

## INFLUENCE OF SOCIAL NETWORKING SITES ON ACADEMIC PERFORMANCE OF BIOLOGY STUDENTS IN NATIONAL OPEN UNIVERSITY OF NIGERIA

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### Abstract

The study focused on the influence of social networking sites on the academic performance of biology student in National Open University of Nigeria. Four research questions guided the study. The sample size was 187. The instrument used for data collection was questionnaire which was validated by three experts. Split half method was used to determine the reliability of the instrument and a reliability index of 0.76 was obtained. Mean was used to answer the research questions. The findings revealed among others that social media (facebook, twitter and linkedIn), media sharing networks (instagram, snapchat, youtube), discussion forums (reddit, quora, digg), bookmarking and content curation networks (pinterest, flipboard) influence the academic performance of biology students in National Open University of Nigeria. Based on the findings, the researcher recommended among others that lecturers should embrace and effectively use social media to teach, give assignments to students, and create reading groups and other learning activities.

**Key words:** Social Networking Sites, Academic Performance, Biology Students.

### Introduction

The use of internet has tremendously affected all areas of human life. It has contributed to the utilization of social networking sites. Internet is a global network which refers to all inter-connected data sources and computers, network routers and circuits. Internet users can log on to computer (if allowed access) to download or upload files, engage in online conferences and of

course exchange electronic mails. It is like a phone system which ties together caller from around the world via web data transmission lines. The internet grew out of the Advanced Research Projects Agency's Wide Area Network (then called ARPANET) established by the United States Department of Defense in 1960s for collaboratories. ARPANET grew beyond everyone's expectations and acquires the name internet. The development of hypertext based technology called World Wide Web (www) provided means of displaying text graphics, animations, and easy search and navigation tools triggered by internet's explosive worldwide growth. Internet has provided its users with different online services (Chuka, 2012). Some of these include:

- a) Web: a collection of billions of web pages that you can view with a web browser such as, Internet Explorer, Mozilla Firefox, Safari, Opera, Konqueror, Lynx etc
- b) E-mail; the most common method of sending and receiving messages online. Whatsapp, Messenger, Telegrams and many others are included in E-mail.
- c) Online gaming; games that allows people to play with and against each other over the internet. Counting some are FIFA 20, Diablo 3, Red dead online (Image credit:Rockstar) Bubble shooter etc.
- d) Social media; websites and applications that allow people to share comments, photos, and videos. Facebook, YouTube, Online Tv, Instagram etc

Social networking sites comprises of activities that involve socializing and networking online through words, pictures and videos. Kaplan and Haenlein (2016) defined social networking sites as a group of internet based applications that build on the ideological and technological foundations of user generated content is a web where digital tools allow users to create, change and publish dynamic content (Aharony, 2018). Social networking sites service uses between teachers and students can improve rapport and motivation and engagement with education (McBride, 2019). Social networking sites increase student's collaborations. It provides an avenue for students to easily contact one another regarding school projects, group assignment and homework assignment (Hangs, 2017). Use of social networking sites in the classroom can encourage more participation. Students who do not participate regularly in class can express their thoughts through social media. It can help build the student confidence and encourage them to find their voice and be able to participate in class (Ezeugo, 2015).

Social networking sites can be useful for homework help. When students have questions about a class assignment, they can easily post a message asking if anyone can help. They can ask specific questions to a teacher on a wall that other students can see. This allows the whole class to have access to feedback from the teacher. Social networking sites can help in sharing resources quickly in the classroom. If a teacher needs to direct students to particular online resources they can easily

share the site through social networking sites like twitter. Social networking sites helps to keep parents, teachers and students all on the same page. It is very useful for teacher to be able to post on social networking sites about class activities, homework assignments and even school events. This helps the teachers, parents and students all stay on the same page about what is going on at school. Educators and advocates of new [digital literacy](#) are confident that social networking encourages the development of transferable, technical, and social skills of value in formal and informal learning. [Tweeting](#), [instant messaging](#), or [blogging](#) enhances student involvement. Students who would not normally participate in class are more apt to partake through social network services (Akubuilu, 2016). Networking allows participants the opportunity for just-in-time learning and higher levels of engagement. The use of social networking sites allows educators to enhance the prescribed curriculum. When learning experiences are infused into a website student utilize everyday for fun, students realize that learning can and should be a part of everyday life. It does not have to be separate and unattached (Oluyola, 2012). ). Students can also use social networking sites to research content material in order to develop new knowledge (Lamb & Johnson, 2018). By allowing the needs of creative learners to be met through a cooperative learning environment, students are better able to balance their individualism with the need for contact with others, allowing new ideas to flourish. Some of social networking sites used by students includes Online discussion forums, also known as World Wide Web forums, Bookmarking, Content curation, media sharing networks, social media etc. Cruz (2017) listed the following as the positive effect of social networking sites on students:

**Facilitation of Online Learning:** The use of social media has helped the students to learn through various online learning platforms available to them. The use of YouTube to watch educational videos has helped the students to gain wider knowledge.

**Access to Information:** There are many groups that students can join through online platforms, that are related to their course of study, demographic, school, environment and much more. Joining this group on Whatsapp, Twitter, Facebook and others will help the students to have access to quality information as at when needed.

**Gain Wider Knowledge:** Social media helps to enhance student academic performance and increase their knowledge through data and information gathering. When students are been given an assignment in school, they go through various online platforms to gather information so as to find solutions to their assignment.

**Building Relationship:** Students can get to know each other better through social media networks. It helps to bring together two or more people, where they can share their problem, which it can get solve by their fellow colleagues. If a student's finds out that he or she is having a problem in a

particular course, he or she can open up through chat and finds a genius who can provide a solution to the problem.

A number of Nigerian scholars agree that addiction to social networking sites have become a distractive technology. Among the scholars is Osharive (2016) who surveyed 1,860 Facebook users from the Lagos State University and found that 90 percent of the students could not get up to cumulative grade point average (CGPA) above 3.50 because they had spent a large part of their homework and study time on face booking. It is perceived that school grades will suffer when spending too much time on social sites such as Face book, twitter and Whatsapp as valuable, study time is lost (Kubey, 2011). Nevertheless, the influence of social networking sites on academic performance of students in national Open University of Nigeria is yet to be known and that is the crux of this research work.

### **Research Questions**

**The following research questions guided the study:**

To What extent do social media (facebook, twitter and linkedIn) influence the academic performance of biology students in national Open University of Nigeria?

To What extent do media sharing networks (instagram, snapchat, youtube) influence the academic performance of biology students in national Open University of Nigeria?

To what extent do discussion forums (reddit, quora, digg) influences the academic performance of biology students in national Open University of Nigeria?

### **Methodology**

The research design adopted for the study was Survey research design. The study was carried out in National Open University of Nigeria (NOUN), Enugu Study Centre. Specially, it was delineated to Biology students in the Faculty of Science Education. The population for the study comprises 352 Biology students of different levels. The sample size of the study consists of 187 Biology Education Students. Simple random sampling technique was used to select 53, 45, 40 and 49 from year one to four (1-4) respectively. Structured questionnaire was used for data collection, and organized on a four point Semantic differential scale type and weighted thus: Very High Extent (VHE) 4 points ,High Extent (HE) 3 points, Low Extent (LE) 2 points ,Very Low Extent (VLE) 1 point. . The instrument was validated by an expert in Measurement and Evaluation and two experts in Biology Education. Split half method was used to determine the reliability and an index of 0.76 was obtained. Mean was used to answer the research questions. The decision rule is that any statement with mean of 2.5 and above was regarded as high extent while a mean score below 2.5 was regarded as low extent.

## Results

### Research Question One

To what extent do social media (facebook, twitter and linkedIn) influence the academic performance of biology students in National Open University of Nigeria?

Table 1: mean response on extent social media influence the academic performance of biology students in National Open University of Nigeria.

| S/N | Items  | VHE | HE | LE | VLE | N      | Efx | X    | Decision |
|-----|--|-----|----|----|-----|--------|-----|------|----------|
|     |  | 4   | 3  | 2  | 1   |        |     |      |          |
| 1.  | Social media motivates biology students towards learning   | 69  | 93 | 14 | 11  | 187    | 725 | 4.03 | HE       |
| 2.  | Use of social media permits students to develop self efficacy in the classroom interaction                   | 66  | 87 | 10 |     | 14 187 | 531 | 2.95 | HE       |
| 3.  | Distracts students' attention towards learning and coverts it towards non-academic activities like charting. | 80  | 68 | 5  | 34  | 187    | 575 | 3.19 | HE       |
| 4.  | Encourages the quest for acquiring more knowledge by students  | 92  | 61 | 10 | 24  | 187    | 574 | 3.19 | HE       |
| 5.  | social media do not lead to academic discipline among students   | 21  | 34 | 85 | 63  | 187    | 391 | 2.17 | LE       |

It was discovered in items 1-4 with mean values above the cutoff point of 2.5. social media motivates Biology students towards learning, permits students to develop self efficacy in the classroom interaction, distracts students' attention towards learning and coverts it towards non-academic activities like charting and encourages the quest for acquiring more knowledge by

students On the other hand, it was discovered in item 5 has mean value below the cutoff point of 2.5. This means that use of social media leads to academic discipline among students.

**Research Question 2:** To what extent do media sharing networks (instagram, snapchat, Youtube) influence the academic performance of biology students in national Open University of Nigeria?

Table 2: mean response on extent media sharing networks influence the academic performance of biology students in National Open University of Nigeria.

| s/n | Items   | VHE      | HE       | LE       | VLE      | N   | Efx | X    | Decision |
|-----|---|----------|----------|----------|----------|-----|-----|------|----------|
|     | <b>Media sharing networks</b>   | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |     |     |      |          |
| 6.  | Improves literacy, communication, and reading skills among biology students | 65       | 67       | 30       | 25       | 187 | 576 | 3.08 | HE       |
| 7.  | Leads to Distance learning opportunities among students                     | 61       | 83       | 26       | 17       | 187 | 534 | 2.95 | HE       |
| 8.  | Leads to Parental involvement in students academics                         | 93       | 46       | 32       | 16       | 187 | 590 | 3.15 | HE       |
| 9.  | Enhances Communication and collaboration among students                     | 51       | 68       | 34       | 34       | 187 | 452 | 2.51 | HE       |
| 10. | Helps students in finding concrete information online                       | 121      | 61       | 2        | 3        | 187 | 653 | 3.63 | HE       |

The data got in items 6- 10 with mean values above the cutoff point of 2.5 showed that media sharing networks improves literacy, communication, and reading skills, leads to distance learning opportunities among students, enhances communication and collaboration among students, leads to parental involvement in students academics, and help students in finding concrete information online.

### Research Question 3

To what extent do discussion forums (reddit, quora, dig) influence the academic performance of biology students in national open university of Nigeria?

Table 3: mean response on extent discussion forums influence the academic performance of biology students in National Open University of Nigeria.

| s/n | Items  | VHE      | HE       | LE       | VLE      | N   | Efx | X    | Decision |
|-----|--|----------|----------|----------|----------|-----|-----|------|----------|
|     | <b>Discussion forums,</b>  | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |     |     |      |          |
| 11. | Gives distance learning opportunities among biology students   | 71       | 83       | 19       | 14       | 187 | 557 | 3.09 | HE       |
| 12. | Ensures mutually productive relationships among biology students and staff   | 83       | 71       | 20       | 13       | 187 | 577 | 3.21 | HE       |
| 13. | Increase level of understanding due to more opinions, depths and points of view provided by other biology students | 53       | 65       | 29       | 40       | 187 | 477 | 2.65 | HE       |
| 14. | Leads to proper participation of biology students in classroom activities  | 69       | 93       | 14       | 11       | 187 | 725 | 4.03 | HE       |
| 15. | Enhance speedy and easy access to information on a given topic in biology  | 85       | 63       | 21       | 34       | 187 | 599 | 3.2  | HE       |

Based on the data got in items 11-15, the respondents agreed discussion forums give distance learning opportunities among biology students, ensures mutually productive relationships among biology students and staff, increase the level of understanding due to more opinions, depths and points of view provided by other biology students, Leads to proper participation of biology students in classroom activities and enhance speedy and easy access to information on a given topic in biology.

### Discussion of Findings

The finding from Table 1 shows that the use of social media sharing networks leads to motivation of biology students towards learning, permits students to develop self efficacy in the classroom interaction. Use of social media also permits students to develop self efficacy in the classroom interaction. The finding is in line Aharony ( 2018 ) that postulated that the ability to interact



asynchronously is one of the main benefits of online learning .The finding also is in conformity with view of Chen and Bryer (2012) that it encourages the quest for acquiring more knowledge by students and provides an opportunity for students to expand their learning environment. The study also show that social networking sites distracts students' attention towards learning and coverts it towards non-academic activities like charting .This agree with findings of Osharive (2016) that addiction to social networking sites have become a distractive technology among Nigerian scholars.

From Table 2, it was discovered that media sharing networks like youtube, instagram, snapchat etc., lead to distance learning opportunities among students; enhances communication and collaboration among students; and help students in finding concrete information online. Sharing of media network improves literacy, communication, reading skills among biology students and that it leads to parental involvement in students academic. . The result agrees with Asemah and Edegoh (2019) who noted that social media is the most used news media for information sharing. Students can reflect upon their perceptions and ideas before they decide to share them in the class, which leads to better reflective responses as well as deeper learning. . Moreover, these interactions reinforce the achievement of desirable learning outcomes (Yuetal, 2018).The study finding also is in agreement with of view of Oluyola (2012) who maintained that if learning experiences are infused into a website student utilize everyday for fun, students realize that learning can and should be a part of everyday life; which does not have to be separate and unattached.

From the Table 3, it was discovered that discussion forums (reddit, Quora, dig) gives distance learning opportunities among biology students, ensures mutually productive relationships among biology students and staff, increase the level of understanding due to more options, depth and points of view provided by other biology students and leads to proper participation of biology students in classroom activities. This finding aligns with those of Kuh,( 2013) that social networking sites usage within the academic setting not only increases students' GPA, but also facilitates peer feedback on assignments and thoughtful student reflections on course content because of the ability for students to openly communicate with each other and develop strong relationships among peers. . This is also in agreement with the assertion made by Anneta (2019) that the use of social networking sites in academic coursework can increase the learning achieved by an individual student. Social networking sites support collaborative learning, which in turn helps to strengthen the creative learning process.

## **Conclusion**

Based on the findings of the study, the following conclusions can be drawn:

1. Social media motivates students towards learning, permits students to develop self efficacy in the classroom interaction among others.



2. Media sharing networks improves literacy, communication, and reading skills, leads to distance learning opportunities among students, and enhances communication and collaboration among students, leads to parental involvement among others.
3. Discussion forums give distance learning opportunities among biology students, ensures mutually productive relationships among biology students and staff, increase the level of understanding among others.

### Recommendations

The following recommendations were made:

1. Lecturers should embrace and effectively use social media to teach, give assignments to students, and create reading groups and other learning activities.
2. Bring your own Device (BYOD) should be adopted as part of educational technology by management of Nigeria higher education. As such, students should be given access to their institutions' internet services, database and library services through their devices.
3. Parents should monitor their children reading at home and encourage them to imbibe the habit of life-long readership.

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