Students' Usage of WhatsApp Instant Messenger as a Supporting Tool for Learning in Kaduna State, Nigeria

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ABSTRACT

The study was carried out to examine the extent of Students' Usage of WhatsApp Instant Messenger as a Supporting Tool for Learning in Kaduna State, Nigeria. A survey research design was adopted in the study. Five tertiary institutions were randomly selected based on security guarantee for the study. All final year students in tertiary institutions in Kaduna State formed the population of the study, and the stratified random sampling method was used to select a sample of 598 students in exit classes for the study. Five research questions were used as a guide in the study. A structured questionnaire titled; Impact of WhatsApp Instant Messenger on Learning Questionnaire (IWIMOLQ) was used to elicit information from the respondents. 598 copies of the research instrument were administered with the support of five research assistants (who were students in the institutions). The questionnaires were completed and returned within ten weeks. The information collected was coded accordingly into statistical data and analyzed using Mean (M) and Standard Deviation (SD) statistical tools. Mean scores of 2.5 and above (≥2.5) were accepted while mean scores below 2.5 (< 2.5) were rejected. The major finding of the study is that students are already familiar with and are using the different WhatsApp features for different purposes, thus making its acceptance and integration as a support tool for learning a seamless process. The study concludes that the usage of WhatsApp and other social networking platforms by teachers and students should be encouraged in learning institutions. The study, therefore, recommends inter alia, developing user friendly WhatsApp functionalities with affordable mobile Internet services.

Keywords: *Student; WhatsApp; support; tool; learning; Nigeria*

INTRODUCTION

Technological developments provide everywhere and anytime learning opportunities. The use of computer and mobile technologies has considerably changed the way people utilize information. Therefore, today, technology plays a significant role in educational environments in which emerging technological tools are used (Kartal, 2019). The critical need everywhere in the world is for education to prepare students to lead successful, fulfilling lives. In today's world, it means providing them with relevant educational experiences that nurture their passions, problem-solving abilities, and higher level thinking skills, including critical thinking and creativity (Bere, 2012). This noble expectation is being threatened in Nigeria by a myriad of problems like the outbreak of epidemic and pandemic diseases (Ebola and COVID-19), natural disasters (floods), communal conflicts, trade related disputes and insecurity (insurgency/banditry). These issues have led to intermittent or prolonged closure of schools and consistently disrupted the smooth academic processes of the education system in the country. In some circumstances, the mitigating measures introduced to curb the spread of the diseases like COVID-19 led to the closure of schools and forced learning

institutions to find alternatives to traditional learning models, such as blended and online learning, to continue with their teaching and learning (Letsela & Bekithemba, 2020).

These unprecedented trends, according to Durgungoz & Durgungoz (2021), have increased the need for newer, more innovative, and virtual ways of learning. In recent years, methods of teaching are gradually transforming from the traditional face-to-face classroom to an online learning environment that defies the need for synchronous time and geographical distance. Education has developed with the use of social networking technology. Students now increasingly use technological advances to enhance their learning and for the purpose of grasping excellent academic performance (Dror, 2008). Modern technology in communication has no doubt helped to serve as a means of connecting people and as a medium of interaction in the social world and educational arena. As a consequence, education has been exploring the exciting opportunities that technologies have brought to institutions, educators and students (Tayo, Adebola & Yahya, 2019).

In view of the ardent need for a shift in the instructional process from the old face-to-face model to a new blended model, WhatsApp messenger can easily be adopted. The WhatsApp application is one of the most favored mobile based applications that can facilitate synchronous communication (Hutchinson, 2020). It possesses the features to facilitate synchronous learning. Several case studies (Nicholson, 2002; Hrastinski, 2006; Schwier & Balbar 2002; Oztok, Zingaro; Brett & Hewitt, 2013) found that students can develop a sense of community using online synchronous communication platforms. Many online educational programs using web conferencing tools like instant messaging or live chat, webinars and video conferencing allows many people to learn at the same time in different places and as well allow for students and teachers to collaborate and learn in real time (So, 2016).

High-tech innovations are contributing immensely to improvement in teaching and learning. Consequently, educational delivery should evolve from face-to-face to varying methods of mixed and distance learning modes. Emerging communication technologies, including social networking applications are being utilized to facilitate distance education through the Internet (Boateng & Amankwaa (2016). These innovations have improved access to learning resources and enhanced synchronous and asynchronous communication among learners and between learners and teachers (Pimmer & Rambe, 2018). In this regard, Boateng & Amankwaa (2016) asserted that social media has influenced instructors, students, and other academic stakeholders to unite with each other to promote knowledge construction in teaching and learning.

As smartphones become more prevalent, their potential to be used for the purposes of teaching and learning grows into more critical tools for mobile learning, which can be considered as a learner-centric approach that focuses on the mobility of the learner as well as the mobility of learning (Kartal, 2019). A relatively recent study by Yeboah & Nyagorme (2022), showed that WhatsApp usage in a learning environment can support learning approaches such as inquiry learning that support creativity, critical thinking, collaborative skills, and critical reflection. According to Andujar (2016), WhatsApp constitutes a powerful educational tool to encourage interaction among group participants and its tremendous potential to activate students' involvement remains the least exploited functionality of mobile phones. WhatsApp can also boost students' dynamic participation and inspire learners to get involved in purposeful activities with a special emphasis on effective learning outcomes (Beetham & Sharpe, 2013).

Educators have emphasized the benefits of WhatsApp application in the educational process and advised the use of WhatsApp to inform students about many interesting tasks that can be done with the messaging application in the field (Woztell.com, 2022). Moreover, it is one of the creative teaching techniques which can be used to attract students' interest and attention and provide fun-based learning (So, 2016). It allows the students to express thoughts and ideas via various features of the WhatsApp application platform, such as attaching pictures, sharing videos, sharing web-

links, recording videos and many more. It also helps the students to get actively involved in learning activities via various features on this application (Kartal, 2019).

Consequently, with the stated advantages of WhatsApp, the continuous closure of schools has become an issue of concern to the stakeholders since the face-to-face method of learning is gradually being endangered. This worrying apprehension stimulated this study, whose main thrust is to find out the extent of students' usage of WhatsApp instant messenger as a supporting tool for learning in Kaduna State, Nigeria.

STATEMENT OF THE PROBLEM

Education is seen as a powerful instrument of development and the most important factor to ensure equality of opportunities. Therefore, countries are making remarkable progress in getting children into the classroom, and more children worldwide are now in school. Despite the enrolment efforts, learning is still not guaranteed because of dramatic disruptions afflicting the academic environment. According to Mulyono, Suryoputro & Jamil (2020) the outbreak of the coronavirus disease (COVID-19) has led to the worst crisis in the education sector. The pandemic has affected educational systems worldwide, leading to near total closures of schools, thereby disrupting academic activities (UNESCO, 2020). The World Bank (2020) reported that at the peak of school closures in April 2020, about 1.6 billion children were out of school worldwide. This implies that the education sector is evidently amongst the major casualties of the COVID-19 pandemic.

The education sector in Nigeria is also faced with a myriad of problems. Prominent among the problem areas in the sector in Nigeria is intermittent or prolonged closure of schools due to outbreak of epidemic diseases like Ebola, natural disasters like floods, communal conflicts, trade/industrial related disputes and actions leading to insecurity like militancy and insurgency/banditry. The continued closure of schools because of these causes has consistently disrupted the academic processes and hence detrimentally affected the processes and products of the education system. School closures in response to these challenges have shed more light on numerous issues affecting access to quality education and the attainment of a peaceful learning environment in Nigeria (Usman & Madudili, 2021).

In another worrying dimension, Yaba (2022) reported that the menace of banditry and military operation against bandits in some parts of the North-West and North-Central has forced the Kaduna State Government to abruptly shut down schools in 2021 for security reasons. Related closure of school activities due to insecurity amid a spate of student kidnappings has been reported in more states across the region (Olaniyan & Aminu, 2021). Globally, the usual face-face mode of instructional delivery is steadily being threatened by socio-economic, political and security reasons. More so, prolonged school closure and home confinement during a disease outbreak might have negative effects on children's physical and mental health (Wang, Zhang, Zhao, Zhang, & Jiang, (2020). This is becoming worrisome to parents, educators and other stakeholders in the sector, considering the importance of education and the resources being invested in educating the learners.

Considering that the factors leading to the closure of schools appear to be growing unabated in Nigeria, experts are encouraging the adoption of more innovative and virtual ways of learning using modern technology platforms. Considering the highlighted problems, the researchers seek to find out the extent of students' usage of WhatsApp instant messenger as a supporting tool for learning in Kaduna State, Nigeria.

OBJECTIVES OF THE STUDY

The main objective of this study is to assess Students' Usage of WhatsApp Instant Messenger as a supporting tool for Learning in Kaduna State. However, the specific objectives are to:

1) Identify the WhatsApp functionalities mostly used by students in Kaduna State.
2) Ascertain the contents exchanged through WhatsApp Messenger by students in Kaduna State.
3) Explore the purpose of WhatsApp Messenger usage among students in Kaduna State.
4) Discover the challenges affecting usage of WhatsApp messenger among students in Kaduna State.
5) Examine the frequency of WhatsApp messenger usage among students in Kaduna State.

RESEARCH QUESTIONS

The study seeks to provide answers to the following research questions:

1) What are the WhatsApp functionalities mostly used to support learning?
2) What are the contents regularly exchanged through WhatsApp Messenger?
3) What purpose do you use WhatsApp Messenger for?
4) What are the challenges affecting usage of WhatsApp Messenger in learning?
5) How frequently do you use WhatsApp Messenger?

DELIMITATION OF THE STUDY

The study was delimited to only public tertiary institutions in Kaduna State. This is because of the state Government's desire to advance the acceptance of modern technology in all sectors in the state. The study was further delimited to cover the WhatsApp functionalities mostly used by students, the contents exchanged through WhatsApp Messenger, the purpose of WhatsApp Messenger usage among students, the challenges affecting usage of WhatsApp messenger among students and the frequency of WhatsApp messenger usage among students in Kaduna State.

RESEARCH METHODOLOGY

A survey research design was adopted in this study. Five tertiary institutions were randomly selected based on security guarantee for the study. The institutions are Kaduna Polytechnic, Kaduna State University Kaduna, Federal Co-operative College Kaduna, Nuhu Bamalli Polytechnic Zaria, and College of Education Gidan Waya. The population for the study comprises all final year students in tertiary institutions in Kaduna State, Nigeria. The stratified random sampling method was used to select 598 students in exit classes as the sample for the study from the selected institutions.

Five research questions were used as a guide in the study. A structured questionnaire titled; Impact of WhatsApp Instant Messenger on Learning Questionnaire (IWIMOLQ) was used to elicit information from the respondents. The questionnaire covered 30 items. A four point Likert rating scale of; Agree (A), Strongly Agree (SA), Disagree (D) and Strongly Disagree (SD) was used for the responses. The instrument was face validated to ascertain its suitability for use in data collection by an expert in Kaduna State University, Kaduna. The reliability of the instrument was determined using a test –retest method. The reliability co-efficient 0.892 and 0.867 obtained for the instrument in a pilot study conducted with 113 students in two institutions was declared acceptable for the study.

598 copies of the research instrument were administered with the support of five research assistants (who were students in the institutions).The questionnaires were completed and returned within ten weeks. Information collected was coded accordingly into statistical data before analysis using Mean (M) and Standard Deviation (SD) statistical tools. Mean scores of 2.5 and above (≥2.5) were accepted while mean scores below 2.5 (< 2.5) were rejected.

RESULTS, DATA ANALYSIS AND DISCUSSION

Table 1: *Demographics of Respondents*

S/N	Gender	Frequency	Age Grade (Years)			Total
			18-30	**31-45**	**46-60**	
1	Male	431	226	196	9	431
2	Female	167	142	21	4	167
	Total	598	368	217	13	598

Source: Field Survey, 2021

Table 1 shows demographic information about the respondent's gender and age. Analysis of the data shows that 431 (72.07 %) and 167 (27.93%) males and females participated respectively in the study. 368 (61.54%), 217 (36.29%) and 13(2.17%) of the respondents were between the ages: 18-30, 31-45 and 46-60 years respectively. This indicates that more males participated while the majority of the respondents were in the 18 to 30 age group and the least in the 46 to 60 age group.

The study investigated Students' Usage of WhatsApp Instant Messenger as a Supporting Tool for Learning in Kaduna State, Nigeria. Both males and females in the age category between 18 - 60 years participated in the research and were all conversant with WhatsApp messenger as a platform for communication. This is in line with the position of Bere (2012) that WhatsApp application has become popular, widely adopted by individuals and increasingly being used among youth because it allows better accessibility, enjoyment, and quick information-sharing and cost benefits, corroborating the results of later studies (Centinkaya, 2017; Tayo et al., 2019; Effiong et al., 2021; Wulystan 2021; Yeboah & Nyagorme, 2022).

Research Question 1. What are the WhatsApp functionalities mostly used by students to support learning?

Table 2: *Mean score and standard deviation of WhatsApp functionalities mostly used to support* learning

S/N	Items (S)	M	SD	Decision
1.	Voice/Video Calls	2.57	1.13	Accepted
2.	Documents Sharing	3.44	2.11	Accepted
3.	Group Messaging	3.63	1.11	Accepted
4.	Group Chat	3.51	1.15	Accepted
5.	Sharing Photos/Videos	2.56	1.14	Accepted
6.	Text	3.02	1.18	Accepted
7	WhatsApp on web and desktop	2.55	1.16	Accepted
8 .	End-to-end encryption	2.68	1.12	Accepted
	Grand Mean:	**2.99**		

Source: Field Survey, 2022

The results in Table 2 above show an accepted grand mean rating of 2.99. This indicates that the respondents accepted all the items as the basic WhatsApp functionalities that support learning activities. The results show the functionalities most used are group messaging, group chats and document sharing, with mean scores of 3.63, 3.51 and 3.44, respectively. The study found that all common WhatsApp functionalities are being used by students to support learning in schools. The finding agrees with Church & deOliveira, (2013) that WhatsApp Messenger is a potential tool for

increasing the accessibility of reading materials, improving reading culture, enhancing interactive teaching and learning processes, and facilitating participatory educational discussions among students.

The result also relates with the conclusion of the studies (Rambe & Bere, 2013); Durgungoz & Durgungoz, 2021; Wulystan, 2021) that the activities of users of WhatsApp are connected to their ability to connect, communicate cooperatively and collaboratively share knowledge in a specific context through texts, group chat, WhatsApp on web and desktop, WhatsApp voice and video calls, end-to-end encryption, photos and videos, voice messages and documents. The features make messaging simple and reliable, assist the group with keeping in touch, keep the conversation going, allow members to speak freely, enhance security by default, makes it easy to share moments that matter, allows free expression and makes document sharing very easy. The use and popularity of WhatsApp are increasing due to user friendliness

Research Question 2: What are the contents regularly exchanged through WhatsApp Messenger?

Table 3: *Mean score and standard deviation of contents regularly exchanged through WhatsApp Messenger*

S/N	Items (S)	M	SD	Decision
9	Assignments	3.72	1.12	Accepted
10	Lecture materials	2.84	1.12	Accepted
11	Websites	2.24	1.12	Rejected
12	Videos/audios	2.58	1.11	Accepted
13	Past questions	2.56	1.11	Accepted
	Grand Mean:	**2.78**		

Source: Field Survey, 2022

The results in Table 3 above indicate an accepted grand mean rating of 2.78. Items 9, 10,12 and 13 (assignments, lecture materials, videos/audios and past questions) were accepted as content regularly exchanged through WhatsApp messenger by students. However, item 11(websites) was rejected.

The findings in relation to the content regularly exchanged through WhatsApp Messenger by students reveal that assignments, lecture materials, videos/audios and past question papers are among the items mostly shared. The findings agree with studies conducted by Ujakpa, Heukelman, Lazarus, Neiss, & Rukanda (2018), that WhatsApp allows for instant message sending to either individuals or groups. It also allows pictures, audio-visual files attachment file sharing. The study also aligns with the findings of Baulch, Matamoros-Fernández & Johns (2020), that students envision WhatsApp as a lever for crossing over access to cooperatively created resources, heightening assignment conduct and promoting important context-free learning (Baulch et al., 2020). On the contrary, the findings revealed that students were not keen on sharing academic websites for further readings amongst themselves.

Research Question 3; what purpose (s) do you use WhatsApp Messenger for?

The analysis of data in Table 4 below indicates a grand mean score of 3.18. This score affirmed that the students in tertiary institutions in Kaduna State use the WhatsApp platform mainly for academic, social, recreational, business and security purposes. The results show the students favored the use of WhatsApp mostly for academic and social purposes, respectively.

Table 4: Mean score and standard deviation of purpose(s) of usage of WhatsApp Messenger

S/N	Items (S)	M	SD	Decision
14	Academic purpose	3.51	0.98	Accepted
15	Social purpose	3.50	0.94	Accepted
16	Recreational purpose	3.45	0.89	Accepted
17	Business purpose	2.89	0.68	Accepted
18	Security purpose	2.54	0.76	Accepted
	Grand Mean:	**3.18**		

Source: Field Survey, 2022

The findings reflect that of the study by Aliyu & Maifata (2017), that the use of social media in education provides students with the ability to get more useful Information, to connect with learning groups and other educational systems that make education convenient. More so, the findings agree with other studies that established student usage of WhatsApp for other purposes. The findings also validate (Ujkpa et al., 2018) that WhatsApp is utilized for recreational activities with less commitment on student achievement and literacy abilities. Robinson et al., (2015) explored the use of WhatsApp in an educational context and stated that WhatsApp enabled participants to socialize, particularly when they felt lonely or were at risk of becoming bored. The findings of this study showed that most students at tertiary education institutions consistently connect and communicate using WhatsApp for educational and non-educational purposes in a diverse environment. This finding aligns with those of many other researchers (So, 2016; Gasaymeh, 2017; Yeboah & Nyagorme, 2022; Mistar & Mohammed, 2016; Suleiman, 2020) who maintain that individuals or groups interact for different purposes using WhatsApp as an easy means of sharing information.

Research Question 4: What are the challenges affecting usage of WhatsApp Messenger in learning?

Table 5: Mean score and standard deviation of challenges affecting usage of WhatsApp

S/N	Items (S)	M	SD	Decision
19	Poor network services	2.80	0.75	Accepted
20	Epileptic Power Supply	2.83	0.67	Accepted
21	High cost of Data	2.90	0.61	Accepted
22	Unregulated contents	2.18	0.72	Rejected
23	Internet addiction/Distractions	2.54	0.82	Accepted
24	Cyber Bullying	2.65	0.75	Accepted
	Grand mean	**2.65**		

Source: Field Survey, 2022

The results in Table 5 above indicate that the respondents accepted poor network services, epileptic power supply, high cost of data, Internet addiction/distractions and cyber bullying as challenges affecting the effective use of WhatsApp in the learning process. However, item 22 "Unregulated contents" with a mean score 2.18 was rejected. The rejection may be perhaps because of the position (So, 2016; Kartal, 2019) that WhatsApp possesses the features to mute, remove or regulate what members post on the platform.

The findings are in line with earlier studies; O'Keeffe and Kathleen (2011); Olubiyi, (2012): and Naryoso & Lailiyah, (2020). Other studies (Mistar & Mohammed, 2016; Aliyu & Maifata, 2017;Tayo et al., 2019; Suleiman, 2020; Iranmanesh et al., 2022) also reported that many students spend much time on their laptops, tablets, desktop computers and smart phones to check Tweets and

status updates of their friends and families. Addiction to the use of social media platforms can squander an individual's time that could be used for profitable tasks and exercises.

Research Question 5: How frequently do you use WhatsApp Messenger?

Table 6: *Mean score and standard deviation of frequency of usage of WhatsApp messenger among students*

S/N	Items (S)	M	SD	Decision
25	Never	1.55	0.89	Rejected
26	Daily	3.41	0.89	Accepted
27	Weekly	2.57	1.13	Accepted
28	Fortnightly	2.34	0.87	Rejected
29	Monthly	2.28	0.82	Rejected
30	Quarterly	2.04	0.41	Rejected
	Grand mean	**2.36**		

Source: Field Survey, 2022

The data in Table 6 above shows a rejected grand mean of 2.36 on the participants' view on the frequency of use of WhatsApp to support their learning. Items 25, 28, 29 and 30 scored a mean rating of below 2.5 and were rejected. However, items 26 and 27 were accepted. This shows that all categories of students use the WhatsApp platform daily. The results are in agreement with Olubiyi, (2012); Barhoumi, (2015); Yaraghi (2019) and Effiong et al., (2021), which indicate that the students are already conversant with WhatsApp messenger and have adopted it as a communication tool. The implication is that the adoption of WhatsApp as a supporting tool in learning will be easy. However, frequent usage can make a person become individualistic, refuse to socialize, and even reduce interpersonal communication with others (Naryoso & Lailiyah, 2020).

CONCLUSION

The study was carried out to examine the extent of Students' Usage of WhatsApp Instant Messenger as a Supporting Tool for Learning in Kaduna State, Nigeria using a descriptive research method. The findings from the study showed that a significant number of students are already using WhatsApp messenger for educational purposes, and this suggests that it could be easily adopted to support students learning. This study concludes that the usage of WhatsApp should be encouraged among students and learning institutions should provide a conductive learning environment with modern technology and adequate security as a top priority.

RECOMMENDATIONS

Based on the findings, the study recommends as follows:

a) Challenges facing online learning in Nigeria should be solved by providing the basic amenities that can aid learning and maximize the benefits that comes with remote learning.

b) The use of WhatsApp in the education process should be encouraged as a supportive technology to change the perception of WhatsApp as an academic disruptor to that of an academic performance enhancer.

c) The management of educational institutions should ensure the availability of suitable conditions such as WhatsApp-supported mobile devices for students' use.

d) Adequate security should be provided to protect learners, learning facilities and the learning environment

e) Teachers should encourage the adoption of WhatsApp by channeling assignments or discussions on social media platforms to help inculcate the habit of using these media platforms for academic work by students.

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