

INFLUENCE OF TERTIARY STUDENTS' USAGE OF ONLINE COLLABORATIVE TOOLS FOR LEARNING AND IMPROVING STUDENTS' ACADEMIC PERFORMANCE IN KOGI STATE, NIGERIA

By

**Tolorunleke, Emmanuel Adebayo (Ph.D.)¹, Haruna, Muhammad Muftawu²
and Olugbade, Damola (Ph.D.)³**

^{1 & 2} Department of Educational Foundations,
Faculty of Education,
Prince Abubakar Audu University, Anyigba

³Centre for Languages and General Studies,
First Technical University, Ibadan

Corresponding Author: tolorunleke.ae@ksu.edu.ng

Abstract

Online collaboration refers to the tools and platforms people use to work together within a digital environment. It also refers to how people work together on the internet. It can also be referred to investigate as innovative and instructional tools that can be used to supplement traditional teaching and learning for the enhancement of students' academic performance. This study was carried out to in the influence of tertiary students' usage of online collaborative tools for learning and improving students' academic performance in Kogi State, Nigeria. The study adopted a descriptive research decision using the survey method. The study sample was drawn from three (3) tertiary institutions in Kogi state, Nigeria. A total of 382 respondents were sampled, but 370 of the 382 questionnaires were properly filled and returned. The respondents were 370 students. A researcher designed questionnaire was utilized in collecting data while mean was used to analyse the data collected. The results of the study indicated that Facebook, LinkedIn, Google Plus (Google +), To Go, Friendster, Twitter, Myspace, YouTube, Blogger.com WhatsApp are the kind of online collaborative tools available, and which tertiary students utilize for learning in Kogi State. The study concluded that Facebook, LinkedIn, Google Plus (Google +), To Go, Friendster, Twitter, Myspace, You Tube, Blogger.com WhatsApp and Slideshare are the kind of online collaborative tools available to tertiary students for learning in Kogi State. Based on the findings, it was however recommended that tertiary students should be encouraged to utilize online collaborative tools for learning so as to improve their academic performance.

Keywords: Influence, utilization, online collaborative tools, learning, technology-supported learning

Introduction

Education is a light that has shown mankind the right direction. The purpose of education is not just making a student literate but adds thinking, knowledgeable and self-sufficiency. Education is fundamental to all-round development and growth of every human

being. The researchers further stressed that it is beneficial to incorporate all facets of education - spiritual, moral, cerebral, artistic, physical, and labor. When preparing a child for school. When there is willingness to change, there is hope for progress in any field. Education can be seen as any act or experience that has a formative effect on the mind, character and physical ability of an individual. Some scientific advances have demonstrated that education may enhance psychological well-being, mental health, and intrinsic motivation. According to Schnepf, Boldrini, and Blasko (2022), a high-quality education can significantly reduce the likelihood of feeling lonely, in-returns, helping an individual's mental health.

Education in Nigeria is adopted as an instrument "per excellence" for effecting national development National Policy on Education (Federal Republic of Nigeria, FRN 2014). The importance of education to mankind cannot be overemphasize, most especially in this era of science and technology breakthrough. Education is a necessity and a worthwhile venture for the development of the nation (UNESCO, 2006). Amaele (2003) described education as the total development of an individual child, through acceptable methods and techniques, according to abilities and interest, as well as the needs of the society to take rightful place and the child's meaningful contribution towards the development and advancement of his society. Information and communication technology has produced changes in the economic, political, and educational sphere of lives such that the use of ICT has become so important that it is one of the significant indices of national and economic development. It is becoming the basic building block of modern society. Globally, the ICT world has initiated a transition of emphasis from analogous educational research based technological development to that of digital knowledge-based technological development in education (Jude & Dankoro, 2012).

Technology has been known to play important role especially among the education technocrats and so the increasing use of technology to meet the vast educational needs of our expanding world has resulted to the heightened application in the learning experiences within the school environment. In their research, Mitrović, Božić and Takači (2022) explored whether or not the use of technology in the classroom influences student involvement and how classroom engagement activities affect learning results. Their findings showed that, in comparison to when technology weren't employed in the classroom, pupils were inspired to participate in more positive, as well as passive and active, activities. In their opinion, digital technology may help advance learning in higher education. This corroborates Bonk (2002) assertion that the use of a more collaborative environment in which students interacts with their instructors as well as with the fellow students has become more pronounced because of the purported learning benefits for the students. There is a considerable use and application of technology for instructional purpose in the electronic classroom web-based courses and compressed video has greatly increased the breadth and scope of educational outreach (Mangan, 2001).

The need for collaboration between teachers and students with the use of online collaborative tools for learning in an instructional setting is very vital because it creates an avenue for the students to achieve their educational goals within and outside the classroom environment. Following a humanistic perspective that considers the interactions of social, cultural, and technical systems, González-Sanmamed, Muñoz-Carril, and Santos, (2019), González-Sanmamed, Sangrà, Souto-Seijo, and Estévez, (2020) promoted the integrated use of digital media. Online collaborative tools afforded teachers and students to engage in institutional collaboration within and outside learning environment. *Jane* (2009) described collaboration as an interactive process that engages two or more participants who work together to achieve outcome they could not accomplished independently. Online collaborative tools are online innovative and instructional tools that can be used to supplement traditional teaching

and learning for the enhancements of students' positive academics performance (Mishra & Miles, 2011).

Online collaboration using (ICT) platforms and media tools are essential in academia due to their potential for fostering cooperative knowledge development (Al-Emran, 2019, 2021; Lyons, Lobczowski, Greene, & Whitley, 2020; Tarun, 2019). Unfortunately, the application of online collaborative tools for learning, particularly in Nigerian universities is still at its infancy. The majority of Nigerian tertiary students are neither familiar, nor skilful in employing these tools in the process of learning. It is of high importance that the conventional learning method should be supplemented with online collaborative tools such as Facebook, Twitter, YouTube, WhatsApp and so on which can stimulate and arouse students' interest to learn effectively. This will greatly influence their academic performance positively and consequently facilitate learning. Most Nigerian university students utilize these online collaborative tools for entertainment purposes (listening to music, chatting on social media sites) which distract them from learning (Focheri & Molfino, 2000).

Purpose of the Study

The main purpose of this study examined the influence of tertiary students' usage of online collaborative tools for learning in Kogi State, Nigeria: Specifically, this study:

1. examined different kinds of online collaborative tools available for learning among tertiary students' and improving students' academic performance in Kogi State;
2. investigated the prominent online collaborative tools for learning among tertiary students and improving students' academic performance in Kogi State;
3. determined the influence of gender on tertiary students' attitude towards the use of online collaborative tools for learning and improving students' academic performance in Kogi State.

Research Questions

1. What are the different kind of online collaborative tools available for learning among tertiary students' and improving students' academic performance in Kogi State?
2. What kind of online collaborative tools tertiary students' use for learning and improving students' academic performance in Kogi State?
3. Does gender influence tertiary students' usage of online collaborative tools for learning in Kogi State.

Research Hypothesis

There is no significant difference between male and female tertiary students' use of online collaborative tools for learning and improving students' academic performance in Kogi State.

Methodology

This study was descriptive research of the survey type. A researcher designed questionnaire was used to gather useful and relevant information on the influence of tertiary students' usage of online collaborative tools for learning, in Kogi State. The population for this study were all tertiary students in Kogi State. 382 respondents were sampled across the tertiary institutions. The research instrument was a researcher designed questionnaire. The questionnaire contained Section A, B and C. Section A consist of a demographic data of the respondents while Section B sought information on the online collaborative tools available for learning and Section C investigate the Online Collaborative tools used by tertiary students in Kogi State. The questionnaire was presented in clear and simple language to enable respondents easily give response to the questions. Data obtained from this study was subjected to descriptive

and inferential statistics. The descriptive statistics of percentage and inferential statistics was used to answer the research questions and *t*-test was used at 0.05 alpha level of significance to test the hypothesis. The data collected were coded and analysed using Statistical Package for Social Sciences (SPSS) version 23.0.

Results

Table 1

Percentage distribution of respondents by institution

Institution	Frequency	Percentage (%)
School A	183	49.5
School B	102	27.6
School C	85	22.9
Total	370	100

Table 1 showed the percentage distribution of the respondents by the institutions. The table revealed that the respondents of 183 (49.5%) of the respondents were from School A, 102 (27.6%) were School B and 85 (22.9%) respondents were from School C. It is deduced that Prince Abubakar Audu University student has a larger no of the respondents for the study.

Table 2

Percentage distribution of respondents by gender

Level	Frequency	Percentage (%)
Male	201	54.3
Female	169	45.7
Total	370	100

Table 2 revealed the percentage distribution of respondents by gender, and this shows that 201 (54.3%) of the respondents were male while the female respondents were 169 (45.7%).
Research Question 1: What are the different kind of online collaborative tools available for learning among tertiary students' and improving students' academic performance in Kogi State?

Table 1

Availability Online Collaborative Tools for Learning

S/N	Online Collaborative Tools	A	NA	S/N	Online Collaborative Tools	A	NA
1.	Facebook	361	9	12.	LinkedIn	200	170
2.	Google Plus (Google +)	305	65	13.	Bebo	23	347
3.	To Go	259	111	14.	Friendster	188	182
4.	Twitter	369	1	15.	Orkut	65	305
5.	Flicker	182	188	16.	Myspace	186	184
6.	YouTube	344	26	17.	Blogger.com	314	56
7.	Digg	50	320	18.	Ning	88	282
8.	Technorah	12	358	19.	Twoo	0	370
9.	Scribd	36	334	20.	SlideShare	333	37
10.	Rogo	8	362	21.	Vimeo	45	325
11.	Hi5	101	269	22.	WhatsApp	370	0

Note: A = Available & NA = Not Available

Online collaborative tools available for learning among tertiary students in Kogi State was investigated and the result is being presented in Table 1. The result revealed that Facebook is available to 361 respondents, Google Plus (Google +) is available to 305 respondents, 259 respondents have To-Go application. Also 369 respondents have Twitter but 182 out of the 370 respondents have Flicker. YouTube was available to 344 respondents but Digg, Technorah, Scribd, Rogo and Hi5 is not available to majority of the respondents. Others followed suit as shown in Table 1. From the result of findings, it was established that Facebook, LinkedIn, Google Plus (Google +), To Go, Friendster, Twitter, Myspace, YouTube, Blogger.com, SlideShare and What's App are the kind of online collaborative tools available to tertiary students for learning in Kogi State. Research Question 2: What kind of online collaborative tools tertiary students' use for learning and improving students' academic performance in Kogi State?

Table 2

Utilization of online tools by tertiary education students for learning

S/N	Online Collaborative Tools	U	NT	S/N	Online Collaborative Tools	U	NU
1.	Facebook	361	9	12.	LinkedIn	200	170
2.	Google Plus (Google +)	300	70	13.	Bebo	13	357
3.	To Go	190	180	14.	Friendster	185	185
4.	Twitter	369	1	15.	Orkut	15	355
5.	Flicker	162	198	16.	Myspace	186	184
6.	YouTube	344	26	17.	Blogger.com	321	49
7.	Digg	10	360	18.	Ning	88	282
8.	Technorah	1	369	19.	Twoo	0	370
9.	Scribd	6	364	20.	SlideShare	350	20
10.	Rogo	1	369	21.	Vimeo	45	325
11.	Hi5	15	355	22.	WhatsApp	370	0

Note: U = Utilized & NA = Not Utilized

The kind of online collaborative tools which tertiary students utilize for learning in Kogi State was investigated and the result is being presented in table 2. The result revealed that 361 respondents out of the 370 respondents sampled utilize Facebook for learning, 300 respondents utilize Google Plus (Google +) for learning, 190 respondents utilize To-Go application for learning. Furthermore, 369 respondents utilize Twitter for learning but 162 out of the 370 respondents utilize Flicker for learning. 344 respondents utilize You-Tube for learning. but Digg, Technorah, Scribd, Rogo and Hi5 is not being utilized by majority of the respondents. Other results on the kind of online collaborative tools utilized for learning were shown in Table 2. From the result of findings, it was established that the kind of online collaborative tools which tertiary students utilize for learning in Kogi State includes Facebook, LinkedIn, Google Plus (Google +), To Go, Friendster, Twitter, Myspace, YouTube, Blogger.com WhatsApp and SlideShare.

Research Question 3: Does gender influence tertiary student use of online collaborative tools for learning.

Table 3

Gender influence on tertiary student use of online collaborative tools for learning

S/N	Online Collaborative Tools	Utilization		Total
		Male	Female	
1.	Facebook	261	100	361
2.	To Go	100	90	190
3.	Flicker	82	80	162
4.	YouTube	143	201	344
5.	LinkedIn	90	110	200
6.	Friendster	85	100	185
7.	Myspace	88	98	186
8.	Blogger.com	121	200	321
9.	SlideShare	156	194	350
10.	WhatsApp	190	180	370

The influence of gender on tertiary students' use of online collaborative tools for learning was investigated in research question 3. The results of the findings revealed that 261 males and 100 females utilise Facebook for learning, 100 males and 90 females make use of To Go for learning and 82 males and 80 females preferred Flicker for learning. Also, 143 males and 201 females utilize You Tube for learning, 90 males and 110 females utilise LinkedIn for learning. 85 males and 100 females utilise Friendster in their learning, 88 males utilise Myspace for learning while 98 females utilise Myspace for learning. 121 males and 200 females utilise Blogger.com for learning, 156 males and 194 females utilize SlideShare for learning, Lastly 190 males and 180 females utilize WhatsApp for learning. The differences showed that there is gender influence in the use of online collaborative tools for learning among tertiary students.

Hypothesis: There is no significant difference between male and female tertiary' use of online collaborative tools for learning and improving students' academic performance in Kogi State.

Table 4

Significant Difference between Male and Female Tertiary Students' Use of Online Collaborative Tools for Learning.

Gender	N	X	SD	Df	t	Sig (2-tailed)	Remarks
Male	201	23.67	34.23				
				368	2.39	0.86	Not Rejected
Females	169	23.03	33.96				
Total	370						

The significant difference between male and female tertiary students use of online collaborative tools for learning was tested in hypothesis one and the result was presented in table 4. The findings showed that $t(368) = 2.39$ and $p > 0.86$. Thus, the hypothesis was not rejected. Thus, there was no significant difference between male and female tertiary students use of online collaborative tools for learning. This implies that male students in tertiary institutions in Kogi state use of online collaborative tools for learning does not differ from their female counterparts.

Discussion of Findings

This study examined the influence of tertiary students' usage of online collaborative tools for learning and improving students' academic performance in Kogi State, Nigeria. Result of the findings from this study based on research question one shows that Facebook, LinkedIn, Google Plus (Google +), To Go, Friendster, Twitter, Myspace, YouTube, Blogger.com WhatsApp and SlideShare are the kind of online collaborative tools available to tertiary students for learning in Kogi State. This, according to Mangan (2018), online tools have greatly increased the performance of students by using online collaborative tools for learning. These tools can significantly increase students' academic performance if utilised appropriately. The findings also revealed that online collaborative tools which tertiary students utilize for learning in Kogi State includes Facebook, LinkedIn, Google Plus (Google +), To Go, Friendster, Twitter, Myspace, YouTube, Blogger.com WhatsApp, and SlideShare which improves their academic performance. The finding of the study further affirmed the study of Urtel, et al (2006), which found out that on-line tools can greatly increase students' academic performance. The findings also revealed that gender influence tertiary use of online collaborative tools for learning. However, it was found out that there was no significant difference between male and female tertiary students use of online collaborative tools for learning.

Conclusion

The study concluded that Facebook, LinkedIn, Google Plus (Google +), To Go, Friendster, Twitter, Myspace, YouTube, Blogger.com WhatsApp, and SlideShare are the kind of online collaborative tools available to tertiary students for learning in Kogi State. These collaborative tools have improved students' academic performance through collaborations, research and downloading of materials. The kind of online collaborative tools which tertiary students utilize for learning in Kogi State includes Facebook, LinkedIn, Google Plus (Google +), To Go, Friendster, Twitter, Myspace, YouTube, Blogger.com WhatsApp and SlideShare. Gender influence tertiary students use of online collaborative tools for learning. There was no significant difference between male and female tertiary students use of online collaborative tools for learning.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Government at all levels should make online collaborative tools available to all tertiary students for learning which will improve their academic performance.
2. Tertiary students should be encouraged to use online collaborative tools for learning.
3. Determination should be made to ensure that both male and female utilize online collaborative tools for learning in Nigerian tertiary universities.

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