

# Using WhatsApp as a medium of postgraduate instruction in a private university in Nigeria: fall-outs of the Covid-19 Pandemic

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**ABSTRACT.** The Covid-19 pandemic resulted in a global lockdown and the cessation of all academic activities on-site. Higher education in Nigeria was not exempt, as a paradigm shift was required for university officials to explore non-conventional teaching methods to prevent students from wasting time and to keep them intellectually engaged. During the pandemic, our research examines how a private institution in Ede, Osun State, Nigeria, utilised the social networking platform WhatsApp for Ph.D. student seminars. The study obtained data from ten doctoral students in the Department of Library and Information Science at Adeleke University via online interviews. The difficulties faced by the students and the benefits of utilising ICT were highlighted. Due to the constant insecurity and poor road network in Nigeria, as well as the risk of long-distance travel, especially for postgraduate students who are not always resident on campus, we recommend the continued use of E-learning platforms in Higher Education Institutions as a solution to reducing transportation costs.

**Keywords:** Covid-19; cyberethics; Higher Education Institutions (HEIs); online learning; postgraduate Instruction; WhatsApp.

## Usando o WhatsApp como meio de instrução de pós-graduação em uma universidade particular na Nigéria: consequências da pandemia de Covid-19

**RESUMO.** A pandemia de Covid-19 resultou em um bloqueio global e na cessação de todas as atividades acadêmicas no local. O ensino superior na Nigéria não estava isento, pois era necessária uma mudança de paradigma para que os funcionários da universidade explorassem métodos de ensino não convencionais para evitar que os alunos perdessem tempo e os mantivessem intelectualmente engajados. Durante a pandemia, nossa pesquisa examina como uma instituição privada em Ede, Osun State, Nigéria, utilizou a plataforma de rede social WhatsApp para seminários de alunos de doutorado. O estudo obteve dados de dez estudantes de doutorado do Departamento de Biblioteconomia e Ciência da Informação da Adeleke University por meio de entrevistas online. Foram destacadas as dificuldades enfrentadas pelos alunos e os benefícios da utilização das TIC. Devido à constante insegurança e má rede rodoviária na Nigéria, bem como ao risco de viagens de longa distância, especialmente para estudantes de pós-graduação que nem sempre residem no campus, recomendamos o uso continuado de plataformas de E-learning em Instituições de Ensino Superior como uma solução para reduzir os custos de transporte.

**Palavras-chave:** Covid-19; ciberética; Instituições de Ensino Superior (IES); aprendizagem online; instrução de pós-graduação; whatsapp.

## Uso de WhatsApp como medio de instrucción de posgrado en una universidad privada en Nigeria: consecuencias de la pandemia de Covid-19

**RESUMEN.** La pandemia de Covid-19 resultó en un bloqueo global y el cese de todas las actividades académicas en el sitio. La educación superior en Nigeria no estuvo exenta, ya que se requería un cambio de paradigma para que los funcionarios universitarios exploraran métodos de enseñanza no convencionales para evitar que los estudiantes pierdan el tiempo y mantenerlos intelectualmente comprometidos. Durante la pandemia, nuestra investigación examina cómo una institución privada en Ede, estado de Osun, Nigeria, utilizó la plataforma de redes sociales WhatsApp para seminarios de estudiantes de doctorado. El estudio obtuvo datos de diez estudiantes de doctorado en el Departamento de Bibliotecología y Ciencias de la

Información de la Universidad de Adeleke a través de entrevistas en línea. Se destacaron las dificultades que enfrentan los estudiantes y los beneficios de utilizar las TIC. Debido a la inseguridad constante y la mala red de carreteras en Nigeria, así como al riesgo de los viajes de larga distancia, especialmente para los estudiantes de posgrado que no siempre residen en el campus, recomendamos el uso continuado de las plataformas de aprendizaje electrónico en las instituciones de educación superior como una solución para reducir los costos de transporte.

**Palabras clave:** Covid-19; ciberética; Instituciones de Educación Superior (IES); aprendizaje en línea; instrucción de posgrado; whatsapp.

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## Introduction

The COVID-19 pandemic has affected every aspect of life and altered the way we live and conduct business. No one can withstand these winds of change, and the educational sector, especially higher education, appears to have been hit the hardest, requiring a more pragmatic approach to resolution. The outbreak of a novel coronavirus, which has caused a decline in the economies of many nations, particularly in the context of higher education in developing nations, is currently being fought by the entire global community (Anyanwu & Salami, 2021; Shang, Li, & Zhang, 2021; Yu et al., 2021). Universities postponed or cancelled academic events to safeguard faculty, staff, and students. Some universities were compelled to increase their efforts to prevent face-to-face interactions (Babhar & Gupta, 2022; Omidire & Aluko, 2022; Sims & Baker, 2021).

In response to the viral epidemic, several governments in Sub-Saharan Africa adopted the resolution to close educational institutions. Consequently, educational institutions must redesign their operations, accelerate their digital transformation, and adopt online platforms (Aborode, Anifowoshe, Ayodele, Iretiayo, & David, 2020; Bakibinga-Gaswaga, Bakibinga, Bakibinga, & Bakibinga, 2020; Mensah-Aggrey, Ofori-Dankwa, Akowuah, & Okyere-Fosu, 2022). The increasing availability of modern information and communication technology (ICT) via internet connectivity is eliminating the previously insurmountable barrier of distance and location of higher education institutions. Numerous universities around the world are embracing online learning to provide educational opportunities to prospective students, including those for whom attendance at the university's physical location is not possible: students who are employed full-time and unable to leave their jobs, physically disabled individuals, parents of young children, and military personnel, among others. By utilising ICT, Egielewa, Idogho, Iyalomhe, and Cirella (2022) believe that teachers and students who are not in the same location can exchange lessons as part of the educational process. Using video, audio, or computer technologies, CD-ROM technology, and even textual communication or storage devices such as USB-enabled tools for data storage, ICT tools are used to facilitate this type of learning.

Despite a high prevalence of smartphone ownership among students and other research indicating a high rate of smartphone availability and use among students in several countries, anecdotal evidence suggests that many students in higher education do not use WhatsApp for learning. This is a prerequisite for the implementation of mobile learning. Three-quarters of students used WhatsApp for at least four hours per day (Abdelmoniem, 2022; Reeves, Alkhalaf & Amasha, 2019).

Current educational use of ICT is an effective response to the proliferation of ICT. In the field of information and communication technology, social networks are a new development. Information and communication technology (ICT) has a significant impact on the field of education. Social networks (occasionally referred to as social network sites or SNSs) are commonly understood to refer to networked applications that enable users to connect, interact, and share ideas and interests (Nau, Quan-Haase, & McCay-Peet, 2022). Teachers and students now have more opportunities for collaboration and communication because of this social network. E-learning allows students to study regardless of their location, schedule, or time zone. Even as subjects become more challenging, students are encouraged to use technology to study. Accessing word libraries and exchanging instructional videos, PDFs, and other digital resources allows students to extend their learning in the digital realm (Sivankalai, 2021).

Social media are websites that use technology to enable individuals or groups to express themselves and interact socially. These Web 2.0 e-learning resources emphasise active involvement, connectedness, collaboration, and the sharing of knowledge and ideas among users (Niaz, Buriro, & Soomro, 2022; Yunusa et al., 2021). Presently, social networks are viewed as learning platforms or communities that can be used to improve student engagement and performance. Multiple studies have identified a variety of positive

outcomes associated with student and peer involvement in online communities. WhatsApp has become indispensable because it enables users to communicate and connect with their peers (Venturino & Hsu, 2022).

## Problem statement

After the global pandemic known as Covid-19 developed, universities in Nigeria and other nations were forced to transition from traditional face-to-face classrooms to alternative remote education methods. Facebook and WhatsApp have the highest user penetration rates for social media as a form of communication. WhatsApp is a social networking software largely used by family, friends, and coworkers to discuss social matters, such as accomplishments, plans, and personal worries. Before the global shutdown, students had established WhatsApp chat groups to address various problems.

Given that WhatsApp was already a common mode of communication among graduate students, the purpose of the present study was to investigate the efficacy of its use among LIS doctoral students who used WhatsApp groups for learning. The study also investigated the benefits and drawbacks of using it as an E-learning platform, as well as how it may be improved for usage by the broader education community.

## Objectives of the study

The study aimed to investigate the usage of WhatsApp as a medium for Postgraduate instruction in a Nigerian Private University.

### The specific objectives of the study were to:

1. to determine the effectiveness of the WhatsApp social networking platform as a medium of instruction among postgraduate students in a Nigerian private university;
2. to identify the challenges encountered by postgraduate students in a Nigerian private university regarding the use of WhatsApp social networking platform as a medium of instruction; and
3. determine the benefits of using WhatsApp social Networking site among postgraduate students in a Nigerian private university
4. determine the level of interest in the continued use of WhatsApp social networking sites among postgraduate students in a Nigerian private university.

## Literature review

In compliance with international protocols, on March 30, 2020, Nigeria declared a nationwide lockdown to prevent the spread of the COVID-19 pandemic, with immediate effect in two states of the Federation (Lagos and Ogun) and the Federal Capital (Abuja) (Ifejika, 2022). As a result of the lockdown, university administrators in several nations were forced to utilise ICT to prevent their students from wasting time. Chawinga and Zozie (2016) in a study of higher education, discovered that higher education administrators and politicians understood the need for technology, but lacked interest in distance education and had reservations about its support due to the refusal to provide adequate personnel, supplies, and an adequate operating budget. During this time, advocates of the use of technology in education challenged higher education institutions to base their teaching and learning practices on the digital technologies that made it possible. Robles, Guerrero, Llinas, and Montero (2019) noted that university students viewed the pervasiveness of technology gadgets, mobility, and connectivity to be effective academic aids. According to studies, students prefer social networking sites to traditional classrooms because they like the teamwork and continual learning that technology provides. The popularity of instant messaging networks has led higher education institutions in industrialised nations to incorporate them into their courses (Maphosa, Dube, & Jita, 2020).

WhatsApp is a popular social networking application that has significantly impacted every area of young people's life. Franco and Holzer (2023) postulated that several institutions of higher education had lately adopted WhatsApp to improve information sharing, communication, and collaboration via student forums. Effective teaching and learning are attained when the professor and students engage effectively, and Çelik, Uzunboylu, and Demirbaş-Çelik (2023) observed that WhatsApp enables regular interaction between the lecturer and students, thereby fostering a positive relationship. As it allowed university students to communicate material, WhatsApp was an indispensable tool for overcoming educational access issues.

Mogotsi (2021) found that the deployment of WhatsApp at a university redressed the information access asymmetry by enabling students from disadvantaged backgrounds to access educational content via their mobile devices.

Various research has been undertaken on the educational applications of WhatsApp. Chavan (2018) conducted a study regarding WhatsApp's effect on student performance. Seventy percent of pupils said that WhatsApp negatively impacted their academic performance. In addition, the survey revealed that pupils submitted assignments with grammatical problems. In contrast, Abbas et al., (2022) investigated the influence of social media networks, including WhatsApp, on student involvement and collaboration in a class of mature students. This study found that WhatsApp was beneficial for fostering student connection and cooperation during learning conversations. Similarly, Gharbi, Al-Kilani, AbuDaabes, and Ismail (2023) discovered that the use of social media fostered improved student learning and increased student engagement. In their study done at Lupane State University, Maphosa et al. (2020) found that 77% of students reported that WhatsApp afforded them learning opportunities even during the COVID-19 pandemic. In addition, eighty percent of students believed that the tool was simple to use. According to the research by Hertzog and Swart (2018), 97% of students said that WhatsApp promoted interaction between them and their instructors. In addition, 97% of the students recommended that instructors use audio while offering feedback to facilitate communication. WhatsApp was chosen for this study because it is extensively used and can be accessed via mobile devices, to which the majority of students have access. College students use of mobile phones has expanded over time (Hsu & Lin, 2022). As a teaching tool, mobile phones can be advantageous for both instructors and pupils. It has modern and automated methods for reaching teaching and learning objectives, and mobile phones are far less expensive to purchase than larger devices. WhatsApp messaging social media can be downloaded, installed, and utilised on mobile devices running Android, IOS, and KIOS. It may also be used on desktops and laptops by linking the mobile device with the computer by scanning a QR code, making a mobile phone a need using WhatsApp Technologies.

According to Mare, Woyo, and Amadhila (2023), mobile media messaging technologies like WhatsApp have the potential to offer multiple teaching and learning options at the university and elementary school levels, but this potential remains untapped. According to Haas, Lavicza, and Kreis (2023), this is due to a limited academic understanding and conceptualisation of how this technology can be integrated into mainstream classroom practice and uncertainties on educational outcomes.

According to Mercado and Shin (2023), another advantage of adopting the WhatsApp social media platform is that it encourages collaborative learning, which contributes to the learning process, active participation, learning anytime and anywhere, and informal communication. This means that teaching and learning are no longer confined to the classroom, but may occur anytime and anywhere as long as a smartphone is connected to the internet. According to a study conducted by Gon and Rawekar (2017), WhatsApp was beneficial for boosting student contact, the sharing of learning materials, the accessibility of learning materials, and interaction with the teacher. In addition, 70% of the participants in that survey stated that concerns were rapidly resolved when WhatsApp was used since instructors provided instant clarifications. This means that WhatsApp can be used to aid the teaching and learning process outside of the classroom by both teachers and students. Students can share learning resources and collaborate to overcome obstacles they may encounter while attempting to comprehend concepts in their respective fields of study. According to Muthmainnah (2023), the adoption of WhatsApp is an innovative trend that leads to improved outcomes for consumers.

However, there are downsides to using WhatsApp for academic objectives. Among the obstacles posed by the use of WhatsApp in the classroom is the fact that WhatsApp groups have a limit on the number of users, which may impede the formation of student groups with more than 256 members (Nobre, Ferreira, & Almeida; 2022). However, new updates to WhatsApp currently permit a maximum of 512 group members, which is barely a constraint in postgraduate (particularly doctorate) classes due to their small size. In addition, Can and Bardakci (2022) opine that crucial educational elements, such as proximity and eye contact, are limited in the distance learning environment, but offer a meaningful connection between students and instructors. As a result, teachers are unable to see student emotions and cannot detect anxious periods, restricting their ability to respond to student needs. In addition to the aforementioned obstacles, Yang (2023) argues that education systems must continuously adapt to the rapid development of digital technology, opining that colleges should have learned from the unanticipated effects of the Covid-19 pandemic on education and should use the catastrophe as a reminder to have contingency plans in place to prevent such problems from occurring in the future.

According to Hertzog and Swart's (2018) research, 10% of students had issues with internet bandwidth, while 24% of students had trouble connecting to campus Wi-Fi. This corroborates the finding of Rambe and Nel (2015), who reported that students in South African higher education institutions (SAHEIs) faced challenges with internet bandwidth. Tamrat and Teferra's (2020) study revealed that in Africa, only 24 percent of the population has access to the Internet, but frequent power outages, high data costs, and poor connectivity are obstacles. In addition, Dube (2020) found in a study conducted in rural South Africa that learning was hindered by a lack of virtual learning equipment and network connectivity. Participation is another negative element of online learning, which can be ascribed to causes such as a lack of willingness to study, financial difficulties, internet connection troubles, and inadequate peer contact (Almajali, Al-Okaily, Barakat, Al-Zegaier, & Dahalin, 2022). Moreover, Annamalai (2019), in a study conducted in the undergraduate context of Malaysia, suggests that WhatsApp may have pedagogical implications. WhatsApp should not be used to discuss intensive reading materials; rather, it should be used to communicate information regarding assignments and examinations. In a separate Pakistani study, conducted by Minhas, Ahmed, and Ullah (2016), 21% of the participants reported using WhatsApp to share academic information. However, this research did not examine postgraduate student participation via WhatsApp. This paper explores the experiences of postgraduate students on the use of WhatsApp for the teaching and learning process to reinvent the effective use of WhatsApp to ensure academic success and engagement, as an alternative method to the conventional face-to-face teaching that was abandoned after the outbreak of the Covid-19 virus. Successes, obstacles, and prospects of utilising WhatsApp for academic reasons are also examined in detail.

## Methodology

The methodology used to conduct the study comprises the design, population, sample, data collecting instrument, the procedure of administration, data analysis, and presentation of results. This qualitative survey was conducted during March and April 2020, to examine the successes and challenges of the use of WhatsApp among Postgraduate students during the COVID-19 pandemic. Qualitative approaches have the advantage of allowing the participants to provide depth, as they allow respondents or participants to provide as many details as they wish with a view to institutions' better understanding of their intentions and views. A qualitative method was chosen because it helps in revealing the perspectives of postgraduate students regarding the subject of the study, which focuses on their usage of WhatsApp as a medium of instruction. The approach was also chosen because participants typically provide more descriptive responses, which allow the researcher to make inferences. The qualitative approach is also less expensive, especially when self-administered. Understanding the perspectives of postgraduate students towards the use of WhatsApp as a medium for instruction will help to derive a conclusion in the study.

In this study, the researcher collected pertinent data using an internet-enabled survey, which was conducted even though there are many other kinds of qualitative techniques available (Creswell & Poth, 2018). Thematic analysis was used to analyse the data, as it enables flexibility in interpretation, bringing out the richness and depth of the data. Thematic analysis is used when the intent is to bring out something about the data about the question (Braun & Clarke, 2021). The sequence of thematic analysis is the preparation of the study data, data familiarisation, organisation, coding and reviewing of the themes, data reduction and taxonomy of the themes, and finally thematic analysis. The data were then presented in narrative form with proper contextualisation. The findings from the analysis and transcribing of the data gathered from the open-ended survey were described. The findings are presented topically.

## Population and Sample

Throughout the duration of the study, all participants were from Adeleke University, Ede Osun state, Nigeria, second-year Ph.D. candidates who were still enrolled in classes and required to attend seminar sessions in person. The survey data collection followed a qualitative research methodology (Babbie, 2013). The online survey was developed using the Google Forms website. It is a free internet service with an intuitive visual appearance. The link to the online survey form was shared over WhatsApp with the cohort. Ten individuals were recruited for the survey, and eight responses were obtained, all of which were comprehensive. This translates to an eighty percent response rate. According to Babbie (2013), an 80 percent response rate is acceptable.

## Instrument

Pre-formed items relating to the four objectives of the study were developed, and sent to the WhatsApp® platform of the class group, through an online link. Similarly, the link was sent to individual WhatsApp accounts of class members. They were informed that they could submit their responses by either recording voice messages or typing out their responses.

## The Procedure of Administration

Regarding ethical considerations, participants were informed that they could withdraw their participation if they perceived any risk whatsoever. They were informed that participation was voluntary, and could be withdrawn at any point in time without consequences. Participation in the survey had no risks, implied or otherwise.

## Result

The finding from Table 1 revealed a doctoral class with an almost equal response distribution of males and females. The class was composed of mature individuals with a modal age range of 41-50 years. Class participation at these online sessions was generally good, with almost 97% of the class population attending more than ten classes.

**Table 1.** Characteristics of the study population.

Criteria	Number
Gender	
Male	3
Female	5
Age group	
31-40	3
41-50	3
51-60	1
60 and above	1
Less than 10	1
10-15	3
16-20	4

Objective 1: To determine the effectiveness of the WhatsApp social networking platform as a medium of instruction among postgraduate students in a Nigerian private university:

Doctoral students were asked about the effectiveness of WhatsApp during their seminar classes. The responses were summarised as follows:

Participant 1: WhatsApp is only averagely effective. Yes, it was useful as a stop-gap medium of instruction during the pandemic lockdown, as it allowed us to continue to engage in seminar classes. The group call feature was used for real-time communication, but majorly we used the class platform to circulate our seminar materials.

Participant 2: WhatsApp is one of the social media that can be used to reach out as a means of instruction to impart knowledge. Seminars were underway when the pandemic started. Very effective but could not accommodate more than 10 participants in a class of 11 plus the instructor, so it was a 'fastest finger' situation. In all, it was good as we were occupied throughout the lockdown

Participant 3: WhatsApp allows us to connect with peers. Very effective during covid 19 in bridging the communication gap and geographical boundaries. Limitations: not more than 10 people could log on to that version of WhatsApp

Participant 4: WhatsApp was used by our class for seminar sessions and to circulate soft copies of our work. I loved the fact that we could continue with class work, however, its effectiveness could not have been more than 50% because it was fraught with so many challenges.

Participant 5: On a scale of 10, I would give using WhatsApp for class instruction a 6. I am not a fan of technology like that. I love the interactiveness of a physical class session

Participant 6: Using WhatsApp is highly effective and instructing.

Participant 7: Classes run via WhatsApp are so convenient and effective. I have access to good internet, so I was able to keep up with all class sessions. Online classes make everyone's life so much easier.

Participant 8: I really gained a lot and was happy to use WhatsApp. It's a great medium for instruction.



The results of this study tally with the findings of Hosen et al. (2021) in a study on the use of WhatsApp for learning among 407 private universities in West Malaysia. They documented that WhatsApp could impact positively on learning outcomes. This finding was also reiterated by Sharma, Singh, Leiva, Martin-Barreiro, and Cabezas (2022) in a study among university students in India, who maintained that using the app for non-class purposes while lectures were ongoing could result in a lower GPA, sometimes, using the app could help students learn and perform better. They identified that many students disseminate materials through the app for academic purposes, contributing to their academic performance, and enhancing communication with their teachers. Daramola and Umoru (2022) in a study on the use of WhatsApp among Federal College of Education students in Nigeria similarly documented the advantageous use of the platform as a tool for enhancing academic performance.

**Objective 2:** To identify the challenges encountered by postgraduate students in a Nigerian private university regarding the use of the WhatsApp social networking platform as a medium of instruction

Doctoral students were asked to identify the challenges encountered by postgraduate students in a Nigerian private university regarding the use of the WhatsApp social networking platform as a medium of instruction during the Covid-19 lockdown.

Participant 1: It was very challenging because of the network challenges, and inability to detect nuances in body language. I prefer face-to-face classes.

Participant 2: using WhatsApp during lockdown was a series of challenges... funds challenges... power supply challenges.... Devices challenges. I do not know how to make use of smileys and emoticons. Then there was too much casualness and unseriousness in class, that the lecturer wouldn't have allowed a physical. It was challenges galore for me

Participant 3: Limited bandwidth resulted in poor internet connection, due to so many contiguous users. The power supply was bad, resulting in my battery dying severally during the sessions, were the major challenges I encountered.

Participant 4: The network was a major problem. Not so much interested in using WhatsApp as a mode of instruction because one cannot monitor the participation level of other participants. Then, I had serious eye strain problem. The screens were too small. It was only later I knew that I could actually share WhatsApp on my laptop.

Participant 5: Challenges for me were almost insurmountable. I had no money for data, and I couldn't go out to do any work, so my finances were very low. Also, I had network which prevented me from being online and using WhatsApp. I am not that good with the additional features of WhatsApp. My children had to help me every time and they got tired of doing so eventually. Now that the lockdown is over I am glad. Personally, I hate this idea of online classes. It isn't for me. I am too old for this type of rapid change. I was always sleepy and couldn't engage enough in class.

Participant 6: Too many technical challenges due to the cost of data and phone issues. My phone battery was bad, and there is no power in our area. Once a GSM call comes in, I will be bounced off the group call. I hated every minute of it. I was glad when the lockdown was over and life went back to normal.

Participant 7: There are challenges in any new system, but let's face it, life has to continue. The pandemic hit us like a tsunami. No one expected it. Challenges were caused because we live in a third-world nation. Ideally, we should take power supply and averagely good internet as givens. The fact that we were able to continue classes for me far outweighs the challenges. Classes during the lockdown kept my sanity.

Participant 8: I wouldn't go as far as saying that there were no challenges because I speak from a place of relative privilege. I have access to almost uninterrupted internet and power supply.

The results of this study tally with the findings of Orabueze, Okafor, Okonkwo, Chinonso, and Ekwueme (2021) in a study on the use of Whatsapp as a tool for learning the German language in Eastern Nigeria. They documented challenges as accessibility, affordability, connectivity, proximity, lack of sufficient power, unavailability of smartphones or laptops, attention retention, and lack of digital netiquette. This view was also reiterated by Mheidly, Graña, and Tayie (2021) who, in a study among students in Lebanon, stated that Although WhatsApp, as a learning tool, was functional, accessible, and technically effective, it hindered the learning experience with the lack of social, teaching, and cognitive presence.

**Objective 3:** To determine the benefits of using WhatsApp social Networking site among postgraduate students in a Nigerian private university

Participant 1: It was an opportunity to be active during the lockdown period, as there was really nothing much to do, and it was better to be occupied.

Participant 2: Using WhatsApp was so convenient and distance wasn't an issue, from the convenience of my living room, I could attend classes without leaving home.

Participant 3: I learnt to use my smartphone and WhatsApp more. I used to see my phone as just a tool for entertainment majorly, but the pandemic made me realise that I could do more collaboration and networking to advance myself academically. I learnt that WhatsApp is especially a very powerful tool for sharing messages and instructions.

Participant 4: WhatsApp prevented delay and wasting of time. With just a click, questionnaires and work can be shared, and timely responses obtained from other users.

Participant 5: I daresay WhatsApp saved us. It was fast, easy to use, convenient, and by far cheaper than travelling down to school for me.

Participant 6: WhatsApp was very ok, even when I couldn't attend class, I could easily read up all the notes and comments made by our lecturer and classmates. So even though I was absent, it was as if I wasn't totally absent. My notes and messages were there, once I put on my data

Participant 7: WhatsApp was beneficial to me. ICT breaks a lot of barriers. It's the way to go!!

Participant 8: Sincerely speaking, the use of WhatsApp is beneficial. Online learning must be embraced for several reasons. It is convenient for all to use, cheaper, and has less risk to life and limb, especially for those of us students who have to travel so far due to the non-residential nature of the Ph.D. programme. We need to embrace ICT, especially now that the pandemic is over. Our eyes have been opened to so many benefits ICT in Education has to offer.

The findings of this study were in tandem with the findings of Aduba and Mayowa-Adebara (2022). In a study among 187 undergraduate LIS students at Delta State University, Abraka, Nigeria, Aduba and Mayowa-Adebara (2022) averred that 'the adoption and use of social media platforms like WhatsApp will make the teaching/learning process an interactive, collaborative, and participatory activity for all students, thus underscoring its effectiveness as a medium for class instruction among students'. Leveraging and using WhatsApp was also documented for effectiveness by Afful and Akrong (2020). This finding was also documented by Orabueze et al. (2021).

Objective 4: To determine the level of interest in the continued use of WhatsApp social networking sites among postgraduate students in a Nigerian private university.

Participant 1: I will be sticking to using WhatsApp beyond the pandemic, it has simplified communication and class participation for me. My colleagues are just a click away.

Participant 2: A lot was gained, but face-to-face interactions are better although the merits of the online classroom cannot be underemphasised. One needn't miss out on physical interactions. It can be a secondary or supportive means for classroom instruction. Here in Nigeria, more can be done. Coursera, EDx, and other online platforms allow for pre-planned videos to be integrated

Participant 3: Nigerian academics need to take a leaf from what obtains in other climes. Live interactions can be done for questions to observe the level of understanding and for feedback purposes.

Participant 4: Audio conference calls were very clear, In large classes, voice messages on WhatsApp are very appropriate, students can always go back to refer to the notes and comments by classmates. I will definitely appreciate the continued use of WhatsApp in class for teaching.

Participant 5: I am very much interested in using WhatsApp, and even other internet-driven means of interaction for classroom instruction.

Participant 6: I really don't want to continue using WhatsApp. I like class connections with my peers

Participant 7: I will definitely not want to continue using WhatsApp in class. It is way too inconvenient for me

Participant 8: Yes, how I hope our university administrators see the need for continued use of WhatsApp, or even blended models of instruction now that the heat of the pandemic is over. The benefits of cost saving are immense. Who knows, this may even bring down the price of private higher education in Nigeria.

Danjuma (2022) in a study conducted among tertiary institution students in Sokoto, Northern Nigeria also confirmed the use of WhatsApp as being a beneficial tool in enhancing academic activities, a position also agreed upon by Odili (2021).

## Implications and Recommendations

The implications of this study are pertinent to postgraduate students, lecturers, and university administrators at both the national and institutional levels.



- Since the findings revealed a high level of willingness among students to use WhatsApp during seminar sessions, its use should be encouraged among students to facilitate speedy and effective collaboration via WhatsApp chats.
- To reduce transportation costs and in light of the security situation in Nigeria, university administrators should take a greater interest in blended classrooms, especially in postgraduate settings where students do not reside on campus, particularly for seminars and in-class situations where students control the pace of the classes.
- Universities should continue to enhance their provision of internet and power supply on campus.
- Students must be instructed on cyberethics to preserve decorum and etiquette while online.

## Conclusion

The importance of WhatsApp as a medium of instruction in Nigeria has been seen to be of great relevance, particularly among postgraduate students who typically do not reside on campus due to their mature age and familial obligations. Even now that the pandemic has ended, it is necessary to take advantage of the numerous opportunities and solutions that emerged when everyone was compelled to adopt the New Normal. As it is now clearly obvious that ICT has become interwoven with our world, it is necessary to employ ICT strategically to reap its benefits.

## References

- Abbas, N., Whitfield, J., Atwell, E., Bowman, H., Pickard, T., & Walker, A. (2022). Online chat and chatbots to enhance mature student engagement in higher education. *International Journal of Lifelong Education*, 41(3), 308-326. DOI: <https://doi.org/10.1080/02601370.2022.2066213>
- Abdelmoniem, S. (2022). Knowledge, attitude, and barriers in distance education using smartphones among pediatric dentistry master degree students during COVID-19 pandemic in Egypt: a cross-sectional study. *Egyptian Dental Journal*, 68(3), 2025-2034. DOI: <https://doi.org/10.21608/edj.2022.126740.2016>
- Aborode, A., Anifowoshe, O., Ayodele, T. I., Iretiayo, A. R., & David, O. O. (2020). Impact of COVID-19 on education in sub-Saharan Africa. *Preprints.org* 2020, 2020070027. DOI: <https://doi.org/10.20944/preprints202007.0027.v1>
- Aduba, D. E., & Mayowa-Adebara, O. (2022). Online platforms used for teaching and learning during the COVID-19 era: the case of LIS students in Delta State University, Abraka. *International Information & Library Review*, 54(1), 17-31. DOI: <https://doi.org/10.1080/10572317.2020.1869903>
- Afful, B., & Akrong, R. (2020). WhatsApp and academic performance among undergraduate students in Ghana: Evidence from the University of Cape Coast. *Journal of Education for Business*, 95(5), 288-296.
- Almajali, D., Al-Okaily, M., Barakat, S., Al-Zegaier, H., & Dahalin, Z. M. (2022). Students' perceptions of the sustainability of distance learning systems in the post-COVID-19: a qualitative perspective. *Sustainability*, 14(12), 7353. DOI: <https://doi.org/10.3390/su14127353>
- Annamalai, N. (2019). Using WhatsApp to extend learning in a blended classroom environment. *Teaching English with Technology*, 19(1), 3-20.
- Anyanwu, J. C., & Salami, A. O. (2021). The impact of COVID-19 on African economies: An introduction. *African Development Review*, 33(Suppl 1), S1. DOI: <https://doi.org/10.1111/1467-8268.12531>
- Babbie, E. R. (2013). *The basics of social research* (6th ed.). Belmont, CA: Thomson Wadsworth.
- Babhar, M., & Gupta, T. (2022). Response of educational institutions to COVID-19 pandemic: An inter-country comparison. *Policy Futures in Education*, 20(4), 469-491. DOI: <https://doi.org/10.1177/14782103211021937>
- Bakibinga-Gaswaga, E., Bakibinga, S., Bakibinga, D. B. M., & Bakibinga, P. (2020). Digital technologies in the COVID-19 responses in sub-Saharan Africa: policies, problems and promises. *The Pan African Medical Journal*, 35(Suppl 2). DOI: <https://doi.org/10.11604/pamj.supp.2020.35.2.23456>
- Braun, V., & Clarke, V. (2021). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative research in psychology*, 18(3), 328-352. DOI: <https://doi.org/10.1080/14780887.2020.1769238>
- Can, Y., & Bardakci, S. (2022). Teachers' opinions on (urgent) distance education activities during the pandemic period. *Advances in Mobile Learning Educational Research*, 2(2), 351-374. DOI: <https://doi.org/10.25082/amler.2022.02.005>

- Çelik, B., Uzunboyulu, H., & Demirbaş-Çelik, N. (2023). Preferencias de las plataformas de medios sociales de los estudiantes de educación superior con fines educativos. *Revista de Educación a Distancia (RED)*, 23(72). DOI: <https://doi.org/10.6018/red.491551>
- Chavan, S. B. (2018). The impact of WhatsApp messenger usage on student performance. *International Journal of Trend in Scientific Research and Development*. In *International Conference on Digital Economy and its Impact on Business and Industry* (p. 191-196). Rayat Institute of Research and Development. Satara, Jaysingpur Shirol, Kolhapur, Maharashtra, India.
- Chawinga, W. D., & Zozie, P. A. (2016). Increasing access to higher education through open and distance learning: Empirical findings from Mzuzu University, Malawi. *International Review of Research in Open and Distributed Learning*, 17(4), 1-20. DOI: <https://doi.org/10.19173/irrod1.v17i4.2409>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design. Choosing among five approaches* (4th ed.). Sage Publishers.
- Danjuma, R. A. (2022). Pedagogical value of WhatsApp in learning inferential listening skill among students of Tertiary Institutions in Sokoto State Nigeria. *International Journal of Social Sciences and Humanities*, 11(3) 65-75. Recovered from <http://arcnjournals.org>
- Daramola, R., & Umoru, T. A. (2022). Effects of Whatsapp and google classroom on the academic performance of business education students in cost accounting in federal colleges of Education. *Journal of Education and Practice*, 12(9), 31-37.
- Dube, B. (2020). Rural online learning in the context of COVID-19 in South Africa: Evoking an inclusive education approach. *REMIE: Multidisciplinary Journal of Educational Research*, 10(2), 135-157.
- Egielewa, P., Idogho, P. O., Iyalomhe, F. O., & Cirella, G. T. (2022). COVID-19 and digitized education: Analysis of online learning in Nigerian higher education. *E-Learning and Digital Media*, 19(1), 19-35. DOI: <https://doi.org/10.1177/20427530211022808>
- Franco, A., & Holzer, A. (2023). Fostering privacy literacy among high school students by leveraging social media interaction and learning traces in the classroom. In *Proceedings of the 13th International Learning Analytics and Knowledge Conference* (p. 538-544). DOI: <https://doi.org/10.1145/3576050.3576153>
- Gharbi, I., Al-Kilani, M. H., AbuDaabes, A. S., & Ismail, W. S. (2023). Facebook posts for academic and non-academic events: higher education institutions in Abu Dhabi. In A. Hamdan, H. M. Shoaib, B. Alareeni, & R. Hamdan (Eds.), *The Implementation of smart technologies for business success and sustainability* (p. 441-449). Cham, UK: Springer. DOI: [https://doi.org/10.1007/978-3-031-10212-7\\_37](https://doi.org/10.1007/978-3-031-10212-7_37)
- Gon, S., & Rawekar, A. (2017). Effectivity of e-learning through WhatsApp as a teaching-learning tool. *MVP Journal of Medical Sciences*, 4(1), 19-25. DOI: <https://doi.org/10.18311/mvpjms/0/v0/i0/8454>
- Haas, B., Lavicza, Z., & Kreis, Y. (2023). Parent's experience in remote learning during COVID-19 with digital and physical-mathematical modelling. *Research and Practice in Technology Enhanced Learning*, 18. DOI: <https://doi.org/10.58459/rptel.2023.18013>
- Hertzog, P. E., & Swart, A. J. (2018, April). The use of WhatsApp in design-based modules. In *2018 IEEE Global Engineering Education Conference (EDUCON)* (p. 445-450). Santa Cruz de Tenerife, ES: IEE. DOI: <https://doi.org/10.1109/educon.2018.8363264>
- Hosen, M., Ogbeibu, S., Giridharan, B., Cham, T. H., Lim, W. M., & Paul, J. (2021). Individual motivation and social media influence on student knowledge sharing and learning performance: evidence from an emerging economy. *Computers & Education*, 172, 104262. DOI: <https://doi.org/10.1016/j.compedu.2021.104262>
- Hsu, H. T., & Lin, C. C. (2022). Extending the technology acceptance model of college learners' mobile-assisted language learning by incorporating psychological constructs. *British Journal of Educational Technology*, 53(2), 286-306. DOI: <https://doi.org/10.1111/bjet.13165>
- Ifejika, S. I. (2022). COVID-19 pandemic: security agencies and extrajudicial killings amid enforcement of government lockdown order in Nigeria. *Humanities, Arts and Social Sciences Studies*, 22(3), 686-699. DOI: <https://doi.org/10.14456/hasss.2022.59>
- Maphosa, V., Dube, B., & Jita, T. (2020). A UTAUT evaluation of WhatsApp as a tool for lecture delivery during the COVID-19 lockdown at a Zimbabwean University. *International Journal of Higher Education*, 9(5), 84-93. DOI: <https://doi.org/10.5430/ijhe.v9n5p84>

- Mare, A., Woyo, E., & Amadhila, E. M. (2023). Harnessing the technological dividends in African higher education institutions during and post-COVID-19 pandemic. In A. Mare, E. Woyo, & E. M. Amadhila. *Teaching and learning with digital technologies in higher education institutions in Africa* (p. 1-24). London, UK: Routledge. DOI: <https://doi.org/10.4324/9781003264026-1>
- Mensah-Aggrey, D., Ofori-Dankwa, J., Akowuah, N. K., & Okyere-Fosu, D. C. (2022). COVID-19, poverty, education, and technology in Ghana: challenges and resolutions. In *Contemporary Issues in Multicultural and Global Education* (p. 217-239). IGI Global. DOI: <https://doi.org/10.4018/978-1-7998-7404-1.ch012>
- Mercado, F. M. S., & Shin, S. (2023). Teacher professional development in the 21st century: how social media has revolutionized the practice. In A. S. Zimmerman. *Research, practice, and innovations in teacher education during a virtual age* (p. 227-254). IGI Global. DOI: <https://doi.org/10.4018/978-1-6684-5316-2.ch012>
- Mheidly, N., Graña, G. G., & Tayie, S. S. (2021). Learning through WhatsApp during the COVID-19 pandemic: a case study. *Asia-Pacific Journal of Information Technology and Multimedia Jurnal Teknologi Maklumat dan Multimedia Asia-Pasifik* 10(2), 136-145. DOI: <https://doi.org/10.17576/apjitm-2021-1002-10>
- Minhas, S., Ahmed, M., & Ullah, Q. F. (2016). Usage of Whatsapp: a study of University of Peshawar, Pakistan. *International Journal of Humanities and Social Science Invention*, 5(7), 71-73.
- Mogotsi, C. N. A. (2021). *Enabling adult learners to access lifelong learning in D15 Tshwane West ACET centres* (Doctoral Dissertation). University of South Africa. Recovered from <https://hdl.handle.net/10500/29631>
- Muthmainnah, M. (2023). Expanding on the use of YouMiMe as technology instructional design in learning. *Pegem Journal of Education and Instruction*, 13(1), 367-378. DOI: <https://doi.org/10.47750/pegegog.13.01.40>
- Nau, C., Quan-Haase, A., & McCay-Peet, L. (2022). Defining social media and asking social media research questions: how well does the Swiss army knife metaphor apply? *The SAGE Handbook of Social Media Research Methods*, 13. DOI: <https://doi.org/10.4135/9781529782943.n3>
- Niaz, S., Buriro, G. A., & Soomro, N. H. (2022). Web-based English language learning: a review from Web 1.0 to Web 3.0. *Pakistan Journal of Humanities and Social Sciences*, 10(2), 813-821. DOI: <https://doi.org/10.52131/pjhss.2022.1002.0246>
- Nobre, G. P., Ferreira, C. H., & Almeida, J. M. (2022). A hierarchical network-oriented analysis of user participation in misinformation spread on WhatsApp. *Information Processing & Management*, 59(1), 102757. DOI: <https://doi.org/10.1016/j.ipm.2021.102757>
- Odili, N. (2021). Awareness of the use and impact of Facebook and Whatsapp among undergraduate students in Tertiary Institutions: a review of the literature. *MiddleBelt Journal of Library and Information Science*, 19. Recovered from <https://www.mbjlisonline.org/index.php/jlis/article/view/159>
- Omidire, M. F., & Aluko, F. R. (2022). Academic and institutional readiness towards e-Learning to inform policy and practice in an evolving post-school education sector. *Perspectives in Education*, 40(1), 62-79. DOI: <https://doi.org/10.18820/2519593x/pie.v40.i1.4>
- Orabueze, F., Okafor, H. I., Okonkwo, U. U., Chinonso, M. M., & Ekwueme, O. (2021). Methods and techniques of teaching English and German classes in Nigeria during the Covid-19 pandemic era. *XLinguae*, 91-99. DOI: <https://doi.org/10.18355/xl.2021.14.01.08>
- Rambe, P., & Nel, L. (2015). Technological utopia, dystopia and ambivalence: teaching with social media at a South African university. *British Journal of Educational Technology*, 46(3), 629-648. DOI: <https://doi.org/10.1111/bjet.12159>
- Reeves, A. J., Alkhalaf, S., & Amasha, M. A. (2019). WhatsApp as an educational support tool in a Saudi university. *International Journal of Advanced Computer Science and Applications*, 10(8). DOI: <https://doi.org/10.14569/ijacsa.2019.0100853>
- Robles, H. R., Guerrero, J., LLinas, H., & Montero, P. (2019). Online teacher-students interactions using WhatsApp in a law course. *Journal of Information Technology Education. Research*, 18, 231-252. DOI: <https://doi.org/10.28945/4321>
- Shang, Y., Li, H., & Zhang, R. (2021). Effects of pandemic outbreak on economies: evidence from business history context. *Frontiers in Public Health*, 9, 632043. DOI: <https://doi.org/10.3389/fpubh.2021.632043>
- Sharma, P., Singh, A. K., Leiva, V., Martin-Barreiro, C., & Cabezas, X. (2022). Modern multivariate statistical methods for evaluating the impact of WhatsApp on academic performance: methodology and case study in India. *Applied Sciences*, 12(12), 6141. DOI: <https://doi.org/10.3390/app12126141>

- Sims, S. K., & Baker, D. M. (2021). Faculty perceptions of teaching online during the COVID-19 University transition of courses to an online format. *Journal of Teaching and Learning with Technology*, 10, 337-353. DOI: <https://doi.org/10.14434/jotlt.v10i1.31621>
- Sivankalai, S. (2021). Academic libraries support e-learning and lifelong learning: a case study. *Library Philosophy and Practice (e-journal)*, 8(18), 1-18.
- Tamrat, W., & Teferra, D. (2020). COVID-19 threat to higher education. *International Higher Education*, 102, 28-30. Recovered from <https://ejournals.bc.edu/index.php/ihe/article/view/14615>
- Venturino, M., & Hsu, Y. C. (2022). Using WhatsApp to enhance international distance education at the University of South Africa. *TechTrends*, 66, 401-404. DOI: <https://doi.org/10.1007/s11528-022-00718-9>
- Yang, J. (2023). The impact of Industry 4.0 on the world of work and the call for educational reform. In D. Guo. *The frontier of education reform and development in China* (p. 285-298). Singapore, SG: Springer. DOI: [https://doi.org/10.1007/978-981-19-6355-1\\_15](https://doi.org/10.1007/978-981-19-6355-1_15)
- Yu, Z., Razzaq, A., Rehman, A., Shah, A., Jameel, K., & Mor, R. S. (2021). Disruption in global supply chain and socio-economic shocks: a lesson from COVID-19 for sustainable production and consumption. *Operations Management Research*, 15, 233-248. DOI: <https://doi.org/10.1007/s12063-021-00179-y>
- Yunusa, A. A., Sanusi, I. T., Dada, O. A., Oyelere, S. S., Agbo, F. J., Obaido, G., & Aruleba, K. (2021). The impact of the covid-19 pandemic on higher education in Nigeria: university lecturers' perspectives. *IJEDict-International Journal of Education and Development Using Information and Communication Technology*, 17(4), 43-66.  
Recovered from <https://www.diva-portal.org/smash/get/diva2:1624059/FULLTEXT01.pdf>

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