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INMAKURDI LOCAL GOVERNMENT AREA, BENUE STATE,

NIGERIA

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**INFLUENCE OF SOCIAL MEDIA ON ACADEMIC ACHIEVEMENT OF
SENIOR SECONDARY SCHOOL, TWO (SS 2) STUDENTS IN
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NIGERIA**

BY

MBATIVGA, Nengenen Shadrach 14/29420/UE

***DEPARTMENT OF SCIENCE EDUCATION, FEDERAL UNIVERSITY OF
AGRICULTURE, MAKURDI***

MAY, 2018

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GOVERNMENT AREA, BENUE STATE, NIGERIA.***

BY

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***BEING A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF SCIENCE
EDUCATION, COLLEGE OF AGRICULTURAL AND SCIENCE EDUCATION,
FEDERAL UNIVERSITY OF AGRICULTURE,
MAKURDI, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD
OF BACHELOR OF SCIENCE EDUCATION, B.SC(ED.)
MATHEMATICS/STATISTICS DEGREE.***

MAY, 2018

DECLARATION

I hereby declare that I personally carried out this research and reported it. I affirm that this work has not been submitted to any institution for the award of any certificate, and that all authors whose works have been referred to are duly quoted or referenced.

Mbativga, Nengenen Shadrach

(Project student)

Date

CERTIFICATION

This research work has been read and approved to have met one of the requirements for the award of Bachelor of Science Education degree in the department of Science Education, Federal University of Agriculture, Makurdi.

Dr. P.I. Anyagh

Date (Project Supervisor)

**Dr. O.K. Okwara
(Head of Department)**

Date

External Examiner

Date

DEDICATION

I dedicate this work to my Saviour Jesus Christ by whose grace I am what I am.

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My first gratitude goes to my supervisor, Dr. P.I. Anyagh who, from the beginning to the end of this work, saw to it that I did exactly what I was supposed to do. Despite his tight schedules in and out of office, he would sit me down to correct and teach me the norms of educational research, and was never tired of my questions. May God that rewards good will do so to you sir. I appreciate the head of department, Dr. O.K. Okwara for his hard work of reading this work and making the necessary corrections. I appreciate Dr. Leke Oni, Mr. Isa and Mr. Nwouso, all of the department of Mathematics/Statistics/Computer Science for their labour in *baking* me academically.

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ABSTRACT

The downward movement of academic output in Nigeria, especially in the past few decades, has raised issues of concern for every academically minded Nigerian. This deterioration has been attributed to many factors suspiciously. Social media, one of the latest breakthroughs in technology, have also been suspected recently by many to be responsible for low academic performance in the secondary schools. This research was carried out to examine the influence of social media on academic achievement of secondary school students. The researcher chose the Senior Secondary School, Two (SS 2) students in Makurdi Local Government Area of Benue State, Nigeria as the population for this study. A sample of 97 students from a total of 966 SS 2 students in the study area was used for the study. The researcher explored different control variables in relation to social media use as a guide to examining its impact on students. The study examined students' exposure to social media, the people they relate with on social media, activities students engage in on social media, how long they stay online and the type of social media sites students patronize. The Ex post facto was adopted as the research design for this study. To obtain the relevant data, the structured questionnaire and achievement test were administered to the respondents. The research questions were answered by frequency count and percentages from the data collected with the questionnaire while the research hypothesis was tested using the student t-test via the SPSS software. Research findings showed that students are exposed to social media; that they relate more among themselves on social media; that they spend only a maximum of thirty minutes when they visit social media and that they majorly visit social media to keep company with their friends. The overall analysis (from hypothesis testing) revealed that social media does not affect students' academic performance. Thus teachers were recommended to get involved with students on social media in order to help them derive the best from these sites. Further studies on other variables, apart from social media, were suggested to investigate academic decline since this research proved otherwise.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study.

The internet, since its inception in the early 1960s by the U.S Department of defense (Schneider, Evans and Pinard, 2006 in Wanajak, 2011), has hit the ground running. A greater percentage of the world's activities and numerous facets of human endeavours have been (to a great extent) affected by the fast advancement of the internet technology and its programmes. Internet, according to Wikipedia dictionary is a global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols.

As mentioned in the above definition, one of the sectors of human endeavours greatly influenced by the internet is communication. Several communication facilities have been developed on the internet to facilitate easy communication. Social media, the focus of this study constitutes one of those communication facilities.

According to Apuke (2016), social media has emerged to be one of the most vital communication means as it exists to ease communication among people regardless of the expanse, making it open to people to easily share information, files, pictures and videos, create blogs and send messages and conduct real time conversations.

By definition, according to Adebayo(2012) as cited in Asemah and Okpanachi(2013), social networks (media) is a social structure made up of individuals or organizations called "nodes", which are tied (connected) by one or more specific types of independency, such as friendship, kinship, common interest , financial exchange , dislike, sexual relationships or relationships of beliefs, knowledge or prestige. Social media sites include: Facebook, whatsapp, 2go, Instagram, Blackberry messenger (BBM), Twitter, Google talk etc.

Social media use cuts across almost all human age groups, social status, occupations and the likes including students of different institutional levels. The secondary school level which is the major focus in this research is not in any way exempted from amongst social media users. It is no news to see or hear secondary school students making calls, receiving messages and chatting with friends or associates in the class room when the class is ongoing. They spend late hours of

the night on chatting through social media when you should have expected them to be reading their books or sleeping.

The emergence of social media as a result of advancement in technology and expansion in internet software has raised eye brows among academics on its (social media) impact on studies (Asemah, E., Okpanachi, A., 2013). Many researchers have argued as touching whether social media use has or has not any impact or influence on students' academic achievement.

Giving the analysis on the tracks of mass failure in the National Examination Council (NECO) results, Dayo Adesulun of **Vanguard** expressed *"It is sad to note that for five consecutive years, candidates writing the National Examination Council (NECO) examination have recorded mass failures. Apparently, the scenario is worrisome to education stakeholders as nobody knows at whose door-steps to place the blames, students or NECO"* (Vanguard news, April 5, 2012). The analysis reported that in 2002 at NECO's maiden edition, most candidates passed their registered subjects including Mathematics and English Language which led to the public accusing the body of awarding cheap results to students. However, after 2007 NECO November/December where 65% had credit pass in Mathematics, the analysis said, performances of candidates deteriorated every year, down to 11.3% in 2011/2012 result, a situation which the reporter said called for concern among stakeholders. During NECO June/July 2011 examination, the analysis reported that less than 25% of the 1,160,561 candidates had passes at credit level in subjects including Mathematics. This implies that more than 870,421 candidates failed Mathematics and other subjects. In a similar vein, as reported by the WAEC Head of National office, Yaba, Mr. Charles Eguridu, the result of May/June 2014 as was announced on Monday, 11 August 2014, witnessed a mass failure in Mathematics and English Language (published on August 11, 2014; retrieved from <https://ynaija.com>). He reported that 529,425 candidates representing 31.28% obtained credits in Mathematics and other four subjects. He noted that, comparing this result to the 2012/2013 May/June result, there was marginal decline in the performances of candidates. The report stated that in 2009, 25.99% obtained credits in Mathematics and English compare to 23.5% in 2008 among the Nigerian candidates.

Whether or not social media use influences academic achievement of students is a question that remains to be answered. Therefore the problem this research investigates is the influence of

social media use on academic achievement of junior secondary school students in mathematics in Makurdi Local Government of Benue State Nigeria.

1.2 Statement of the problem.

The decline in the academic achievement among secondary school students in Nigeria, especially in mathematics, is crystal-clear to anyone who has followed the trend of events in this level of learning over the past few years. This degradation is evident in many ways, including students poor grammatical construction, poor averages in their terminal examinations, failure in external examinations such as the West African Examination Council (WAEC), National Examination Council (NECO) and of course entrance examinations such as the Unified Tertiary Matriculation Examination(UTME).The struggles for academic success experienced by many students newly admitted into the university, especially in their first year of study, is highly traceable to their secondary school foundation. The success of any student in mathematics in the tertiary institution is directly a function of his/her success in the secondary school in the same subject.

Many factors have been identified to be responsible for this high rate of educational decay among the Nigerian secondary schools. One of these factors that have caught the attention of the public as regards students' poor academic performance among the secondary schools is the advent of social media. As mentioned earlier, this research investigates the place of social media use in the academic achievement of Senior Secondary School, two (SSS2) students in Mathematics in Makurdi Local Government area of Benue State, Nigeria.

1.3 Objectives of the study.

The general objective of this study was to determine the influence of social media on academic achievement of Senior Secondary School, two (SSS2) students in Mathematics in Makurdi Local Government Area of Benue State, Nigeria. Specifically the objectives of this research include:

- (i) To determine whether SSS2 students are exposed to social media
- (ii) To determine which social media students are exposed to
- (iii) To determine whether gender difference influences social media exposure.
- (iv) To determine the duration students spend on social media
- (v) To examine the people students relate with on social media

- (vi) To examine what students use social media for
- (vii) To examine the influence of social media use on students' academic performance in Mathematics.
- (viii) To proffer a possible solution to the eminent underachievement in mathematics by secondary school students.

1.4 Research questions.

The following were the research questions for this study:

- (i) What proportion of SS2 students are exposed to social media?
- (ii) What type of social media are SSS 2 students exposed to that influences their achievement in Mathematics?
- (iii) What is the influence of gender difference on social media exposure?
- (iv) What time/duration do students spend on social media?
- (v) Who are the people students relate with on social media?
- (vi) What activities do students engage in on social media?
- (vii) What is the effect social media have on students' academic activities?

1.5 Research hypothesis

The following was the statement of the null hypothesis for this research:

Social media has no significant influence on SS2 students' achievement in Mathematics.

1.6 Significance of the study.

This study will be of great importance to both students, teachers, parents and the entire society as it will open their eyes to the subtle damage associated with inappropriate use of the social media. Students will learn how to balance their academic work – reading, assignment and so on and social media involvement. In so doing, they will become more productive academically, morally, socially and otherwise not only to themselves but to the entire society. It will be an eye opener to unsuspecting teachers and head teachers who might have taken things for granted regarding the place of social media in students' academic achievement. This will help them define deliberate

bounds on social media usage for students especially during school hours. The study will also help parents to watch their children/wards more closely, helping them at home to spend their time reasonably in reading their books and other noble courses rather than misappropriating them on the internet. It will also help them (parents) to monitor what activities their children/wards engage in on social media especially at home. This study will also help the entire academic society, especially curriculum planners, to include strategic contents that will help students maximize social media positively for academic purposes. The study will also be relevant as a source or ground for further studies.

1.7 Scope/delimitation of the study.

This study was specifically set to examine the influence social media use has on secondary school students' academic achievement in mathematics in Makurdi Local Government Area of Benue State, Nigeria. Makurdi is one of the 23 local governments of Benue state and has Makurdi as its headquarters located along the Benue River. It shares boundaries with Guma, Gwer East and Gwer West among other local governments of the state. An unbiased sample of all secondary schools (as specified in chapter 3) in the area was used for this study. Few control variables among others were examined. The study examined the proportion of students' exposure to social media, which social media they are mostly exposed to, the time they spend on social media, the people they relate with on social media, influence of gender difference on social media exposure and the possible solution offered for checking low academic achievements among secondary school students which may be possibly traceable to inappropriate social media use. These control variables were to help investigate the impact social media places on secondary school academic performance in mathematics as earlier mentioned.

It was in the interest of the researcher to study the influence of social media on students' academic achievement in mathematics across all secondary schools in Nigeria since social media use and poor academic achievement of students are not only witnessed in one isolated state or local government in the country. However, due to limited resources paramount to the research, the researcher limited the study to Makurdi Local Government of Benue State.

It is worthy of note, the fact that, the findings of this study may not be applicable to other parts of the country or the globe. This is because different locations in Nigeria and in facts, the world

over have various cultural practices and social norms that may influence students' behaviour with regard to social media.

The researcher also worked on the assumption that the responses of all the respondents were correct and sincere. If otherwise, then the findings of this study may not be considered authentic following the same assumption.

1.8 Operational definition of terms

The following terms, as used in this report, were defined to ease understanding when encountered in any part of the body of the work. It should be noted that these terms were defined contextually with respect to this study.

- i. **Social media:** These are platforms made available on the internet through which people communicate with friends, peers and relatives with the use of phones, ipads, personal computers and other communication gadgets. Examples are whatsapp, facebook, twitter, Badoo, etc.
- ii. **Internet:** An electronic communications network that connects computer networks and organizational computer facilities around the world.
- iii. **Academic achievement:** This is a measure of how successful a student is in his academic work. It manifests through students' examination results, communication, conduct and other means.
- iv. **SSS 2 Student:** This is a learner at the Senior Secondary School, II level.
- v. **Chatting:** A means of communication whereby two or more individuals communicate one another through sending and replying of, usually short, text messages simultaneously.
- vi. **Questionnaire:** A list of questions, providing options for the respondent to either pick answers from or give a short answer of usually one word.
- vii. **Respondent:** A person who provides answers to a set of questions. **viii. Data:** Pieces of information about a population of interest.
- ix. **Population:** Total number of individuals, of similar attributes, living in a place per time. In this study, the population is all the students in all senior secondary school, two in Makurdi local government.

- x. **Sample:** This is a carefully selected portion or part of the population for consideration. The sample for this study was obtained by carefully selecting some secondary schools in Makurdi local government.
- xi. **Instrument:** The means by which data is obtained. For this study the instrument used was the *questionnaire*. The *questionnaire* is discussed in chapter three of this report.
- xii. **Statistic:** The statistical tool used for data analysis. The statistic used for this study is discussed in chapter three.
- xiii. **Hypothesis:** A tentative statement about a phenomenon, open to further investigation, which may or may not be accepted.

CHAPTER TWO: LITERATURE REVIEW

2.1 Theoretical framework

The theory considered most appropriate for this study is the *media equation theory*. Media equation theory, as noted by Asemah and Edegoh, cited in Okpanachi and others (2013), was propounded by Byron Reeves and Clifford Nass in 1996. The theory proposes that media are equal to real life and that electronic media in particular are being given human attributes. In most cases, people talk to computer as if they were talking to human beings. More so, in most cases, they talk to their television set as if they were discussing with human beings. That is, people have personalized the media of mass communication to the extent that they now see them, just the way they see human beings. Thus, Asemah and Edegoh, cited in Okpanachi and others (2013), noted that media are equal to real life. They further noted that what Reeves and Nass' equation suggests is that we respond to communication media as if they were alive. This theory says that people now treat computers, television and the new media like real people and places. Going by the media equation theory, we tend to give human attributes to inanimate objects in our homes.

According to Asemah and Edegoh (2012), as cited in Okpanachi and others (2013), *the practical implication of the media equation is that once we turn on a television or boot up on computer, we follow all the rules of interpersonal interaction that we have précised throughout life. Thus, the word interface is particularly apt when describing human media relations. This natural social response goes way beyond occasional words yelled at the television set or our frantic play for the computer to retrieve lost data. Reeves and Nass maintain that the media equation is so basic that it applies to everyone; it applies often and it is highly consequential.*

The above assertion aptly captures how the audience members now tend to engage the media in a discussion as they do to human beings. The relevance of the media equation theory to this present study cannot be overemphasized. People, including students, treat media like human beings; hence they pay maximum attention to it and believe whatever they see in it as they would human beings. Students substitute their study and assignment time for social media to their own detriment. Going with this theory along with the findings of this study, the researcher ascertained the impetus behind students' behaviours and attitudes towards social media, predicted the pitfalls and uttered precautions on social media use especially by secondary school students.

2.2 Conceptual frame work.

Different scholars have written diversely on *social media* and academic achievement of students. Different stances have already been taken by these scholars regarding several arguments that have already gone out about social media use and its place in academic performance of students. Definitions of social media have been coined differently as deemed suitable for different scholars.

According to Ndaku, cited in Mensah and Nizam (2016), the use of social media among students has reached high levels and has affected their study time, poor grammar and wrong spellings when socializing on social media as well as diverting their attention from their studies. In their study-“the impact of social media on students’ academic performance”, Mensah and Nizam stressed that students spend much of their study time on social networks than in their academic undertakings and that, for university students, has affected their Grade Point Average (GPA).

Asemah et al (2013), in “*Influence of Social Media on the Academic Performance of the Undergraduate Students of Kogi State University*” defined social media as a structure made up of individuals or organizations called “nodes”, which are tied (connected) by one or more specific types of interdependency, such as friendship, kinship, common interest, financial exchange, dislike, sexual relationships or relationships of beliefs, knowledge or prestige . They also looked at social media as a map of specified ties, such as friendship, between the nodes being studied. The nodes, to which an individual is thus connected, they say, are the social contacts of that individual; the network, according to them, can also be used to measure social capital – the value that an individual gets from the social network. Their list of Social networking (media) sites include: Yahoo Messenger, Facebook Messenger, Blackberry Messenger (BBM), Google talk, Google+Messenger, iPhone, Androids and so on. These social media sites are used by most people to interact with old and new friends, physical or internet friends (Adeboye, 2012).

Laying aside the breakthroughs recorded through internet use however, the researchers pointed out that lack of regulation towards the usage of internet has led to its excessive use leading to several negative effects which include poor academic performance of students through social media.

The researchers further lamented that it is not a common sight to see a youth chatting in sensitive and highly organized places like the Church, Mosque and Lecture venues. Some are so carried

away that even as they are walking along the high way, they keep chatting. Attention, they say, has been shifted from visible to invisible friends, while important ventures like study and writing are affected in the process. This phenomenon, according to them, has become a source of worry to many who believe in knowledge and skill acquisition.

Osharive, (2015), in *“Social media and academic performance of students in University of Lagos”* state that modern technology in communication no doubt has turned the entire world into a “Global village”. But as it is, he said, technology is like two sides of a coin, with both negative and positive sides. It helps people to be better informed, enlightened, and kept abreast with world developments. The evolution of internet technology, according to him, has led to its use as the best medium for communication. Whereby, two-third of the world’s internet population visits social networking or blogging sites, thus serving as a communication and connection tool. The researcher explains social networking sites (SNSs) or social media sites as online Communities of Internet users who want to communicate with other users about areas of mutual interest, whether from a personal, business or academic perspective (William, et al, 2009). The millions of social networking sites, he says, have transformed the thought of global village into a reality whereby billions of people communicate through social networking sites. Numerous benefits, according to him, have been obtained through distant communication through the use of social networking sites. However the darker side within technological evolution, he states, has resulted in dilemmas such as the setback of real values of life especially among students who form the majority of users interacting through the use of social networking sites.

Academic excellence or achievement plays an important role in an individual’s placement, be it in the academic institutions or job placement, for this reason, many people are concerned with the ways they can enhance their academic achievement.

Academic performance or achievement, as explained by Osharive, (2015) is the outcome of education, the extent to which a student, teacher or institution has achieved their educational goals. He further explained that academic performance is commonly measured by examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important, procedural knowledge such as skills or declarative knowledge such as facts.

A direct relationship, according to the researcher, exists between social media usage and the academic performance of students in universities. With so many social networking sites

displayed on the internet, students are tempted to abandon their homework and reading times in preference to chatting online with friends. Many students, claims the researcher, are now addicted to the online rave of the moment, like Facebook, Twitter, snap chat and so on.

According to Kuppaswamy and Shankar, (2010), social network websites grab attention of the students and then diverts it towards non-educational and inappropriate actions including useless chatting. Whereas on the other hand, (Liccardi, Ounnas, Massey, Kinnunen, Midy, & Sakar. 2007), reviewed that the students are socially connected with each other for sharing their daily learning experiences and do converse on several topics.

2.3 Empirical frame work.

In order to examine the influence of social media on academic achievement of secondary school students, the researcher reviewed a number of empirical studies by different scholars who have written on the same and similar subjects. The following are some of the reviewed literature.

Mensah and Nizam (2016) conducted a research, titled “*The impact of social media on students’ academic performance*”, in Malaysia to examine the impact social media use places on tertiary institution students’ academic performance. The simple random sampling (SRS) technique was used to obtain a sample size of 120 students from two colleges. The researchers used only two departments from each of these colleges, which they said were the most populated of all the departments in the two colleges, to actualize this sample. The questionnaire method was used by the researchers to gather data for the research. The study investigated the impact that the time students appropriate on social media has on their academic performance. The finding was that students who spend more time on social media platforms for mere casual chats are most likely to see a drop in their academic performances. The duration students spend on social media networks was found by the researchers to be insignificant to their academic performance. This, according to them, is so because some students can spend much time on social media platforms and yet their performance for the semester or academic year still remains the same.

The researchers also reported a positive and significant relationship between friends and people connections and students’ academic performance. This, according to the researchers, is so because students can form study groups which facilitate better means through which they improve on their studies. They explained further that lecturers can connect with students to

provide study materials that can be helpful and useful to them. A positive and significant influence of Nature of Usage on students' academic performance was reported by the researchers.

The research found a significant relationship between internet addiction and students' academic performance. The researchers explained that the more addicted one is to the internet the more time one spends on it. One spends more time without taking into consideration one's meal. They stressed that missing of the meal could affect the health of the students which in turn will have a negative impact on their academic performance.

Privacy/security problems, as reported by the researchers, have significant influence on students' academic performance. This is so according to the finding because the changes that are been made frequently on these social media platforms could destabilize students' concentration on their studies and thus affect their test or examination scores.

This research work could be considered relevant and useful especially for the fact that a wide range of control variables were considered in ascertaining their influence on students' academic performance. The most common and central of these control variables considered was time duration spent on social media networks by students. Time is an asset that many things seek to compete for in any man's life. Balancing the time between mere social media involvement and academic work is one of the most obvious problems facing many students. The researchers, on the other hand, on health addiction, indirectly contradicted the earlier mentioned report on the first control variable (time duration). They earlier reported that the length of time spent on social media has no influence on students' academic work. On the contrary, they stated that internet addiction leads to spending lengthy hours which can lead to health problems. Health problems will surely lead to poor academic performance. Also, this study failed to proffer solution and make recommendations with respect to the different findings gathered. This present study is set to close this kind of flaw.

Elsewhere, Anthonia, Nwabueze & Aduba, in 2014, conducted a research titled *"Influence of Social Networking on Secondary School Students"* in Enugu State, Nigeria to ascertain the relationship between social media use and academic performance of secondary school students. The sample comprised seven hundred (700) students selected from ten (10)

secondary schools in Enugu East LGA. The researchers used the proportionate stratified random sampling technique to select these 700 students. A structured questionnaire was used by the researchers for data collection. The reliability of the instruments was established using Cronbach Alpha Coefficient formula. Data obtained in the study were analyzed using descriptive statistics. Arithmetic mean was used to answer the research questions and the null hypothesis was tested using z-test at 0.05 significance level.

This research examined the influence of gender difference on social media use. The result revealed that there is significant difference in the extent to which male and female students make use of social networking. The researchers found that majority of female students use social networking sites for their assignments. A greater number of male students use social networking sites for communication purposes as well as for entertainment purposes (pleasure). They also reported that majority of female students use social networking sites as an information link and a majority of male students use social networking sites to keep vigilance about happenings in the world (News). The male students according to them also use social networking sites to relate with their peers and classmates more than their female counterparts. To which of the numerous social networking sites students are mostly exposed to, the researchers reported that 2go, Facebook, WhatsApp, Blackberry Messenger, Yahoo messenger and MySpace topped the chart in that order.

The findings of this study also showed that to a high extent students visit some social networking sites for various purposes, which include; relating with their peers and classmates, for communication and for entertainment (pleasure). This finding, according to the researchers, is in line with that of Poukhan (2010) whose study found that majority of secondary school students visit social networking sites for entertainment reasons other than educational reasons (which include research and learning new things).

As touching the time students spend on social media sites, the study revealed that students visit social networking sites on daily basis; they spend a significant amount of time (three hours daily each time they visit the sites). The result, according to the researchers also indicated that some of

these social networking accounts are active all through the day, therefore making students spend much time including their leisure hours on the sites. They correlated this result with that of Pierce and Vaca (2007) whose study, according to them, showed that students who use social networking sites have their accounts active all through the day even while doing homework and while at class.

This research revealed that students disagreed with the positive statements on the influence of social networking on them. This, according to the researchers, implies that students do not believe in the positive influence of social networking on their reading habits, social welfare and overall attitude except for the fact that they agreed that social networking broadens their knowledge on different subject matters. The report also stated that students also agreed to the negative statement that as a result of constant social networking, they resort to book cramming rather than reading their books which make them have a loose grip on what they read, leading to poor performances in continuous assessments and examinations.

The report of this study portrays its effectiveness in that a large sample size (700) was used which made room for a wider coverage. In another way, the researchers made good and clear recommendations to teachers, parents/guardians etc, as a result of their findings.

They are thus quoted as saying *“the school authorities, teachers, parents and guardians should pay more attention to the male folks. They need to be guided properly and informed on the vulnerability they may face on these sites if not utilized in moderation. School teachers can introduce a group discussion forum on these networking sites for the students to contribute positively on different topics of interest; this will keep them active in a productive way”*. On the other hand, the study only reported the influence of gender difference on social media use. It did not clearly spell out the influence of social media use on students’ academic performance as a result of gender difference. Also, the researchers though came to the conclusion that social networking has negative impact on students’ academic performance, did not clearly point out which of the factors considered leads to negative impact and which leads to positive impact. This present study will do justice to that.

Ezekiel, S., Okpanachi, A. and Edegoh, N.O also conducted a research in Kogi State University, Anyigba, Nigeria titled *“Influence of Social Media on the Academic Performance of the Undergraduate Students of Kogi State University, Anyigba”*. The researcher limited the study

to only undergraduate students. The purposive sampling was used to select mass communication undergraduate students while the simple random sampling was used to select the 282 students that form the sample size for the study. The questionnaire was used to gather all the data for this research.

The researchers patterned the questionnaire in one way to ascertain the exposure of students to social medial networks. Their finding showed that the undergraduate students of Kogi State University have access to social media and that the extent of their exposure to social media is high. This, according to them, was evident as the majority of the respondents agreed to that effect (68%). The implication of this is that the students of Kogi State University are exposed to social media. Findings of this study further showed that the Facebook is the social media network that is mostly used by the undergraduate students of Kogi State University. The researchers evidenced this finding by the fact that the majority of the respondents agreed that facebook is the social network mostly used by the students of Kogi State University. They, in addition, referenced their Asemah and Edegoh (2013) who noted that facebook is the most used new media by students of the same institution.

In conclusion the researchers emphasized that *“students who spend more time on social media are likely to perform poorly in their academics. This is because, instead of reading their books, they spend their time charting and making friends via the social media and this will definitely have negative effect on their academic performance, because when you do not read, there is no way you can perform well academically”*.

The researchers strengthened this study with their well-directed recommendations as:

- i. Students, especially those willing to record huge academic success should guide themselves against the use of social media.
- ii. The government, schools and other well to do individuals should encourage hard work by rewarding successful students through scholarship schemes and other incentives.
- iii. The government should consider the possibility of evolving a policy on teenagers’ exposure to social media.

2.4 Summary.

Various control variables with respect to social media use were highlighted and examined by the researchers with regards to their influence on students’ academic achievement. Among these

were time duration spent on social media, appropriateness of usage, people connected with on social media, activities engaged in on social media, internet addiction, type of social media mostly visited by students, and gender difference. It was reviewed that overuse and misappropriation of social media through most of these factors led to students' poor academic performance. Nevertheless, few among many of these factors were reported to have had positive influence on students' academic achievement. The researchers whose works have been reviewed seemed to have gone in a similar direction in that they all examined more of what social media do to students' academic performance than what it does to their social, moral and other aspect of their lives. In a similar vein, this present study specifically examines the effect of social media use on students' academic achievements, whether positively or negatively though its influence cuts across different aspects of human life.

CHAPTER THREE: METHODOLOGY

This chapter specifically discusses the nature of this research work, the method(s) through which data were collected and analyzed. It is arrayed in the following subheadings: Introduction, Research design, Area of study, Population of study, Sample and sampling technique, Instrumentation, Validation of instrument, Reliability of instrument, Method of data collection, and Method of data analysis.

3.1 Research design

The research design considered most suitable for this research was the *Ex Post Facto research design*. This was because the researcher was soliciting for already existed information in the subject. This meant that there was no treatment and hence the researcher was only testing the knowledge of the respondents that had already existed.

3.2 Area of study

As earlier mentioned in the scope of the study this research work was conducted in Makurdi Local Government Area of Benue State, Nigeria. The choice of the study area was because it was the closest to the researcher. This greatly reduced the cost of travelling far distances, coupling with the fact the researcher was still running his undergraduate program and had no enough funds and time to meet the cost.

3.3 Population of study

The population for this research was all the SS2 students in Makurdi Local Government Area of Benue State. There were a total of 966 students in this category. SS2 students were used for the population because they were considered to have had better understanding of the concept and hence this would reduce many response errors.

3.4 Sample and sampling technique

A random sample of 97 students from a total number of 966 SS2 students obtained from Government-owned and grand-aided schools in Makurdi Local Government Area were used for this research. The researcher determined this sample size by simply estimating 10% of the total population.

3.5 Instrumentation

Two instruments were used in obtaining the data for this research. The first was a well-structured questionnaire titled “Social Media and Academic Performance of Students Questionnaire”. It consisted of two parts. Part I was set to obtain personal information about the respondents while Part II comprised of simple, self-explanatory and well-ordered questions to evoke responses from the respondents. The answers were to be either a “YES”, “NO” or other “just tick” responses.

The second instrument used to collect the data for this research was a suitable objective test set by the researcher. The test was made up of fifteen (15) questions, each having three options: A, B and C (from which respondents were to select their answers) to be scored over thirty marks (i.e. two marks per one correct answer).

3.6 Validation of instrument

The questionnaire was submitted to the project supervisor and one more expert, one after the other, for constructive criticism and corrections before distribution was made. The objective test was also submitted to the secondary school teachers whose students served as the respondents in this research for necessary vetting. They checked and approved the consistency of the test with the current curriculum, syllables and their objectives.

3.7 Reliability of instrument

The reliability of the two instruments was tested using the Pearson correlation coefficient. The coefficient value for the questionnaire was found to be 0.76 which indicated the reliability of the instrument. Similarly a coefficient value of 0.61 was found for the achievement test which also indicated its reliability for usage.

3.8 Method of data collection

The data for this research was collected solely with the use of questionnaire and objective test. The two instruments were distributed to the same number of students that made the sample of this study with the former first, followed by the latter. The students were guided to provide their responses to the questions outlined in the questionnaire. The questionnaire was collected at the spot, after completion, from the respondents.

After collecting the filled questionnaires from the respondents the objective test was distributed immediately. The researcher after collecting the needed data proceeded and collated those that were collected with the use of the questionnaire for analysis and presentation. The objective test was also marked and recorded accordingly.

The data collected with the use of the questionnaire were used to answer the research questions while the test result was used for testing the research hypothesis.

3.9 Method of data analysis

The responses from the questionnaire were analyzed using the descriptive *statistics* of frequency count and percentage and presentation of results was done with the use of simple bar charts and pie charts. Similarly, the scores from the achievement test were analyzed using the student *t*-test.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS

4.1 Data presentation

The data collected for this survey with the use of the two instruments discussed earlier are presented in the following tables.

Table 1: Presentation of Demographic Data

Sex	Frequency	Percentage
Male	64	66%
Female	33	34%
Total	97	100%

Table 1 above shows the number of students that made the sample for this survey. There were 64 male respondents representing 66% of the sample while 33 female respondents representing 34% made the sample.

4.2 Data Analysis

4.2.1 Analysis of data for research questions

Research question 1: *What proportion of SS2 students are exposed to social media?*

Table 2: Students' exposure to social media

Access to media	frequency	percentage Social
Yes	59	61%
No	38	39%
Total	97	100%

Table 2 above shows that 59 students representing 61% of the sample indicate that they have access to social media against 38 students representing 39% of the sample who accept no access to social media.

Research question 2: *What type of social media are SSS 2 students exposed to that influences their achievement in Mathematics?* **Table 3:** Social media sites students are exposed to.

Social media site	Frequency	Percentage
Facebook	56	94.9%
WhatsApp	-	-
Twitter	1	1.7%
Google Talk	1	1.7%
Yahoo Messenger	1	1.7%
Others	-	-
Total	59	100%

Table 3 shows that SS 2 students in Makurdi Local Government Area of Benue State are exposed to only four social media sites. 59 students representing 94.9% of the sample indicate that they use Facebook, 1 student representing 1.7% each uses Twitter, Google Talk and Yahoo Messenger. No student uses WhatsApp and the rest of other social media sites.

Research Question 3: *What is the influence of gender difference on social media exposure?*

Table 4: Gender and social media exposure

Gender	Frequency	Percentage
Male	44	75%
Female	15	25%
Total	59	100%

Table 4 shows students exposure to social media, taking their gender into consideration. It shows that 44 students representing 75% of the total 59 students that are exposed to social media are males. On the other hand, 15(25%) students are females. This means that male students have access to social media more than their female counterparts.

Research Question 4: *What time/duration do students spend on social media?*

Table 5: Time students spend on social media

Time Interval	Frequency	Percentage	
1-19min	16	27.1%	
20-29min	16	27.1%	From
30min-1hr	15	25.4%	table 5
2-3hrs	9	15.3%	above,
4hrs & above	3	5.1%	27.1 %
Total	59	100.0	(16

students) indicate that they spent 1-19minutes any time they visit social media. The same figure (16 students) indicate that they spend 20-29minutes when they visit social media. 15 students representing 25.4% of students that use social media spend 30minutes to 1hour any time they visit social media. 15.3% of students spend 2-3hours on social media per visit while 3(5.1%) students spend 4hours and above when they visit social media sites. Figure 2 above also presents the same information in table 5.

Research Question 5: *Who are the people students relate with on social media?*

Table 6: People students relate with on social media

Category	Frequency	Percentage
Class Mates	34	57.6%
Teachers	-	-
Old Friend	5	8.5%
New Friends	10	16.9%
Family Members	3	5.1%
thers	7	11.9%
Total	59	100%

Figure 3: Pie Chart representing different categories of people students relate with on social media.

Table 6 and figure 3 are representations of different categories of people that students normally visit social media sites to relate with. They show that 34 students representing 57.6% or 58% of the total 59 students that use social media visit them to relate with their classmates. 5 students (8.5%) visit social media to relate with old friends, 10 students (16.9%) visit to relate with new friends, no student relates with teachers on social media, 3 students (5.1%) visit to relate with their family members while 7 students (11.9%) visit social media sites to relate with other categories of people outside the list presented to them during this research.

Research Question 6: *What activities do students engage in on social media?*

Table 7 and figure 4 overleaf show that of the 59 students that use social media, 49.2% (29 students) visit them to keep company with their friends, 3.4% (2 students) visit to watch movies, 16.9%(10 students) visit social media for *assignments*, 8.5%(5students) visit to find new friends while 22%(13 students) visit social media sites to follow news.

Table 7: Activities students engage in on social media

Activity	Frequency	Percentage
Keeping company with friends	29	49.2% with friends
Watching movies	2	3.4%
Assignment	10	16.9%
Finding new friends	5	8.5%
Following news	13	22.0%
Total	59	100%

Figure4: Pie chart showing students' activities on social media

Research Question 7: *What is the effect social media have on students’ academic activities?*

Table 8: Effect of social media on students’ academic activities

If social media distract students when Mathematics	Frequency	Percentage studying
Yes	48	81.4%
No	11	18.6%
Total	59	100%

Table 8 shows that 81.4% of students against 18.6% accepted that social media distract them when they are studying Mathematics.

4.2.2 Analysis of Data for Research Hypothesis

As earlier stated in the previous chapter the research hypothesis for this study which stated that “*Social media has no significant influence on SS2 students’ achievement in Mathematics*” was tested using the student *t*-test. To do so, the Statistical Package for Social Sciences (SPSS) software was used. Table 9 and 10 that appear overleaf present the analysis of the software.

Table 9: Group statistics

Group	N	Mean	Std. Deviation	Std. Error Mean
Achievement Group A	59	10.9831	5.38674	0.70129
Group B	38	11.4737	4.97962	0.80780

Table 10: Independent samples Test

	t- test for Equality of means						
	t	df	Sig. (2tailed)	Mean diff.	Std.error diff.	95% confidence interval of the difference	
						Lower	Upper
Achievement							
<i>Equal variance Assumed</i>	-.451	95	.653	-.49063	1.08826	-2.65109	1.66983
	-.459	83.524	.648	-.49063	1.06975	-2.61812	1.63685
<i>Unequal variance Not assumed</i>							

From table 10 above the result shows the probability value (p-value) of **0.653** with equal variance assumed.

Decision: Since the p-value of **0.653** is greater than the **0.05** level of significance (i.e. **0.653>0.05**), we fail to reject the null hypothesis which states that “*Social media has no significant influence on SS2 students’ achievement in Mathematics*”

4.3 Discussion of Results

The findings of this research are quite fascinating. On exposure to social media, the research found that SS 2 students to a high extent are exposed to social media. This was ascertained from the 61% against 39% who agreed that they used social media.

It was gathered from findings also that SS2 students in Makurdi Local Government have access to only four social media sites, namely Facebook, Twitter, Google Talk and Yahoo Messenger. Of the four, results show that Facebook topped the chart with 94.9%. This means that students in the study area engage on Facebook more than on any other social media. This result agrees with that of Apuke, 2016 who obtained a similar result among the undergraduate students of Taraba State

University, Jalingo. Students' high preference for Facebook may not be strange at all. Facebook is one of the most cheaply accessible social media sites.

This study also explored the influence of gender difference on exposure to social media. Results reveal that male students in the study are more exposed to social media than their female counterparts. 75% against 25% of the total respondents that used social media were males. The results also gathered that majority of students (27.1%) spend a maximum of 29 minutes whenever they visit social media. This low time span could be traceable to the fact that most of these secondary school students are still dependent on their parents and relatives and hence may not have all the time for themselves to spend on social media.

Of whom students relate with on social media, the greatest number (57.6%) visit social media to relate with classmates. In a similar fashion, results show that students visit social media to keep company with their friends. By implication a good number of students' friends are among themselves. This is in line with the findings of Nwabueze and Anthonia, 2014 who got the same result in Enugu among secondary school students. Strangely results show that students don't relate with their teachers on social media. It is also amazing that academic work of students only occupy the third spot on the chart of students' activities on social media with a grudging 16.9% of students. This could mean that students visit social media mainly during their scarce leisure time.

In the previous section of this chapter the findings of this research led the researcher to accepting the null hypothesis that "*Social media has no significant influence on SS2 students' achievement in Mathematics*". This decision was based on the fact that the probability value, p-value obtained from analysis was greater than the level of significance of 0.05. It is therefore now justifiable to accept the students' claim that social media do not consume much of their time (as shown in chart 2). Again, students' friends on social media are their class mates, as stated earlier, which could mean that they relate on social media on matters that are academically inclined. For students to also agree (in table 9) that social media turn to distract them when they are studying Mathematics, it means they had identified that disadvantage and took possible measures to curb it to spare their academics from deteriorating. This finding that social media does not affect students' academic

performance is in collaboration with the findings of Waleed, 2016 who carried out a similar research in Malaysia.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The overall objective of this study was to determine the influence of social media on academic performance of Senior Secondary School, two (SS 2) students in Makurdi Local Government Area of Benue State. Various control variables such as students' exposure to social media, people students relate with on social media, time spent on social media, activities on social media, social media sites students use and others were investigated.

The *media equation theory* was adopted in the theoretical frame work of this study and several empirical studies of scholars relating to the topic were reviewed. A sample of 97 students from a population of 966 SS 2 students in the study area was used. The researcher obtained the sample through convenient sampling by estimating 10% of the population.

The research design maximized by the researcher for this study was the *Ex Post Facto research design*. The data for this research were gathered through a well-structured questionnaire and achievement test administered by the researcher to the respondents. These instruments were validated by scrutiny and adjustments by the project supervisor and one other expert as well a secondary school teacher from one of the schools where they were administered. Research questions were answered by using percentage count and frequencies while the research hypothesis was tested at 95% level of significance by the student *t*-test via *SPSS* software.

Findings of this study showed that SS 2 students in the study area were exposed to social media. It was revealed that students only had accounts with Facebook, Yahoo Messenger, Google Talk and Twitter. Students were also found to have had more relationships among themselves on social media than they did with any other category of persons. Results showed that majority of students spent a maximum of thirty minutes any time they visit social media sites. A greater number of students, results revealed, visit social media sites to keep company with their friends who were majorly their classmates. Students admitted that social media did distract them any time they

attempted combining it with their studies. The result from the hypothesis testing showed that social media use does not affect SS 2 students' performance in Mathematics in the study area.

5.2 Conclusion

By all the available proofs from the findings of this research, it is justifiable to conclude that Secondary School Students, in the study area, are exposed to social media. Students in the study area are aware of the negative impacts of social media on their academics and hence took measures to curb them as it could be seen they spend a maximum of thirty minutes on social media when they visit.

In the overall analysis, social media use does not influence the academic achievement of students in the study area. This also is obvious from the results of this study. Students were economical with their time as not to engage it unwisely on social media. This obviously spared their academics. This result implies that poor academic performance of students would not be attributed to social media but to something else.

5.3 Recommendations

In the light of the findings of this study, the following recommendations are made:

1. Teachers should be deliberate to make friends with their students on social media as this will help them monitor their activities there.
2. Students should be guided on how to maximize social media for their assignments and other academic endeavours.
3. Both the positive and negative sides of social media should be spelled to students by teachers and guardians so they will not be ignorant of the advantages and disadvantages of the same.

5.4 Suggestions for further study.

This study serves as the basis for further studies on social media and academic achievement of students.

Similar studies should be conducted in different States of Nigeria and among different categories of students so as to help them on how best to engage the social media for academic productivity. Studies should also be carried out using other variables, other than social media, which may be deemed responsible for academic deterioration in the country.

References

- Osharive, P. (2015). Social Media and academic performance of students. Retrieved from <http://www.researchgate.net>
- Wanajak, K. (2011). Internet use and its impact on secondary school students in Chiang Mai, Thailand. Retrieved from <http://ro.ecu.edu.au/theses/394>
- Qingya, W., Wei, C. & Yu, L. (2011). The Effects of Social Media on College Students. Retrieved from http://scholarsarchive.jwu.edu/mba_student
- Asemah, S., Okpanachi, A. & Edegoh, N. (2013). Influence of Social Media on the Academic Performance of the Undergraduate Students of Kogi State University, Anyigba, Nigeria. Retrieved from <http://www.iiste.org>
- Nwabueze, U. & Aduba, E. (2014). Influence of Social Networking on Secondary School Students in Enugu State, Nigeria.
- Fori, E. (2016). The Effects of Social Networking Sites on the Academic Performance of the Engineering Students in the University of Maiduguri, Borno State, Nigeria. Retrieved from [http:// www.IJCSI.org](http://www.IJCSI.org)
- Apuke, K. (2016). The Influence of Social Media on Academic Performance of Undergraduate Students of Taraba State University, Jalingo, Nigeria. Retrieved from <http://www.iiste.org>
- Mensah, O. & Nizam, I. (2016). The impact of social media on students' academic performance- a case of Malaysia tertiary institution. Retrieved from <http://www.ftms.edu.my/journals/index.php/journals/ijelt>
- Waleed, M. & Mohd, S. (2016). The Impact of Social Media use on Academic Performance among university students: A Pilot Study. Retrieved from <https://www.researchgate.net/publication/283723637>.