

THE IMPACT OF SOCIAL NETWORKING ON ACADEMIC PERFORMANCE IN MATHEMATICS IN SELECTED SECONDARY SCHOOLS IN EDO STATE

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ABSTRACT: *This study was aimed at investigating the impact of social networking on the academic performance of secondary school students in mathematics using selected secondary schools in Edo State. The study was necessitated by the relative new culture of communication and connecting with friends via the internet in this part of the world. The work also seeks to find out what motivate students to study mathematics. The study adopted descriptive research design; simple random sampling procedure was used to select ten public and private secondary schools out of the lot in the area. The research instrument used for data collection was questionnaire. The data obtained from respondents were analyzed using simple percentage and the results were briefly discussed. The findings revealed that students disposition towards their teacher (mathematics teacher in this case) and their intended career can motivate them to study mathematics; students have access to phones, computers and other communication devices and the internet. Majority of the respondents indicate that social networking do not have negative effect on their study habits. It was recommended that students should be enlightened on the academic advantage in social networks and guided to avoid been distracted from their studies.*

KEYWORDS: Social Networking, Academic Performance, Mathematics, Nigeria

INTRODUCTION

Communication and relating with others in our contemporary time have gone beyond writing letters, making telephone calls and sending text messages. Modern communication and relationship among friends, colleagues, associates, business partners, present and former classmates are now majorly done via the internet; this internet flow of friendship is commonly known as social networking. A social network represents relationships and flows between people, groups, organizations, animals, computers or other information/knowledge processing entities; the term “social network” was coined in 1954 by J. A. Barnes (Webopedia 2015). Walker (2011), states that social networking started in 1978 with the Bulletin Board System (BBS); BBS was hosted on personal computers and it was the first system that allowed users to sign in and interact with each other. Geocities was the first web-based social networking site developed in 1994; it allowed the users to create their own websites (Kumarjit n,d). Other social networking sites evolved over the years, notable among them are; Friendster in 2002, Myspace in 2003 and Facebook in 2004.

Majority of social networking in our present day are done on the internet, according to Boyb and Ellison (2007), Social networking sites (SNS) may be defined as: Web-based services that allow individuals to:

1. construct a public or semi-public profile within a bounded system.
2. articulate a list of other users with whom they share a connection.

3. view and traverse their list of connections and those made by others within the system

Social networking services or sites allow the user to create a virtual representation or profile showcasing one's likes, dislikes, interests, activities etc and some other additional services (Kumarjit n,d). Social networks enable their members to share information in various aspects of life like academics, discoveries, movies, music, business, health, dating, life experiences and games as well as chat as long as they are connected to the internet. Nigerian Bulletin (July 22, 2015) give the world's mostly used social networking sites as;

- Facebook.com
- Twitter.com
- Linkedin.com
- Pinterest.com
- Googleplus.com
- Tumblr.com
- Instagram.com
- Vk.com
- Flickr.com
- Vine.com
- Meetup.com
- Tagged.com
- Ask.com
- Meetme.com
- Classmates.com

Technological advancement especially in the area of information and communication technology has brought to the door step of many homes the use of computers - (desktops, laptops, notebooks & palmtop), GSM phones, smart phones, I-pads, Androids, tablets. Accessing the internet is now relatively easier than before. This relative ease has made it possible for even teenagers to spend much of their valuable time "social networking". Internet world statistics report (June 2015) rank Nigeria as seventh (7th) in the world in internet usage with 92,699,924 users. The Nigerian Communication Commission (NCC) report (May 2015) as reported in News Watch Times (May 11 2015) put subscribers that browse on Nigeria's Telecommunication Networks (NTN) at 83 million as at February 2015.

Table 1: TOP 20 COUNTRIES WITH HIGHEST NUMBER OF INTERNET USERS

S/N	COUNTRY	POPULATION 2015 EST.	INTERNET USERS YEAR 2000	INTERNET USERS JUNE 2015	PENETRATION (% POPULATION)
1	China	1,361,512,535	22,500,000	674,000,000	49.5 %
2	India	1,251,695,584	5,000,000	354,000,000	28.3 %
3	United States	321,362,789	95,354,000	280,742,532	87.4 %
4	Brazil	204,259,812	5,000,000	117,653,652	57.6 %
5	Japan	126,919,659	47,080,000	114,963,827	90.6 %
6	Russia	146,267,288	3,100,000	103,147,691	70.5 %
7	Nigeria	181,562,056	200,000	92,699,924	51.1 %
8	Indonesia	255,993,674	2,000,000	73,000,000	28.5 %
9	Germany	81,174,000	24,000,000	71,727,551	88.4 %
10	United Kingdom	64,767,115	15,400,000	59,333,154	91.6 %
11	Mexico	121,736,809	2,712,400	59,200,000	48.6 %
12	France	66,132,169	8,500,000	55,429,382	83.8 %
13	Egypt	88,487,396	450,000	48,300,000	54.6 %
14	Philippines	109,615,913	2,000,000	47,134,843	43.0 %
15	Iran	81,824,270	250,000	46,800,000	57.2 %

16	Turkey	77,695,904	2,000,000	46,282,850	59.6 %
17	Vietnam	94,348,835	200,000	45,579,922	48.3 %
18	Korea	49,115,196	19,040,000	45,314,248	92.3 %
19	Bangladesh	168,957,745	100,000	44,625,000	26.4 %
20	Italy	60,795,612	13,200,000	37,668,961	62.0 %

Source – Internet World Statistics (June, 2015)

Table 1 above shows top twenty (20) countries with highest number of internet users in the world. Nigeria with an estimated population of 181,562,056 has 92,699,924 internet users (internet world statistics 2015) and is ranked seventh (7th) in the world; behind China, India, United States of America, Brazil, Japan and Russia. Countries ranked after Nigeria are Indonesia, Germany, United Kingdom, Mexico, France and so on. However, in terms of internet users penetration of population Korea leads with 92.3%, followed by United Kingdom (91.6%), Japan (90.6%), Germany (88.4%) and United States of America (87.4%). It is worthy to note that Nigeria is the only country in Africa that is among the top twenty (20) top internet users in the world.

Social networking is very attractive to students especially those in senior secondary school because it is used to socialize with their peers and help build cultures around them (Boyd and Ellison 2007). No wonder the fact that some students go to the extent of getting themselves involved in social network activities especially chatting and posting of pictures and sending of comments in the class even when a teacher is teaching them. Others do not stay in their classes, they hide somewhere inside their schools' compound to chat and probably look for friends on the network (Flad 2010). This has become part of the modern teenage life style in our society to the extent that it is even done in places of worship.

Statement of the Research Problem

In the 70s, and 80s, the major form of communication among teenagers in this part of the world was majorly through writing of letters. Late 90s and entering the new century brought the awareness of using electronic mail on the internet for communication. Internet social networking which started gaining ground about five years back have been very attractive to teenagers. Social networking can therefore be said to be new to our ever dynamic way of life (culture). The reason for this study is to find out how this relatively new form of socializing affects teenagers study habits. Flad (2010) conducted a similar study on the influence of social networking participation on student academic performance across gender in New York. Communication gadgets, use of computers and internet access are “no big deals” in advanced countries among people of various ages (young and old). This is not the case in Nigeria; for example the use of global system of mobile communication (GSM) started in 2001 (Global Technology Archive 2012), which have been in existence in advanced countries for years.

Consequently, it is pertinent to find out/investigate if social networks/social networking has any effect on academic performance of secondary students in mathematics in Edo state. In the same vein to find out if the effect is positive or negative.

Research Questions

1. What motivates students to study mathematics?

2. Do students have access to phones/computers and internet facilities.
3. Does social networking affect the studying habits of students in Edo state in their academics especially in mathematics?

METHODOLOGY

Research Design

The research design for the study is descriptive research design. Descriptive research gathers quantifiable information that can be used for statistical inference on your target audience through data analysis; this type of research takes form of closed-ended questions (Penwarden 2014).

Descriptive research can provide information about preferences, attitudes, practices, concerns, interest and so on. This study is descriptive in the sense that it is concerned with attitudes and interest of a particular age group (teenagers); closed-ended questions were used for easy understanding and response by the targeted students.

Population

The population of the study comprises of secondary school students in selected schools in Edo state. The population is made of all public and privately owned secondary schools, single or/and mixed.

Sample & Sampling Technique

The sample for this study was selected using simple random sampling. A simple random sample is meant to be an unbiased representation of a group (Investopedia 2015). In a simple random sampling, each element or unit of the population has exactly the same chance as any other unit of being included in the sample (Afemikhe and Onyemunwa 1997).

Research Instrument

The instrument used for data collection is a closed-ended questionnaire.

Reliability of Instrument

The questionnaire was pilot tested; it was administered to twenty (20) students that were not part of the main study. This was done to determine the reliability of the instrument and the ease or difficulty of students' response. Test-retest method was used to determine the reliability of the instrument. Pearson's product moment correlation was used to calculate the reliability of the questionnaire, a reliability coefficient of 0.65 was obtained, which showed that the instrument is reliable.

Administration of Instrument & Data Analysis

The questionnaire were administered at each of the selected schools with the co-operation of the principals, vice principals, teachers and students. The questionnaires were administered and responses collected on the spot, also on a second visit for those who could not finish on scrutiny. The questionnaire were correctly filled and considered useful for the study. Two

hundred (210) questionnaires were administered and 200 were returned. The analysis is based on the use of frequency table and simple percentage. The raw scores were converted to percentages and the findings obtained.

Research Question 1

What motivates students to study mathematics?

Table 2: Responses on what motivates students to study mathematics

VARIABLE	SUB-VARIABLE	YES	%	NO	%
What motivates me to study mathematics	I like the subject (s)	165	82.5	35	17.5
	I like the teacher of the subject	137	68.5	63	31.5
	My intended career	189	94.5	11	5.5

From Table 2 above, 82.5% with 165 respondents are motivated to study because they like the subject (s), while 17.5% with 35 responses are of contrary view. 68.5% with 137 responses are motivated to study because they like the teacher of the subject, 31.5% with 63 respondents are contrary. This shows students' disposition towards teacher (s) influences students' likeness and motivation to study the subject (s).

Research Question 2

Do students have access to phones/computers and internet facilities.

Table 3: Responses on access to phones/computers and internet

VARIABLE	SUB-VARIABLE	YES	%	NO	%
Access to phones/computers and Internet	I have a phone/computer of my own that can browse	146	73	54	27
	I use my parents'/other relations phone/computer to browse	80	40	120	60
	I always have much megabyte to browse/social network	100	50	100	50
	The network that I use to browse is always accessible	153	76.5	47	23.5

From table 3, 73% with 146 respondents have access to phones or computers of their own that can browse while 27% with 54 responses don't have phones or computers of their own that can browse. 40% with 80 respondents uses their parents or other relations phones or computer to browse while 60% with 120 responses don't use their parents or other relations phones or computer to browse.

50% of the responses have much megabytes to browse/social network another 50% don't have much megabytes to browse/social network. The network used by 76.5% of the respondents to

browse is always accessible while the network used by 23.5% of the respondents is not always accessible.

Research Question 3

Does social networking affect the studying habits of students in Edo state in their academics especially in mathematics?

Table 4: Respondents on Concentration on study

VARIABLE	SUB-VARIABLE	YES	%	NO	%
Concentration	I hardly read for 30 minutes without social networking	35	17.5	165	85.5
	I can pay attention/concentration on my studies for up to 2 hours without social networking	185	92.5	15	7.5
	I easily get distracted by social network when studying	86	43	114	57

From Table 4, 17.5% of respondents with 35 responses agree they can hardly read for 30 minutes without social networking while 85.5% with 165 responses are on the contrary. Also, 92.5% with 185 responses can pay attention on their studies for up to 2 hours without social networking while 7.5% with 15 responses cannot pay attention for up to 2 hours without social networking.

43% of the respondents with 86 responses agree that they are easily distracted by social network when studying while 57% with 114 responses are not easily distracted by social network when studying. This implies that social networking can affect academic work of some students negatively.

CONCLUSION

Computer literacy, internet awareness and access have increased tremendously these days unlike some years back when it was among few elites who were privileged to travel abroad or were in the university system. The deregulation of the telecommunications industry in Nigeria brought the use of the global system of mobile communication and privately owned telecommunication companies. The competition among them gives room for cheap and fast internet access.

Students at the senior secondary school level are at the formative period of their intended choice of career. Abandoning their studies for too much leisure will have adverse effect on their academic development especially in the areas of mathematics which required adequate and quality time to study for understanding and to practice by solving problems for the development of mathematical skills for daily living and for future development. However, some of the students are able to use social network to enhance their academics by getting information that are useful in their studies.

RECOMMENDATION

The following recommendation is made based on this study;

1. Teachers should ensure that their students have good disposition towards them to encourage the students to like their subject and study effectively.
2. Students who spend too much time social networking should go through counseling on how to social network and still be very serious with his/her academics.
3. School administrators, teachers and counselors should watch over students to prevent social networking during school hours as distraction may set in for the students.
4. Parents/guardians should effectively monitor their children and wards on social networking activities.
5. Students should be enlightened on how social networking can also be useful to them in their academics. Social networking can be used among students to share information about difficult subject areas and assignments.
6. Curriculum planners and developers should include social networking as part of the curriculum especially for computer studies in secondary schools.

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