# Utilization of Social Media Networks for Teaching Effectiveness in Tertiary Institutions of Cross River State, Nigeria: Implications for Learning and Practice in an Environment of Students with Intellectual Disabilities

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**Abstract:** *Aim*: This study examines the use of social media networks for teaching effectiveness in public tertiary institutions of Cross River State, Nigeria: Implications for learning and practice in an environment of students with intellectual disabilities. Four study objectives were stated to guide the research. Four research questions were formulated, and one hypothesis statement was made. A literature review was carried out based on the variables under study, as research gaps were also stated.

*Method*: The study utilize7d the descriptive survey research design. The study population comprised 2,800 academic staff of public tertiary institutions of Cross River State. The sampling techniques adopted for this study were the stratified random sampling technique and the accidental random sampling technique. A total sample of 560 respondents was selected from 2,800 academic staff of public tertiary institutions in Cross River State using 20% of the entire population. A validated 25-item four-point modified Likert scale questionnaire was the instrument used for data collection. The face and content validity of the instrument was established by experts in Test and Measurement from the University of Calabar, Calabar-Nigeria. The reliability estimates of 0.89 for the instruments were established using the Cronbach Alpha method. A descriptive analysis of frequency count, percentages, mean, and standard deviation was used to test the research questions.

*Results*: The results obtained from the data analysis revealed that there was a statistically significant joint relationship between the predictor variables (Twitter, Facebook, WhatsApp) and teachers' teaching effectiveness in tertiary institutions in Cross River State, Nigeria.

*Conclusion*: From the findings of this study, one can conclude that there was a statistically significant joint relationship between the predictor variables (Twitter, Facebook, WhatsApp) and teachers teaching effectiveness in tertiary institutions in Cross River State, Nigeria. Key statistical measures, including mean scores, standard deviation, and inferential tests such as Multiple Linear regression, indicate a positive correlation between social media utilization and improved instructional delivery. The findings suggest the need for inclusive digital strategies to maximize learning outcomes, emphasizing the importance of accessible and adaptive teaching approaches. These insights have critical implications for policy formulation, curriculum design, and pedagogical practices in higher education.

*Recommendation*: Based on the result of the study, it was recommended that since the utilization of social sites by teachers improves teaching effectiveness, learning institutions should enact regulations that will govern the proper and positive use of the various types of social media sites among teachers in institutions to promote teachers' teaching effectiveness.

**Keywords:** Twitter, Facebook, WhatsApp, Teachers, Teaching, Effectiveness, Students.

## INTRODUCTION

The change in human society is an indispensable process, and the only means for keeping track of this change in society as a whole is education. It is widely accepted that every student's success and academic achievement rely on the teachers' quality, efficacy, and teaching effectiveness. Teaching is a challenging profession, and since the instructor is the most important component in students' learning experiences, any professional teacher must be successful. Teachers' effectiveness is described by the ability to address underlying topics for the need for learners to

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conduct and divide information into sections for learners' comprehension. A successful instructor acquires and needs improvements, learns talents, has a positive outlook, is knowledgeable about the subject matter, is full of thoughts, and can affect the desired improvement in the learner's behavior.

Unfortunately, some teachers are ineffective in the classroom, as shown by their poor attitude toward education, bad record-keeping, lateness to training, inconsistent attendance to classes, poor self-discipline, casual attitude toward taking lesson notes and labeling attendance records, and a variety of other negative behaviors that can contribute to the achievement of defined objectives. This has been a source of controversy, with the government, parents, and the general public blaming incompetent teachers for students' poor academic performance. This suggests that students' poor academic achievement is related to the efficacy of their teachers, as it is thought that when teachers succeed, students will do well, and vice versa.

There's no denying that ever since social networks and social media made their way into our lives, everything has been different. Beginning with the way we socialize, interact, plan for parties, and even how often we go out. The change in the socio-economic and education environments necessitates a consistent and continual search for different and innovative teaching strategies to address the learning requirements of future generations of students who are technically inclined and driven. Technological innovation and increased use of the Internet for e-teaching by teachers in higher education institutions have brought revolutionary changes in communication patterns. Social media provide excellent educational e-teaching opportunities to teachers for academic collaboration, access to course contents, and tutors despite the physical boundary [1].

As online tools and technologies have developed, social media has become regarded as a key tool for supporting applied learning activities. Social media technologies provide tutors with the means to engage learners with valuable time-on-task learning [2] and self-regulated learning [3]. Ingeneral, affordances provided using social media present opportunities for users to develop connections and to communicate with others irrespective of time and geographical barriers. Popular social media spaces such as Facebook, Twitter, Instagram, YouTube, and LinkedIn are designed to be intuitive to use and entirely accessible from any online connected device.

Social networking sites incorporate mobile connectivity, photo/video sharing, and blogging. There are over 200 SNSs worldwide used to connect people around the world. The popular ones used by students to enhance their learning include Facebook, Twitter, LinkedIn, YouTube, Blogs, Myspace, Flickr, Podcasts, Ning, WhatsApp, Google+, and 2go, among others. However, since the researchers cannot research all the social networking sites, the interest of this research is on Twitter, Facebook, and WhatsApp.

Twitter is a micro-blogging portal that is proving extremely useful across academic applications. It is one of the most popular social networking sites currently in use, which allows teachers to post short and simple messages known as tweets in not more than 140words [4]. Teachers, students, and parents can benefit greatly from the use of Twitter in education. Teachers can use short Tweets to inform students about academic program changes and work collaboratively as a great team.

The Facebook phenomenon is happening all over the world. In America, 42% of teens ages 12-17 communicate via Facebook, replacing landline phones and e-mail [5]. Undeniably, the young generation is spending more and more time online, especially on Facebook.

WhatsApp helps users stay connected and maintain relationships; creating new connections is also possible. WhatsApp is commonly used for learning about events, but it can also be used for surveillance and social surveillance to gather information about others [6].

Social media and mobile devices allow the teachers to create, edit, and share the course contents in textual, video, or audio forms. These technological innovations give birth to a new kind of learning culture, learning based on the principles of collective exploration and interaction [7]. Social media phenomena originated in 2005 after Web 2.0's existence became a reality. It is defined more clearly as "a group of Internet-based applications that build on the ideological and technological foundation of Web 2.0 and allow creation and exchange of user-generated content [8]. Social media provide opportunities to access resources, materials, and course content and interact with mentors and colleagues [9].

The adoption and application of social media can provide ample teaching opportunities for teachers to

access course content and interact with students and experts. The use of social media and mobile devices presents both advantages and challenges, mostly its benefits seen in terms of accessing course contents, video clips, transfer of instructional notes, etc. Overall, teachers feel that social media and mobile devices are cheap and convenient tools for obtaining and releasing relevant information. Studies in Western countries have confronted that online social media use for teaching has a significant contribution to students' academic performance and satisfaction [10].

In Nigeria, many teachers intertiary institutions are believed to beutilizing social sites to pursue academic goals; however, many seem not to be able to acquaint themselves with the use of these social networks for learning. [11] acknowledged the need for teachers to utilize SNSs to improve academic learning. [12] observed with concern that despite the obvious benefits of integrating social networks in teaching, the majority of teachers in tertiary institutions in Nigeria, especially in Cross River State, utilized the platform mainly for non-academic purposes. Rather, they appear to now divert their search towards non-educational, online activities such as useless chatting forthe sake of enjoyment instead of doing their assignments.

Despite the growing body of literature on social media utilization in education, several gaps exist in the context of teaching effectiveness in tertiary institutions in Cross River State, Nigeria, particularly in environments that include students with intellectual disabilities. While studies have explored the general impact of social media on teaching and learning, few have specifically examined how social media can be adapted to support students with intellectual disabilities in higher education settings. Again, existing research often focuses on student engagement and participation but lacks quantitative and qualitative data that measure teaching effectiveness when using social media as an instructional tool.

Most studies on social media in education are conducted in developed countries or urban centers, with a limited focus on tertiary institutions in Cross River State, Nigeria. The unique challenges faced by educators and students in this region, such as infrastructural deficits, digital literacy levels, and socio-economic factors, remain underexplored. There is limited research on the accessibility of social media platforms for students with intellectual disabilities, including issues related to content adaptation, user interface design, and the effectiveness of assistive technologies in enhancing their learning experiences. It is important to state that few studies assess the extent to which institutional policies and government regulations support or hinder the integration of social media into teaching practices in tertiary institutions, especially in inclusive learning environments.

Several studies have been carried out on the effects of social media on students' learning outcomes in colleges and schools. The studies have recognized both positive and negative bearings of social media on students' academic achievement in education [13]. However, the studies have not proven the utilization of social media for teaching in tertiary institutions in the study area. Based on this background, this study examined the utilization of social media networks for teaching in tertiary institutions of Cross River State, Nigeria: Implications for learning and practice in an environment of students with intellectual disabilities.

## PURPOSE OF THE STUDY

The main purpose of this study was to examine the utilization of social media networks for teaching effectiveness in public tertiary institutions of Cross River State, Nigeria: Implications for learning and practice in an environment of students with intellectual disabilities

Specifically, the study soughed to;

1. Examine the types of social networking sites used by teachers
2. Examine the benefits of social networks to teachers
3. Assess the extent of utilization of social sites for teaching by teachers
4. Ascertain the challenges of using social network sites for teaching and learning

## RESEARCH QUESTIONS

1. What are the types of social networking sites used by teachers?
2. What are the benefits of social networks to teachers?
3. To what extent do teachers utilize social network sites for teaching?

4. What are the challenges of using social network sites for teaching and learning?

## STATEMENT OF HYPOTHESIS

The hypothesis states thus;

There is no joint significant relationship between the predictor variables (Twitter, Facebook, WhatsApp) and teachers teaching effectiveness in tertiary institutions in Cross River State, Nigeria.

## LITERATURE REVIEW

### Application of Social Media in Tertiary Institutions

The popularity of social media draws the attention of educational researchers, and the use of social media (such as Facebook, blogs, WhatsApp, Zoom, and Twitter) in the tertiary educational context has been studied.[14]studied Facebook posts in a university course and found that more students communicated administrative-type posts. They concluded that teachers should involve learners in critical engagement instead of allowing students to receive teachers' content passively. [15] studied four university courses using Facebook, and 78% of the students thought Facebook was an effective learning tool that enhanced discussion, interaction, and access to posted assessments and lecture notes. While the above study found that social media was an effective learning tool that enhanced discussion, interaction, and access to posted assessments and lecture notes, the study is related to the present study because it emphasizes the effective use of social media in institutions.

Several studies highlight Facebook's role in fostering peer relationships, motivation, and communication. [16] found that 95% of students in the survey agreed that Facebook assisted them in the development of peer relationships and appreciated the collaborative discussion in the online environment. Similarly, [17] revealed that about 70% of university students using Facebook had a positive attitude towards learning and felt the use of social networks could motivate learning. Additionally, [18] performed a survey in a university course in which Facebook was used to facilitate sharing among students, and 95.5% of students felt that communication with others had improved.

Blogs have been identified as tools that promote a sense of community, self-reflection, and engagement in coursework. Research by [19] examined the sense of community, including blogging in a university course, and indicated that respondents had moderately felt the sense of community and perceived learning had a stronger relationship with the sense of community. Additionally, [20] revealed that blogs that sustained students' sense of togetherness and reflected their own practices could support self-refection, self-expression, and social interaction. [21] further indicates that students efficiently completed assignments using an unrestricted blog, demonstrating its effectiveness in coursework.

Moreover, [22] reported that 79% of students did not feel pressured when using blogs to express their thoughts, suggesting that blogs provide a low-stress environment for academic discussions. A review by [23] emphasized that students preferred blogs for formative purposes, reinforcing their role in continuous learning. [23] conducted a review on the use of blogs in higher educational environments and found that students particularly liked to use blogs for formative purposes. A comparison by [24] found that students using Twitter had higher engagement scores than those who did not, with improved communication between teachers and students, leading to better feedback and active learning. Similarly, [25] found that Twitter’s advantage over traditional teaching methods was its ability to enhance social presence and connect students to professional communities of practice. In a language-learning context, [26] revealed that 70% of students believed Twitter helped them develop effective language skills, highlighting its potential in skill-based learning.

### Use of Twitter for Teaching Effectiveness

Twitter, a widely used Web 2.0 microblogging platform, has been increasingly integrated into education due to its interactive and real-time communication features. Research highlights its role in classroom engagement, student-teacher interaction, information dissemination, and learning enhancement, although concerns about distractions and multitasking persist. Studies emphasize that Twitter enhances real-time participation and student engagement in academic discussions. It allows students to post questions during lectures, enabling lecturers to address them immediately or at the end of the session [27, 28]. Additionally, Twitter can be used for in-class revision activities, where lecturers post questions, and students respond in real time. Beyond lectures, the platform facilitates post-class discussions, ensuring continued engagement in a virtual environment. Furthermore,

Twitter supports peer-to-peer interactions, where students can provide feedback during presentations and engage in collaborative learning [28]. This aligns with findings that Twitter can enhance student communication networks and foster a sense of academic community.

Lecturers leverage Twitter for multiple administrative and instructional purposes. The platform is used to:

- Share course-related updates and reminders (e.g., assignment deadlines, test dates) [28, 33].
- Gather student feedback on teaching methods and learning activities [28].
- Coordinate group assignments by providing a collaborative space for students to communicate and share resources [28].
- Disseminate important university announcements, ensuring quick and efficient communication [33].

According to [34], Twitter is an effective communication medium due to its interactive features. In this sense, the student can activate the notification function. When this function is activated, students will get a direct notification when the lecturer posts a new announcement. At the same time, lecturers can address and solve possible problems or issues, for instance, changing the schedule of the lectures to suit students who are not able to attend due to overlapping schedules. This can also improve students' engagement as they can directly respond to news or tweets or use direct messaging to explain the situation they face. The quick feedback function can contribute to improving the use of Twitter for decimating important information to students. This is also parallel with the findings of a previous study that showed Twitter can improve the spread of information to the students, which was conducted on a different topic. Research also suggests that Twitter's short-text format and notification features make it an effective tool for sharing direct, relevant academic content without unnecessary distractions [35].

A study by [30] was carried out to determine the extent to which business education students use Twitter to enhance academic learning at Anambra State. One research question guided the study, and one null hypothesis was tested at a 0.05 significance level. A descriptive survey research design was adopted, and the population of 330 2018/2019 final-year business education students in the four public tertiary institutions was studied without sampling. The instrument for data collection was a structured questionnaire containing 8 items and validated by experts in the field of business education and measurement and evaluation. Pilot testing was used to establish the reliability of the instrument, and data analysis with Cronbach Alpha yielded a coefficient of 0.94. Three hundred and twenty (320) duly completed copies of the instrument were retrieved and used for the study. Mean and standard deviation were used to answer the research question and determine the homogeneity of the respondents' ratings, while the t-test was used to test the hypothesis. Findings revealed that Twitter is utilized by business education students to enhance academic learning to at small extent. Gender did not significantly influence respondents' mean ratings on the extent to which they utilize Twitter for enhancing academic learning. Based on the findings of the study, the researcher concluded that much still needs to be done to ensure that business education students utilize Twitter to enhance their academic learning.

This indicates that while Twitter is available as a learning tool, its adoption in formal educational settings requires more encouragement and structured implementation. Moreover, studies highlight that Twitter can support both low-order thinking skills (e.g., memorization and recall) and higher-order cognitive processes (e.g., evaluation and critical thinking). For instance, well-designed activities, such as analyzing historical events through images and discussions, can foster critical analysis and problem-solving skills [28].

Despite its benefits, research also indicates challenges associated with Twitter usage in education. Studies reveal that social media multitasking—including the use of Twitter—can negatively impact students' academic performance by increasing distractions and reducing study efficiency [32]. Wang, Chen, and Liang found that a significant proportion of students use social media while studying, which may interfere with their reading and learning habits.

**Use of Facebook for Teaching Effectiveness**

With the rapid development of information and communication technologies (ICTs), various changes have been made in terms of the methods in the teaching and learning process [36]. Facebook is currently the leading social networking site, with over

500 million active users as of March 2011 [37]. Interestingly, 70% of Facebook users are from outside of the US. Indonesia has the highest number of Facebook users in Asia, numbering 18.9 million, while Malaysia ranks fifth with 5.1 million users [38]. According to Facebook statistics, its users spend over 700 billion minutes per month on Facebook.

Facebook groups' is a feature that is available on the social networking site Facebook. This feature allows for an unlimited number of members to participate, communicate, and interact via post and chat for a specific purpose. FB is essentially a personalized profile of which users have complete control over its content. A user's profile can be viewed by other users in the same 'network' by default unless the profile owner specifies otherwise. Users are able to share photos, comment on friends' walls, send messages, chat, create, and join groups within this online community. Of educational interest is that this means that users are continuously involved in sharing information, interacting and communicating with other users, collaborating, and sharing ideas and opinions via posts and status updates. Hence, the researchers believe that FB possesses huge potential as an educational tool due to the features it offers [39].

In research conducted with first-year undergraduate students at a British university, most of them generally saw FB mainly as a means for social interactions and secondly for informal learning purposes but completely rejected the idea of FB being used as a tool for formal teaching [40]. Focusing on FB use for informal learning, 46% of the respondents conceded that though they started using FB for purely social reasons, they increasingly used FB for discussing academic work on a daily or weekly basis. More importantly, these discussions, revisions, and academic queries were all student-initiated and not a requirement for a course. However, the fact remains that students still see FB as a social tool and not an academic one.

Faudree conducted a survey on how Manchester College students used the social networking site FB [41]. A similar idea of FB as a way for users to waste time is being proposed. According to the study, students procrastinate and waste their time on the Internet network and activities done on FB. As an example, Schiesel stated that instead of doing other, more important work, students were found to be stuck in features offered by FB, such as the various free games offered [41]. Some of the popular free games offered are, 'Sorority Life' and 'Mafia Wars.' Most games do not end in a single session, which requires and traps the users to keep coming back and continue playing. If this phenomenon happens for a long duration, it will cause "FB addiction" [41]. Users will then end up spending most of their time in a day updating their profile, extending their social network, and looking at other users' information and photos. This distraction, which is a form of negative impact, needs to be considered by educators as one of the major problems expected to be faced by students if FB were to be incorporated into the teaching and learning process.

[42] suggested that the educational use of Facebook in higher education has some advantages, such as the dissemination of information, piquantness and motivation, interaction chance, and ease of access to information and entertainment in education. It also has some disadvantages, like being nested with entertainment, doubt of the accuracy of shared information, problems of control mechanisms, and informational convergence. Three different interactions can be mentioned during the education process: student-student interaction, student-teacher interaction, and student-content interaction [43]. Social media sites are considered the most important element that increases student-student interaction and maximizes students' satisfaction with the courses. At the same time, administrators, teachers, and students state that teachers' use of digital technologies is the key to social interaction [44].

[45] emphasized in his study that social media positively increases student-teacher interaction, affects student-student collaboration, enriches data, develops ideas, and provides alternative learning environments such as learning management systems (LMS) outside the school.

**Use of WhatsApp for Teaching Effectiveness**

WhatsApp was founded in 2009 by Brian Anton and Jan Koom, both former Yahoo employees. In April 2013, Google acquired WhatsApp, which now has over 400 million active monthly users in more than 180 countries [46]. WhatsApp is a free messaging and calling app that is available on phones worldwide. It was created as an alternative to SMS and is now widely used for sending and receiving various media, including text, photos, videos, documents, and location. Additionally, WhatsApp allows users to make voice calls securely and reliably to make voice calls securely and reliably.

WhatsApp has the potential to enhance the learning. Although it differs to some extent from other social media platforms [47], it is not a social network. Social networks have become a fundamental part of users' daily lives and are often used in education. Studies indicate that social networks have both positive and negative effects on various variables, including communication, motivation, social interaction, and academic success. These effects are dependent on the purpose and form of the use of social networks in education. These tools, each with unique features for learning, have the potential to enhance cooperation, increase social interaction, interest, motivation, sense of belonging, academic success, and student-teacher and student-student interaction. They also support learning anytime and anywhere, provide peer support and feedback, and facilitate the sharing of information in education [48].

Using smartphones for communication in education can be challenging. Some students don't own smartphones, while teachers may be overwhelmed by the number of messages. Language barriers and unrealistic expectations from students can also cause educational issues. Digital communication has become popular for students and teachers. Channels such as e-mail, SMS, Facebook, Twitter, and WhatsApp provide opportunities for learning. Each tool has different characteristics that affect its suitability. These tools have different characteristics that can affect their suitability for learning [49]. WhatsApp is a very popular platform in Nigeria but is also extensively used worldwide as an instant messaging (IM) tool. Smartphone users can use this multitasking instant messaging app that relies on internet connectivity to transmit content [49]. Recently, this platform has enabled real-time exchange of various media, including text, videos, photos, location, documents, status updates, voice calls, and video calls. As of July 2017, it had over 1.3 billion monthly active users worldwide, making it one of the most popular smartphone messenger platforms [49]. As of February 2017, over 200 million monthly active users in India use the mobile messaging platform [50].

The growing popularity of smartphones has enabled the widespread use of WhatsApp [51], leading to increased information sharing across various industries, including the service sector [52]. WhatsApp groups are used to share messages, and the application is quickly becoming an important educational tool. In recent years, digital communication has become common among students and teachers through e-mail, SMS, Facebook, Twitter, and WhatsApp channels. However, each tool has unique characteristics that impact its suitability for learning [52]. [53] examined the effectiveness of using Facebook and WhatsApp in developing critical thinking skills such as analyzing, evaluating, applying, generating ideas, and expressing ideas (clarity, accuracy, relevance, depth, and logic). They also reviewed how students and information from multiple sources share experiences and express ideas.

## MATERIALS AND METHODS

### Experimental Setting

The descriptive survey research design was adopted for this study. A descriptive survey design is a research method that aims to collect and analyze data to describe the characteristics of a population, situation, or phenomenon systematically. It is commonly used in social sciences, education, and health research to gather information from a sample representing the larger population [54];[55].

The area of this research study is Cross River State. Cross River State is located in the South-South Geo-political Zone of Nigeria. It comprises eighteen Local Government Areas, namely Abi, Akpabuyo, Bakassi, Boki, Calabar Municipality, Calabar South, Ikom, Etung, Obubra, Ogoja, Bekwarra, Yala, Yakurr, Odukpani, Biase, Akamkpa, Obudu and Obanliku. Cross River State is divided into three education zones, namely, the Ogoja Education Zone, which covers five area education authorities of Ogoja, Bekwarra, Obanliku, Obudu, and Yala. Ikom Education Zone covers Ikom, Boki, Etung, Obubra, Yakurr, and Abi. Moreover, the Calabar Education Zone comprises Akpabuyo, Bakassi, Calabar Municipality, Calabar South, Biase, Akamkpa, and Odukpani. Cross River lies in southern Nigeria between latitudes $8^0$ $42^1$ and $23^0$ $39^1$ East of the Greenwich Meridian and longitudes $5^0$ $57^1$ and $23^0$ $99^1$ North of the Equator.

### Participants/Sample

The study's population comprised 2,800 academic staff of public tertiary institutions in Cross River State. The breakdown of the population is shown in Table **1**.

The sampling techniques that were adopted for this study were the stratified random sampling technique and the accidental random sampling technique. The stratification was based on the different tertiary institutions. 20% of the population from each institution

**Table 1: Population of the Study**

| S/N | University | Number of academic staff |
|---|---|---|
| 1 | University of Calabar | 1,680 |
| 2 | Cross River University of Technology | 596 |
| 3 | College of Education, Awi | 147 |
| 4 | Federal College of Education, Obudu | 377 |
| | Total | 2,800 |

Source: UNICAL academic planning unit, 2024; UNICROSS Senior Establishment Unit, 2024; COE, AWI, 2024; FCE OBUDU OFFICE OF REGISTRAR, 2024.

was utilized in the study. An accidental sampling technique was employed to select the respondents for the study. This means that the instrument was administered to any academic staff found during distribution.

A total of 560 respondents were selected from 2,800 academic staff of public tertiary institutions in Cross River State, using 20% of the entire population. The sample distribution is seen in Table **2**.

**Instrument for Data Collection**

The instrument for data collection was a researcher-developed questionnaire titled "Social Media Networks and Teaching Effectiveness Questionnaire (SMNTEQ)." It consists of three sections. Section A consists of the respondents' personal demographic data, such as gender, years of experience, educational qualification, rank, types of social sites, benefits of social media, extent of utilization of social media sites, and challenges of using social media.

Section B consists of five items in each sub-section measuring Twitter, Facebook, and WhatsApp, thus giving 15 items for the study on a four-point modified Likert scale type of rating scale of Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Extent (VLE). The respondents are required to tick (√) options that are applicable to them based on their opinion.

Section C consists of ten (10) items measuring the dependent variable-teaching effectiveness on a four-point modified Likert scale type of rating scale of SA-Strongly Agree, A-Agree, D-Disagree, and SD-Strongly Disagree. The respondents were also required to tick (√) options that are applicable to them based on their opinion.

Face validity was established. Face validity refers to the way the questionnaire items appear to take care of relevant contents of the subject area of interest [55]. Two experts in the field of Test/Measurement at the University of Calabar scrutinized the items to certify that the instruments had face validity and could be used for the study. Results of the validation revealed that two items were dropped, three were modified, and two new items were added to the questionnaire. It was established that the questionnaire was good enough, so it was approved for use in the study.

The Cronbach Alpha reliability coefficient method was used to establish the instrument's reliability. A trial test was conducted using (50) respondents drawn from the University of Uyo To ascertain the instrument's reliability, which is not part of the population area. The result of the reliability is 0.89.

The procedure for data collection involved a written request by the researcher to the Heads of Departments for permission to administer the instrument to the lecturers. On granting the request, the researcher met the respondents in their offices for the administration of the instrument. The researcher administered the instrument with the help of one research assistant. The research assistant was trained on how to seek verbal informed consent and interact with academic staff during the administration of the questionnaire. During data collection, verbal informed consent was sought from respondents, stating clearly the confidentiality of their responses and protection, including their voluntary participation in the study and freedom to withdraw from the study at any time. The researcher explained issues and answered questions raised by the respondents, if any. The questionnaires were distributed, and some were collected on the same day, while some were collected a few days later.

After collecting the questionnaire, codes/scores were assigned to each item. For ease of data preparation, a coding schedule was prepared by developing a key for each of the constructs in the instrument in a tabular form. The schedule is presented in Table **4**.

**Table 2: Sample**

| S/N | University | Number of academic staff (20%) |
|---|---|---|
| 1 | University of Calabar | 336 |
| 2 | Cross River University of Technology | 119 |
| 3 | College of Education, Awi | 29 |
| 4 | Federal College of Education, Obudu | 76 |
| | Total | 560 |

Very High Extent (VHE) 4 points

High Extent (HE) 3 points

Low Extent (LE) 2 points

Very Low Extent (VLE) 1 point

The variables and appropriate statistical techniques adopted were identified and used to test the research questions and hypotheses directing the study. Data was analyzed using the Statistical Package for Social Sciences (SPSS) program version 26. Results were presented using frequency counts, percentages, mean, and standard deviation of the research variables. Multiple linear regression was used to analyze the hypothesis.

**Study Group Definition (SGD)**

- The study group comprises academic staff from four public tertiary institutions in Cross River State, Nigeria.
- The age range is between 25-70 years
- There are both males and females in the group
- All the lecturers selected for the study utilized various kinds of social media for teaching.

**Ethical Consideration**

The study adhered fully to social science research ethical norms and principles to safeguard the participants' psychological, physical, and emotional well-being and guarantee the privacy, secrecy, and confidentiality of their data.

- The researcher advised the participants that their information would be kept private.
- Furthermore, the investigator made certain that the participants in the study gave their informed consent and did so voluntarily.
- Participants were given a comprehensive explanation of the study, including the purpose of the research.
- The expected duration of their involvement.
- The participants gave their informed permission for the study by being made aware of its goal, which may have affected their decision to take part.
- The nature of the data being collected.
- Potential risks, benefits, and the voluntary nature of participation.
- Participation was strictly voluntary, with no coercion or undue influence.
- Participants were informed of their right to withdraw from the study at any point without any repercussions.
- The consent forms were written in clear, non-technical language to ensure accessibility and understanding.
- For participants requiring further clarification, dedicated sessions were arranged to address their concerns.
- All personal identifiers (e.g., names, student IDs, e-mail addresses) were removed from the data.
- Only the principal investigator and authorized team members had access to raw data.
- When sharing results, data was aggregated to prevent the identification of individual participants.
- The study protocol, including consent and confidentiality measures, was reviewed and approved by the institution's Ethics Review Committee to ensure compliance with ethical standards.

## RESULTS

The results of the frequency distribution and descriptive data analyses are presented in Table **3**. The data presented in Table **3** showed that 174 respondents, representing 31.1%, were males, while 385(68.9%) respondents were females. The data further showed that 233(41.7%) respondents were 40 years of age and below; 207(37.0%) respondents were between 41 and 50 years of age; 109 (representing 19.5%) respondents were between 51 and 60 years of age, and 10 respondents representing 1.8% were 61 years and above.

Further examination of the data revealed that 70(12.5%) respondents have First degrees, 2 respondents, representing 0.4%, have Postgraduate Diplomas, 153(27.40%) respondents have Master's degrees, 238, representing 42.6%, have Ph.D., and 96 respondents, representing 17.2 %, have Postgraduate degrees.

The result further showed that 71(12.7%) respondents were Graduate Assistants, 11(2.0%) respondents were Assistant lecturers, 147 (representing 26.3%) were Lecturer II, 95(17.0) were Lecturer I, 120 (21.5) were Senior Lecturers, 17(3.0) were Associate Professors, and 98(17.5%) respondents were Professors.

### Research Question One

What are the types of social networking sites used by teachers?

The data presented in Figure **1** showed that 287 respondents, representing 51.34%, use WhatsApp for teaching; 124(22.2%) use Facebook; 56 respondents, representing 10.02%, use Twitter; 41 respondents (7.33%) use Instagram; 32 respondents, representing 5.72%, use YouTube; and 19 respondents, representing 3.4%, use the Zoom App for teaching. This study shows that WhatsApp is the most used social media network for teaching and academic purposes.

### Research Question Two

What are the benefits of social networks to teachers?

The data presented in Figure **2** showed that out of 559 respondents used in the study, 182 respondents, representing 32.56%, stated that it enables group discussions and peer-to-peer interactions outside the classroom; 119(21.29%) stated that it provides a platform for instant feedback and clarification; 202 respondents, representing 36.14 respondents, stated that it allows teachers to share supplementary materials like links, documents, and multimedia files, while 56 respondents (10.01%) stated that it

**Table 3: Frequency Distribution of the Respondents (N=559)**

| SN | | | Frequency | Percentage |
|---|---|---|---|---|
| 1. | Gender | Male | 174 | 31.1 |
| | | Female | 385 | 68.9 |
| 2. | Years of experience | 10 years and below | 233 | 41.7 |
| | | 11–20 years | 207 | 37.0 |
| | | 21-30 years | 109 | 19.5 |
| | | 31years and above | 10 | 1.8 |
| 3. | Highest qualification | First degree | 70 | 12.5 |
| | | PGD | 2 | 0.4 |
| | | Master | 153 | 27.4 |
| | | Ph.D | 238 | 42.6 |
| | | Post Doctoral | 96 | 17.2 |
| 4. | Rank | Graduate Assistant | 71 | 12.7 |
| | | Assistant Lecturer | 11 | 2.0 |
| | | Lecturer II | 147 | 26.3 |
| | | Lecturer I | 95 | 17.0 |
| | | Senior Lecturer | 120 | 21.5 |
| | | Associate Professor | 17 | 3.0 |
| | | Professor | 98 | 17.5 |

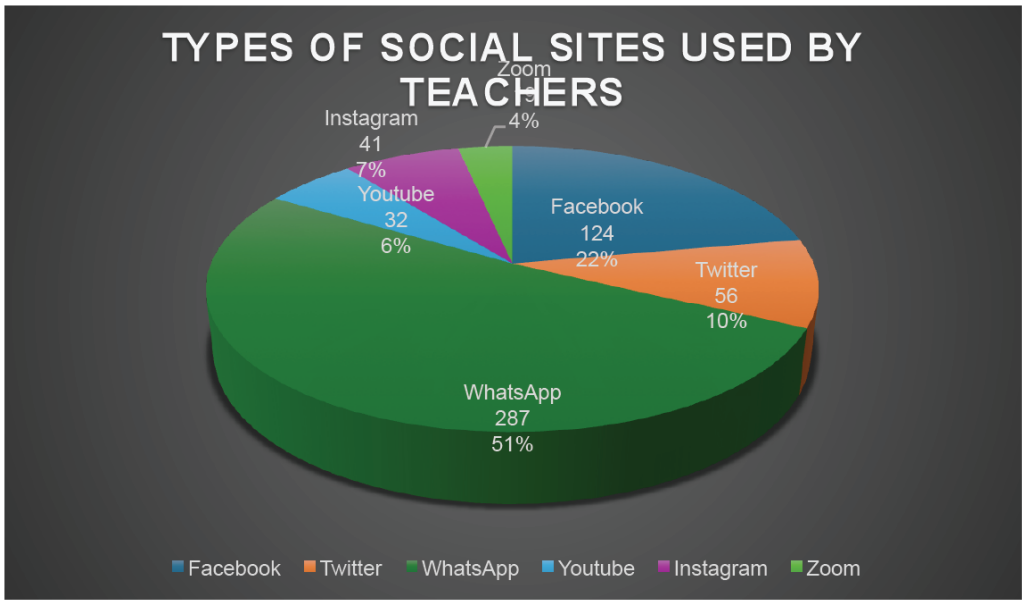


**Figure 1:** Types of social sites used by teachers.

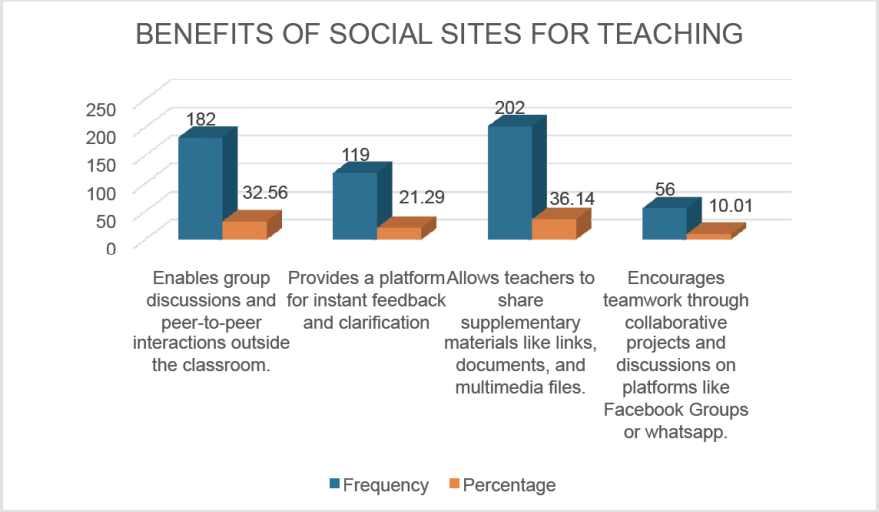


**Figure 2:** Benefits of social sites for teaching.

encourages teamwork through collaborative projects and discussions on platforms like Facebook Groups or WhatsApp. This study is an indication that social networks are important tools for teaching and academic purposes.

### Research Question Three

To what extent do teachers utilize social network sites for teaching?

The result further showed that only 24 respondents, representing 4.3%, utilize social sites for teaching to a low extent, while a whopping 535, representing 95.7%, utilize social sites for teaching to a very high extent.

### Research Question Four

What are the challenges of using social network sites for teaching and learning?

The data presented in Figure **4** showed that out of 559 respondents used in the study, 211 respondents representing 37.75% stated that students might become distracted by non-educational content; 117(20.93%) stated that teachers and students might face unwanted exposure to inappropriate content, 132 respondents representing 23.61% stated that not all students have equal access to reliable internet or devices, while 99 respondents (17.71%) stated that digital literacy varies, leaving some students struggling

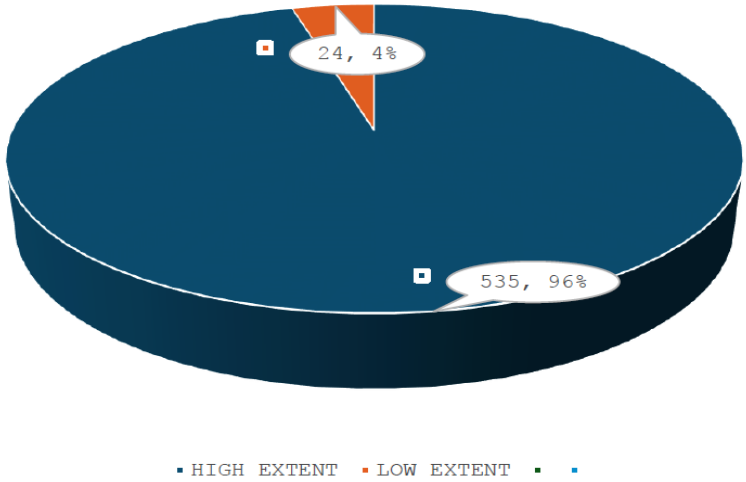


**Figure 3:** Extent of teachers utilization of social network sites for teaching.

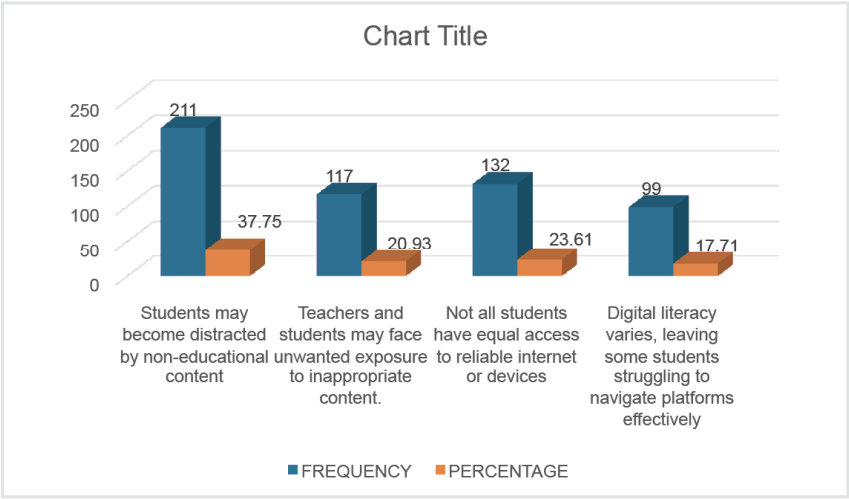


**Figure 4:** Challenges of using social network sites for teaching and learning.

to navigate platforms effectively. This study has revealed that the greatest challenge to social site usage for academic purposes is that students may become distracted by non-educational content.

**Test of Hypothesis**

The hypothesis states thus;

There is no joint significant relationship between the predictor variables (Twitter, Facebook, WhatsApp) and teachers teaching effectiveness in tertiary institutions in Cross River State, Nigeria. The choice of multiple linear regression (modeling application) was to help explain the linear relationship that exists between and among the predictor variables at $p < 0.05$. The results are presented in Tables **4** and **5**

The regression equation is given thus:

$$Yi = B_o + B_1X_1 + B_2X_2 + B_3X_3 + e_i \text{ ... Equation 1}$$

Where:

Y is the predicted value of the DV (teaching effectiveness)

$X_1$ = Twitter

$X_2$ = Facebook

$X_3$ = WhatsApp

Bo is the Y-intercept and

$e_i$ is the error of prediction known as residuals

Table **4** shows that multicollinearity does not exist among the five (5) predictor variables (Twitter, Facebook, WhatsApp) because the zero-order correlations are less than 0.85. More importantly, none of the correlations among the independent variables is greater than 0.68.

The inter-correlation matrix presents the relationship between teaching effectiveness (DV) and the use of Twitter, Facebook, and WhatsApp. Correlation Coefficients (r-values): These indicate the strength and direction of the relationship between variables. The values range from -1 to +1, where Positive values indicate a direct relationship (as one variable increases, the other tends to increase). Negative values indicate an inverse relationship (as one increases, the other decreases). Larger values (closer to 1.00) indicate stronger relationships. Values marked with ** (0.547*) are statistically significant at a certain confidence level (usually $p < 0.01$).

Twitter and Teaching Effectiveness ($r = 0.547$, $p < 0.01$) → There is a moderately strong positive correlation, meaning that higher use of Twitter is associated with increased teaching effectiveness. WhatsApp and Teaching Effectiveness ($r = 0.512$, $p < 0.01$) → A moderate positive correlation, suggesting WhatsApp also contributes to teaching effectiveness. Facebook and Teaching Effectiveness ($r = 0.259$, $p < 0.01$) → A weak positive correlation, implying that Facebook plays a lesser role in enhancing teaching effectiveness compared to Twitter and WhatsApp.

### Inter-Correlations among Social Media Platforms

Twitter and WhatsApp ($r = 0.277$, $p < 0.01$) → A small but significant relationship, indicating that those who use Twitter for teaching may also use WhatsApp.

Twitter and Facebook ($r = 0.121$, not significant) → A weak and non-significant relationship, suggesting that Twitter users do not necessarily use Facebook for teaching purposes. Facebook and WhatsApp ($r = 0.274$, $p < 0.01$) → A small but significant relationship, indicating some level of co-usage. Mean scores indicate the average level of usage for each platform, with teaching effectiveness (DV) having the highest

**Table 4: Inter-correlation Matrix of all the Variables**

| | DV | Twitter | Facebook | WhatsApp |
|---|---|---|---|---|
| DV | 1.00 | | | |
| Twitter | 0.547** | 1.00 | | |
| Facebook | 0.259** | 0.121 | 1.00 | |
| WhatsApp | 0.512** | 0.277** | 0.274** | 1.00 |
| Mean | 24.37 | 13.52 | 15.15 | 11.38 |
| SD | 7.39 | 4.46 | 2.83 | 4.05 |

KEY: DV = Teaching Effectiveness.

**Table 5: Regression Model Summary of all the Predictor Variables (Twitter, Facebook, WhatsApp) and Teachers Teaching Effectiveness**

| Model | R | R square | Adjusted R square | Std. error of the estimate | |
|---|---|---|---|---|---|
| 1 | 0.671 | 0.450 | 0.447 | 5.44029 | |
| Source of Variables | Sum of Squares | Df | Mean square | F | Sig. |
| Regression | 13463.596 | 3 | 4487.865 | 151.633 | 0.000 |
| Residual | 16426.225 | 555 | 29.597 | | |
| Total | 29886.821 | 558 | | | |
| Variables | Regression weight | | | | |
| | B | Std error | Standard. Coef. | t-value | Sig. |
| (constant) | 3.103 | 1.382 | | 2.245 | 0.025 |
| Twitter | 0.711 | 0.054 | 0.433 | 13.220 | 0.000 |
| Facebook | 0.277 | 0.085 | 0.107 | 3.271 | 0.001 |
| WhatsApp | 0.655 | 0.061 | 0.363 | 10.710 | 0.000 |

Key:

DV = Teaching Effectiveness

mean (24.37). Standard deviation (SD) shows variability in responses, with teaching effectiveness (7.39) having the highest variability, indicating differences in how respondents perceive its impact. This analysis suggests that educators who use Twitter and WhatsApp more frequently are likely to experience greater improvements in teaching effectiveness, while Facebook appears to have a lesser impact in this context.

Table **5** shows that the combination of all the predictor variables (Twitter, Facebook, WhatsApp)are joint predictors of teachers' teaching effectiveness. The predictor variables accounted for 45.0% of the variance in teachers' teaching effectiveness, which is a significant fit of the data.

Furthermore, the regression ANOVA revealed a moderate joint contribution of the predictor variables to teachers' teaching effectiveness $F(3,558) = 151.633$; $p < 0.00$. The adjusted $R^2$ (0.447) shows some shrinkage from the unadjusted value (0.671), indicating that the model could be generalized to the population. Based on the result, it was revealed that when all the contributor variables, Twitter, Facebook, and WhatsApp, are used together, they significantly contribute to teachers teaching effectiveness.

In terms of the individual predictors (Twitter, Facebook, WhatsApp), Table **5** shows that teachers' teaching effectiveness is significantly predicted by all the variables: Twitter, Facebook, and WhatsApp. This is a positive relationship (look at the beta sign), indicating that the more teachers utilize Twitter, Facebook, and WhatsApp, the better the teaching effectiveness.

The higher the β value, the greater the contribution of the predictor variable.

Therefore, the regression equation is expressed thus:

$$\text{Teaching effectiveness} = B_o + B_1\,\text{Twitter}_i + B_2\,\text{Facebook}_i + B_3\text{WhatsApp}_i \quad \text{Eq 2}$$

$$= 3.103 + (0.711\text{Twitter}_i) - (0.277\text{Facebook}_i) - (0.655\text{WhatsApp}_i)$$

Therefore, we can conclude that there was a statistically significant joint relationship between the predictor variables (Twitter, Facebook, WhatsApp) and teachers teaching effectiveness in tertiary institutions in Cross River State, Nigeria.

## DISCUSSION

The finding revealed that there was a statistically significant joint relationship between the predictor variables (Twitter, Facebook, WhatsApp) and teachers teaching effectiveness in tertiary institutions in Cross River State, Nigeria. This finding is true because teachers can use platforms like WhatsApp to share course materials, answer students' questions, and provide timely feedback, improving their effectiveness. The finding of this study supports [34] that Twitter is an effective communication medium due to its interactive features. In this sense, the student can activate the notification function. When this function is activated, students will get a direct notification when the lecturer posts a new announcement. At the same time, lecturers can address and solve possible problems or issues, for instance, changing the schedule of the lectures to suit students who are not able to attend due to overlapping schedules. This can also improve students' engagement as they can directly respond to news or tweets or use direct messaging to explain the situation they face. The quick feedback function can contribute to improving the use of Twitter for decimating important information to students. This is also parallel with the findings of a previous study that showed Twitter can improve the spread of information to the students, which was conducted on a different topic.

The finding of this study aligns with[42] that educational use of Facebook in higher education has some advantages, such as the dissemination of information, piquantness and motivation, interaction chance, ease of access to information, and entertainment in education. It also has some disadvantages, like being nested with entertainment, doubt of the accuracy of shared information, problems of control mechanisms, and informational convergence. Three different interactions can be mentioned during the education process: student-student interaction, student-teacher interaction, and student-content interaction [43]. Social media sites are considered the most important element that increases student-student interaction and maximizes students' satisfaction with the courses. At the same time, administrators, teachers, and students state that teachers' use of digital technologies is the key to social interaction [44].The finding of the study is in tandem with [35] that social media positively increases student-teacher interaction, affects student-student collaboration, enriches data, develops ideas, and provides alternative learning environments such as learning management systems (LMS) outside the school.

This study's finding aligns with [46] that WhatsApp enhances online collaboration and cooperation and offers several educational advantages as a tool for learning. WhatsApp for learning has technical obstacles such as being time-consuming, causing eyestrain, and taking up memory. However, these can be overcome by limiting learning sessions. Despite this, WhatsApp effectively trains critical thinking skills through analyzing, evaluating, applying, generating, and expressing ideas, which are measured by clarity, accuracy, relevance, depth, and logic indicators.

The study's finding is in line with [45] that WhatsApp can be used to enhance students' critical thinking skills. In addition, WhatsApp facilitates the sharing of multimedia annotations and plays a crucial role in transferring annotations, as noted by [48]. WhatsApp serves various purposes for students, including communication, social interaction, dialogue creation, and sharing, in addition to functioning as a learning platform. While WhatsApp offers technical, educational, and academic advantages, it can also lead to challenges such as irrelevant messages and language incompatibility between teachers and students, as pointed out by [47].

## IMPLICATIONS FOR STUDENTS WITH INTELLECTUAL DISABILITIES

This study implies thatsocial media platforms provide flexible and accessible learning opportunities for students with intellectual disabilities, allowing them to engage with content at their own pace. This is true because features like multimedia content (videos, images, and audio) can help simplify complex concepts, catering to diverse learning needs. Furthermore, platforms like WhatsApp can facilitate real-time interactions between teachers and students, fostering better understanding and engagement and social media use can help students with IDs develop essential digital literacy skills, preparing them for a technology-driven world.

Teachers can use social media tools to customize content for students with varying intellectual abilities, promoting an inclusive learning environment. Peer-to-peer learning facilitated through social media can help foster empathy and understanding among students.

## IMPLICATIONS FOR LEARNING AND PRACTICE

The study underscores the need to integrate social media literacy into the curriculum for both students and teachers, particularly tailored for students with intellectual disabilities. It is pertinent to state that teachers must receive professional development on utilizing social media to create accessible, inclusive, and engaging learning experiences. In terms of policy development, institutions in Cross River State should develop policies to regulate the use of social media for teaching, ensuring safety and appropriateness for students with IDs.

Encourages the use of blended learning models where social media complements traditional teaching methods, catering to the diverse needs of students. The study, in the future, highlights the need for investments in digital infrastructure and tools to support equitable access for all students.

## CONCLUSION

From the findings of this study, one can conclude that there was a statistically significant joint relationship between the predictor variables (Twitter, Facebook, WhatsApp) and teachers teaching effectiveness in tertiary institutions in Cross River State, Nigeria. The bottom line is that social media is a big part of our day-to-day life, and there's no point in keeping it away from the education process. School, college, and university staff should be encouraged to make use of technology. Utilizing social sites in learning will not only revolutionize instructional delivery but also stimulate students' active involvement in their learning process and the development of their in antiscientific and critical thinking abilities. Hence, there is a need for more training and monitoring of teachers and students.

The study focused only on tertiary institutions in Cross River State, Nigeria, which may limit the generalizability of the findings to other states or countries with different socio-cultural and technological environments, and data collection relied on self-reported responses from teachers, which may be subject to social desirability bias or inaccuracies in recall. The study examined only Twitter, Facebook, and WhatsApp, while other educational technologies such as Zoom, Google Classroom, and Telegram could also significantly influence teaching effectiveness. Future research should examine the impact of social media on teaching effectiveness in a broader range of institutions, including private universities and other states or countries, to enhance the generalizability of the findings, and conducting longitudinal studies will help assess the long-term impact of social media usage on teaching effectiveness, student engagement, and learning outcomes.

Again, future studies should compare the effectiveness of various social media platforms alongside other educational technologies, such as Microsoft Teams, Google Classroom, and Telegram, to determine which tools are most effective for specific teaching activities. While this study focused on teachers, further research should investigate students' perspectives on how social media influences their learning experience and academic performance.

## RECOMMENDATIONS

Based on the findings of the study, it was recommended that;

1. Since the utilization of social sites by teachers improves teaching effectiveness, learning institutions should enact regulations that will govern the proper and positive use of the various types of social media sites among teachers in institutions to promote teachers' teaching effectiveness.

2. The government should formulate policies that will enhance the surveillance of the kind of social or interpersonal interactions that occur on Twitter among teachers and learners.

3. Seminars and workshops should be organized by tertiary institutions' Faculties and Authorities to enlighten students on how to effectively utilize Facebook for academic purposes and the impact it will have on their academic performance and teaching effectiveness.

4. Lecturers should lead by example by utilizing WhatsApp to enhance theirown academic teaching of their students. This will enlighten the students to their benefits in education and there fore, stimulate their interest in utilizing WhatsApp for enhancing their academic learning.

5. Tertiary institutions should collaborate with social media developers to create features specifically tailored to the needs of students with intellectual disabilities.

6. Institutions should create policies that provide a structured approach to incorporating social media into teaching while addressing potential distractions.

7. Students should be required to contribute to discussions, share insights, and respond to queries posted by lecturers on social media.

8. Researchers should explore best practices for optimizing social media platforms for deeper learning and critical thinking skills.

## CONFLICTING INTERESTS

The authors hereby declare that there is no conflicting interest. Hence, the publishers can go ahead with publishing the paper.

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## REFERENCES

[1] Gikas J, Grant MM. Mobile computing devices in higher education: Student perspectives on learning with cellphones, smartphones & social media. Internet High Educ 2023; 19: 18-26. https://doi.org/10.1016/j.iheduc.2013.06.002

[2] Purvis A, Rodger H, Beckingham S. Engagement or distraction: The use of social media for learning in higher education. Stud Engage Exp J 2023; 5(1): 1-5. Available online at http://shura.shu.ac.uk/12274/

[3] Dabbagh N, Kitsantas A. Personal learning environments, social media, and self-regulated learning: A natural formula for connecting formal and informal learning. Internet High Educ 2021; 15(1): 3-8. https://doi.org/10.1016/j.iheduc.2011.06.002

[4] Enang CE. The use of social media in collaborative professional development of business education teachers in Nigeria. Assoc Bus Educ Nigeria 2019; 1(2): 77-86.

[5] Teens and social media: An overview, Pew Research Center's internet & American Life Project 2019. Available at: (http://Perinternet.or)

[6] Joinson G. Adolescents and the net: Internet use and well-being. Adolescence 2018; 42(168): 659-75.

[7] Selwyn N. Making sense of young people, education and digital technology: The role of sociological theory. Oxf Rev Educ 2022; 38(1): 81-96. https://doi.org/10.1080/03054985.2011.577949

[8] Kaplan AM, Haenlein M. Users of the world, unite! The challenges and opportunities of social media. Bus Horiz 2020; 53(1): 59-68. https://doi.org/10.1016/j.bushor.2009.09.003

[9] Cavus N, Ibrahim D. A mobile tool for learning English words. Online Submiss 2018; 6-9. Retrieved from http://libezproxy.open.ac.uk/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED504283&site=ehost-live&scope=site.

[10] Zhu C. Student satisfaction, performance, and knowledge construction in online collaborative learning. J Educ Technol Soc 2022; 15(1): 127-36.

[11] Rousseau JMS, Puttaraju K. A study on the uses of social networking sites on young adults to infer on the different types of users. IOSR J Humanit Soc Sci 2017; 19(11): 39-51. https://doi.org/10.9790/0837-191123951

[12] Okereke CE, Oghenetega LU. The impact of social media on the academic performance of university students in Nigeria. J Educ Pract 2024; 5(33): 21-4.

[13] Espinosa S, Laffey W, Whittaker D, Sheng E. Snapping, pinning, liking, or texting: Investigating social media in higher education beyond Facebook. Internet High Educ 2016; 44: 100707. https://doi.org/10.1016/j.iheduc.2019.100707

[14] Rambe P. Critical discourse analysis of collaborative engagement in Facebook postings. Australas J Educ Technol 2022; 28(2): 295-314. https://doi.org/10.14742/ajet.875

[15] Irwin C, Ball L, Desbrow B, Leveritt M. Students' perceptions of using Facebook as an interactive learning resource at university. Australas J Educ Technol 2022; 28(7): 1221-32. https://doi.org/10.14742/ajet.798

[16] McCarthy J. Blended learning environments: Using social networking sites to enhance the first year experience. Australas J Educ Technol 2020; 26(6): 729-40. https://doi.org/10.14742/ajet.1039

[17] Kabilan MK, Ahmad N, Abidin MJZ. Facebook: An online environment for learning of English in institutions of higher education. Internet High Educ 2020; 13(4): 179-87. https://doi.org/10.1016/j.iheduc.2010.07.003

[18] Ophus JD, Abbitt JT. Exploring the potential perceptions of social networking systems in university courses. J Online Learn Teach 2019; 5(4): 639-48.

[19] Top E. Blogging as a social medium in undergraduate courses: Sense of community best predictor of perceived learning. Internet High Educ 2022; 15(1): 24-8. https://doi.org/10.1016/j.iheduc.2011.02.001

[20] Deng L, Yuen AHK. Towards a framework for educational affordances of blogs. Comput Educ 2021; 56(2): 441-51. https://doi.org/10.1016/j.compedu.2010.09.005

[21] Deed C, Edwards A. Unrestricted student blogging: Implications for active learning in a virtual text-based environment. Act Learn High Educ 2023; 12(1): 11-21. https://doi.org/10.1177/1469787410387725

[22] Huang TC, Huang YM, Yu FY. Cooperative weblog learning in higher education: Its facilitating effects on social interaction, time lag, and cognitive load. Educ Technol Soc 2021; 14(1): 95-106.

[23] Sim JWS, Hew KF. The use of weblogs in higher education settings: A review of empirical research. Educ Res Rev 2020; 5(2): 151-63. https://doi.org/10.1016/j.edurev.2010.01.001

[24] Junco R, Heiberger G, Loken E. The effect of Twitter on college student engagement and grades. J Comput Assist Learn 2021; 27(2): 119-32. https://doi.org/10.1111/j.1365-2729.2010.00387.x

[25] Dunlap JC, Lowenthal PR. Tweeting the night away: Using Twitter to enhance social presence. J Inf Syst Educ 2019; 20(2): 129-35.

[26] Borau K, Ullrich C, Feng J, Shen R. Microblogging for language learning: Using Twitter to train communicative and cultural competence. Adv Web Based Learn ICWL 2019; 78-87. https://doi.org/10.1007/978-3-642-03426-8_10

[27] Kassens-Noor E. Twitter as a teaching practice to enhance active and informal learning in higher education: The case of sustainable tweets. Act Learn High Educ 2022; 13(1): 9-21. https://doi.org/10.1177/1469787411429190

[28] Evans C. Twitter for teaching: Can social media be used to enhance the process of learning? Br J Educ Technol 2024; 45(5): 902-15. https://doi.org/10.1111/bjet.12099

[29] Miri B, David BC, Uri Z. Purposely teaching for the promotion of higher-order thinking skills: A case of critical thinking. Res Sci Educ 2017; 37(4): 353-69. https://doi.org/10.1007/s11165-006-9029-2

[30] Umezulike AN, Nwagu CC. Extent of utilization of Twitter for enhancing academic learning by business education students in Anambra State, Nigeria. COOU J Educ Res 2024; 6(1): 344-56.

[31] Norman R. Social networking teens more likely to drink use drugs. Retrieved from http://jjie.org/teens-on-facebook-morelikely-dring-or-use-drugs-study-finds/20/13 2019.

[32] Wang Q, Chen W, Liang Y. The effects of social media on college students. MBA student scholarship 2021.

[33] Murti W, Maya S. The effectiveness of the environmental learning model on students' motivation and learning outcomes. Lentera Pendidik J Ilmu Tarbiyah Keguruan 2021; 24(2): 255-63. https://doi.org/10.24252/lp.2021v24n2i8

[34] Al-Khalifa KS, AlMuhammadi FN, AlOraifi NY, Alkuwaiti EA, Aladinan BA, Alzahrani NM, Khusheim SA, Al-Johani MH. The pattern and use of Twitter among dental schools in Saudi Arabia. PLoS One 2022; 17(9). https://doi.org/10.1371/journal.pone.0272628

[35] Reyna NS, Pruett C, Morrison M, Fowler J, Pandey S, Hensley L. Twitter: More than tweets for undergraduate student researchers. J Microbiol Biol Educ 2022; 23(1): 1-4. https://doi.org/10.1128/jmbe.00326-21

[36] Mazman SG, Usluel YK. Modeling educational usage of Facebook. Comput Educ 2020; 55: 444-53. https://doi.org/10.1016/j.compedu.2010.02.008

[37] Facebook Press Room. Never gonna GIF you up: Analyzing the cultural significance of the animated GIF. Soc Media Soc 2021. https://doi.org/10.1177/2056305117725223

[38] Lim YH. Facebook in Asia: Total users and age groups. Grey Rev 2020.

[39] Kabilan MK. Facebook: An online environment for learning of English in institutions of higher education. Internet High Educ 2020; 13: 179-87. https://doi.org/10.1016/j.iheduc.2010.07.003

[40] Madge C. Facebook, social integration and informal learning at university: 'It is more for socializing and talking to friends about work than for actually doing work.' Learn Media Technol 2019; 34(2): 141-55. https://doi.org/10.1080/17439880902923606

[41] Faudree MR. Is Facebook a useful tool for college students? 2019; 1-15.

[42] Çoklar AN. Evaluations of students on Facebook as an educational environment. Turk Online J Qual Inq 2022; 3(2): 42-53.

[43] Bernard RM, Abrami PC, Borokhovski E, Wade CA, Tamim RM, Surkes MA, et al. A meta-analysis of three types of interaction treatments in distance education. Rev Educ Res 2019; 79(3): 1243-89. https://doi.org/10.3102/0034654309333844

[44] Manca S, Ranieri M. Is Facebook still a suitable technology-enhanced learning environment? An updated critical review of the literature from 2012 to 2015. J Comput Assist Learn 2016; 32(6): 503-28. https://doi.org/10.1111/jcal.12154

[45] Yudhiantara RA, Saehu A. Mobile-assisted language learning (MALL) in Indonesian Islamic higher education. IJELTAL Indones J Engl Lang Teach Appl Linguist 2017; 2(1): 21. https://doi.org/10.21093/ijeltal.v2i1.52

[46] Amadi EA, Anireh UN, Nwobike A. Assessment of instructional media use in enhancing teaching and learning of accounting by business education students in the Niger Delta, Nigeria. Int Multidiscip Acad Res J 2019; 3(1): 24-39.

[47] Mayangsari ID, Apriant A. Understanding communication among parents and teachers in WhatsApp A case study in Bandung, Indonesia. Malays J Soc Sci Humanit 2017; 2(2): 19-24. https://msocialsciences.com/index.php/mjssh/article/view/40/40

[48] Allen K, Jolly C, Barnes J. Using social media to engage and educate teen parents. J Ext 2016; 54(2). https://doi.org/10.34068/joe.54.02.05

[49] Bax S. The end of CLT: A context approach to language teaching. ELT J 2023; 57(3): 278-87. https://doi.org/10.1093/elt/57.3.278

[50] Motiwalla LF. Mobile learning: A framework and evaluation. Comput Educ 2017; 49(3): 581-96. https://doi.org/10.1016/j.compedu.2005.10.011

[51] Bere A, Rambe P. Using mobile instant messaging to leverage learner participation and transform pedagogy at a South African University of Technology. Br J Educ Technol 2023; 44(4): 544-61. https://doi.org/10.1111/bjet.12057

[52] Aicha S. Understanding academics' adoption of learning technologies: A systematic review. Comput Educ 2014; 151. https://doi.org/10.1016/j.compedu.2020.103896

[53] Rambe G, Chipunza R. An overview of mobile-assisted language learning: From content delivery to supported collaboration and interaction. ReCALL 2023; 20(3): 271-89. https://doi.org/10.1017/S0958344008000335

[54] Creswell JW. Research design: Qualitative, quantitative, and mixed methods approaches. 4th ed. SAGE Publications 2014.

[55] Isangedighi AJ, Joshua MT, Asim AE, Ekuri EE. Fundamentals of research and statistics in education and social sciences. Calabar: university press 2012.

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