International Journal of Sub-Saharan African Research (IJSSAR)
Vo::l. 3, Issue 4, pp. 274-289, December 2025, ISSN: 3043-4467 (Online), 3043-4459 (Print)
doi:10.5281/zenodo.18109843

Knowledge and Use of Zoom Technology for Academic Activities among Teaching Staff of Public Universities in South-East, Nigeria

[1]Ifeyinwa Nsude, & [2]Joseph Ogbonnaya Elechi

[1]Department of Mass Communication, Ebonyi State University, Abakaliki, Nigeria
[2]Department of Mass Communication, Alex-Ekwueme Federal University, Ndufu-Alike, Ikwo, Ebonyi State, Nigeria

[2]https://orcid.org/0000-0001-5110-2240

***Corresponding Author:** elechiogbonnaya@gmail.com

ABSTRACT

Background: Nigerian education sector is surrounded with fast and available online activities such as virtual tools that facilitate teaching and learning activities. This technological explosion was driven by the aftermath of COVID-19 Pandemic. This study investigated the knowledge of Zoom Communication Technology for academic activities among teaching staff of public universities in southeast, Nigeria.
Objective: The study investigated the level of knowledge and use of Zoom Communication Technology by the teaching staff of public universities in South-East, Nigeria.
Method: The descriptive survey research design was adopted of which two public universities (1 for federal and the other, for state) were used to represent south-East. The population of teaching staff was 2,281 from both universities with source from personnel units. The sample size of 376 participants was used with Taro Yamane formula and this was complemented with focus group discussion (FGD) of 16 participants split into two groups, one for each of the two universities covered. The study used simple probability sampling technique to obtain the representatives. While the research instruments were the questionnaires and interview guide. Data were analysed interpreted using alpha cronbach analysis and descriptive statistics and presented in frequency tables.
Results: There were low result on the knowledge and use of zoom communication technology for academic activities among teaching staff of public universities in southeast, Nigeria. Findings from FGD revealed that 80% of the respondents agreed that each of them lacks suitable electronic devices, face huge Internet data consumption and unsteady electric power supply which significantly inhibit the use of the Zoom technologies among few academic staff of public universities in the study area.
Unique Contribution: The study provides new insights on the technological tools and devices used by academics in the southwest, Nigeria and the global south.
Key Recommendation: The study recommended that members of teaching staff of public universities in the area should develop themselves by getting acquainted with video conferencing facilities such as the Zoom Technology. The study aims to contribute in the adoption of technological tools as well as physical presence in teaching and learning activities in southeast, Nigeria.
Keywords: Virtual Conferencing, Hybrid, Online Activities, Zoom, Communication, Technology.

International Journal of Sub-Saharan African Research (IJSSAR)
Vo::l. 3, Issue 4, pp. 274-289, December 2025, ISSN: 3043-4467 (Online), 3043-4459 (Print)
doi:10.5281/zenodo.18109843

INTRODUCTION

Academic activities now witness paradigm shift from heavy dependence on physical activities to online/webinar since the era of COVID-19. And going further, another threatening factor is the artificial intelligence that is vigorously pursued worldwide. Today, it is different from methodical lecturer-students interface (classroom activities) to radio educational programme to listening to tapes (CDs) etc and now Internet dependent educational activities where lecturers ease-off the dangers of road accidents, unapologetic of absence to theatres and comfortable transaction of ideas even on a transit (Anibueze, & Nwafor 2011). This particular method is almost out-dated/crude as students keep calling and reminding their lecturers the schedule even when he/she is on an important university assignment or ill or perhaps, solving pressing family need. A lecturer can conveniently deliver one of his key mandates – (teaching) via online activities (Means, Toyama, Murphy, & Bakia, 2010) in evaluation of evidence-based practices in online learning: a meta-analysis and review of online studies, US Department of Education.

Although it is argued that physical presence of a lecturer enhances students – centered learning, and provides flexible learning arrangements. However, a lecturer's physical presence is not always needed (Means, et al, 2010; Nwafor, & Odoemelam, 2012). The students should advance in knowledge by learning to do things on their own such as research and group learning while the lecturer is absent. With the introduction of blended learning culture by the Nigerian University Commission, a lecturer can skip classes and seldomly give assignments to students numbering above 200 and above in public universities and mark and record those assignments at a record time (Means, et al. 2010). Another school of thought may argue that lecturer's physical presence may provide emotional support and social interactions (Akpobo, & Nwafor, 2013). All these can be done virtually without recourse to lecturer's presence.

Nigerian Government's Effort At Introducing Virtual Learning

The Federal Government of Nigeria like her counterparts – Ghana, Israel and Canada after the COVID-19 Pandemic, rolled out numerous digital programmes to facilitate learning activities. In Nigeria, it kick started with the implementation of Blended learning and stepped further to introduce national digital policy. Currently, she introduced National Digital Learning and inclusion Task Force (*Vanguard* 2024). The National University Commission has opened the Directorate of Open Distance and e-learning (oDeL). This is to ensure inclusiveness among Nigerians irrespective of the distance, age and capability (*Vanguard, 2024).* The National Universities Commission (NUC) in her glaring but cheering effort also introduced Open Distance Learning. The programme is aimed at accommodating every Nigerian without bias hence 'open'. It is evidently clear that the federal government is abreast of this new development and is ever ready and willing to drive Nigerians technologically *(Vanguard 2024).*

International Journal of Sub-Saharan African Research (IJSSAR)
Vo::l. 3, Issue 4, pp. 274-289, December 2025, ISSN: 3043-4467 (Online), 3043-4459 (Print)
doi:10.5281/zenodo.18109843

THEORETICAL FRAMEWORK

This study is anchored on Technology Acceptance Model (TAM). Technology Acceptance Model is the openness of mind to accept, receive and use a most recent technology which is evolving and is believed to outdate in usefulness the previous technology. As a theoretical framework, it was developed by Davies, (1989) to be one of the most influential models of technology acceptance, with two primary factors influencing an individual's intention to use new technology: perceived ease of use and perceived usefulness (Okoro, et al., 2014).

It is an information systems theory that models how users come to accept and use a technology (Google, 2022). There are two basic issues here: the users-to-be were unfamiliar with the technology; their preparedness to accept the technology- a major factor. The justification for the use of this theory is that zoom communication technology seem to have been widely embraced by scholars of various disciplines across the world and so the researcher considers it appropriate to anchor the study on this theory to identify the knowledge-level and application of zoom communication technology for academic activities among teaching staff of public universities in Ebonyi State, Nigeria.

Again, the major assumption of Technology Acceptance Model in this research is that, first; the academic staff has to be familiar with zoom technology in the first place. This is 'knowledge' and acquaintance. This underscores the fact that they (public university teaching staff in Ebonyi State) were unfamiliar with the technology. Second, the academic staff of public universities in Ebonyi State will be prepared to accept and use zoom technology in their teaching, learning and research activities.

EMPIRICAL RESEARCH

Odunayo, Amuda, and Ajani (2021) investigated optimizing zoom application for virtual research presentation: awareness and experience of researchers in Nigeria library school. The study was triggered by Covid-19 pandemic that forced many tertiary institutions in Nigeria closed but for the survival of private institutions whose source of income solely depends on the school fees paid by their students, had to move all in-persons courses to remote learning and research format. Mixed method of research was adopted on the course of the study. The research in its objective, explored researchers' awareness and experience on the use of zoom application for virtual research presentation. The sample size was 98 respondents. Total enumeration sampling technique was adopted with a questionnaire administered through online platforms. The findings of the study were: the use of zoom application for online presentation is now prominent among researchers in Nigerian library schools; the use of zoom for virtual research presentation is very interesting and highly satisfactory. The study concluded that zoom is suitable for virtual research presentation when compared to physical presentation. The study recommended that technical difficulties associated with the use of zoom could be tackled through the provision of written instruction before the presentation.

International Journal of Sub-Saharan African Research (IJSSAR)
Vo::l. 3, Issue 4, pp. 274-289, December 2025, ISSN: 3043-4467 (Online), 3043-4459 (Print)
doi:10.5281/zenodo.18109843

The study above aligns with this study in that the use of zoom application for online presentation is now prominent in Nigeria and equally agrees that there is much technical difficulties associated with the use of online activities

Frank, Nancwat, (2022) investigated the use of zoom technology for teaching and learning among undergraduate students of Ambrose Alli University Ekpoma Edo state, Nigeria. The researchers employed descriptive survey design to carry out the study. Their main objective was to investigate the use of zoom technology for teaching and learning among undergraduate students of Ambose Alli University, Ekpoma, Edo state, Nigeria. The population of the study comprises all the undergraduate students of the Faculty of Education, Ekpoma. The sample size was 295 respondents. Data were analyzed with tables and simple percentages, mean and standard deviation. Findings reveal that the level of awareness of zoom technology for teaching and learning among undergraduates of the Faculty of Education in Ambrose Alli University, Ekpoma Edo state was high to a great extent; the study concludes that there are several benefits of zoom. However, there were also several challenges (not mentioned). The study recommends that zoom technology phone apps should be encouraged among undergraduate students. Also, trainings on ICT should be intensified to encourage practical tasks on zoom technologies. This study has a good approach. The descriptive design was suitable and the sample size too was adequate. The major defect is that the study should have been designed using online survey to interface the respondents on the efficacy and effectiveness of Zoom technology in teaching and learning activities.

Bambang, Agus, Saida and Arda (2021) investigated the use of Information and Communication Technology (ICT) in the implementation of instructional supervision and its effects on teachers' instructional process quality. The researchers employed descriptive survey research method and used random sampling technique to select their respondents. Their general objective was to explore communication techniques based on the information and communication technology used in the implementation of instructional supervision to determine their effect on the teachers' learning process and find effective techniques to improve the quality of the teachers' learning process. The research was conducted in Biltar City in Indonesia. The sample size was 60 respondents. In their findings, the study discovered that the most widely used ICT-based communication techniques are WhatsApp, Google Meet, Zoom, Skype, and Google Forms. They are followed by email, video recording, and audio recording techniques. The use of ICT is still rare. There is a significant relationship between the use of ICT in instructional supervision and the quality of the teacher's teaching-learning process, except when using telephones and televisions. ICT techniques are most commonly used for synchronous communication, followed by use for sharing information, and recording activities. The study submits as recommendation that the use of ICT in instructional supervision simultaneously affects the teachers' instructional process.

This study set out to discover the use of Information and Communication Technology (ICT) in the implementation of instructional supervision and its effects on teachers' instructional process quality but ended up identify multi-dimensional platforms of Information and Communication Technology for instructional supervision and quality process of teachers' instructional process.

International Journal of Sub-Saharan African Research (IJSSAR)
Vo::l. 3, Issue 4, pp. 274-289, December 2025, ISSN: 3043-4467 (Online), 3043-4459 (Print)
doi:10.5281/zenodo.18109843

The research outcome is ambiguous and should focus on the acceptance and application of ICT Platforms for supervision of instructional materials.

Celia, Maria-Jose, Daniela, Cristina, and Ruiz (2021) researched on the massive implementation of ICT in universities and its implications for ensuring SDG 4: challenges and difficulties for Professors. The author(s) employed descriptive study methodology to carry out the study. The general objective was to study the relationship between the adaptation of university faculty to the massive use of ICTs and educational digitization, and the promotion of SDG4, which establishes Target 4.3 – ensuring access to quality university education. The sample size for the study was 245 teachers drawn from public and private Spanish Universities. Findings reveal that there are different emotional reactions among professors. On one hand, ICTs allow for the development of new skills, the introduction of new methodological proposals, and the development of a positive attitude towards the use of digital tools in order to reach all of their students. On the other hand, the results show that the use of ICTs caused an increase in anxiety, workloads and the need for ongoing training. The study recommends that there is need to continue improving the digital competencies of faculty Professors in order to favour access to ICTs by university students and, thus, promote quality education worldwide.

This study aligns with the researcher's interests for the fact that there is development of new skills available for academics to make do with and provision of digital competencies to improve oneself on is the major concept of this study. Minhas, Hussain, and Ghani (2021) investigated the topic, 'exploring students learning: a study of zoom application'. Survey research method was adopted. Their main objective was to investigate students learning during online classes using zoom application. A structured electronic questionnaire was distributed among the students of three Pakistan Universities to understand the student's personal experience regarding zoom application usage during online classes. Findings show that zoom video conferencing application remains the best for the online classes; students were satisfied about the overall class management and general interface of the zoom application and appreciated screen sharing, lecture recording features of the application.

The study above captured electronic questionnaire. This good but should incorporate manual or hardcopy questionnaire to complement the data generation. Ogwunte, & Amadi, (2020), investigated on the perceived influence of Zoom Cloud and WhatsApp Technologies on Instructional Delivery in University Business Education Classroom in Rivers State. Descriptive survey research design was adopted. Two research questions and two null hypotheses guided the study. The population of the study comprised all 75 business educators in Universities offering business education programme in Rivers state (Rivers State University and Ignatius Ajuru University of Education). The instrument used was a self-structured questionnaire and was designed on a 4-point likert rating scale. Data were collected and analysed using mean and standard deviation to answer research questions, and z- test to test the null hypothesis formulated. The study revealed that zoom cloud and whatsapp technologies have positively influenced instructional delivery in business education programme. The study recommended that administrators of business education programmes should regularly organized in-service training to train and retrain business educators on current trends in the utilization of zoom cloud and

International Journal of Sub-Saharan African Research (IJSSAR)
Vo::l. 3, Issue 4, pp. 274-289, December 2025, ISSN: 3043-4467 (Online), 3043-4459 (Print)
doi:10.5281/zenodo.18109843

WhatsApp technologies in the classroom. Also, business educators should fully implement the technological based social media such as zoom cloud and whatsapp application.

The study is apt and aligns completely with the researcher's interest. The research design and sample size are adequate. The recommendations too which suggests training and retraining of staff is a significant strategic measure for this study. Indianati, Retno Palupi & Wiji, Raharjo (2020) investigated the advantages of each online learning tool like Zoom, Google Classroom, Google Meet, WA Group and Email. Descriptive survey design was used together with interview Guide. Their objective was to discover the major tool students and lecturers prefer as a tool for online learning. The paper was arranged by literation method to some references about the online learning and interview with random sample object in UPN "veteran" Yogyakarta about the tools used in online learning. For the sampling technique, the paper adopted disproportionate stratified random sampling because of limited number of students and lecturers. Findings reveal that Zoom Communication tool is liked by many lecturers and students as it is not free and easy to hack. Again, Zoom provides opportunity for interactions and interface.

METHOD

The researcher employed mixed method of research – qualitative and quantitative methods. The rationals was to allow for openness of mind and free expressions of ideas to generate an elicited response. Groanland, Dana (2019) citing Jensen (1999) buttressed the relevance of applying two research methods when she points out that "quantitative and qualitative approaches can be complementary and if taken together, can provide additional insights into particular cases". Also, in the combination of the two, qualitative data can supply the missing links in quantitative data (Nnamani, 1999). The researcher explored some hidden truths about knowledge and use of zoom communication technology for academic activities among teaching staff of public universities in Ebonyi State, Nigeria. Statistical Packages for Social Sciences (SPSS) version 20.1 was used to analyse the quantitative data. This was done to obtain necessary descriptive statistics such as frequencies, percentages, arithmetic mean, standard deviation, and skewness. Further analyses of the quantitative data were carried out using One-sample T-Test and One-Way analysis of variance to test the significant of the mean responses and the difference among mean responses across the categories in the questionnaire, respectively.

AREA OF STUDY

This study covers public universities in South East Nigeria but was represented by Ebonyi State University, Abakaliki (EBSU) and Alex Ekwueme Federal University, Ndufu-Alike (AE-FUNAI). The two universities share equal characteristics and the federal university has national outlook and captures all elements in southeast Nigeria and beyond. Southeast Public University's method of teaching and learning is dominated by physical presence of lecturers on daily basis.

PARTICIPANTS

Simple probability sampling technique was used. Under this technique, the researcher adopted random sampling. This is because research democracy is assured and where equal opportunity is given to every academic member of the population. There are many departments and faculties that are running different programmes in the two public universities- (AE-FUNAI and EBSU)

International Journal of Sub-Saharan African Research (IJSSAR)
Vo::l. 3, Issue 4, pp. 274-289, December 2025, ISSN: 3043-4467 (Online), 3043-4459 (Print)
doi:10.5281/zenodo.18109843

Table 1: Population of academic staff of the two public universities in Ebonyi State

Institution	**Numberof academic staff**
Ebonyi State University (EBSU)	851
Alex Ekwueme Federal University	1,430
Total	**2,281**

Source: Personnel units, Ebonyi State University and Alex Ekwueme Federal University, Ndufu-Alike, (2023) respectively.

There are also teaching staff of different levels ranging from Graduate Assistants to Professors and there are men and women in the population and all are represented. Therefore, in order to select an unpredictable and unbiased representative, the researcher ensured equal opportunity by randomly selecting from the table list containing all these lecturers in order to produce a possible outcome. The outcome produced 200 representatives from Alex Ekwueme Federal University, Ndufu-Alike Ikwo (AE-FUNAI) while in Ebonyi State University, Abakaliki,184 representatives were selected. The researcher therefore distributed 200 copies of questionnaire to academic staff of AE-FUNAI and 184 copies of questionnaire to academic staff of EBSU respectively.

For the Focus Group Discussion, the researcher employed purposive sampling technique. This, the researcher did by reaching out to individual teaching staff from selected programmes to field in the discussion. Therefore, 8 teaching staff were drawn from EBSU and 8 teaching staff too were drawn from AE-FUNAI making a total of 16 participants that participated in the Focus Group Discussion.

PROCEDURE

Respondents' and Participants' consents were sought for before filling the Google form. For those of FGD, their consents were sought for in an interview that lasted for 50 minutes on the average; responses were tape-recorded on the promise of keeping records in anonymity. The respondents and participants for the questionnaire and FGD respectively, focused on these areas: (a) do teaching staff of Alex Ekwueme Federal University (AEFUNAI) and Ebonyi State University (EBSU) have significant knowledge of zoom communication technology? (b)To what extent do teaching staff of AEFUNAI and EBSU apply zoom communication technology in academic communications in their teachings, meetings and presentations? (c) Do teaching staff of AEFUNAI and EBSU obtain benefits like: local and international collaborators and expand frontier knowledge visibility, boost confidence, while applying zoom in their academic communications? (d) What factors inhibit the use of zoom communications in their academic activities? The findings are structured into three themes: knowledge/awareness, benefits in the application of zoom communication technology and inhibitions in using zoom communication technology in academic activities.

International Journal of Sub-Saharan African Research (IJSSAR)
Vo::l. 3, Issue 4, pp. 274-289, December 2025, ISSN: 3043-4467 (Online), 3043-4459 (Print)
doi:10.5281/zenodo.18109843

KNOWLEDGE/AWARENESS

Table 8: Data relating to the respondents' level of knowledge of Zoom communication

Response	Frequency	Percent
Very low	72	19
Low	155	41
Moderate	61	16
High	45	12
Very high	28	7
Excellent	15	4
Total	376	100.0

Source: Field survey (2022)

The data above shows that as many as 41% of the lecturers surveyed indicated having low knowledge of Zoom communication, in fact, a cumulative 60% have very low or low of such knowledge. 16% indicated they had moderate knowledge, while a combined 19% had high or very high such knowledge. Only 4% rated their level of knowledge as 'excellent'. The data point to the conclusion that not many academic staff in the universities studied had good knowledge of the Zoom video conferencing facility.

BENEFITS IN THE APPLICATION OF ZOOM COMMUNICATION TECHNOLOGY

In this set of items, the objective was to ascertain how the lecturers in the study area felt they benefit from using the Zoom facility for academic communications. The responses were prepared using two broad categories – 'certified' and 'did not certify'. Under this arrangement, the 5-scale Likert format has 5 points for Strongly Agree (SA), 4 points for Agree (A), 3 points for Neutral (N), 2 points for Disagree (D), and 1 point for Strongly Disagree (SD). Strongly Agree (5 points) and Agree (4 points) are aggregated as "Certified". Then, neutral, (3 points), Disagree (2 points) and Strongly Disagree (1 point) are aggregated under "did not certify". The weighted arithmetic mean was the method of analysis of this kind of data to ascertain the relevance of each listed point to a particular objective. A total of five points were listed under the objective under review and the summary of the analysis and results obtained is presented in table as follows.

International Journal of Sub-Saharan African Research (IJSSAR)
Vo::l. 3, Issue 4, pp. 274-289, December 2025, ISSN: 3043-4467 (Online), 3043-4459 (Print)
doi:10.5281/zenodo.18109843

Weighted arithmetic mean of data relating to lecturers' gratification for using the Zoom facility in academic communications

S/N	Gratification for using the Zoom facility in academic communications	**Certified**	**Did not certify**
19	It enhances lecturers' local visibility.	33(09%)	343(91%)
20	It enhances lecturers' global visibility as a scholar.	61(16%)	315(84%)
21	It enhances lecturers' impact as academics.	328(87%)	48(13%)
22	It boosts lecturer's confidence as a professional.	309(82%)	67(18%)
23	It opens new knowledge frontiers to lecturers.	270(72%)	106()28%

Source: Field work (2022)

Data in Table 17 indicates 33 aggregate number of respondents (20 for strongly agree and 13 for agree) representing 9% and aggregate of 343 (neutral = 33 + disagree =163 + strongly disagree = 147) representing 91%. Also, 41(A) + 20(SA) = 61 representing 16% while 87 (N) +133 (D) + 95 (SD) representing 84%. Again, aggregate of 328 (223 agree +105 strongly agree) representing 87% while aggregate of 48 (9 neutral + 18 disagree + 21 strongly disagree) representing 13%. Furthermore, an aggregate 309 (184 agree + 125 strongly agree) representing 82% while aggregate of 67 (37 neutral + 12 disagree + 18 strongly disagree) representing 18%. Then, an aggregate of 270 (103 agree + 167 strongly agree) representing 72% while an aggregate of 106 (44 neutral + 25 disagree + 37 strongly disagree) representing 28% ofthe responses are presented in descending order from Strongly Agree (SA) that is certified to Strongly Disagree (SD) that is did not certify with a mid-point or average of 3.0 (i.e., 5 + 4 + 3 + 2 + 1 = 15, divided by 5). The frequency for each response option was multiplied by the corresponding weight and cumulated to obtain the total weight (TW). In turn, the ratio of each TW to the total number of respondents (TR) equals the mean. To illustrate using the last point in the Table (Item 23), the TW of 1,402 was obtained as follows: 103*5 + 167*4 +44*3 + 25*2 + 37*1. Then the mean of 3.73 was obtained as follows: 1,402 ÷ 376. This procedure applies to the rest of the data in the table.

International Journal of Sub-Saharan African Research (IJSSAR)
Vo::l. 3, Issue 4, pp. 274-289, December 2025, ISSN: 3043-4467 (Online), 3043-4459 (Print)
doi:10.5281/zenodo.18109843

The Items are accepted or rejected based on whether their weighted mean scores are greater than or less than the Likert average (3.0 in this study). In other words, Items with mean scores at least 3.0 are accepted while those with mean scores below 3.0 are rejected. Going by this rule, Items 19 and 20 in Table 17 are rejected while 21, 22, and 23 are accepted. Being accepted means that the respondents agreed, on the average, with the thought expressed in the statement while being rejected means they did not. For example, Item 19 has a weighted mean score of 1.93 (2 approximately). This corresponds to the weight assigned to 'Disagree'. We would therefore conclude that the respondents, on the average, disagreed that, lecturers in the study area can enhance their local visibility by using the Zoom facility in their academic communications. Similarly, Item 20 has mean equal to 2.41 (less than 3.0), which approximates to 2 as well, implying that, on the average, the lecturers surveyed disagreed with the idea that the use of the Zoom facility in their academic communications would enhance their global visibility as scholars or professionals.

On the other hand, Item 21 has mean score equal to 4.31 which is between 'Agree' and 'Strongly Agree'. It means that the respondents, on the average, agreed with the idea that use of zoom technology in academic communications enhances lecturers' impact as academics. Similarly, Item 22 has a weighted mean score of 4.18 which is approximately 4.0, the weight for 'Agree'. It means that, on average, the respondents agreed that use of zoom technology in academic communications boosted lecturers' confidence as professionals. Lastly, Item 23 has a weighted mean score of 3.73 which is approximately 4.0, the weight for 'Agree'. It means that, on average, the respondents agreed that use of Zoom technology in academic communications opens new knowledge frontiers to lecturers.

In addition, we computed the grand mean, or mean of means, and obtained a value equal to 3.31, as contained in Table 17. The grand mean tells us whether all the items in the table can be accepted. The Grand mean we obtained is greater than the 5-point Likert average (3.31 > 3.0) which implies that, altogether, the items/statements listed in the table can be considered relevant in measuring the gratification to lecturers for using the Zoom technology in academic communications. However, we do know that the grand mean was boosted by the latter 3 items in the table whose mean scores are far above the 3.0 benchmark.

The standard deviation (SD) indicates how close the data are to the arithmetic mean; low standard deviation implies that the responses are clustered around the mean while high values would indicate the data are more spread out – away from the mean. In other words, a standard deviation close to zero indicates that data points are far below the mean, whereas a high standard deviation indicates data points are above the mean. The result in Table 17 shows standard deviations ranging from 1.046(Item 19) to 1.23 (Item 20). Since all the standard deviation values are above 1 each, it means that the responses mostly cluster to the right side of their weighted arithmetic mean.

Skewness is a measure of the asymmetry of the probability distribution of a real-valued random variable about its mean. Generally, the skewness value is positive, zero, or negative. When using the descending-order Likert scale, as in this study, a negative skew commonly indicates that data is clustered to the left side, and positive skew indicates that data is clustered to the right. A zero

International Journal of Sub-Saharan African Research (IJSSAR)
Vo::l. 3, Issue 4, pp. 274-289, December 2025, ISSN: 3043-4467 (Online), 3043-4459 (Print)
doi:10.5281/zenodo.18109843

skewness means the data is not skewed which implies it follows the normal distribution – that it is symmetrical. Applying theses interpretations to the data in Table 17, Items 19 and 20 have positive skewness which means the responses clustered to the right-hand side where we have 'Disagree' and 'Strongly Disagree', which explains why the statements in those items were rejected because of their low mean values. However, Items 21, 22, and 23 have negative skewness which means that the responses to those items are clustered to the left side of the distribution where we have 'Agree' and 'Strongly Agree', which explains why the thoughts expressed in those items were accepted.

INHIBITIONS IN USING ZOOM COMMUNICATION TECHNOLOGY IN ACADEMIC ACTIVITIES

In this fourth set of items, the objective was to whether availability of appropriate devices, data demand, and electricity supply constituted inhibitions to lecturers' willingness to use the Zoom facility for academic communications. A total of 7 questions/statements appeared under this section. The first 3 required the respondent to state the fact or state of affairs while the latter four are Likert structured.

In Item 24 the respondents were asked if they owned a smartphone, tablet, or personal computer. The responses obtained are presented as follows.

: Weighted arithmetic mean of data relating to factors inhibiting lecturers' use ofthe Zoom facility in academic communications in Ebonyi State

S/N	Inhibitions in using the Zoom facility in academic communications	Certified	Did not certify
27	Lack of technical know-how.	236(63%)	140(37%)
28	Lack of appropriate electronic devices.	314(83%)	62(16%)
29	High data consumption.	298(79%)	78(21%)
30	Lack of regular power supply.	305(81%)	71(19%)

Source: Field work (2022)

All the Items in Table 21 are accepted because each of them has mean score greater than the Likert average of 3.0 which is applicable in this study. The Items have mean scores ranging from 3.59 (Item 27) to 3.99 (Item 28) all of which can be approximated to 4.0, the weight assigned to 'Agree'. Therefore, the result implies that, on the average, the respondents agreed that technical know-how, lack of appropriate devices, high data consumption, and lack of regular power supply all can inhibit lecturers' use of the Zoom facility for academic communications in the public universities in Ebonyi State. The grand mean of 3.85 also leads to a similar conclusion.

International Journal of Sub-Saharan African Research (IJSSAR)
Vo::l. 3, Issue 4, pp. 274-289, December 2025, ISSN: 3043-4467 (Online), 3043-4459 (Print)
doi:10.5281/zenodo.18109843

The result in Table 21 shows standard deviations ranging from 1.059 (Item 29) to 1.245 (Item 27). Since all the standard deviation values are on the right side of 1 each, it means that the responses mostly cluster to the right side of their weighted arithmetic mean. Regarding the distribution, all four Items in the table each has negative skewness which means that the responses to those items are clustered to the left side of the distribution where we have 'Agree' and 'Strongly Agree', which explains why the respective factors in each of the items were accepted as a possible inhibitor

DISCUSSION

The need to look other side of scientific evolution in technological advancement after COVID-19 epidemic stemmed the issue of research into the awareness/knowledge, use, benefits and inhibitions of virtual learning. The use of zoom communication technology was centred as hybrid learning has taken central stage. This study investigated the knowledge and use of Zoom communication technology for academic activities among teaching staff of public universities in Ebonyi State, Nigeria. The study aimed at determining the level of knowledge of zoom communication among academic staff of public universities in Ebonyi State, to ascertain the level of application of zoom communication among the academic staff of the public universities, to determine the benefits academic staff of public universities in the State derive by using zoom communication technology, and to investigate the degree to which availability of devices, access to internet services, and power supply inhibit the use of zoom communication among academic staff of public universities in Ebonyi State. The survey research design was adopted for the study involving 384 participants and this was augmented with focus group discussion of 16 participants split in two groups, one for each of the two universities studied. Based on the findings summarised in the above section, this study concludes that teaching staff in the public universities in Ebonyi State have limited knowledge of Zoom communication technology and so do not use it effectively in their academic communications. The implication of the finding is that the flow of academic activities in the institutions would be severely disrupted, even halted, by circumstances that prevent in-person contacts.

Ethical clearance

Ethical consent was sought and obtained from the participants used in this study. They were made to understand that the exercise was purely for academic purposes, and their participation was voluntary.

Acknowledgements

We acknowledge Prof Kenneth Adibe Nwafor and the lecturers and staff of Ebonyi State University, Abakaliki and Alex Ekwueme Federal University, Ndufu-Alike for assisting us with data collection. We equally appreciate the efforts of both University's Library staff for their cooperation and support.

Sources of funding

The study was not funded.

International Journal of Sub-Saharan African Research (IJSSAR)
Vo::l. 3, Issue 4, pp. 274-289, December 2025, ISSN: 3043-4467 (Online), 3043-4459 (Print)
doi:10.5281/zenodo.18109843

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Authors' Contributions.
Prof. Ifeyinwa Nsude and Joseph O. Elechi conceived the study, including the design, J.O. Elechi and Obin Ogban collated the data, and J. Nweke handled the analysis and interpretation, while Prof. Kenneth Adibe, the initial manuscript. All authors have critically reviewed and approved the final draft, and are responsible for the content and similarity index of the manuscript.

Availability of data and materials.
The datasets on which conclusions were made for this study are available on reasonable request.

Citation

Nsude, I & Joseph, O. E. (2025). Knowledge and Use of Zoom Communication Technology for academic activities among teaching staff of public universities in southeast, Nigeria in 2025.International Journal of Sub- Saharan African Research.

REFERENCES

Adeyemi, A. (2017). 53% of Nigerians lack Internet Access. *Guardian Newspaper*: guardian.ng

Adomi, E. E. (2005). Internet development and connectivity in Nigeria program. Electronic Library and Information Systems 39 (3) 257-268 Doi:10.1108/00330330510610591

Agba, P. C. (2002). International Communication Principles, Concepts and Issues in Okunna, C. S. (Ed). *Teaching Mass Communication: A Multi-Dimensional Approach*: Enugu: New Generation Books.

Akpobo, E. S. & Nwafor, K. A. (2013). Information Technologies (ICTs), Development, and Crime Prevention and Control in Nigeria. *Benin Mediacom Journal, 6(1), 154-163.*

Amposah, K., Kolugan, A. K., Joy, V. P., Navid A. (2021). Virtual Work Meeting during the Covid-19 Pandemic: The Good, Bad and Ugly. *Small Group Research Journal of publication. DOI 27 07 22*

Anibueze, S. & Nwafor K. A. (2011). Level of Awareness and Use of ICTs Among Residents of Abakaliki Metropolis of Ebonyi State. *Journal of Media Studies, ESUTH, III (1),* 55-65

Bambang,Wiyono, Wedi, Ulfa, Purnama (2021). The Use of Information and Communication Technology (ICT) in the implementation of Instructional Supervision and its Effect on Teachers' instructional process quality. *Journal of information.*

Celia, R., Maria-Jose G., Daniela, M., & Cristina, R. (2021).The Massive Implementation ofICT in University and its implication for Ensuring SDG 4; Challenges and Difficulties for Professors.*Sustainability 2021MDPI Journal.*

Cook, F. (2011). Television and the Public Sphere: Relationships of Power and Resistance in Contemporary New Zealand Television. *http://researcharchive.vuw.ac.nz*

Derar, S. (2020). Transitioning from face-to-face to remote learning: students' attitude and Perceptions of using zoom during Covid-19 Pandemic*: International Journal of technology in Education and Science* (IJES), 4 (4) 335-342

Earon, S.A. (2020). The Value of Video Communications in Education. TelemanagementResources International Inc.

Edward, G., Leo-Paul, D. (2019). Qualitative Methodologies and Data Collections Methods: Toward Increased Rigour in Management Research. *https://www.researchgate.net*

Fischler, R. (2021). 2021-22 Graduate catalog and students Handbook. http://education.nova.edu

Ibukun, I. (2017). Internet usage low in Bayelsa, Yobe, Ebonyi states others.*https://guardian.ng*

John, D. (2022). Covid-19 Pandemic and Higher Education: Leveraging on DigitalTechnologies And Mobile Applications for online learning in Ghana. *Reseachgate.*

Franklin, O., Nancwat, M. (2022). Use of Zoom Technology for Teaching and Learning among Undergraduates Students of Ambrose AlliUniversityEkpoma Edo State, Nigeria. *International Journal of Innovative Information Systems &Technology Research*

Fred,O. (2020). How zoom transformed communication interaction in Nigeria.*GuardianNewspaper:http://guardian.ng*

Goss, M. (2021). 12 Advantages and Disadvantages of video conferencing. *Biz Technology Solution.*

Goggle (2022). Times Higher Education Ranking, July 2022. Webo metric universityRankings.

Griffin (2022). Zoom *video communication*. *ZoomInfo.com*

Guzachara, N. (2020). Zoom Technology as an Effective Tool for Distance Learning in Teaching English to Medical Students. *Bulletin of science and practice*

Halimah, Amuda, Ayodeji, A. (2021). Optimizing zoom Application for Virtual Research Presentation: Awareness and Experience of Researchers in Nigeria Library School. Precedings of the ICT SSH 2021 Conference. *International Journal/Conference on Social Science and Humanities.*

Ibikun, I. (2017). Internet usage low in Bayelsa, Yobe, Ebonyi states & others. http://guardian.ng

Indinati, RetnoPalup&Wiji, Raharjo (2020). Proceeding on Political and Social Science Series : Zoom As A Tool for Online Learning. http://proceeding.rsfpress.com/index.php/pss/ index Volume 1 Number 1(2020):161-165

Luiz, A., Manuela, L. (2021). Zoom In, Zoom Out: The impact of COVID-19 Pandemic in the classroom. *Sustainability*. .

Magaji, S. (2012). Cost-Benefit of E-learning under ODL of Developing Economies. *African Journals online*

Means, B., Toyama, Y., Murphy, R., &Bakia, M. (2010) Evaluation of evidence-based online. learning: a meta-analysis and review of online studies, US Department of Education. *http://www.taylorfrancis.com*

Minhas S., Tasaddaq, H., & Abdul, G. (2021). Exploring Students Learning; AStudy of Zoom Application. *Gazi University Journal of Science.*

Mpungose (2021). Lecturers' reflections on use of zoom video conferencing technology fore-learning at a South African University in the context of coronavirus. African identity

Mathudzi, T. (2020). Communication as a management functionwith specific. *Univendspace.unIven.ac.za.* http://uniendspace.univen.ac.za

Nadine, B. (2021). Determining Appropriate Sample Size in Survey Research.https://research *gate.net 10/7/2023.*

Nwafor, K.A (2019). Understanding the Dynamics of the History and Development of the MassMedia in Nigeria. Abakaliki; *L & D Chocho Ventures.*

Nwafor, K. A., & Odoemelam, C. C. (2012). An Appraisal of the Knowledge of ICTs among Residents of Nsukka Urban of Enugu State and Abakaliki Capital of Ebonyi State. *Journal of Contemporary Communication, 1(1),* 190-197.

Ogbuoshi, L. (2021). Understanding Modern Research Methods and Thesis Writing.*Plot C4 Presidential Road, Enugu. Linco Enterprises.*

Ogwunte, P. C. & Amadi, E. A. (2020). Perceived Influence of Zoom Cloud and Whatsapp Technologies in Instructional Delivery in University Business Education Classroom in Rivers State. *International Journal of Innovation Information Systems and Technology Research*

Ohaja, L. (2013). Influence of Social Media on the Academic Performance of the Undergraduate Students of Kogi State University Anyigba, Nigeria. *Research on Humanities and Social Sciences.* ISSN 2222-1717.

Okoro, M. N., Nwafor, K. A. & Odoemelam, C. C. (2014). Influence of Digital Media, Video Games, Toys and Cartoons on the Behaviourof Early School-Age Children in South-East Nigeria. *The Nigerian Journal of Communication, 12(1), 212-240.*

Paderanga, L. (2014). Classroom Video Conferencing: Its Contribution to Peace Education *ScienceDirect. http://www.sciencedirect.com*

Henry, P. (2001). E-learning Technology, Content and Service. Education and Training 43(4/5)249-255.DOI:10.1108EUM0000000005485, researchgate.net. 27/7/2023.

Riederlie, J. (2020). Design and implementation challenges of maturity models for healthcare Organizations; An experience report. http://www.researchgate.net

Saidu, S., Alhassan, A., Abdulai, A. (2011). The Role of Community Radio in Livehood Improvement: The Case of Simli Radio. *The journal of field actions. Journals.open edition.org*

Samuel, A., Michael, M. V., Michael K. K., (2021). Academic Experiences Of 'Zoom Fatigue' as Virtual Streaming Phenomenon During the Covid-19 Pandemic.*International Journal of Web-Based Learning and Teaching Technology.*

Surattana, A. (2021). Why Web-Conferencing Matters: Rescuing Education in the time ofCovid-1 19 Pandemic Crisis. *Mini Review frontiers in Education. Wwwfrontiersin.orgVolume 6 Article 752522*

Ukonu, (2006). Dynamics of mass media development in Nigeria, histories, media bodies, Communication policy, press laws and freedom and ICTs development. Enugu*; Rhyce Kerex publishers.*

Taylor, Erin, Mike (2022). Collection Management in the Cloud: A Guide for Using cloud. *Researchgate.net*

Kapoor, K., Tamilmani, K., Nerur, S. (2018). Advances in Social Media Research: Past, Present And Future. *Information Systems Frontiers 20, 531-558*

Vanguard, (2024) www.vanguardngr.com/2024/06/nigeria-strenthens-digital-learning-with-National-task-force-on-digital-education.

Xueqian, C. (2021). Virtual work meetings during the Covid-19 pandemic. *Journals Sagepub.com http://journals.sagepub.com*