



Survey Of Social Media Usage And Upper Basic Two Students' Achievement In Basic Science And Technology In Jos North Plateau State, Nigeria

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ABSTRACT

The study investigated junior secondary two students' Social Media Usage of and their basic Science achievement in Jos North Local Government of Plateau State. Five research questions were formulated and one hypothesis guided the study. The population comprised of all junior secondary two schools students in Jos North Area Inspectorate Office. The sample size for the study consisted of 90 girls and 70 boys respectively adding up to 160 Junior Secondary two Basic Science Technology Students. Two instruments were used for data collection on students' views of their Social Media behaviours and records of their Basic Science and Technology achievement test scores. The study results show that students frequently use different forms of Social Media platforms mainly to chat and make friends. It was recommended that teachers should be encouraged to improve their Social Media usage competency in order to assist student use Social Media for meaningful learning rather than to distract their learning. It was also recommended that basic science students need to be train on how to use Social Media to improve on their basic science studies and achievement. The school administrators in both private and public secondary school should make internet data provisions to enable the teachers teach and send their assignment to the students. However, Parents are adverse to provide their wards with mobile phones that they can use interact with their teachers for learning and submission of school assignment.

Keywords: Social Media Usage, Upper Basic Two, Basic Science / Technology, Achievement

INTRODUCTION.

Advancement in science and technology has changed the face of communication globally through introduction of electronic soft-wares and information technology gargets that gives people access to platforms such as Social Media networking websites and video conferences. There is a global competition for internet usage among students, Educators and organizations in this 21st century. This is evident due to the long periods of usage by people being observed using Social Media site for various forms of interactions on net for different purposes. The practice has made communication much easier, faster especially for younger generation of the 21st century. Basically the increased in electronic

communication is increasingly reducing the challenges of time and distance that were seen as obstacles to communication in the past. Communication is a vital tool and a pivot for scientific investigations and innovations. In this 21st century, the attention of people especially younger generation's have been captured by more attractive and agile communication platforms such as Web-based and mobile apps like Twitter, Instagram, Face book (messenger), Twitter, Yahoo messenger, WhatsApp messenger, 2go Messenger, Skype, Blackberry Messenger (BBM), Google talk, Google messenger, Stumble upon, Snap chat, Hangout, Research Gate, Chat line, YouTube, to mention but a few. These are new means of communication globally at our comfort zones. This advancement has lots of benefits, when properly utilized are not only limited to chatting with friends, sharing pictures or watching videos and other stories but can effectively assist learners to involve in Educative discussions, carry out scientific investigations and communicate reports of scientific findings. Limiting these platforms to friendly charting may be disastrous to the younger students because it may take away their quality study time and even change their perception of the world. When this happened, it could lead students to abandon their studies and that could make them less able to solve their future challenges. Social Media is not only restricted for authors and publishers to disseminate research findings, but is also increasingly being used by science researchers in carrying out investigations and reporting discoveries of scientific findings and innovations.

Social networking generally refers to means of interaction of people using various Social Media platforms to communicate ideas, form discussion with groups or organizations through zoom or written communications with the absence of physical geographical environment. Clement (2019) posited that an estimated 2.65 billion people are active on Social Media platforms worldwide in 2018, a number projected to increase to almost 3.1 billion in 2021. He estimated that Face book has over 500 million users, while twitter has over 20 million excluding Blogs, You Tubes, and video blogs. Easy accessibility to information and communication using social media is no doubt the reason students are actively engaged in online charting and other interactions. This social and Academic networks as observed by Noorden, (2014) has rapidly risen to a degree that people least expected in the 20th century. He examines a subset of scholars who said they regularly visit Social Media site, they were quizzed in detail about their activities. They revealed that Twitter has about 330 regular visitors, Face book has about 340 regular visitors Linked-in has 389 regular visitors, Research- Gate has 1,589 regular visitors, Academia Education has 283 regular visitors, and Mendeley has 198 regular visitors. Research was done by Madisch in Noorden, (2014) shows that more that 4.5 million researchers have signed up for research Gate and another 10,000 arrive every. That is a pittance compared with Facebook's 1.3 Billion active users but astonishing for a network that only researchers can join.

In a world where internet makes information ubiquitous what matter is the ability to use knowledge intelligently to the wider world. According to Nigerian National policy of Education FRN, (2014), the operational goals of Education include among others: To promote information and communication technology capability at all levels. To ensure achievement of this objective, the National policy of Education stipulated the operational goals of Education in Nigeria has emphasis the development of Information and Communication Technology (ICT) curriculum to be taught at all levels of Nigerian Education sector. Government have provided computers and also equipped science laboratory across the nation. The Federal Ministry of Science and Technology is a Nigerians Ministry who's Missions is to facilitate the development of science and technology apparatus to enhance the pace of socio-economic development of the country through appropriate technological inputs into productive activities in the nation.

Research by Olubiyi (2012) shows that, students are so engrossed in the Social Media that they spend almost 24 hours online. He observed that even in classrooms and lecture theatres, some students are seen always busy pingping 'to-go' or 'Face book' while lectures are going on. The time that ought to be channeled towards learning some academic research and innovations have been crushed by the passion for meeting new Friends, lovers and posting pictures. Hence most students' academics suffer setback as a result of these distraction from the Social Media.

Similarly, research by Wordu, Dan-Jumbo, Mina, (2021) revealed that students devote more attention and time to Social Media than they do for their studies. This leads to divided attention that does not allow students to learn well. In another development, Obi, Bulus, Adamu and Sala'at (2012) observed that the use of these sites also affects students' use of spoken English and grammar and errors in written text. Errors such as '@' instead of 'at', which is referred to as shortest form of words commonly used by those addicted to Social Media. The language is commonly called slang words. Hence, these words affect student's ability to write effectively as they often forget the spelling of the words used in written text due to these slang communications.

Research was done by Medge, Meek, Wellens and Hooley (2009) based on the Universities in the U.K. The result showed a negative relationship between Face book and the academic achievement of students. However, the study didn't focus on which students were using Face book and what time of the day they used it the most. With the aforementioned, there is an urgent need to control these vices of Social Media addiction among the secondary school students and convert it to useful activities that will bring about positive relationship between social media usage and academic achievement of students in Nigerian schools. In line with that, research by Ezeabii, Chibuike, and Udeh, (2019) pointed out that the use of Social Media in Education system has advantages and disadvantages. Social Media sites increase student's collaborations, provides an avenue for students to easily communicate with one another regarding school projects, group assignment and homework assignment, encourage participation in classrooms, Students can regularly in express their thoughts through Social Media when not in class, build student confidence and useful for doing homework by giving them opportunity to share their views on line. However, the trend in which social networks is rapidly advancing when left un-monitored can be misleading and dangerous especially for teenage secondary school students. Especially when it comes issues of charting and making friendly communications, this give teenagers false impressions about the world, that love and friendship are the most important thing in life and easy to conquer or destroyed.

In another dimension, Social Media has been viewed by Ezeabii, Chibuike, and Udeh, (2019) as being a source of distraction in the classroom by students. This is simply because most students use Social Media for chatting with friends, sharing pictures and videos, watching other stories, looking for other timelines and pictures even when they are in the classroom or other important places. The question that comes to mind is 'what kind of impact has these platforms on students and especially their academic challenges, social vices like cyber-crime, identity thief and the growth and development of the society? How can students see Social Media as a platform for improving their academic achievement?

Research by Kessy and Pessa (2022), shows that Despite the importance of social media in facilitating knowledge and communication online, evidence of negative effects of the media on students' learning abound. There has been a persistent public concern about the effect of social media especially on moral issues, such as sex in relation to girls and violence in relation to boys. This in turn seems to reflect broader fears of the future direction of the youth in the society. He explain the Findings from USA, South Korea, UK, and Germany which revealed concerns about the harmful effects such as influence of video and television on violence and cinema on sex. These concerns have reached the level of 'moral panic' in this 21st century. Murray (2017) revealed another negative effect of social media to include sleep deprivation among others. She pointed out that 62 percent of snap-chat users were the most at risk of sleeping deprivation. A survey research including more than 2,000 UK residents discovered that Instagram users were the second most likely to have their sleep interrupted by social media with Twitter and Face book coming in third and fourth respectively.

Statement of the Problem

In a world where Social Media has been identified as a vital tool for promoting effective communication, teaching and learning can be foster through Social Media platforms, but most times, students misuse it for other sources which most often do not connect to the teaching and learning process. Research and experience have shown that most students use Social Media for chatting with friends, sharing pictures and videos, watching other stories, looking for other timelines and pictures. This is evident as research by Wordu, Dan-Jumbo, and Mina. (2021) revealed that students devote more attention and time to Social

Media than they do for their studies yet, what they spend this time for has little or no connection with their learning. Hence, they do not pass their examinations since what they do has no connection with their learning (Osharive, 2015). Obi, Bulus, Adamu and Sala'at (2012), observed that the use of these sites also affects students' use of English and grammar. Such as in the students used the shortest form words, use of addicted to Social Media language they called slang words. Addiction to these words affects student's ability to effective writing. They often forget the spelling of the words use in writing. Olubiyi (2012) noted that students' attention are so engrossed in the Social Media almost 24 hours online even in classrooms and lecture theatres, such students are observed always busy ping, going or Face booking, while teaching is going on. This diverts their focus on learning activities in classrooms. However, it is against the afore mentioned that this study is designed to investigate the Basic Science and Technology two students' Social Media Usage of and their Basic Science and Technology achievements in Jos North Local Government of Plateau State.

Aim And Objectives Of The Study

The study is designed to achieve the following specific objectives:

1. to investigate the Social Media behaviours of Junior Secondary two Basic Science and Technology students in Jos North Plateau
2. to find out the type of Social Media usage of Basic Science and Technology two students in Jos North Plateau State, Nigeria.
3. to examine the frequency of Social Media usage of Junior Secondary two Basic Science and Technology students' in Jos North Plateau State, Nigeria.
4. to determine the achievement of Junior Secondary two students in Basic Science and Technology in Jos North Plateau State, Nigeria.
5. to assess the Social Media usage of Junior Secondary two students and their achievement in Basic Science and Technology in Jos North Plateau State, Nigeria.

Research Questions

The following research questions were answered to provide data for the study.

1. What is the Social Media behavior of Basic Science and Technology students in Jos North Plateau State, Nigeria?
2. What types of Social Media are frequently use by Basic Science and Technology students in Jos North Plateau State, Nigeria?
3. What is the frequency of Social Media usage of Basic Science and Technology students in Jos North Plateau State, Nigeria?
4. What is the achievement of Junior Secondary two students in Basic Science and Technology students in Jos North Plateau State, Nigeria?

Research Hypothesis

1. There is no significant association between Social Media behaviours and achievement of Basic Science and Technology students in Jos North Plateau State, Nigeria?

METHODOLOGY

The study employed a descriptive survey design. The population comprised of all junior secondary schools students in Jos North Area Inspectorate Office. 12 private and public junior secondary schools in Jos North Area Inspectorate Office Jos were used to draw 161 students as sample for the study. A simple random sampling technique was used to select six schools each from public and private junior secondary schools for the study. Five research assistants who were master students in Science Education were trained to assist with data administration and collection. Two instruments were used to collect data for the study namely: Students' Social Media Usage Questionnaire (SSMUQ) adopted and Record of Basic Science and Technology Students Achievement Result. (RBSTSAR). The SSMUQ instrument had three sections; namely sections A, B and C. Section A consisted of students' personal data, namely gender, and age, school and school location while section B consisted of 10 questions that probes students on the use of Social Media, with each question having three options for the respondents to tick the options applicable

to their Social Media usage, options such as. ‘Not use at all’ = 1 point, use some times, = 2 points and use always = 3.

Similarly, Section C comprised 21 items questionnaires with each item having five ratings options for the respondents to tick the options applicable to them for each of the item. These items were analyzed using Likert’s five point scale in each item. This gives students opportunity to tick either Strongly Agree = 5 points, Agree = 4 points, Undecided = 3points, Disagree = 2 points or strongly disagree 1 point respectively. The instrument was adopted from Graham (2013) and used in measuring the Basic Science and Technology students’ use of social networking. The researcher adopted (SSMUQ) was used to collect data on students’ use of social networking.

Students’ opinions were analyzed using frequency, percentage; mean and standard deviation in response to research questions raised, while records of students’ achievement in Basic Science and Technology were obtained from school records. This comprised of two continuous assessments result records and two terminal examinations results records. The sum of the four results was done for each student and the average of the four results was obtained and recorded as the achievement of each student. The achievement of students was categorized into above average for those whose average scores were 70% and above, average for those whose average score were between 45% and 69% and below average for those whose average score were between 0% and 44% respectively. A chi-square statistical tool was used to determine the relationship between social usage and students’ achievement in Basic Science and Technology.

4.1 RESULTS

Research Questions One- *What is the Social Media behavior of Basic Science and Technology students in Jos North Plateau State, Nigeria?*

Table 1:

Social Media Behaviours of junior secondary two Basic Science and Technology Students in Jos North, Plateau State.

Social Media Behaviour		
	Frequency F	Percentage %
Low SMB	4	2.5
Moderate SMB	91	56.9
High SMB	65	40.6
Total	160	100

KEY:

F=Frequency % = Percentage

Result on Table 1 reveals that students’ Social Media behaviours varied from low, moderate and high Social Media behaviours. Four of the students representing 2.5% do not visit Social Media at all, while others had moderate and high Social Media behaviours at varying levels; this implies that junior secondary two Basic Science and Technology students in Jos North use Social Media. The result is presented on Figure 1

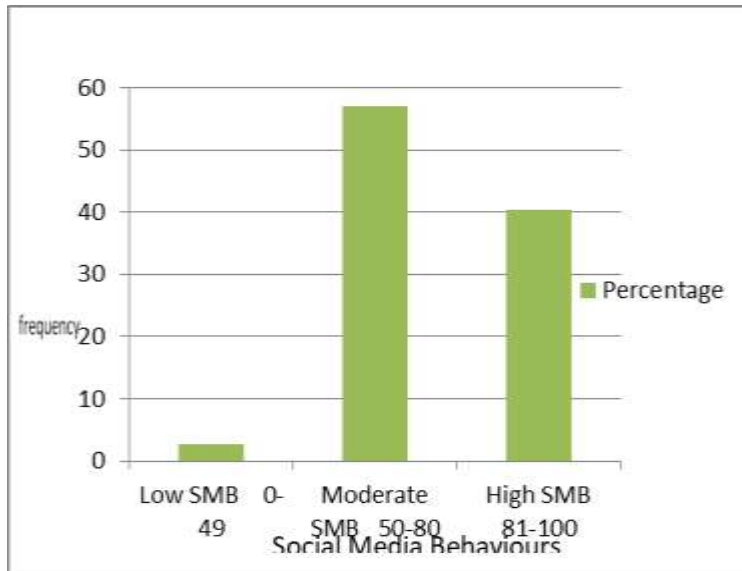


Fig 1. Frequency of Social Media Behaviours of Basic and Technology students in Jos North, Plateau State in Percentages

Research Question 2. What is the frequency of Social Media usage by Basic and Technology students in Jos North, Plateau State?

Table 2: Frequency and Percentage of Social Media usage of Basic Science & Technology students in Jos North junior secondary schools

Social Media Usage (SMU)	Frequency (F)	Percentage (%)
No use at all	4	2.6
Used sometimes	92	57
Used always	65	40.4
Total	161	100

KEY

SMU = Social Media Usage

F = Frequency

% = Percentage

Result on Table 2 reveals that 40.4% and 57% of junior secondary two Basic Science and Technology students use Social Media platforms.

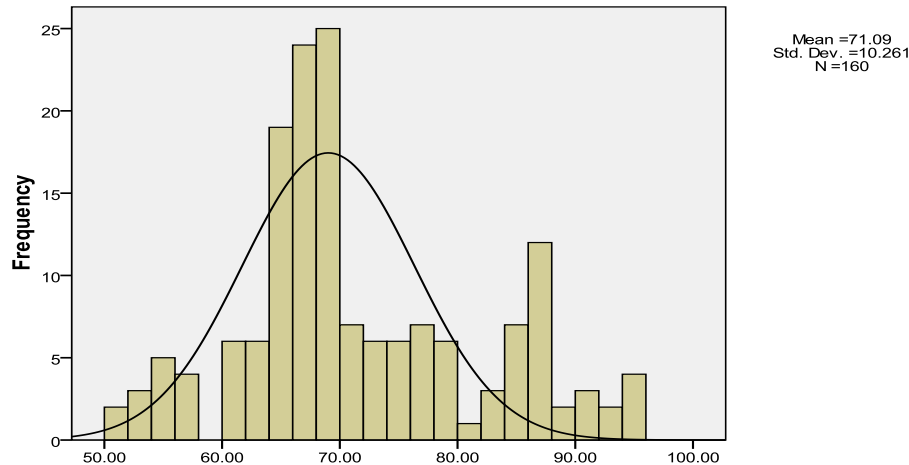


Fig. 2. Mean and Standard deviation of Social Media Usage of Basic and Technology students in Jos North, Plateau State .

Research Question 3. *What types of Social Media platforms do Basic Science and Technology students frequently use?*

Table 3: Types of Social Media platforms frequency of use by Basic Science and Technology Students in schools

S/NO	Social Media Type	Students' Level of Usage							
		Always		Sometimes		No at all		Row Total	
		F	%	F	%	F	%	F	%
1	Facebook	100	62.11	25	15.53	35	22.36	160	100
2	YouTube	130	80.75	30	19.25	0	0	160	100
3	Blogs	15	9.32	120	74.53	25	15.53	160	100
4	Twitter	28	17.39	23	14.29	109	68.32	160	100
5	MySpace	36	22.36	15	9.32	109	68.32	160	100
6	2go	100	62.11	23	14.29	37	23.6	160	100
7	WhatsApp	110	68.32	15	9.32	35	22.36	160	100
8	BlackBerry Messenger	15	9.32	36	22.36	109	68.32	160	100
9	Yahoo Messenger	112	69.57	26	16.15	22	14.29	160	100
10	Skype	23	14.29	38	23.6	99	62.11	160	100
11	Instagram	15	9.32	36	22.36	109	68.32	160	100
	TOTAL	684	39.20	372	21.32	689	39.48	1745	100

KEY

F =Frequency

% = Percentage

Result on Table 3 shows that Basic Science and Technology students in Jos North engage themselves in different Social Media platforms. They most frequently visit YouTube, Yahoo messenger, WhatsApp, Face book, and 2go respectively among others.

Research Question 4: *What is the achievement of Junior Secondary two students in Basic Science and Technology students in Jos North Plateau State, Nigeria?*

Table 4. Comparism of student’s Social Media usage and Achievement scores in Basic Science & Technology

Social Media Usage	Achievement Test scores in Basic Science and Technology			
	Below Average	Average	Above Average	Total
No use at all	0	3	1	4
Frequently used	47	38	7	92
Very frequent used	44	18	2	64
Total	91	60	10	160

Result on Table 4 shows that all Basic Science and Technology students who do not use Social Media had average and above average scores in Basic Science and Technology, while those that used Social Media had majority of students scoring below average with few students scoring average and above average.

Hypothesis - There is no significant relationship between junior secondary two students’ Social Media behaviours and their achievement in Basic Science and Technology in Jos North, Plateau State.

Table 5.Relationship between junior secondary two students’ Social Media behaviours and their achievement in Basic Science and Technology in Science

Social Media Usage	Achievement Test scores in Basic Science and Technology			
	Below Average	Average	Above Average	Total
No use at all	0	3	1	4
Moderately used	47	38	7	92
frequently used	44	18	2	64
Total	91	60	10	160

Table value of X^2	=	9.5
Calculated value of X^2	=	9.7
Df	=	4
Contingency coefficient (Cc)	=	0.18
Strength of association	=	18%

DISCUSSIONS

Result on Table 1 shows that 97.4% of the students sampled for the studies use Social Media. This result supports the views of Olubiyi (2012) that, students are so engrossed in the Social Media that they spend almost 24 hours online. It has been observed that even in classrooms and lecture theatres, some students are seen always busy pinging, ‘to-go’ or ‘Face book’ while lectures are going on. Similarly, this support the research report by Clement (2019), that an estimated 2.65 billion people are active on Social Media platforms worldwide in 2018, a number projected to increase to almost 3.1 billion in 2021.

Result shows that the most frequently visited Social Media platform by students in Jos North are; YouTube, Yahoo messenger, WhatsApp, Face book, and 2go among others. This result support the outcome of research by Noorden (2014) who examines a subset of scholars on the use of Social Media and quizzed them in detail about their activities. They revealed that 330 of them were regular visitors to Twitter, 340 were regular visitors to Face book 389 were regular visitors to Linked-in, 1,589 were regular visitors to Research Gate, 283 were regular visitors Academia Education., and 198 were regular visitors to Mendeley. However, the most widely used Social Media platform for academic purposes was WhatsApp which was mostly used to summits or receive assignment followed by yahoo messenger or gmail.

Result on Table 4 shows that majority of Basic Science and Technology students who use Social Media frequently for chatting with friends, sharing pictures and videos, watching other stories, looking for other timelines and pictures score mostly below average in class assessment that those who use Social Media to improve on their academic work. This result supports the findings of research by Medge, Meek, Wellens and Hooley (2009) on the Universities in the U.K, which revealed a negative relationship between Face book usage and the academic achievement of students. Similarly, the result is in line with the findings of Obi, Bulus, Adamu and Sala'at (2012) showed that the use of these sites also affects students' use of spoken English and grammar and errors in written text. Errors such as '@' instead of 'at', which is referred to as shortest form of words commonly used by those addicted to Social Media. They revealed that these words affect student's ability to write and communicate effectively.

Summary of Findings

The following were identified from the results of the study.

1. Most Basic Science and Technology students use Social Media
2. The most frequently used Social Media platform by Basic Science and Technology Students are YouTube, Yahoo Messenger, WhatsApp, facebook and 2Go.
3. That Social Media usage affects Basic Science and Technology II students' achievement scores in schools.

CONCLUSION

In conclusion, the finding of this study shows that the use of Social Media among secondary school students is on the increased and if not properly monitored can have negative impact on their study habits and academic achievement as well as their spoken and written communication in schools. The findings of the show that Basic Science and Technology students can use Social Media platforms to perform scientific investigations and improve their academic achievement.

RECOMMENDATIONS

It was recommended that students should be expose to a Behaviour Modification Training Model that will shape their Social Media behaviours from un-academic charting to more academic activities that promote their thinking and achievement in schools.

Teachers should be encouraged to improve their Social Media usage and competency to enable them guide students in the use of Social Media to improve their achievements in schools.

1. The school administrators of secondary school should make internet data provision to enable the teachers send their assignment to the students.
2. The teachers should be encouraged to organize Social Media interactive lesson and make them interesting and accessible to students.
3. The parents should provide their wards with an android phone and monitor their usage to ensure that they use them for learning and improvement on their quality of lives.

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