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# ACADEMIC STAFF INTERNET LITERACY NEEDS FOR THE PROMOTION OF E-LEARNING IN TERTIARY INSTITUTIONS IN ENUGU STATE

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## Abstract

*The study ascertained the extent of Academic staff Internet literacy needs for the promotion of e-learning in tertiary institutions in Enugu State. One research Questions and one null hypothesis guided the study. The descriptive survey research design was adopted for the study. The population of the study was 3,728 staff comprising 2,921 from the University of Nigeria, Nsukka (UNN) and 807 from Enugu State University of Science and Technology (ESUT). The sample size of the study was 437 (12%) academic staff drawn using the multi-stage sampling procedure. This consisted of 348 from UNN and 89 from ESUT. The instrument for data collection was an adapted questionnaire titled: Internet literacy skills Possessed by Academic Staff for the Promotion of E-learning. The instrument was face validated by five experts, two from the Department of Adult Education, one from the Department of Science Education (Measurement and Evaluation unit), one from Department of Computer Education and Robotics and one from the Centre for Distance Learning (CDEL). The reliability coefficient value of 0.78 was obtained using the Cronbach alpha statistical tool. Data were analyzed using mean for the research question, while the t- test statistic was employed to test the null hypothesis at 0.05 level of significance. The findings of the study among others indicated that internet literacy needs of staff for the promotion of e-learning in tertiary institutions in Enugu State was at low level. Based on the findings, it was recommended among others that tertiary institutions' administration should expose academic staff to workshops or seminars on the design of online lessons through the use of learning management system capable of promoting e-learning.*

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**Keywords:** Academic staff, Internet literacy, internet literacy needs, E-learning, Tertiary institution.

## Introduction

Internet literacy has gained dominance in this digital age. This results from the increasing shift from traditional method of teaching and learning to online learning otherwise known as e-learning in our educational institutions, particularly at the tertiary levels. The shift to e-learning in our tertiary institutions is brought about by the need to mitigate some of the existing limitations of the face- to-face learning as highlighted by Naveed et al. (2017); Okolo and Mallo (2021); Obi et al. (2018); and Nikolopoulou (2022) such as limited access resulting from inadequate infrastructural facilities and low carrying capacity, lack of flexibility to accommodate the working population, inability to continue education during disruptions (conflict, disasters, pandemics such as the COVID-19) among others.

E-learning, which is the teaching and learning that involves the use of technology appears to be a panacea to these challenges. According to Adeoye et al. (2020), e-learning involves an electronic system of learning linked with internet-based learning in an interactive platform,

providing convenience and flexibility to both the students and academic staff. Therefore, this type of learning does not necessarily need the traditional classroom but access to computers and internet are very crucial for one to take advantage of teaching and learning. Similarly, Bubou and Job (2021) see e-learning as the utilization of digital technologies or information communication technologies, such as the computers, internet, compact discs, the web, social media, mobile phones, tablets and digital video disc (DVD), to support teaching and learning whether within and outside of the traditional classroom setting, encompassing both asynchronous and synchronous. This definition suggests the imperativeness for both teachers and learners to possess the knowledge and ability to utilize various kinds of digital technologies that supports learning both in the classroom and at a distance. In this study, e-learning is seen as the utilization of digital technologies such as computer, mobile devices, internet, social media among others in a web-based environment or synchronously and asynchronously for teaching and learning.

In this digital age, one of the greatest innovations in education is e-learning and it has the capability to address myriads of educational issues. Hence, some of the inherent benefits of e-learning include the provision of accessible and adaptable education, preferences of younger learners, as well as, its offering of direct interaction with the instructors in educational (tertiary) institution (Ibrahim et al., 2017). Additionally, e-learning ensures the continuity of education during disruptions such as conflict, disasters, pandemics such as the COVID-19 among others. However, in order for academic staff to take advantage of all these inherent benefits, they are expected to possess adequate internet literacy skills, as e-learning is mostly facilitated by the internet technology.

Internet is the greatest innovation of mankind. Hence, Mangal and Mangal (2014) described it as the largest world area network and inter-network system that provide the cheapest, fastest and easiest channel for the numerous users to obtain, provide and disseminate information. The internet has become an indispensable part of our human lives. However, it requires some level of literacy to effectively navigate internet environment. Literacy in a digital age is no longer viewed from the traditional standpoint, according to United Nations Educational, Scientific and Cultural Organization (UNESCO) (2013a); Ng et al. (2021), where it is merely seen as an individual's capability to read and write in everyday life. However, the advent of digital technologies has expanded the meaning of literacy according to UNESCO (2005) as the capacity to recognize, comprehend, interpret, produce, communicate, and calculate using written and printed materials across diverse contexts. Literacy represents an ongoing process of learning, empowering individuals to attain their objectives, nurture their knowledge and capabilities, and engage actively in their community and the broader society. This modern definition acknowledges that in addition to literacy being the ability to read and write a particular language, it is also a dynamic and evolving set of practices that requires ongoing learning and adaptation. Hence, literacy now includes the understanding and how to use digital technology such as the internet as a medium to social participation including for educational purposes.

Therefore, internet literacy is the fundamental skills needed to function on an internet environment. McNulty (2021) describes internet literacy as the skills to utilize devices, such as laptops, smartphones among others to access the internet. It includes activities such as accessing websites and applications, browsing through them to obtain and create content and possessing a certain level of comprehension regarding the motives and method behind online content publication. Furthermore, Yeşilyurt and Vezne (2023) supported that internet literacy is the ability to use computers, software applications such as learning management systems, video

conferencing tools etc., databases, and other technologies for an academic, work-related, or personal purpose. However, Kim and Yang (2015) pointed out that internet literacy goes beyond the technical skills to operate devices; it encompasses critical information processing skills necessary to effectively interpret, analyze, and evaluate online contents enabling individual make sense of vast amount of information available online.

Furthermore, internet literacy involves accessing, communicating information and observing measures to safely navigate the internet environment. From this standpoint, Purnawati et al. (2017) simply views internet literacy as the ability to seek for online information. In the same vein, Vernanda et al. (2017) describes internet literacy as a skill that involves knowing where and how to connect to internet and utilizing the internet to acquire knowledge and critically evaluating obtained information. In addition, Fuji and Yoshida (2015) defined internet literacy as the essential skills necessary to navigate the internet taking into consideration: the capability to address and manage illegal and harmful online contents properly; communicate appropriately, and; take measures to protect one's privacy and security. That is to say that an internet literate is one who does not only know how to navigate into internet environment but also do so safely by protecting oneself from online harm and threats. In addition, the individual should be able to send and receive messages through the web and social media messaging platforms. Gan (2023) provided more encompassing definition which is that internet literacy is the ability to search and utilize online information. As well as communicate with others online. It involves the ability to safeguard one's privacy, and avoid harmful and malicious content on the internet. Additionally, internet literacy includes basic computer proficiencies, along with the ability to utilize social media and search engines, the knowledge of Microsoft Office tools, send and receive emails, ask questions in forums and enroll in online educational courses. Similarly, Purnawati et al. (2017) added that internet literacy include skills such as the capacity to connect, secure, utilize multimedia, communicate, and engage in web development. Therefore, in this study, internet literacy is seen as the ability of lecturers to access, navigate, create and communicate information responsibly and safely in an internet environment using all kinds of digital technologies for the facilitation of e-learning.

Effective functionality on the internet environment requires some certain knowledge and skills. Hence, Huang, Liu, Wang, Dong and Tang (2021) expressed that internet literacy consists of internet knowledge and internet skill. Furthermore, Obasuyi and Otabor (2012) view internet literacy skills to include ability to utilize the world wide web (WWW), utilize the WWW for information retrieval, participate in online discussion group and chatting, send e-mail message, attach files to e-mail message, save an image or graphic from web pages, creating a web page and download files from the internet or world wide web. In addition, Liang and Chao (2022) added Searching world wide websites; setting internet system; homepage management; utilize e-mail; manage file of an e-mail among others as internet literacy skills.

Furthermore, internet skills include operational and formal skills, information and strategic skills, and communication and content creation skills (Van-Deursen & Van-Dijk, 2011; & Van-Deursen & Van-Dijk, 2014). Operational skills according to Van-Deursen and Van-Dijk (2011); and Van-Deursen and Van-Dijk (2014) are the foundational abilities needed to use the internet. They are regarded as the most basic methods of using the internet and could lead to the experience of more complicated activities. In continuation, formal skills involve online architecture and prevent people from being lost or confused when using internet-related tools. Furthermore, information skills include skills for seeking, selecting, and assessing information

on the internet. Communication skills refer to the ability to convert and interpret messages to understand, construct, and exchange meaning with other people through email and other message systems. While, content creation skills are seen to be the skills to create content of standard quality to be published on the internet. A strategic skill focuses on abilities to use online resources to further one's personal and professional objectives.

In educational profession, the use of the internet is very common. Selywn (2014) observes that the internet aligns closely with the core concerns of education particularly at the higher level. In addition, Ogunbodede et al. (2020) emphasized that the internet also offers academic staff a platform to access up-to-date e-journals and online databases, allowing them to conduct research and publish their findings. This helps them to stay relevant and continually advance within the academic community. For the purpose of e-learning, an academic staff with good internet literacy skills are able to use the internet to facilitate the exchange of educational experience and communication between them and students no matter where they are located through forums, e-mail, social networks, chats, video conferences, learning management systems among others. Therefore, internet literacy is highly imperative for academic staff to effectively integrate e-learning in the tertiary institutions.

Additionally, Palamarchuk (2018) noted that academic staff includes all those individuals in higher education institutions or programme who participate in teaching, pursuing scholarships, conducting research, and delivering educational services to students and the community at large. Therefore, contextually, academic staff includes lecturers, faculty members, and other teaching professionals employed within the tertiary institutions. Results from literature reviewed such as Ogunode et al. (2020); University of Manitoba (UManitoba) (2022) on the role and duties of academic staff both in the developed and the developing countries like Nigeria rest within three domains, which are teaching, research and community service. However, rapid technological advancement has made it mandatory for academic staff to also possess high level of creativity and flexibility to adopt digital technological innovations that promote teaching and learning. Emphatically, Fauzan et al. (2022) expressed that the purpose of digital tools for lecturers and students include research, online teaching and learning, collaboration, assessment, and personal communication. Therefore, Srivastava and Deyb (2018), noted that academic staff are also now required to continuously familiarize themselves with methods of utilizing digital technologies, updating their own knowledge and developing digital literacy skills which include internet literacy skill for not just in the classroom but for e-learning. Hence, this new demands upon the academic staff highlights the imperativeness to ascertain their internet literacy needs.

A need, according to US Department of Education (2017), refers to the gap or difference between a current state (what exists) and a desired state (what should be). Therefore, Academic staff internet literacy need refers to the gap between the present skills possessed by staff to access and utilize digital technologies such as computer, smart phones etc. to access, navigate, create and communicate information responsibly and safely in an internet environment for the facilitation of e-learning and the desired skills required to meet standard performance of these activities. The knowledge of staff internet literacy needs maybe crucial to adoption of teaching and learning innovations such as e-learning in tertiary institutions.

Tertiary institutions refer to institutions providing higher education. Furthermore, according to Eze et al. (2018), tertiary institutions are institutions offering education after secondary education and include Universities, Polytechnics, Colleges of Education, and other institutions offering correspondence courses. In this study, tertiary institutions refer specifically

to public universities or universities owned by federal and state government. They are higher educational institutions that awards Bachelors, Masters and Doctor of philosophy (PhD) degrees. The type of tertiary institutions focused on in this study is the public universities. Public Universities are Universities owned by Federal and State Government. This form of tertiary institutions has possibility to serve and impart knowledge to individuals of varying socio-economic backgrounds as they are moderately affordable and sponsored by the government. National University Commission (NUC) (2023) website show that about 20 distance learning accredited Federal Universities and some other State Universities have embraced e-learning or online learning mode and more are still on the way.

In Enugu State, apart from University of Nigeria Nsukka and Enugu State University of Science and Technology, which are NUC accredited institutions running e-learning programme in Nigeria, some other tertiary institutions also claim to have e-learning programme on-going in their various institutions. However, Okafor (2022) observed that the e-learning adopted in Nigeria including Enugu State is usually in form of lecture note on CD-ROM which can be played as at learners' convenience. However, e-learning is more than lecture note on CD-ROM, but must be complemented with the use of the internet to provide access to quality education to all tertiary institutions. In the higher education field, The Inter-American Dialogue (2016) noted that e-learning has become increasing relevant. Its expansion can be attributed not only to advancement in technologies and pedagogical methods, but also to the need to expand access to higher education for the sustainability of tertiary education especially where there is disruption in academic activities evident during the outbreak Coronavirus pandemic.

The declaration of COVID-19 as a deadly pandemic on March 11, 2020 (World Health Organization (WHO), 2020), prompted the Federal Ministry of Education in Nigeria to approve the closure of schools in an effort to contain the spread of the virus. The closure disrupted traditional classroom teaching and learning in Nigeria, including in Enugu state, as most educational activities were halted without any alternative means of teaching and learning. Hence, Sambo et al. (2021) noted that the outbreak of COVID 19 exposed the deficiencies in the Nigeria's (Enugu State inclusive) educational system, as students in public institutions helplessly endured at home for ten months. This, according to Marinoni et al. (2020); Nwachukwu et al. (2021) is because during the COVID-19, certain universities (and academic staff) in Nigeria, including Enugu State refrained from even attempting to involve their students in online distance education due to the absence of suitable digital infrastructure, limited digital learning preparedness and expertise such as the use of the internet and its related software to support educational activities resulting in the complete suspension of teaching. Hence, the pandemic underscored the benefits of e-learning during crisis when face-to-face classroom teaching and learning is impossible. As well as the need for adequate academic staff digital literacy preparedness, particularly in the area of internet literacy, which is essential to drive e-learning. Internet literacy will help the academic staff, according to Omosekejimi et al. (2018) to integrate internet technology into teaching and use it to understand and develop modern communication, navigate the digital space effectively and to manage knowledge and experience in the information age with the primary aim of benefitting the students.

Internet literacy empowers academic staff in the utilization of diverse digital technologies for accessing the internet, information sourcing and designing, delivering courses and content creation on the internet and establishment of engaging learning environment for both face-to-face and online settings. However, academic staff in Enugu State seems to possess inadequate internet

literacy skills required to utilize both the technological devices and services needed for e-learning. This inadequacy was evident during COVID-19 pandemic which resulted to temporary closure of tertiary institutions in Nigeria, causing a significant disruption in education and loss of a full academic year for students. This experience highlights the urgency to re-assess the preparedness of tertiary institutions to adopt e-learning (online learning) as an innovative teaching-learning method. Since academic staff play a pivotal role in implementing e-learning in tertiary institution, it is imperative to assess their level of internet literacy needs, particularly in utilizing internet technologies and services required to promote e-learning in tertiary institutions in Enugu State. Furthermore, to address notable problem of inadequate infrastructural facilities, e-learning centers are being set up in various tertiary institutions to facilitate full online programme. However, the efficient operation of these centers heavily relies on the internet literacy skills of the academic staff. Consequently, it becomes imperative to identify areas of internet literacy needs of academic staff for effective functioning of these centers. Given this context, the study intends to ascertain the extent of Academic staff internet literacy needs for the promotion of e-learning in tertiary institutions in Enugu State.

**Purpose of the study**

The general purpose of the study was to ascertain the extent of academic staff internet literacy needs for the promotion of e-learning in tertiary institutions in Enugu State. Specifically, the objective of the study includes to;

1. ascertain the extent of academic staff internet literacy skill needs for the promotion of e-learning in tertiary institutions in Enugu State.

**Research Question**

1. What is the extent of academic staff internet literacy skill needs for the promotion of e-learning in tertiary institutions in Enugu State?

**Hypothesis**

The study formulated the following null hypothesis which provided guidance and subsequently tested at a significance level of 0.05:

1. There is no significant difference between the means ratings of academic staff in State and Federal Universities on the extent of internet literacy skill needs for the promotion of e-learning in tertiary institutions in Enugu State.

**Methodology**

The descriptive survey research design was adopted for the study. In addition, due to the nature of the study, it involves a need gap analysis. The population of the study was 3,728 staff comprising 2,921 from the University of Nigeria, Nsukka (UNN) and 807 from Enugu State University of Science and Technology (ESUT). The sample size of the study was 437 academic staff which is 12% of the entire population. This sample size is in accordance with Nwana (1981) cited in Edeh et al. (2020) who recommended that if the population is a few hundreds, a 40% or more sample will do; if many hundreds a 20% sample will do: if a few thousands, a 10% sample or more will do and if several thousands, a 5% or less sample will do. This sample size was made up of 348 from UNN and 89 from ESUT. The selection of the sample was conducted using a multi-stage sampling procedure. One research question was posed. The instrument for data

collection was an adapted questionnaire titled: Internet literacy skills Possessed by Academic Staff for the Promotion of E-learning (ILSPASPE). The instrument consisted of two sections (A, with three (3) items and elicited information on the name of respondents' tertiary institution; Faculty and Departments respectively) and (B which comprised of eleven (11) items arranged in one cluster A). Section B elicited information on the extent of Internet literacy Skills possessed by Academic Staff for the promotion of e-learning in tertiary institutions. A 4-point rating scale was used to assess the strength of the opinions of the respondents in the study. The four (4) point numerical values assigned to the rating scale were as follows: VHP = 4 points, HP = 3 points, LP = 2 points, NP = 1 point. The instrument was face validated by five experts, two from the Department of Adult Education and Extra-mural Studies, one from the Department of Science Education (Measurement and Evaluation unit), one from Department of Computer Education and Robotics and one from the Centre for Distance Learning (CDEL). The reliability coefficient value was 0.78 obtained using the Cronbach alpha statistical tool. The researcher with aid of three research assistants administered 437 questionnaire to the respondents in their offices. Some of the respondents couldn't fill the questionnaire on the spot while others were absent at repeated times of visit. At the end, the correctly filled and retrieved questionnaire was 359 out of 437. Therefore, the percentage rate of return was 82 percent. Data collected from the respondents on research question one was analyzed using mean score. The criteria for classifying the mean score on the extent of skills possessed were defined as follows: 3.50-4.00 (VHP), 2.50-3.49 (HP), 1.50-2.49 (LP), 1.00-1.49 (NP). Similarly, the criteria for classifying the extent of need were defined as: 3.50-4.00 (VHN), 2.50-3.49 (HN), 1.50-2.49 (LN), 1.00-1.49 (VLN). Additionally, the t-test statistic was utilized to examine one null hypothesis at a significance level of $p < 0.05$. If the probability value is less than or equal to 0.05, the null hypothesis is rejected and; If the probability value is greater than 0.05, the null hypothesis is accepted.

## Results

**Research Question one:** What is the extent of academic staff internet literacy skill needs for the promotion of e-learning in tertiary institutions in Enugu State?

**Table 1: Mean showing the Need Gap of Respondents on the extent of Academic Staff Internet Literacy Skill Needs for the Promotion of E-Learning in Tertiary Institutions in Enugu State (n=359)**

| S/N | | Possessed | | Needed | |
|---|---|---|---|---|---|
| | | $X_{CSP}$ | Remarks | $X_{SSP}$-$X_{CSP}$ | Remarks |
| | **Ability to:** | | | | |
| 1. | use browser features such as bookmarks, tabs and extensions | 2.67 | HP | 1.33 | VLN |
| 2. | navigate hyperlinks | 2.89 | HP | 1.11 | VLN |
| 3. | create and publish on web blogs | 1.42 | NP | 2.58 | HN |
| 4. | compose, send and access received emails | 3.30 | HP | .70 | VLN |
| 5. | utilize web/video conferencing systems like zoom, google meet etc. | 1.47 | NP | 2.53 | HN |
| 6. | Design online lessons using learning management systems such as Schoology, Google classroom, moodle etc. | 1.21 | NP | 2.79 | HN |
| 7. | Connect with students using social media such as whatsapp, twitter, Facebook, telegram etc. for teaching and communication | 2.89 | HP | 1.11 | VLN |
| 8. | Manage files and teaching resources in cloud computing such as google drive, one drive, drop box etc. | 1.81 | LP | 2.19 | VLN |

| | | | | | |
|---|---|---|---|---|---|
| **9.** | protect oneself against internet threats such as phishing, hacking virus etc. while online using privacy settings, passwords, anti-virus etc. | 2.67 | HP | 1.33 | VLN |
| **10.** | utilize online editor tool such as change pdf-word files, photo editors, video editors etc. | 1.42 | NP | 2.58 | HN |
| **11.** | Ability to conduct effective information search with search engines such as AI ChatGPT, Google, Yahoo, Bing etc. | 2.82 | HP | 1.18 | VLN |
| | **Grand Mean** | **2.23** | **LP** | **1.77** | **LN** |

*NB: XCSP - Mean for current skill possessed; XSS - Mean of Standard Skill = 4 points; HN - Highly Needed; LN - Lowly Needed; VLN – Very Lowly Needed*

Table 1 shows that items 1, 2, 4, 7, 9 and 11 have mean scores of 1.33, 1.11, .70, 1.11, 1.33 and 1.18 rated as very lowly needed while items 8 is classified as lowly needed with a mean score of 2.19. On the hand, items 3, 5, 6, and 10 with mean scores of 2.58, 2.53, 2.79 and 2.58 regarded as highly needed. The grand mean score of 1.77 indicates that internet literacy skill needs of Academic staff for the promotion of e-learning in tertiary institutions in Enugu State is at low level.

**Hypothesis One**: There is no significant difference between the mean ratings of academic staff in State and Federal Universities on the extent of internet literacy skill needs for the promotion of E-learning in tertiary institutions in Enugu State.

**Table 2: t-test analysis of the difference between the mean ratings of respondents on the extent of academic staff Internet Literacy Skill Needs for the Promotion of E-Learning in Tertiary Institutions in Enugu State**

| Group | N | $\bar{X}$ | SD | Df | $t_{cal}$ | $P_{value}$ | Decision |
|---|---|---|---|---|---|---|---|
| **State University (ESUT)** | 70 | 2.21 | .26 | | | | |
| | | | | 357 | -.81 | .42 | Accepted |
| **Federal University (UNN)** | 289 | 2.24 | .29 | | | | |

Data on Table 2 show that the mean score of State University (ESUT) is 2.21, while that of Federal University (UNN) is 2.24. The Table further shows that at t= -.81, the probability value is .42 at 0.05 level of significance, hence, the acceptance of the null hypothesis. This implies that there is no significant difference between the mean ratings of State University (ESUT) and Federal University (UNN) on the extent of internet literacy skill needs of academic staff for the promotion of E-learning in tertiary institutions in Enugu State.

## Discussion of findings

### Extent to which internet literacy skills are needed by academic staff for the promotion of e-learning

The finding of the study in research question one indicates that to a low extent, internet literacy skills are needed by academic staff for the promotion of e-learning in tertiary institutions in Enugu State. This need is as a result of the skill being possessed at a low extent. The hypothesis also indicated that there is no significant difference between the mean ratings of academic staff in State University (ESUT) and Federal University (UNN) on the extent of internet literacy skill needs of academic staff for the promotion of E-learning in tertiary institutions in Enugu State.

The acceptance of the null hypothesis by academic staff in both Universities is an indication that academic staff are skilled in only basic internet literacy skill. This corroborates with the findings of Abdul-Hmid and Mustaffa (2022) who disclosed high competence among majority of their respondents in less technical internet activities but highly unskilled in more technical activities. In addition, Agbo (2014) asserted that academic staff are illiterate in critical aspect of internet literacy that plays pivotal role in academic activities, including e-learning. The reason for this could be because certain innovative educational technologies like learning management systems (LMS) and video conferencing applications, though in existence, were not widely known and adopted in this region before the emergence of COVID-19 pandemic. Consequently, only a limited number of individuals had acquired proficiency in these tools. Awareness and proficiency in LMS and video conferencing applications gained momentum during the urgent quest for alternative teaching methods caused by the COVID-19 lockdown. Hence, internet literacy is vital to academic staff as it affords them access to a wealth of information and educational resources, increasing prospects for learning in traditional classroom and in an e-learning environment. On the contrary, Okigbo and Enemuo (2021) revealed that lecturers have acquired internet literacy skills necessary for internet operation. This variation could be as result of availability and accessibility to institutional resources, support and training which the respondents under study lack the access to the resources. It is therefore imperative to identify those internet literacy needs central to the promotion of e-learning in tertiary institutions in Enugu State.

**Conclusion.**

The study concludes that the extent of Academic staff internet literacy needs for the promotion of e-learning in tertiary institutions in Enugu State is at low level. Although they demonstrate competence in basic internet operations such as email communication, web navigation, social media use, and online information searching, significant deficiencies exist in advanced internet literacy skills essential for effective e-learning delivery. These deficiencies suggest that academic staff experience difficulties in designing, managing, and delivering quality online learning experiences, which could reduce the effectiveness of e-learning programmes. Therefore, bridging these skill gaps is crucial for enhancing the successful implementation of e-learning in tertiary institutions in Enugu State.

**Recommendations**

Based on the findings, the study recommended the following:

1. Tertiary institutions' administration should expose academic staff to workshops or seminars on the design of online lessons through the use of learning management system capable of promoting e-learning.
2. Academic staff should be trained on the use of video conferencing platforms such as , Google Meet, Microsoft Teams and zoom for online teaching, student engagement, and online collaboration.

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