

## Impact of Interactive Technologies on the Academic Performance of students in Federal University of Education, Zaria

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### ABSTRACT

*This study investigated the impact of interactive technologies on Academic Performance of students in Federal university of Education, Zaria. Two Research questions guided the study and descriptive survey research design was adopted by the study. The population of study consists of 105 NCE 11 students. The sample size of the study consists of 50 NCE 11 students who were randomly selected. A four-point Likert Type Rating Scale Questionnaire was the tool of analysis. The questionnaire is titled: Impact of Interactive Technologies on Academic Performance of Students (IMITAPES). The descriptive statistics of percentages and mean were used to analyze the demographic data and the research questions respectively. Research findings showed that a great number of the sampled students in Federal university of Education, Zaria, are addicted to interactive technologies. The researcher therefore recommended that interactive technologies should be used for educational purposes to create a balance between interactive technologies and academic program.*

### ARTICLE INFO

#### Article History

Received: November, 2024

Received in revised form: December, 2024

Accepted: February, 2025

Published online: March, 2025

### KEYWORDS

Interactive Technologies, Academic Performance, Students

### INTRODUCTION

Change in the interaction pattern amongst humans has broadened the scope of communication by means of technological advancement. Ufuophu and Ayobami (2012) observed that the technological tools include internet, satellite, cable data transmission and computer assisted equipment. Interactive technologies is a social structure made up of individuals or organizations called "nodes", which are tied (connected) by one or more specific types of inter-dependency, such as friendship, kinship, common interest, financial exchange, dislike, sexual relationships or relationships of beliefs, knowledge or prestige

Advancement in technological tools has turned the world to a global village for Interactive networking. Twitter, Yahoo Messenger, Facebook Messenger, WhatsApp messenger, 2go messenger, Skype, Google talk, Google Messenger, and Instagram are examples of interactive technologies. Asemah and Edegoh, (2012) pointed out that these networking sites are

used by most people to interact with old and new friends, physical or friends online.

In recent years, two-third of the world's internet population visits interactive technology networking or blogging sites, thus serving as a communication and connection tool. Interactive technologies networking site are 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 Boyd, Densten, Chin, Diamond & Morgenthaler 2019).

Academic performance or achievement is the outcome of education, the extent to which a student, teacher or institution has achieved their educational goals. 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 (Annie, Howard & Mildred, 1996).

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Extant literature suggests that there exists a correlation between Social media usage and the academic performance of students in tertiary institutions. However, there seem to be the upside and downside impact on students. On the upside for instance, It helps people to be better informed, enlightened, and keeping abreast with world developments. The darker side within technological evolution 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.

In line with the aforementioned, Olubiya (2012) noted that these days' students are so engrossed in the social media that they are almost 24 hours online. Even in classrooms and lecture theatres, it has been observed that some students are always busy pinging, WhatsApp chatting or Facebooking, while lectures are on. Times that ought to be channeled towards learning, academic research and innovating have been crushed by the passion for meeting new friends online, and most times busy discussing trivial issues.

Hence most students' academics suffer setback as a result of distraction from the social media. Obi (2012), observed that the use of these sites also affects students' use of English and grammar. The students are used to short forms of writing words in their chat rooms; they forget and use the same in the classrooms. They use things like 4 in place of for, U in place of You, D in place of the etc. and this could affect their class assessment.

Furthermore, students' addictiveness to interactive technology networks has been part of discussion in recent times and which have imparted on their academic performance. Instead of students reading their books, they spend their time chatting and making friends via the social media and this might definitely have influence on their academic performance, because when you do not read, there is no way you can perform well academically. It is a common sight to see a student chatting in sensitive and highly organized places like church, mosque and lecture venues. Some are so carried away that even as they are walking along the high way, they keep chatting. It

is against this backdrop this study examined the influence social media have on student's academic performance with specific reference to students of Federal university of Education, Zaria.

### **Objectives of the Study**

The general objective of this study is to examine the impact of interactive technology on the academic performance of students in Federal University of Education, Zaria.

Specifically, the study seeks to;

1. Examine the level of students' addictiveness to interactive technologies and the impact on their academic performance in Federal university of Education, Zaria.
2. Ascertain how the use of interactive technologies has impacted the academic performance of students in Federal University of Education Zaria.

### **Research Questions**

The following research questions were raised;

1. To what extent does addictiveness to interactive technologies impact their academic performance of students in Federal University of Education Zaria?
2. How has the use of interactive technologies impacted the academic performance of students in Federal university of Education Zaria?

### **LITERATURE**

This section presents prior researches in the study area. The concept of innovative technology is explained based on the views of other researchers and empirical studies are thereafter reviewed.

### **The Concept of Social Media**

Interactive technology is that means that employs mobile and web-based technology to create highly interactive platforms via which individuals and community share, co-create, discuss and modifies user-generated content (Kietzmann, 2012). Interactive technology is a phrase being tossed around a lot. It is a website

that does not just give you information but interact with you while giving you information. It is a group of internet based application that allows the creation and exchange of users generated content. It is easy to confuse interactive technology with social news because we often refer to members of the news as the media. Adding to it, that interactive news site is also interactive technology site. Some interactive website includes:

1. **Social Bookmarking**: interact by tagging website and searching through website book marked by others (Blink list, simple).
2. **Social News**: interact by voting for articles and commenting on them (Digg,propello).
3. **Social Networking**: interact by adding friends, commenting on photo and profiles, sharing groups for discussions (Facebook, 2go)
4. **Social Photo and Video Sharing**: interact by sharing photos or videos and commenting on the user submission. (Youtube and Fliki).
5. **Wikis**: interact by adding articles and editing existing articles. (Wikipedia,wikia).
6. **Social media** refers to the means of interaction among people in which they create, share, exchange and comment among themselves in different networks.

Andreas and Michael (2010) are of the opinion that social media is a group of internet based application that builds on the ideological foundation and allows the creation and exchange of users – generated content. Social media has become one of the major channel of chatting through platforms such as 2go,blogger and wikia. There has been an increase in the mobile interactive technology which has created new opportunity for browsing.

The internet usage effect of interactive technology, in views of Nielsen (2012) is that, students continue to spend more time on the interactive technology than any site. The total time spent on interactive technology across mobile devices increased by 37%, 121 billion minutes in

July 2012 compared to 88 billion minutes in July 2011.

Kaplan and Haenlein (2020) classified interactive technology into six different classes as follows:

1. Collaborative Project (Wikipedia)
2. Blogs and Micro blogs (Twitter)
3. Content Communities (Youtube)
4. Social Networking Site (Facebook; 2go)
5. Virtual Game World (World of war craft)
6. Virtual Second World (Second life)

Technology includes the blogs, picture sharing, music sharing, crowd sourcing, e-mail, instant messaging and voice over. These services could be integrated via social network aggregation platforms.

### Interactive technology and Education

The advent of interactive technology platforms may also be impacting the way in which learners engage with technology in general. For a number of years, Prensky (2020) dichotomy between digital natives and digital immigrants has been considered a relatively accurate representative of the ease with which people of a certain age rate, in particular, those born before and after 1980, use technology.

Interactive technology networking and their educational uses are of interest to many researchers.

Living Stone and Brake (2020) in their opinion said interactive technology networking site, like much else on the internet representing a moving target for researchers and policy makers'. Recent trends indicate that 47% of American adults use social network. A national survey in 2019 found that 37% of online teenagers use social networking site which increased to 55% three years later (Len Hart, Purcell, Smith and Zickuhr, 2010). It has also, shown that it provides opportunity within professional education but however, there are constraints in such areas.

### Student's addictiveness to interactive technology

On the internet, students engage in a variety of activities some of which may be



potentially addictive. (kuss and Griffiths, 2011). The mass appeal of interactive technology on the internet could be a cause for concern, particularly when attending to the gradually increasing amount of time students spend online. Undergraduates spend more time on Facebook, Twitter and other social media through smart phones that are now in abundance among these youths. Many students cannot go for two-three hours without checking and updating their profiles on this interactive technology even at the detriment of other activities such as educational and career pursuit. (Morahan-Martin and Schumacher, 2000) explain interactive technology addiction as the excessive use of the internet and the failure to control this usage which seriously harms a person's life.

In an article on the Daily Trust newspaper, Itodo (2017) posits that there seem to be an alarming rate of interactive technology obsession among students today; a trend that could affect their academic, social and spiritual lives negatively if not properly controlled. Many concerned parents have expressed grave concern that they could hardly get the attention of their children and wards, as they seem to have been carried away by the fascinating world of interactive networks. Some youths are such social freaks that they have now carved out for themselves a world of fantasy and illusion for detached from reality.

It has been observed in recent times that students have unlimited access to the internet as well as the social media. Students connect with computer to send and receive information's anywhere on the globe. The manufacturing and distribution of equally sophisticated cellular phones has complicated the situation, as students no longer need to visit a cybercafé before they send and receive messages. Some schools are so equipped that there is internet connection made available within the school premises as well as in the library. Online Wikipedia and blogs are the main resource centers for students as attention have been shifted from making research in the library to overall dependence on theses social platforms. It is a common thing to see a student reading in the library and putting the books aside on hearing the sound of a ping on the phone.

According to a joint study by Campus2Careers and Study Breaks on the use of mobile devices among students discovered that, an average undergraduate spend 3.6 hours a day with their cell phones and smartphones, while spending less time with computers, TV's, handheld gaming devices and e-readers.

### **Impact of interactive technology on Students Academic Performance**

Though there have been many social, economic, and environmental factors that have added to the pressure of university students in the past ten years, the drop-out rate for students is still a major national problem (Bowen, 2018). Current statistics show that university students in Nigeria are under increased pressure due to higher academic standards in other countries, and it has become more important than ever for educators to encourage graduation and further education (Bowen, 2018). However, with more and more students being preoccupied with interactive technology how will this affect their studies? It is estimated that even those students who do graduate high school, one out of three does not have possess the knowledge and skills that would lead him or her to the next level, such as college or an advanced trade school (Bowen, 2018).

The top academic areas that many school professionals are concerned about are English and advanced literacy (Williams, 2018). The current generations of teens live in a fast-paced technological world with many different types of communication happening all at the same time. For example, he or she may be on the computer on a SNS, while also talking on the phone, sending instant messages to a friend, and emailing someone else all at the same time (Williams, 2018). While there may be some advantages to this, such as the teen learning how to type faster and multi-task many things at once, there may also be a breakdown in much of that communication (Williams, 2018).

Literacy has also taken a dive in the past decade, which has caused many educators to question what can be done to help students improve their reading, writing, speaking, and thinking- all of the most basic skills for a successful



future (Wise, 2019). As one researcher stated, "Literacy is, in reality, the cornerstone of student achievement, for any student, in any grade" (Wise, 2019, 373). The question that many school professionals have with regards to communication is whether or not a tertiary institution student is able to follow school curriculum in courses like English or Language Arts (Williams, 2018). Also, will it be possible to teach them without the use of multi-tasking and using new forms of technology.

Interactive technology engages students and have to be examined as entrepreneurs of understanding. The medium of internet is marketing with increase in its programs. The interactive character of online conditions has extended with social networking. Hooking up through social networking began as being a niche activity, though time it's a phenomenon. The web sites are employed in many ways like developing metropolitan areas, speaking, blogging etc. Additionally different institutions even nowadays are developing groups on several Websites (Saba 2013).

The improved usage of Websites has become a worldwide phenomenon for quite some time. What began out as being a hobby for several computer literate people has converted to a social norm and existence-style for individuals from around the globe (Nicole 2017). Teens and teenagers have especially recognized these internet sites to be able to contact their peers, share information, reinvent their personas, and showcase their social lives (Nicole, 2007). While using the increase of technology helpful for getting together with others along with the recognition on the internet, Internet sites are now being an activity that's done mainly on the web, with Websites (Coyle 2008).

According to U Khan (2019), interactive technology users often time experience poor performance academically. Similarly, He posits that social media is negatively associated with academic performance of student and is a lot more momentous than its advantages. Internet addiction consequently gave rise in internet usage within the last couple of decades.

Nalwa (2013). recommended that addicted user prefer using internet setting back their personal and professional responsibilities which ultimately leads to poor academic performance. In the same vein, Karpinski (2019) pointed out that social media users devoted lesser time to their studies in comparison to nonusers did and subsequently had lower GPAs

## METHODOLOGY

The research design adopted for the study is a descriptive survey. This design is considered apt as Janieson (2004) asserted that it enables the researcher to generate data through the standardized collection procedures based on highly structured research instrument(s) and well defined study concepts and related variables. The population for this study comprised full time NCE 11 students of the department of Business Education department, Federal university of Education Zaria. The total population stood at 105 NCE full time students. 50 students were randomly selected, which forms the sampling size of the study.

A well-constructed and self-developed questionnaire titled "Impact of Interactive Technology on Academic Performance of Students (IMITAPES)" was used to get the desired information from the students. The questionnaire is a closed-ended format based on Likert scale of Agree and Disagree. The researchers personally administered the instrument with the help of two (2) research assistants. Five days was used for the exercise. Responses from the respondents was analyzed using the descriptive statistics of percentage and mean.

## RESULTS

**Research Question 1:** To what extent does students' addictiveness to interactive technology influence their academic performance in Federal University of Education Zaria?



**Table 1:** Students Addictiveness to interactive technology and Academic Performance

S/N	RESPONSE				Total	Mean	Remark
	SA	A	D	SD			
1.	25(100)	15(45)	5(10)	5(5)	50(160)	3.20	Positive
2.	14(56)	17(51)	6(12)	13(13)	50(132)	2.64	Positive
3.	18(72)	17(51)	2(2)	13(13)	50(140)	2.80	Positive
4.	12(48)	21(63)	10(20)	7(7)	50(138)	2.76	Positive
5.	22(88)	15(45)	7(14)	6(6)	50(153)	3.06	Positive

Source: Field Survey, 2023

Table 6 above revealed that all the items has mean value greater than the cut-off mean of 2.50, thus they were tagged positive. This means that students' addictiveness to social media affect this academic performance negatively, this may lead to poor academic performance.

**Research Question 2.** How has the use of interactive technologies Impact the academic performance of students in Federal University of Education Zaria?

**Table 2** Use of interactive technology and Students' academic performance

S/N	RESPONSE				Total	Mean	Remark
	SA	A	D	SD			
11.	7(28)	10(30)	15(30)	18(18)	50 (106)	2.12	Negative
12.	11(44)	16(48)	7(14)	16(6)	50(122)	2.44	Negative
13.	18(72)	17(51)	2(4)	13(13)	50(140)	2.80	Positive
14.	9(36)	8(24)	15(30)	18(18)	50(108)	2.16	Negative

Source: Field Survey, 2023

Table 2 above revealed that all the items but item 13 has mean value less than the cut-off mean of 2.50, the use of social media has not improved the academic performance of Business Education students in FCE, Zaria. Findings from table 1 revealed that addiction to online interactive technology is a problematic issue that affects Business Education students' academic life. Online social media distracts them from my studies as they spent more time online than the number of hours spent reading their books. Student's poor academic performance was attributed to their addictiveness to interactive technology sites according to the study.

Interactive technology have become a major part of the lives of the students of today. The finding of this study shows that Business Education Student's exposure to interactive technology has significant effect on students' academic performance. This corresponds with the findings of Olubiyi (2012) which states that these days' students are so engrossed in the interactive

technology that they are almost 24 hours online. Even in classrooms and lecture theatres, it has been observed that some students are always busy ping, 2going or Facebooking, while lectures are on. Times that ought to be channeled towards learning, academic research and innovating have been crushed by the passion for meeting new friends online, and most times busy discussing trivial issues. Hence most students' academics suffer setback as a result of distraction from the social media.

The use of social media has affect the academic performance of Business Education students in Federal University of Education Zaria, negatively as Wikipedia, Yahoo, and blogging sites were inappropriately used for chatting instead of research purposes as revealed by table 2. This goes in line with the observations of Nicole, (2017) which noted that, the improved usage of Websites has become a worldwide phenomenon for quite some time. What began out as being a hobby for several computer literate people has



converted to a social norm and existence-style for individuals throughout the world.

## CONCLUSION

The result from the findings of this study showed that, though interactive technology have negative impact on students such as lack of privacy, distracting students from their academic work, taking most of their productive time, however, they also have benefits and can be used appropriately. For instance, students can form online communities in order to plan for a project, have group discussions about class material, or use the so interactive technology as a way to keep in contact when a student who has been absent needs to be updated on current academic information. The findings of this study showed some noteworthy results. The first independent variable affected the academic performance of students, that is, interactive technology participation was negatively related with students' outcome, while the other independent variables were positively related with students' outcome.

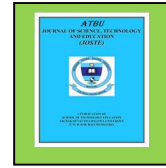
## RECOMMENDATIONS

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

1. Teachers should ensure they use the interactive technology as a tool to improve the academic performance of students in schools.
2. The use of interactive technology by students should focus on the academic relevance of those sites instead of using them for negative purposes.

## REFERENCES

- Annie, W., Howard W.S. and Mildred M. (1996), *Achievement and Ability Tests - Definition of the Domain*. Educational Measurement, 2, New York: University Press.
- Bowen, G. (2008). *Preventing school dropout: The eco-interactional Developmental model of school success*. The Prevention Researcher, 3, 7-9. Retrieved from <http://www.TPRonline.org> on 3<sup>rd</sup> May, 2019.
- Coyle, C., and Vaughn, H. (2018). *Social networking: Communication revolution or evolution*. Bell Labs Technical Journal, 13(2), 13-17.
- Hoyle, E. (1986). *Policies of School Management*, Suffolk: The press Ltd.
- Kaplan, A. M., and Haenlein, M. (2010). *Users of the world, unite! The challenges and opportunities of Social Media*. Business horizons, 53(1), 59-68.
- Karl, K. and Peluchette, J. (2018). *Social networking profiles: An examination of student attitudes regarding use and appropriateness of content*. CyberPsychology and Behavior, 11, 95-97.
- Karpinski, C. (2019). "A description of Facebook use and academic performance among undergraduate and graduate students," paper presented at the Annual Meeting of the American Educational Research Association, San Diego, Calif.
- Kist, W. (2012). *Class get ready to tweet: Social media in the classroom*. Our Children. Retrieved 1/3/2019 from <http://files.eric.ed.gov/fulltext/EJ9913>
- Kist, W. (2012). *I gave up myspace for lent: New Teachers and Social Networking Sites*. Retrieved 9/3/2019 from <http://files.eric.ed.gov/full>
- Kietzmann, H. (2012). "Social media? Get serious! Understanding the functional building blocks of social media". Business Horizons 54: 241-251.
- Kuppuswamy, S., and Narayan, P. (2020). *The Impact of Social Networking Websites on the Education of Youth*. International Journal of Virtual Communities and Social Networking, 2(1), 67-79.
- Kuss D. J and Griffiths M. D. (2011). *Online Social Networking and Addiction-A Review of the Psychological Literature* Int. J. Environ. Res. Public Health 8, 3528- 3552.



- Lenhart, A. (2017). *Teens, Privacy & online social networks: How teens manage their online identities and personal information in the age of My Space*. Washington, DC: Goigi Books.
- Livingstone, S. (2108). *Taking risky opportunities in youthful content creation: Teenagers' use of social networking sites for intimacy, privacy and self-expression*. New Media Society, 10, 393-411.
- Morahan-Martin, J., & Schumacher, P. (2020). *Incidence and correlates of pathological Internet use among college students*. Computers in Human Behavior, 16, 13–29.
- Nalwa, K. and Anand, A. P. (2013). *Internet addiction in Students: a cause of concern*. Cyber psychology and Behavior, 6(6), 653-659.
- Nicole, C. S. (2017). *The benefits of Face book "Fiends;" Social Capital and College Students' Use of Online Social Network Sites*. Journal of Computer-Mediated Communication., 6(6), 65-69.
- Obi N. C., Bulus L. D. Adamu G. M. & Sala'at A. B. (2012). *The need for Safety Consciousness among Youths on Social Networking Sites*. Journal of Applied Science and Management (JASM) 14(1).
- Olubiyi'S. (2012), *social media and Nigeria Youth burden*. Retrieved 2/5/2019 from <http://bluepringng.com/2019/05/social-media-and-nigerian-youth>
- Prensky, M, (2001) *On the Horizon*. MCB: University press,
- Williams, B. (2018). *Tomorrow will not be like today: Literacy and identity in a world of multiliteracies*. Journal of Adolescent and Adult Literacy, 51, 682-686.
- Wise, B. (2019). *Adolescent literacy: The cornerstone of student success*. Journal of Adolescent and Adult Literacy, 52, 369-375.