

| Questions | Frequency (%) | | | | | |
|---|---------------|------|-----------|------|-----------|------|
| | Never | | Sometimes | | Always | |
| | UI | FUTA | UI | FUTA | UI | FUTA |
| Have you ever used Academia.edu for sharing your published research works? | 12 | 1.7 | 24 | 26.2 | 22.6 | 13.5 |
| How frequently do you use Academia.edu to find people to add to your ‘friends’ list in the last one week? | 15.5 | 22.8 | 12 | 11.3 | 19 | 19.4 |
| How frequently do you use Academia.edu to keep in touch with your academic friends in the last one week? | 14.4 | 25 | 17 | 12 | 14.6 | 17 |
| Have you ever used Academia.edu to find academic mentors and mentees? | 16 | 16 | 10 | 20 | 20 | 18 |
| How frequently do you use Academia.edu to find out about special academic opportunities in the last one week? | 22 | 29 | 8 | 10 | 10 | 21 |
| How frequently do you use Academia.edu in the last one week? | 10 | 15 | 20 | 28 | 17 | 10 |
| How frequently do you use Academia.edu to check out scholars’ publication updates in the last one week? | 7 | 10 | 22 | 22 | 20 | 19 |
| How frequently do you use Academia.edu to source new research ideas in the last one week? | 11 | 26 | 10 | 19 | 15 | 19 |
| Have you ever used Academia.edu to meet other scholars? | 19 | 24.5 | 5.8 | 9 | 28.2 | 13.5 |
| Have you ever used Academia.edu to conduct research? | 14.6 | 19.8 | 16 | 7.6 | 23 | 19 |
| How frequently do you use Academia.edu to engage in intellectual discourse in the last one week? | 11 | 8 | 15 | 22 | 24 | 20 |
| Total | 13.8 | 17.9 | 14.5 | 17 | 19.4 | 17 |
| Overall Mean | 32 | | 32 | | 36 | |

Source: Field work 2016

Table 4.12 provides the overall mean rating of the frequency of use of Academia.edu by postgraduate students in percentages. A mildly insignificant number of students (36%) indicated their frequency of use as ‘always’ while 32% ranked their frequency of use as ‘sometimes’ and another 32% as ‘never’. This implies that a very insignificant number of students make use of the research social network for their research.

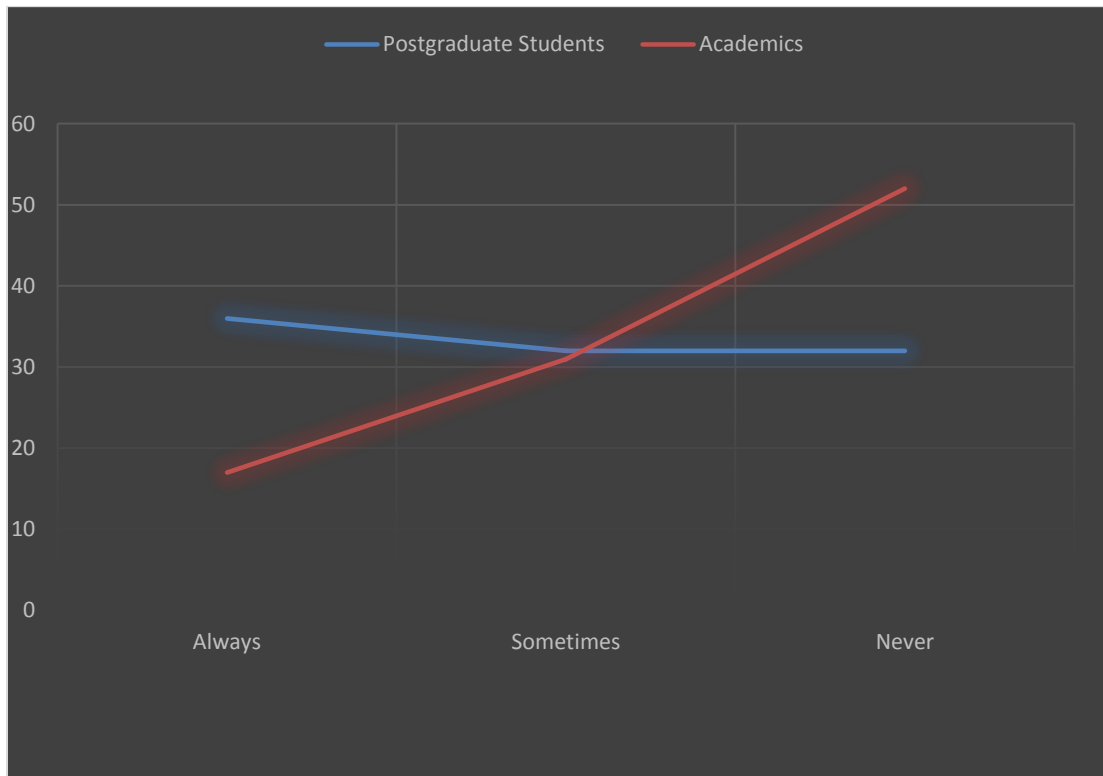
Table 4.13: Academics’ use of Academia.edu

| Questions | Frequency (%) | | | | | |
|---|---------------|------|-----------|------|-----------|------|
| | Never | | Sometimes | | Always | |
| | UI | FUTA | UI | FUTA | UI | FUTA |
| Have you ever used Academia.edu for sharing your published research works? | 14.8 | 20.4 | 28 | 18.2 | 8 | 10.6 |
| How frequently do you use Academia.edu to find people to add to your ‘friends’ list in the last one week? | 38 | 24 | 13.4 | 11.3 | 2.5 | 10.8 |
| How frequently do you use the Academia.edu to keep in touch with your academic friends in the last one week? | 21.1 | 20.6 | 21.1 | 22.2 | 4.7 | 10.3 |
| Have you ever used Academia.edu to find academic mentors and mentees? | 36.2 | 25.5 | 15 | 12 | 5.2 | 6.1 |
| How frequently do you use Academia.edu to find out about special academic and opportunities in the last one week? | 27 | 24.2 | 9 | 18 | 8.8 | 13 |
| How frequently do you use Academia.edu in the last one week? | 18 | 26 | 20.3 | 14 | 9.4 | 12.3 |
| How frequently do you use Academia.edu to check out scholars’ publication updates in the last one week? | 16.5 | 23 | 22 | 21.5 | 8.9 | 8.1 |
| How frequently do you use Academia.edu to source new research ideas in the last one week? | 25.2 | 35 | 13 | 14 | 4.7 | 8.1 |
| Have you ever used Academia.edu to meet other scholars? | 25 | 40 | 15 | 10 | 6.5 | 3.5 |
| Have you ever used Academia.edu for conducting research? | 28.6 | 32 | 11 | 9 | 9.2 | 10.2 |
| How frequently do you use Academia.edu to engage in intellectual discourse in the last one week? | 29.2 | 26.9 | 11 | 11.4 | 7.7 | 13.8 |
| Total | 25.4 | 27 | 16.3 | 14.7 | 6.9 | 9.7 |
| Overall Mean | 52 | | 31 | | 17 | |

Source: Field work 2016

Table 4.13 shows the frequency of use of Academia.edu by academics. Unlike the high level of use recorded by postgraduate students in using Academia.edu, the above result shows that Academia.edu's popularity among academics cannot be compared with postgraduate students as 52% ranked their frequency of use as 'never'.

Figure 4.8: Line Graph showing the overall mean scores of postgraduate students and academics' frequency of use of Academia.edu.



Source: Field work 2016

Figure 4.8 shows that a significant number of postgraduate students, 36% ranked their use of the research social media network as 'always' compared to academics, where 17% ranked their frequency of use as 'always'. Also, both respondents have a significant number that ranked 'sometimes' as their frequency of use having 32% for postgraduate students and 31% for academics, while a very significant number of academics (52%) ranked their frequency of use as never. This implies that the frequency of use of the research social media network by postgraduate students is higher than that of the academics.

4.2.2 Frequency of Use of ResearchGate

Table 4.14: Postgraduate students' use of ResearchGate

| Questions | Frequency (%) | | | | | |
|--|---------------|------|-----------|------|----------|------|
| | Never | | Sometimes | | Always | |
| | UI | FUTA | UI | FUTA | UI | FUTA |
| How frequently do you use ResearchGate to find people to add to your 'friends' list in the last one week? | 36.6 | 36.9 | 12.5 | 10.3 | 2.1 | 1.6 |
| Have you ever used ResearchGate for sharing your published works? | 35.5 | 35.9 | 8.8 | 13.4 | 4.4 | 2 |
| Have you ever used ResearchGate to find academic mentors and mentees? | 39.8 | 34 | 12 | 8 | 3.2 | 3 |
| Have you ever used ResearchGate to meet other scholars? | 34 | 29.2 | 11.6 | 18 | 4.2 | 3 |
| How frequently do you use ResearchGate to engage in intellectual discourse in the last one week? | 38.5 | 33 | 13 | 3.2 | 5.3 | 7 |
| How frequently do you use ResearchGate to keep in touch with your academic friends in the last one week? | 34.3 | 32.9 | 12.2 | 14.2 | 2.4 | 4 |
| How frequently do you use ResearchGate to find out about special academic offers and opportunities in the last one week? | 37.8 | 36.3 | 6.3 | 16.8 | 1.2 | 1.6 |
| How frequently do you use ResearchGate to source new research ideas in the last one week? | 38.5 | 29.8 | 14 | 6.3 | 5 | 6.4 |
| How frequently do you use ResearchGate to check out scholar's publication updates in the last one week? | 34.4 | 30.5 | 16 | 9.6 | 5 | 4.5 |
| Have you ever use ResearchGate for conducting research? | 26 | 28.9 | 11 | 16.1 | 8.2 | 9.8 |
| How frequently do you use ResearchGate in the last one week? | 28 | 35 | 10 | 13 | 8 | 6 |
| Total | 34.8 | 32.9 | 11.5 | 11.7 | 4.4 | 4.4 |
| Overall Mean | 68 | | 23 | | 9 | |

Source: Field work 2016

Table 4.14 represents postgraduate students' result on the frequency of use of ResearchGate. As earlier pointed out in this research, ResearchGate is less popular than Academia.edu among postgraduate students, hence a very insignificant number (9%) of students

indicated their frequency of use of the research social media network as ‘always’, some students (23%) ranked sometimes as their frequency of use while a very significant number, 68% ranked their frequency of use as ‘never’. This confirms our earlier findings that Academia.edu is more popular than ResearchGate.

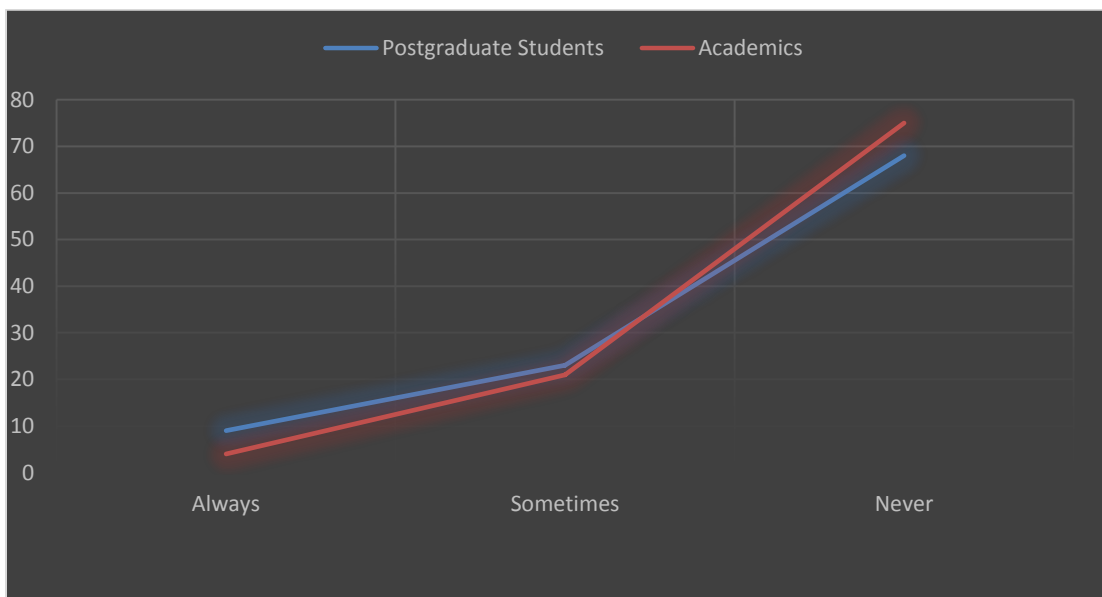
Table 4.15: Academics’ use of ResearchGate

| Questions | Frequency (%) | | | | | |
|--|---------------|------|-----------|------|----------|------|
| | Never | | Sometimes | | Always | |
| | UI | FUTA | UI | FUTA | UI | FUTA |
| How frequently do you use ResearchGate to find people to add to your ‘friends’ list in the last one week? | 34 | 40 | 10.1 | 11.6 | 2.5 | 1.8 |
| Have you ever used ResearchGate for sharing your published works? | 40.5 | 36.4 | 9.5 | 10 | 1.8 | 1.8 |
| Have you ever used ResearchGate to find academic mentors and mentees? | 41.6 | 39 | 8.4 | 9 | 1 | 1 |
| Have you ever used ResearchGate to meet other scholars? | 35 | 42 | 8 | 10 | 3 | 2 |
| How frequently do you use ResearchGate to engage in intellectual discourse in the last one week? | 36 | 37.5 | 10.3 | 12 | 3.2 | 1 |
| How frequently do you use ResearchGate to keep in touch with your academic friends in the last one week? | 36.3 | 37 | 10.4 | 14 | 1.0 | 1.3 |
| How frequently do you use ResearchGate to find out about special academic offers and opportunities in the last one week? | 25.8 | 38.7 | 11.9 | 19.6 | 1.9 | 2.1 |
| How frequently do you use ResearchGate to source new research ideas in the last one week? | 41 | 39.5 | 9 | 6.4 | 1.7 | 2.4 |
| How frequently do you use ResearchGate to check out scholar’s publication updates in the last one week? | 30.7 | 45.9 | 13 | 7.5 | 1.4 | 1.5 |
| Have you ever used ResearchGate for conducting research? | 41 | 39.5 | 5.2 | 11.9 | 1.2 | 1.2 |
| How frequently do you use ResearchGate in the last one week? | 36.1 | 34.4 | 12 | 12 | 3.7 | 1.8 |
| Total | 36 | 39 | 9.8 | 11.2 | 2.0 | 1.6 |
| Overall Mean | 75 | | 21 | | 4 | |

Source: Field work 2016

Table 4.15 shows the frequency of use of ResearchGate by academics. It also confirms our earlier statement that ResearchGate is not popular among the academics. Here a very insignificant number of academics (4%) ranked their frequency of use as ‘always’ while 21% ranked their frequency of use as sometimes and 75% of the respondents ranked their frequency of use as ‘never’. This implies that majority of academics seldom make use of this research social media platform for their research.

Figure 4.9: Line Graph showing the overall mean scores of Postgraduate Students and Academics’ frequency of use of ResearchGate.



Source: Field work 2016

Figure 4.9 is a line graph comparing postgraduate and academics’ responses on the frequency of use of ResearchGate. Both respondents indicated a high frequency of not using the research social media network as seen in the graph. This implies that respondents seldom use the platform for their research.

In summary, the findings above reveal that Academia.edu is more popular among both respondents than ResearchGate. It also reveals that postgraduate students’ level of use of both research social media networks is higher than academics’ level of use.

4.3 What are the Gratifications Sought and Obtained for using Academia.edu and ResearchGate by Academics and Postgraduate Students?

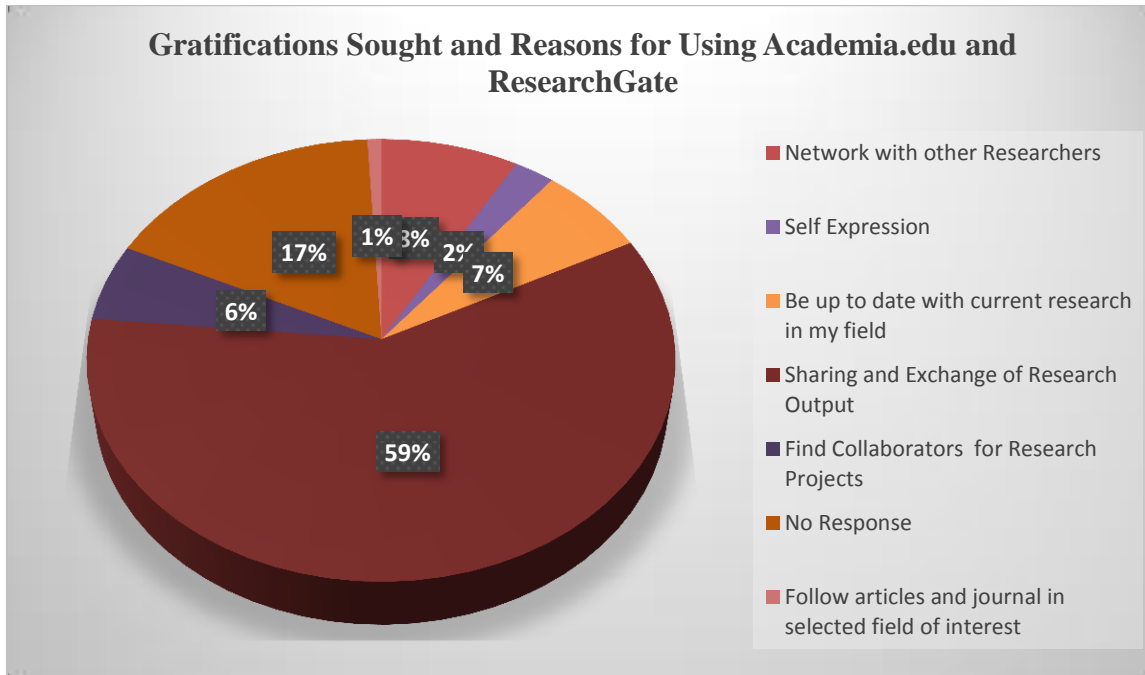
Several scholars have argued that the (simple) assumption that media consumers are active is not enough in research on audience use of media content; heavy consideration must be given to their specific motivation behind the consumption of the particular media (Rubin 1993; Stafford, Stafford and Schkade 2004). Hence, gratification sought is the umbrella under which researchers ground the reason why people seek certain media. The following table shows respondents’ responses on gratification sought for using the two research social media networks.

Table 4.16: Reasons, gratification sought for using Academia.edu and ResearchGate

| Gratification Sought and Reasons for Having Academia.edu and ResearchGate Account | UI | FUTA | % |
|--|------------|-------------|-------------|
| Network with other researchers | 34 | 55 | 8 |
| Share and exchange research output | 368 | 263 | 59 |
| Be up to date with current research in my field | 40 | 31 | 7 |
| Find collaborators for research projects | 21 | 39 | 6 |
| Disseminate teaching material (notes, class slides, etc. | - | - | - |
| Self-Expression | 8 | 18 | 2 |
| Disseminate curriculum vitae | - | - | - |
| Search for job | - | - | - |
| No Response | 80 | 102 | 17 |
| Follow articles and journals in selected field of interest | 9 | - | 1 |
| Others | - | - | - |
| Total | 554 | 514 | 100% |

In assessing the gratification sought for using the two research social media networks, respondents were asked to identify the reasons for using both social networks. These reasons were coded into ten questions as revealed in Table 4.16. This is better illustrated in graphical illustration in Figure 4.10:

Figure 4.10



Source: Field work 2016

Figure 4.10 reveals that respondents have various purposes for using both research social networking sites (Academia.edu and ResearchGate). The highest percentage of the respondents, 59% (631) sought to use both social networking sites to share and exchange research outputs. This was followed by another significant percentage 17% (182) respondents who did not respond to the question. This is due to the fact that not all 1068 respondents for this study have an account on the research social media platforms. This is followed by 8% (89) respondents who sought to use both research social networking sites to connect with other researchers, while 7% (71) respondents indicated the need to collaborate with other researchers as one of the gratifications sought for using the research social media networks. Among all other gratifications sought and purposes, self-expression, being up to date and following articles in selected field of interest have the lowest percentage with 6% (60), 2% (26) and 1% (9) respondents respectively.

From the response above, it can be deduced that knowledge sharing is the highest gratification sought for using Academia.edu and ResearchGate. This is not surprising as the two research social media networks are basically academic sites. In the course of the interview, a postgraduate student from university of Ibadan confirmed this gratification sought when she

pointed out that: “I joined Academia.edu with the hope that I would find it useful for finding and sharing work openly that is related to my research area that might not be available otherwise”

Another respondent, a Lecturer from FUTA, pointed out that:

My greatest expectation when I joined both academic sites was that I expect the sites to increase the exposure of my published works and make them more accessible to those within and outside my disciplines as part of the general movement away from locked-down, closed access academic journals. In addition with this, I also expect to find good literatures for further research. **(IDI/ academic staff/2016)/**

From the above, sharing and exchange of research data, which is the highest gratification sought by respondents can be classified under the cognitive need gratification. This is a type of need gratification that involves the strengthening of information, the acquisition of knowledge and the understanding of the environment. The above findings therefore show that the cognitive needs gratification is the highest coded gratification sought by respondents as 59% of respondents affirmed it as a need sought for using the two social networks.

Another category of need gratification sought out by respondents is the social integrative need gratification which is the desire for affiliation and social contact. This need gratification was coded the second highest as two of the questions asked to get feedback from respondents on the gratification sought are connected to social integration. Hence, ‘network with other researchers’ and ‘find collaborators for research project’ as gratification sought were coded (positively) by 8% (89) and 6% (60) respondents respectively. This need for connectivity and networking is in sync with Lupton (2014) findings of the academic use of social media when she pointed out that, the principal gratification sought from using social media is related to the connections or networks they had established with other academics, students and also those outside academia. Through these interactions, researchers are able to exchange ideas and critiques (Borrego and Anglada 2016). Confirming this, a female lecturer in FUTA agrees with this when she stated that:

I have heard colleagues tell me that I can find a rich and wonderful academic network on academia.edu which is my greatest need. So I joined the academic network in 2013 to discover researchers with similar interests to build my research potential and of course, it has really been of great help especially in areas of feeling better connected to other academics in the science sector **(IDI/academic staff/2016)**

The last need gratification coded by respondents is the personal integrative need which is associated with the need to express oneself.

Gratification Obtained

Gratification obtained is what media users derive from using media content; hence, it is called derived gratification. In measuring the gratification obtained by respondents who use the two social networks, it becomes necessary to identify the categories of gratification needs available. There are different scholars that have classified these needs into different taxonomy, but this study adopted the five categories as identified by Katz, Gurevitch and Hass (1973), namely: cognitive needs, affective needs, personal integrative needs, social integrative needs and escapist needs. The cognitive needs involve the strengthening of information and acquisition of knowledge, the affective needs refer to emotional experiences and the strengthening of aesthetic and pleasurable experiences which have been identified as one of the most basic motivations for media consumption (Hunter 2005; Powell and Cowart 2015). The personal integrative needs relate to the confirmation of credibility, confidence and stability as well as the status of the individual and originate from the individual's desire for self-esteem (Severin and Tankard 1992). The fourth need, which is the social integrative need, focus on the desire for affiliation and social contact and the last need, escapist need refers to the desire to escape, to release tension and seek diversion (Severin and Tankard 1992). Questions were asked focusing on these five needs gratification. The following table presents the feedbacks as regards gratifications obtained in using Academia.edu and ResearchGate.

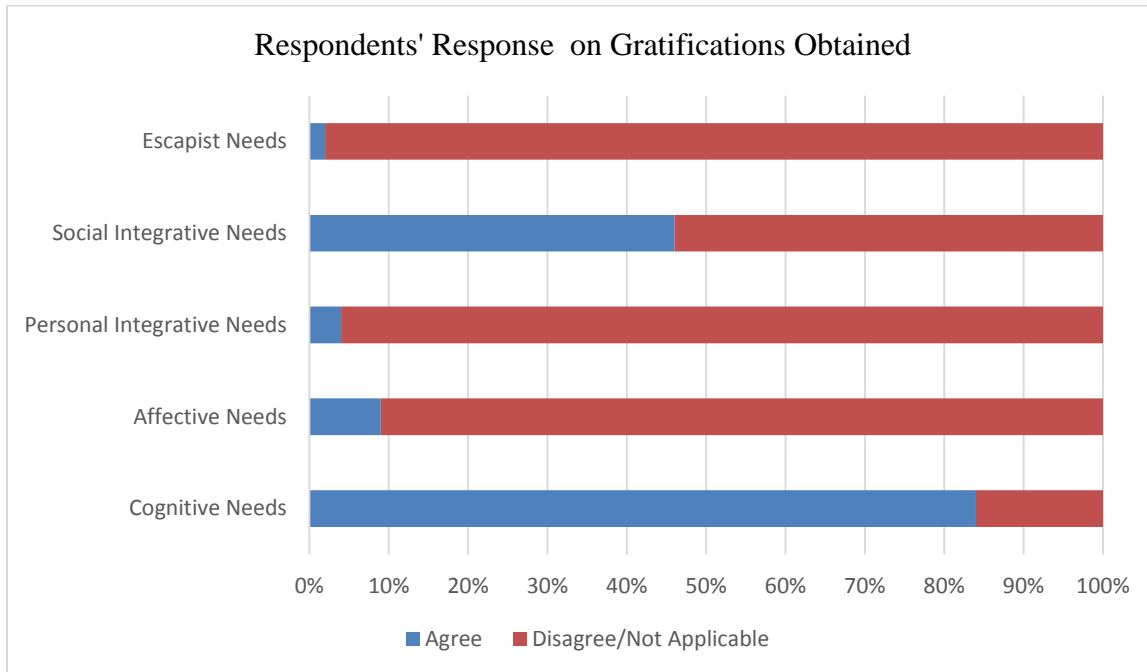
Table 4.17: Gratification Obtained in Using Academia.edu and ResearchGate

| Needs | Questions | Postgraduate Students | Academics | Total |
|----------------------------|---|-----------------------|-----------|-------|
| Cognitive Needs | I download and read articles that give me more knowledge in my field of interest | 587 (84%) | 227 (61%) | 814 |
| Affective Needs | I get emotionally involved and react sometimes to the findings of some research works posted on the social network | 66 (9%) | 18 (5%) | 84 |
| Personal Integrative Needs | I sometimes respond to researchers that I have different opinion with | 31 (4%) | 67 (18%) | 98 |
| Social Integrative Needs | I follow the work of some researchers and sometimes check how many views, downloads and bookmarks my publications get | 323 (46%) | 55 (15%) | 378 |
| Escapist Need | I sometimes wish I could swap places and be an author of some research work I read | 13 (2%) | - | 13 |

Source: Field work 2016

As observed from Table 4.17, 84% (587) postgraduate students indicated that their cognitive needs were gratified in using both social networks. The gratification obtained by the two categories of respondents from the cognitive needs was coded the highest of all the five needs gratification adopted in this study. This is followed by social integrative needs having 46% (323) postgraduate students indicating it as a need gratified. However, for the academics, Personal integrative needs was coded the second best having 67 (18%), followed by Social integrative 55 (15%) respondents indicated this as the third highest need gratified. Affective needs on the other hand were coded low by both categories of respondents, postgraduate students having 9% (66) and academics 18 (5%). The two lowest needs gratifications obtained for postgraduate students are personal integrative needs and escapist needs having 4% (31) and 2% (13). While the two lowest gratifications obtained by academics are affective need with 5% respondents and escapist need having no respondents indicating it as being irrelevant to them. The following graphs better illustrate the findings:

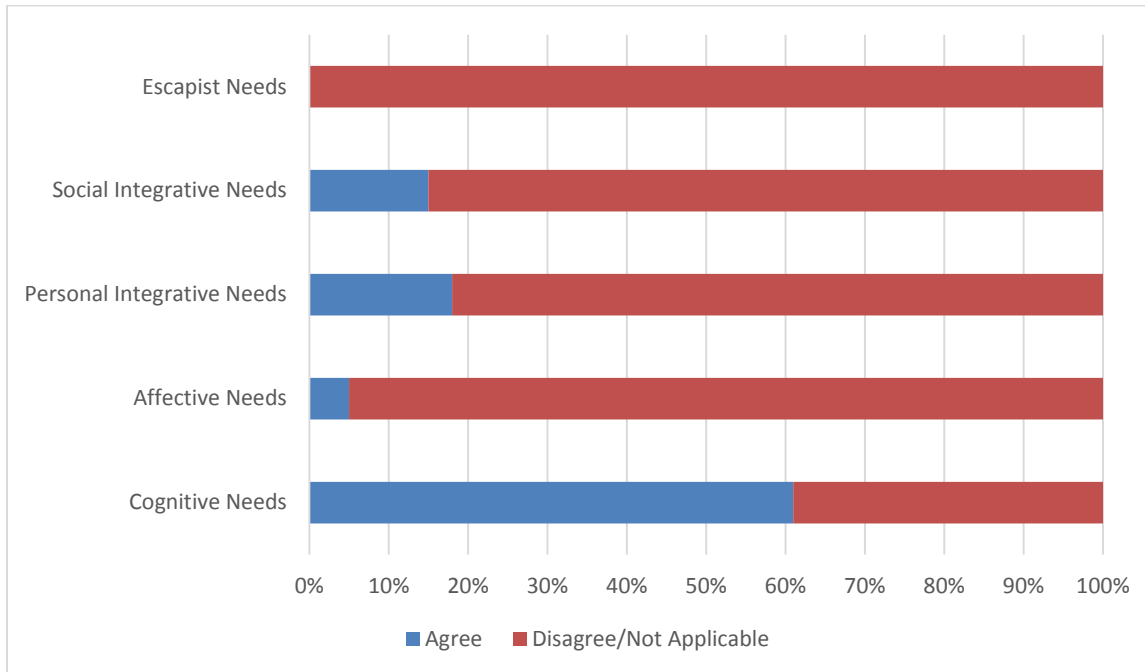
Figure 4.11: Gratifications Obtained by Postgraduate Students



Source: Field work 2016

What this section implies is that, not only are respondents aware of their needs, they are also aware of the aspect of need gratified. From the graph above, which is an analysis of the Table 4.17, cognitive needs was the highest gratification obtained, followed by social integrative needs, affective, personal integrative needs and escapist need.

Figure 4.12: Gratifications Obtained by Academics



Source: Field work 2016

Unlike postgraduate students' gratification obtained, escapist need was never gratified as indicated by the academics respondents while personal integrative need was coded the second highest immediately after cognitive needs.

From both graphs, the highest coded need gratification sought, cognitive need was the highest need gratified. This implies that through downloading and reading of articles on Academia.edu and ResearchGate, the cognitive need is gratified. This finding therefore shows that the more the usage of the social networks, the more the cognitive need can be gratified. One important thing to note at this junction is that the degree of satisfaction of the gratified needs is undetermined. This is because, as mentioned in the objective of the study, the aim is to establish whether needs existed and whether the respondents perceived those needs that are gratified.

The findings of objective three in which cognitive need was coded the highest gratification sought and obtained aligns with Bryant and Heath, (2000); Borrego and Anglada, (2016) in which they claimed that acquisition of knowledge could be obtained through curiosity and explorative drives provided by interactive experiences; and also that learning takes place by interacting with others, exchanging ideas and critiques (Borrego and Anglada, 2016).

4.4 In What Way Does the Attitude of Academics and Postgraduate Students Influence the Use of Academia.edu and ResearchGate?

In assessing the various ways in which attitude influence the use of Academia.edu and ResearchGate, the study focused on the interviews that were carried out to get respondents' responses. Twenty participants were interviewed in the course of the study comprising 5 academics each from University of Ibadan and Federal University of Technology, Akure and 5 postgraduate students each from both universities. The participants were purposely chosen as earlier stated in chapter three with the criteria that they all use the two research social networks. Other important criterion that was considered in the selection was that 5 participants in each of the university have positive attitude towards the social networks and the other 5 participants' attitude toward the social networks are negative. This is because it becomes easier to do a comparative analysis of participants with negative attitude and positive attitude and find out how these attitudes have influenced the uses of both social networks.

A question was asked to identify the frequency of use of the research social networks by the participants in order to measure its influence on the use. Six out of ten of respondents that have positive attitude towards academia.edu sometimes use the social networks and the four other respondents confirm always using the social networks for academic purposes. On the other hand, out of the ten participants that have negative attitude towards the research social networks, two confirm 'sometimes' their frequency of use, while the other eight participants do not use the research social networks This implies that the positive the attitude, the higher the frequency of uses and the negative the attitude towards the social networks, the lower the frequency of use. Giving credence to this view, a female participant from the University of Ibadan who has a negative attitude said:

Well, we know that there are other academic social networks that are better than Academia.edu and ResearchGate and more reputable. Hence, as a lecturer, I am rather active in such networks than the two for your study. My reception for both is very low, so I don't bother logging in to the site despite being a member. I think it is a waste of time. In short, I don't know how I joined the platform in the first place (IDI/academic staff/ 2016).

On the other hand, another participant with a positive attitude said:

The research networks are great and help me get digital access to articles that are impossible to get on my own. They also keep me updated in my field of interest. As a result, I spend quality time going on line to get feedbacks. I also check my mail occasionally to be sure that I have received a mail from the research social networks on recent updates (**IDI/postgraduate student/ 2016**).

This finding is in agreement with Fishbein and Ajzen, (1975) work on Belief, Attitude, Intention and Behaviour where they concluded that attitude influence behavioural intentions. They constructed the value – expectancy model by arguing that a person’s attitude determined his/her intended behaviour, which could ultimately affect the outcome. Based on the model, they stated that a person would hold certain attitudes towards an object by evaluating it. After going through this process, the person then decided whether to hold a favourable or unfavourable view towards it. Indeed such a positive or negative attitude could further influence the person’s intentions to engage in various behaviours with regard to that particular object. This finding also supports Thompson and Hunts (1996) findings on the use of Cognitive Process Model to assess attitude structure. There, they demonstrated that the fastest way to alter the use of a perceived possibility is to alter the attitude of the users. It also aligns with Schneider (1988: 179) who posits that “attitudes are evaluative reactions to persons, objects, and events. These include your beliefs, positive and negative feelings about the attitude object.” He also added that attitude can guide our experiences and decide the effects of our experience on our behaviours. Hence, attitude go a long way in influencing the use of the two research social media networks, and in the above, the aspect it does this is by influencing the frequency of use.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

This study has attempted to examine attitude towards the use of research social media among academics and postgraduate students in selected federal universities in southwestern Nigeria. In chapter one, the researcher provides the background of the development of information communication technology (ICT) and related digital technologies which have ushered in many changes in all spheres of life. They have changed the way people communicate, work, and study, and the speed at which such technologies are penetrating education institutions have offered new ways and tools for the delivery of knowledge across the globe making the cyber-space a borderless learning sphere (Murad *et al.*, 2016).

The chapter further brings to the fore the fact that with increasing globalization, social media have enabled users to have access to any information available in any field or area regardless of distance. Social media in the developed countries provide its users the opportunity to bridge the knowledge gap between them and their counterparts through their networking. They have evolved to become virtual communities where people communicate, share information, and perhaps most important build and maintain ongoing relationships. Although a number of studies have attempted an investigation of the impact of social media on academic performance of students, these studies have neglected an analysis of the attitude of people towards the use of these sites as well as the gratifications they seek in using them. Also very little scholarly consideration has been given to the specific ways in which user's attitudes intertwine with the patterns of use of these social media platforms for specific academic purposes.

Finally, although existing works have examined the nexus between attitude and academic research, scholars have been more particular about students' attitude to specific academic subjects and the relationship between attitude and academic performance while neglecting to look at the attitude of academics and students, specifically, postgraduate students, towards the use of specific social media platforms designated for academic purposes. This study examines two specialized research social media platforms - Academia.edu and ResearchGate which are specifically designed for academic purposes.

Chapter two involves the review of relevant literature important to the work. Lastly, the chapter considers the theoretical framework –Uses and Gratifications Theory- upon which this research was based and the application of the theory to this research.

The research design employed in this work is survey. The target population of the study consists of academics and postgraduate students of University of Ibadan and Federal University of Technology Akure. Purposive sampling technique was used to select the two federal universities in southwestern Nigeria. Data for the research work were collected using quantitative and qualitative methods consisting of questionnaire and in-depth interviews. After the sample size was determined from the total population, a total of one thousand three hundred and thirty eight (1338) copies of questionnaire were distributed. After discarding the erroneous and incomplete ones, one thousand and sixty eight copies (1068) were found useful while twenty (20) in-depth interviews were conducted purposively across academic staff and postgraduate students of the two universities of study comprising five academics each from University of Ibadan and Federal University of Technology, Akure and five postgraduate students each from both universities. The data were analyzed using descriptive statistics and content analysis.

Chapter four is the analysis of the data which sought to examine the attitudes of postgraduate students and academics on the use of Academia.edu and ResearchGate. Through the analysis of the questionnaire administered and interviews conducted, the study revealed that there are three types of attitude towards the two research social media networks. They are: positive, negative and indifferent attitudes. In Academia.edu, positive attitude was ranked the highest score followed by indifferent attitude while negative attitude was ranked the lowest. On the other hand, in ResearchGate, indifferent attitude towards the research social media network was ranked the highest, followed by positive attitude while negative attitude was ranked lowest.

Secondly, the study revealed that the frequency of use of both research social networks by respondents varied but generally low across the two categories of users. Academia.edu was more popular among respondents than ResearchGate. Hence, the formers' level of use was higher than the latter. What is of concern in this finding is that the two research social media platforms attract low patronage among both academics and graduate students and the reason for this can only be surmised. One is wont to guess that, apart from the reasons already provided by respondents, the two research social media platforms may be seen as merely 'frivolous', like the other social media platforms where users upload stuffs without adequate peer review process. Another finding that the study revealed was that respondents sought three needs gratifications in using the two research social networks, viz., cognitive, social integrative and personal integrative needs. Cognitive need gratification was coded the highest gratification sought followed by social

integrative need and personal integrative need. However, despite indicating three needs gratification, respondents indicated that five gratifications were obtained in their use of the two research social networks. They are cognitive, social integrative, personal integrative, escapist and affective needs with cognitive need coded as the highest gratification obtained.

Lastly, the study revealed that respondents' attitudes towards the two research social networks go a long way in influencing the frequency of use of the networks. This became very obvious as majority of respondents that had positive attitude towards Academia.edu specified a higher frequency of use though the percentage is still low while ResearchGate indicated a low level of use because majority of the respondents had negative attitude towards the research social network. The finding, therefore, implied that there is a poor attitude towards research social media use among academics and postgraduate students in the selected universities. (The more positive the attitude, the higher the frequency of use and the more negative the attitude towards the research social networks, the lower the frequency of use). This general poor attitude towards the use of both research social media platforms can be put down to how they are generally perceived, as hinted above.

5.2 Conclusion

In conclusion therefore, in line with the findings of the study, it is evident that some academics and postgraduate students make use of Academia.edu and ResearchGate for their research though Academia.edu is more popular among them than ResearchGate. However, the percentage of the respondents using research social media platform is still low, though postgraduate students tend to use social media more than academics. This might be premised on the fact that Nigerian academics are driven by the desire to attain higher career prospects and also meet internationally accepted academic standard, hence, most academic scholars make use of different academic social networks to put their research in proper perspective. In the course of the study, findings revealed that the attitude towards the use of both research social networks differed as respondents either had a positive, negative or indifferent attitude towards the research social networks. While a positive attitude referred to a good reception of the research social networks, a negative attitude referred to poor reception and an indifferent attitude referred to neutral or disinterested in both research social networks. These attitudes go a long way in affecting the frequency of use. No wonder a significant percentage of respondents having a positive attitude towards Academia.edu indicated a higher frequency of use.

Another interesting point that emerged from this study is that not only were respondents aware of the need gratification they seek from using Academia.edu and ResearchGate, they were also aware of the gratification obtained from their use. This became obvious when respondents indicated three gratifications sought; cognitive, personal integrative and social integrative and also specify five gratifications obtained which are cognitive, personal integrative, affective, social integrative and escapist.

The results of this study gives us an insight into how scholars and students perceive research social media and how they think their research can benefit from research social media platforms. These benefits include connecting and establishing networks with other academics around the world, promoting openness and sharing of information, publicizing and development of research and giving and receiving support for their scholarly works from other scholars working in their areas of interest.

5.3 Recommendations

The following recommendations emerged from the study:

Provision and improvement of Internet services on university campuses

The government and stakeholders in the educational sector should collaborate to make available the necessary infrastructures needed to provide an enabling environment in the Nigerian universities. They should ensure that Internet services are available and constant on university campuses. This is because the Internet service providers do not consider providing easy and free access to the Internet for academic purposes on Nigerian university campuses. Even in the case of those that own smart phones such as blackberry, android, or iPhone, Internet surfing/browsing on them is not free as subscribers have to purchase data bundle to be able to access the internet. These service providers do not make browsing free on their networks either at the level of commercial browsing centers, that is - the cyber cafes, or at the level of private computers at home. Access to Wi-Fi is often times restricted; hence, it is also not a tenable alternative to internet surfing most especially due to the fact that not all tertiary institutions offer free Wi-Fi services in Nigeria. More so, where these services are available they are often poor in terms of connectivity and access.

Furthermore, some social media platforms require subscription and special access and lack of these would effectively lock one out of their sites. Although some tertiary institutions subscribe to some of these social media platforms on behalf of the students and scholars which

make access to them easier, it has been shown that such access by institutions is not a widespread phenomenal. It is also important to note that where institutions register on behalf of students and scholars some bureaucratic procedures such as cumbersome registration prevent them from having access to these platforms. All these should be looked into and university authorities should ensure easy accessibility to these platforms by students and scholars.

Regular supply of power

The government and especially universities authorities should also ensure that there is regular power supply to Nigerian universities to use computers which will help academics and students source for information on the net and improve the level of their research. Internet facilities need to be provided, maintained, and upgraded from time to time right inside the offices of all academic staff to facilitate easy access to these platforms.

Training Programme

Institutions should organize ICT training programme for lecturers and students to expose them to the available ICT facilities as well as the state- of the- art of information technology which will enable them master the use of computer properly and surfing/browsing of the internet.

Prevention of copyrights violation

As evident from the study some scholars pointed out the disadvantages of using both research social networks because of the issue of copyrights violation. In regard to this, lecturers and students should first publish their research in reputable journals that can protect their intellectual property and use other social networks like ResearchGate and Academia.edu to share their published works which will make their works known and this can forestall copyright violation.

5.4 Limitations and Suggestions for Further Study

Since this research investigated attitude towards the use of research social media among academics and postgraduate students in selected federal universities in southwestern Nigeria, it therefore means that it (the study) was limited to one geo-political zone out of the six geo-political zones in the country. Future research should focus on the other geo-political zones and at the same time use both state and private universities as study areas. The differences between gratification sought and obtained provide a road map for future studies to ascertain the differences that may occur between gratifications sought and obtained in the use of any social media network in other zones of the country.

5.5 Contribution to Knowledge

This study has been able to establish that, although Academia.edu and ResearchGate are important and viable platforms for the conduct of research within the academia, their uses in southwestern Nigeria is still quite poor. The rather poor attitude towards these research social media platforms among academics and graduate students should make us examine what factors may be responsible for this and what may be done to address the matter. In this regard, this study represents an original contribution to a set of studies generally concerned with the interface of and the relationship between new media and pedagogy; that is, studies which attempt to account for the benefits of doing an exploratory survey on the impact of social media on different areas of social life, including academic pursuits.

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APPENDIX 1: SURVEY QUESTIONNAIRE

UNIVERSITY OF IBADAN

INSTITUTE OF AFRICAN STUDIES

CULTURAL AND MEDIA STUDIES UNIT

**ATTITUDE TOWARDS THE USE OF RESEARCH SOCIAL MEDIA AMONG
ACADEMICS AND POSTGRADUATE STUDENTS IN SELECTED FEDERAL
UNIVERSITIES IN SOUTH WESTERN NIGERIA**

**ATTITUDE TOWARDS THE USE OF RESEARCH SOCIAL MEDIA
QUESTIONNAIRE**

Dear Respondent,

This survey is part of a doctoral degree programme. It is aimed at eliciting information about academics' and postgraduate students' attitude towards the use of social media in select federal universities in south western Nigeria.

I therefore seek your kind cooperation in completing this questionnaire and assure you that responses shall be used strictly for research purposes only.

Thank you.

Irele. A. O

University of Ibadan,

Institute of African Studies.

Name of University: _____

SECTION A

Demographic Information

Date of birth dd/mm/yy (---/---/---) Age at last birthday_____ years

Sex: Male () Female ()

Highest Educational Levels: B.Sc. /B.A () M.Sc. /M.A () Ph.D. ()

Postgraduate Student: Masters [] Ph.D. []

Scholar type: Academic [] Postgraduate []

Rank: Graduate assistant [] Asst. Lecturer [] Lecturer 11[] Lecturer 1[] Senior Lecturer []

Reader/Associate Professor [] Professor []

Faculty-----

Department -----

Unit:

Average monthly income: ~~₦~~5,000- ~~₦~~10,000 [], ~~₦~~20,000- ~~₦~~30,000 [], ~~₦~~40,000- ~~₦~~100,000 [], above ~~₦~~100,000 []

Do you have certified ICT training? Yes () No ()

| S/N | ICT Training self-efficacy | Not at all confident | Not very confident | Sometimes confident | Confident | Very confident |
|-----|---|----------------------|--------------------|---------------------|-----------|----------------|
| | I can competently handle a computer | | | | | |
| | I know how to competently surf internet | | | | | |
| | My ICT training had helped me to use academia.edu | | | | | |
| | My ICT training had helped me to use ResearchGate | | | | | |

AWARENESS

Are you aware of the research social network academia.edu? Yes () No ()

Do you have academia.edu account? Yes () No ()

Are you aware of the research social network ResearchGate? Yes () No ()

Do you have ResearchGate account? Yes () No ()

SECTION B

Attitude towards Academia.edu and ResearchGate

Please read the following carefully:

Please answer all the following questions simply by ticking (√) underneath the option which you think applies or nearly applies to you. It is important you answer all the questions.

Strongly Disagree = S/D, Disagree = D, Undecided = U, Agree = A, Strongly Agree = S/A

Attitude towards Academia.edu

| S/N | ITEMS | S/D | D | U | A | S/A |
|-----|--|-----|---|---|---|-----|
| 1 | Academia.edu is important and indispensable to academic research. | | | | | |
| 2 | Academia.edu is useful for publication of research works for scholars in developing countries. | | | | | |
| 3 | Academia.edu has become part of my daily routine | | | | | |
| 4 | I feel out of touch when I haven't logged onto Academia.edu for a while | | | | | |
| 5 | Academia.edu has helped me solve many scholarly problems | | | | | |
| 6 | Academia.edu helps me join new and interesting research groups | | | | | |
| 7 | Academia.edu gives free access to scholarly literature around the world. | | | | | |
| 8 | Using Academia.edu is expensive | | | | | |
| 9 | I feel very satisfied when I am on Academia.edu | | | | | |
| 10 | Academia.edu is educative | | | | | |
| 11 | Academia.edu is a resourceful. | | | | | |

Attitude towards ResearchGate

| S/N | ITEMS | S/D | D | U | A | S/A |
|-----|--|-----|---|---|---|-----|
| 12 | ResearchGate is important and indispensable to academic research. | | | | | |
| 13 | ResearchGate is useful for publication of research works for scholars in developing countries. | | | | | |
| 14 | ResearchGate has become part of my daily routine | | | | | |
| 15 | I feel out of touch when I haven't logged onto ResearchGate for a while | | | | | |
| 16 | ResearchGate has helped me solve many scholarly | | | | | |

| | | | | | | |
|----|---|--|--|--|--|--|
| | problems | | | | | |
| 17 | ResearchGate helps me join new and interesting research groups | | | | | |
| 18 | ResearchGate always gives free access to scholarly literature around the world. | | | | | |
| 19 | ResearchGate is expensive | | | | | |
| 20 | I feel very satisfied when I am on ResearchGate | | | | | |
| 21 | ResearchGate is educative | | | | | |
| 22 | ResearchGate is resourceful. | | | | | |

SECTION C

Use of Academia.edu and ResearchGate

Please tick the option that best applies to you regarding the items below

| S/N | ITEMS | Never none | Rarely 1 time | Sometimes 2-3 times | Often 4-5 times | Always 6-7 times |
|-----|--|---------------|------------------|------------------------|--------------------|---------------------|
| 1. | How frequently do you use Academia.edu in the last one week? | | | | | |
| 2 | How frequently do you use Academia.edu to check out scholars' publication updates in the last one week? | | | | | |
| 3 | How frequently do you use Academia.edu to keep in touch with your academic friends in the last one week? | | | | | |
| 4 | Have you ever used Academia.edu to meet other scholars? | | | | | |
| 5 | Have you ever used Academia.edu to find academic mentors and mentees? | | | | | |

| | | | | | | |
|----|--|--|--|--|--|--|
| 6 | How frequently do you use Academia.edu to find people to add to your 'friends' list in the last one week? | | | | | |
| 7 | How frequently do you use Academia.edu to source new research ideas in the last one week? | | | | | |
| 8 | Have you ever used Academia.edu for sharing your published research works? | | | | | |
| 9 | How frequently do you use Academia.edu to find out about special academic offers and opportunities in the last one week? | | | | | |
| 10 | Have you ever used Academia.edu for conducting research? | | | | | |
| 11 | How frequently do you use Academia.edu to engage in intellectual discourse in the last one week? | | | | | |

Uses of ResearchGate

Please tick the option that best applies to you regarding the items below

| S/N | ITEMS | Never none | Rarely 1 time | Sometimes 2-3 times | Often 4-5 times | Always 6-7 times |
|-----|---|------------|---------------|---------------------|-----------------|------------------|
| 12. | How frequently do you use ResearchGate in the last one week? | | | | | |
| 13 | How frequently do you use ResearchGate to check out scholars' publication updates in the last one week? | | | | | |
| 14 | How frequently do you use ResearchGate to keep in touch with your academic friends in the last | | | | | |

| | | | | | | |
|----|--|--|--|--|--|--|
| | one week? | | | | | |
| 15 | Have you ever used ResearchGate to meet other scholars? | | | | | |
| 16 | Have you ever used ResearchGate to find academic mentors and mentees? | | | | | |
| 17 | How frequently do you use ResearchGate to find people to add to your 'friends' list in the last one week? | | | | | |
| 18 | How frequently do you use ResearchGate to source new research ideas in the last one week? | | | | | |
| 19 | Have you ever used ResearchGate for sharing your published research works? | | | | | |
| 20 | How frequently do you use ResearchGate to find out about special academic offers and opportunities in the last one week? | | | | | |
| 21 | Have you ever used ResearchGate for conducting research? | | | | | |
| 22 | How frequently do you use ResearchGate to engage in intellectual discourse in the last one week? | | | | | |

SECTION D

Gratification Sought for Using Academia.edu and ResearchGate

| Gratification Sought and Reasons for being on Academia.edu and ResearchGate | Yes | No |
|---|-----|----|
| Network with other researchers | | |
| Share and exchange research output | | |
| Be up to date with current research in my field | | |
| Find collaborators for research projects | | |
| Disseminate teaching material (notes, class slides, etc. | | |
| Self-Expression | | |
| Disseminate curriculum vitae | | |
| Search for job | | |

| | | |
|--|--|--|
| No Response | | |
| Follow articles and journals in selected field of interest | | |
| Others | | |

Gratification Obtained from Using Academia.edu and ResearchGate

| Needs | Questions | Yes | No | Not/Applicable |
|----------------------------|---|------------|-----------|-----------------------|
| Cognitive Needs | I download and read articles that give me more knowledge in my field of interest | | | |
| Affective Needs | I get emotionally involve and react sometimes to the findings of some research works posted on the social network | | | |
| Personal Integrative Needs | I sometimes respond to researchers that I have different opinion with | | | |
| Social Integrative Needs | I follow the work of some researchers and sometimes check how many views, downloads and bookmarks my publications get | | | |
| Escapist Need | I sometimes wish I could swap places and be an author of some research work I read | | | |

**APPENDIX 2: INTERVIEW QUESTION GUIDE FOR SELECTED ACADEMIC STAFF
AND POSTGRADUATE STUDENTS**

1. What academic or research website are you familiar with?
2. Do you use any academic website for teaching and/or research?
3. Do you use any social media for interacting with colleagues and students?
4. If yes, did it help in facilitating your research work?
5. Does your university support the use of research site by academics and students?
6. What is your opinion about being computer literate?
7. Have you ever heard of Academia.edu and ResearchGate?
8. Do you have a profile on Academia.edu and ResearchGate? If yes, what do you use them for?
9. How often do you use the two social networks?
10. What is your perception about the two social networks and why do you use them?
11. Do you think that these sites can facilitate your teaching and research work?
12. Do you see the two social networks as being resourceful?

**APPENDIX 3: PHOTOGRAPHS TAKEN DURING FIELD WORK AT UNIVERSITY
OF IBADAN AND FEDERAL UNIVERSITY OF TECHNOLOGY AKURE**



Source: Field Investigation University of Ibadan (2016)



Source: Field investigation in FUTA (2016)



Source: Field investigation FUTA (2016)



Source: Field Investigation University of Ibadan (2016)



Source: Field Investigation FUTA (2016)