

## **DIGITAL SKILLS REQUIRED BY BUSINESS EDUCATION LECTURERS FOR EFFECTIVE INSTRUCTIONAL DELIVERY IN TERTIARY INSTITUTIONS IN RIVERS STATE**

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### **ABSTRACT**

This study investigated the digital skills required by Business Education lecturers for effective instructional delivery in tertiary institutions in Rivers State. The study was guided by two research questions and one hypothesis. A descriptive survey design was adopted, and the population comprised 57 Business Education lecturers from Rivers State-owned universities. Due to the manageable population size, no sampling was conducted. To ensure the appropriateness, clarity, and adequacy of the instrument, it was subjected to face and content validation by three experts: one from Computer Science, another from Business Education, and a third from Science Education. A structured and validated questionnaire was used for data collection, and responses were analyzed using mean and standard deviation, while the hypothesis was tested using the t-test at a 0.05 significance level. Findings revealed that Business Education lecturers require a range of digital competencies, including desktop publishing, database management, PowerPoint presentation, and webpage design. The results also showed that internet-based skills such as video conferencing, online communication tools, and social media applications are essential for effective instructional delivery. The hypothesis test indicated a significant difference in the mean ratings of male and female lecturers regarding required computer application skills. The study concluded that digital proficiency is vital for improving teaching effectiveness, especially in ICT-related courses. It recommended regular professional development programs and institutional support to ensure lecturers integrate digital skills into their instructional practices.

***Keywords: Digital Skills, Business Education, Instructional Delivery, Tertiary Institutions***

### **Introduction**

The rapid progression of educational technology, coupled with the widespread digital transformation occurring globally, has intensified the need for educators to acquire strong digital competencies. Digital technologies refer to electronic tools, systems, devices, and resources that enable individuals to create, store, retrieve, and manipulate data. These tools range from social media platforms and mobile devices to online gaming environments and multimedia applications. Within this broader digital ecosystem, information technology (IT) serves as a central component, involving the use of computer systems for processing information and supporting a variety of data handling tasks (Ayemhenre, Okolo, & Ogidan, 2022).

In recent years and especially following the disruptions caused by the COVID-19 pandemic the incorporation of technology into teaching and learning processes has become not only beneficial but indispensable. The success of modern teaching now depends significantly on the extent to which educators are able to adopt, adapt, and meaningfully integrate suitable digital technologies into instructional activities. In fully digitalized learning environments, educators assume more complex roles: they must teach, guide, and facilitate learning with the support of digital tools, thereby transforming traditional pedagogical approaches into technology-enhanced instructional models. This shift requires teachers to plan how digital media will be used to support learning objectives, improve effectiveness, and explore innovative formats and strategies that digital platforms offer (Akudolu & Onyeneke, 2021).

The introduction of computers and information and communication technologies (ICT) across all tiers of education reflects a major shift away from conventional teaching methods toward digitally supported instructional delivery. As noted by Ayemhenre, Okolo, and Ogidan (2022), this transition underscores the responsibility educators now carry as instructional professionals who must continually update and refine their digital capabilities. They explain that digital skills involve the ability to generate content, manage information, and carry out tasks efficiently using digital technologies. In educational settings, these competencies become even more critical, as teachers must possess the digital expertise necessary to enrich instructional processes and promote improved student learning outcomes.

Similarly, digital skills have been described as the capacity to effectively engage with computer systems and digital applications in real time. This includes the ability to search for, organize, interpret, assess, and produce information using technological tools (Orji, Ali, & Okanazu, 2015). Akudolu and Onyeneke (2021) further elaborate that digital competencies enable individuals to make efficient use of digital devices, communication applications, and network systems, allowing them not only to access information but also to create content, share knowledge, and collaborate with others in virtual spaces.

Business Education, as a discipline, involves teaching learners the fundamental theories, principles, concepts, and procedures that govern business operations. It plays a crucial role in general education by equipping individuals with the knowledge and orientation required for personal advancement and national development (Abbo, 2021). According to Nwaokokorom. (2024), Business Education is recognized globally as an academic program designed to prepare learners with essential skills, knowledge, competencies, and attitudes for employment in the workforce. Oguejiofor (2020) similarly views Business Education as a program that empowers learners with employability skills needed to either secure jobs or establish their own businesses. Ademiluyi et al. (2020) describe it as an integral aspect of technical and vocational education that provides learners with practical skills and competencies required for economic empowerment, societal repositioning, and sustainable development.

Furthermore, Nwaokokorom. (2024) assert that Business Education has been structured internationally to achieve multiple objectives. These include preparing students for professional careers in office and business-related occupations, equipping them with entrepreneurial and job-creation skills, and ensuring they possess a comprehensive understanding of modern business practices with a strong emphasis on the integration of ICT and computer technology in both learning and real-world applications.

### **Statement of the Problem**

The integration of Information and Communication Technology (ICT) knowledge and the corresponding digital skills required to apply such knowledge effectively has become increasingly indispensable in contemporary higher education. ICT continues to exert a profound global influence on teaching and learning processes, with research by Kolo, Oghomwen, Adakole, and Karickson (2020) emphasizing its pivotal role in improving instructional delivery in Business Education. This development highlights the expanding opportunities that digital technologies provide for enhancing both teaching effectiveness and student learning experiences in the information age.

Despite the recognized importance of digital competence and the substantial investments made to support digital teaching tools, challenges persist. Amesi and Akoku (2021) observe that many Business Education lecturers remain hesitant to adopt or adequately utilize digital skills in their instructional practices. Their reluctance is attributed to insufficient training, limited knowledge of digital applications, and resistance to pedagogical changes driven by technological advancements. Preliminary observations within the institutions under study reveal similar patterns, indicating that ICT tools are not being fully leveraged to support effective instructional delivery. This gap between technological availability and practical utilization underscores the need to examine the digital skills essential for Business Education lecturers in Rivers State-owned universities.

## **Aim and Objectives**

The study aimed to determine the necessary digital competencies that Business Education lecturers need for effective instructional delivery in Rivers State Owned Universities. Specifically, it sought to:

1. Identify the essential computer application skills required by Business Education lecturers.
2. Determine the internet skills necessary for effective instructional delivery by Business Education lecturers in Rivers State Owned Universities.

## **Research Question**

The study addressed the following research questions:

1. What computer application skills are necessary for Business Education lecturers in Rivers State Owned Universities?
2. What internet skills are essential for Business Education lecturers in Rivers State Owned Universities?

## **Hypothesis**

1. There is no significant difference in the mean ratings between male and female lecturers regarding the computer application skills necessary for instructional delivery by Business Education lecturers in Rivers State Owned Universities?

## **Review of Related Literature**

### **Digital Skills Acquisition for Educators**

Digital skills acquisition is central to modern educational practice, particularly in higher education, where the demand for technologically competent educators is rapidly increasing. Digital skills encompass knowledge, abilities, and attitudes that enable educators to utilize technology effectively for teaching, learning, and administrative purposes (Ayemhenre, Okolo, & Ogidan, 2022). Structured training programs, workshops, and professional development initiatives are pivotal in equipping lecturers with these competencies. Lecturers who undergo formal ICT training, including computer application and internet skills, demonstrate higher confidence in integrating digital tools into pedagogy (Akudolu & Onyeneke, 2021; Unwuchola, Atanu, & Amodu, 2021).

In the Nigerian context, research shows that while many Business Education lecturers are aware of digital tools, there exists a notable gap in practical application, often due to insufficient training and institutional support (Amesi & Akoku, 2021). The acquisition of both computer application and internet skills has been linked to enhanced teaching effectiveness, as lecturers can deliver lessons that are interactive, organized, and accessible to students (Orji, Ali, & Okanazu, 2015). Therefore, deliberate efforts to improve digital competence through formal and continuous professional development are crucial to ensuring that lecturers can meet contemporary pedagogical demands, particularly in ICT-focused courses in Rivers State-owned universities.

### **Computer Application Skills and Instructional Delivery**

Computer application skills, including desktop publishing, database management, PowerPoint presentations, and webpage design, are essential for Business Education lecturers to deliver instruction effectively. These skills facilitate the creation, management, and presentation of educational content, allowing for enhanced clarity, interactivity, and engagement during lessons (Ademiluyi, Adegboye, & Akande, 2022; Unwuchola, Atanu, & Amodu, 2021). Empirical evidence suggests that lecturers proficient in these applications can design instructional materials efficiently, manage learner information, and integrate multimedia resources into teaching (Kolo, Oghomwen, & Adakole, 2022).

The practical application of computer skills is critical in ensuring that theoretical knowledge is effectively communicated to students. Lecturers who employ PowerPoint and database tools can

present structured content while maintaining accurate records of learner progress, thereby enhancing instructional quality. However, challenges such as limited access to updated software, inadequate infrastructure, and insufficient training often hinder the optimal use of these applications (Elmasri & Navathe, 2011). To maximize the potential of computer applications, institutions must provide both technical resources and targeted professional development that allows lecturers to develop competence in these areas, ensuring effective delivery of Business Education programs.

### **Internet Skills and Teaching Effectiveness**

Internet skills have become indispensable in modern instructional delivery, enabling lecturers to utilize online platforms for communication, collaboration, and content dissemination. Key skills include video conferencing, social media communication (WhatsApp, Facebook Messenger, Telegram), and online multimedia integration, which facilitate both synchronous and asynchronous learning (Unwuchola, Atanu, & Amodu, 2021). Lecturers proficient in internet-based teaching methods can reach larger audiences, engage learners in collaborative problem-solving, and provide real-time feedback.

Research demonstrates a direct relationship between lecturers' internet competence and instructional effectiveness. For instance, lecturers with strong internet skills can create interactive learning environments, use digital platforms to reinforce classroom instruction, and support students' independent learning (Ayemhenre et al., 2022). Despite the recognized benefits, barriers such as unreliable internet connectivity, lack of institutional support, and limited exposure to online tools remain prevalent (Amesi & Akoku, 2021). Consequently, continuous skill development and access to robust ICT infrastructure are crucial. Ensuring that Business Education lecturers acquire and apply internet skills effectively enhances the quality of instruction, student engagement, and overall learning outcomes in Rivers State-owned universities.

### **Method**

This study adopted a descriptive survey design to examine the digital competencies required for effective instructional delivery among Business Education lecturers in universities owned by the Rivers State Government. The entire population for the study consisted of 57 Business Education lecturers in the two Rivers State-owned universities, namely Rivers State University, Port Harcourt, and Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt. Because the population was relatively small and manageable, the researchers did not apply any sampling technique; therefore, the entire population was studied as a census. Data were gathered using a structured questionnaire developed by the researchers based on the study's objectives. To ensure the appropriateness, clarity, and adequacy of the instrument, it was subjected to face and content validation by three experts: one from Computer Science, another from Business Education, and a third from Science Education. After validation, all 57 copies of the questionnaire were administered directly by the researchers and successfully retrieved for analysis. The questionnaire was structured on a Five-Point Likert scale that required respondents to rate each item according to the extent to which the identified digital skills were needed. The response options ranged from "Not Required" (1) to "Very Highly Required" (5). Data collected were analyzed using descriptive statistics such as Mean and Standard Deviation to determine the level of digital skills required by the lecturers. The analyzed results were presented in tables for clarity and easy interpretation. To guide decision-making, mean scores were interpreted using predetermined criteria: values between 4.50 and 5.00 denoted skills that were "Very Highly Required," 3.50 to 4.49 represented "Highly Required," 2.50 to 3.49 indicated "Moderately Required," 1.50 to 2.49 signified "Rarely Required," and 0.50 to 1.49 showed that the skills were "Not Required." Furthermore, the study tested its hypothesis at a 0.05 level of significance using the independent samples t-test. The decision rule was straightforward: when the calculated p-value was less than 0.05, the null hypothesis was rejected; however, if the p-value exceeded 0.05, the null hypothesis was upheld. This statistical approach ensured objective

and reliable conclusions regarding the digital skills needed for instructional delivery among Business Education lecturers in the selected institutions.

## Results

### Research Question 1: What computer application skills are necessary for Business Education lecturers in Rivers State Owned Universities?

Table 1: Mean and Standard Deviation of responses on the computer application skills are necessary for Business Education lecturers in Rivers State Owned Universities.

S/N	Computer Application Skills	X	SD	Remarks
	<b>Desktop publishing skills: Ability to;</b>			
1.	manipulate design templates	3.95	1.05	HR
2.	use Clip library	4.4	0.89	HR
3.	arrange objects/graphics on a page.	4.25	0.64	HR
4.	wrap texts around objects/graphics	4.25	0.85	HR
5.	insert pictures from various sources.	4.5	0.51	VHR
6.	design all sorts of documents e.g logos, bulletins etc	4.2	0.77	HR
7.	arrange texts, graphics and colours effectively.	3.95	0.51	HR
	<b>Database Management skills: Ability to;</b>			
8.	create database documents.	4.5	0.89	VHR
9.	create, format and edit records in a table.	4.45	0.89	HR
10.	create queries in database.	3.9	1.41	HR
11.	sort a query on multiple fields.	4.25	0.85	HR
12.	control data access/security.	4.0	0.97	HR
13.	restore data from backup files etc.	4.15	0.81	HR
	<b>PowerPoint Presentation Skills: Ability to;</b>			
14.	load PowerPoint presentation.	4.2	1.00	HR
15.	create slides with different layouts.	4.0	0.98	HR
16.	create presentations using templates.	4.8	0.41	VHR
17.	add textual information and animations.	4.5	0.76	VHR
18.	import data from other sources.	4.6	0.68	VHR
19.	modify and customize presentations.	4.05	1.05	HR
20.	share screen during presentations.	4.5	0.69	VHR
	<b>Webpage Design Skill: Ability to;</b>			
21.	use HTML tags to create webpages.	4.0	0.97	HR
22.	use Complementary and contrasting colors.	4.4	0.68	HR
23.	generate visuals (graphic design) effectively.	4.05	0.76	HR
24.	create buttons to enable users interact with the sight	3.6	1.23	HR
25.	use Image Processing programmes	4.05	0.39	HR
26.	add sounds and videos to webpages.	4.25	0.44	HR
27.	create links.	4.15	0.99	HR
28.	view webpages using browsers.	4.0	0.46	HR

The results presented in Table 1 reveal that items 5, 8, 16, 17, 18, and 20, which recorded mean scores ranging from 4.5 to 4.8, were classified by respondents as very highly required skills. The remaining items, with mean scores between 3.6 and 4.49, were rated as highly required. Furthermore, the grand mean score of 4.21 and a standard deviation of 0.80 demonstrate a strong level of agreement among respondents that all the listed items constitute essential computer application skills needed by Business Education lecturers in Rivers State-owned universities for effective instructional delivery.

### Research Question 2: What internet skills are essential for Business Education lecturers in Rivers State Owned Universities?

**Table 2:** Mean and Standard Deviation of responses on the internet skills are essential for Business Education lecturers in Rivers State Owned Universities.

S/N	Internet skills. Ability to;	X	SD	Remarks
29	use video conferencing to conduct classes.	4.6	0.68	VHR
30	use Facebook Messenger to enable learners share ideas and solve problems collectively.	4.7	0.57	VHR
31	use WhatsApp, YouTube, Instagram, Telegrams applications to interact and present voice notes.	4.4	0.68	HR
32	create visual contents online.	4.05	0.99	HR
33	use cloud-meeting to share lesson plans, give instruction and synchronous learning.	4.3	0.80	HR
34	create, compose, send and retrieve emails.	3.75	0.85	HR
35	use search engines.	4.25	1.16	HR

The analysis in Table 2 shows that items 29 and 30, with mean scores of 4.6 and 4.7, were classified by respondents as very highly required. In contrast, items 31, 32, 33, 34, and 35, which recorded mean scores between 3.75 and 4.4, were rated as highly required. The grand mean of 4.29 and a standard deviation of 0.82 further indicate that respondents agreed that all the listed items represent essential internet skills needed by Business Education lecturers in Rivers State owned universities.

**Test of hypothesis:**

One hypothesis was tested using SPSS t-test statistical tool. The hypothesis was tested at 0.05 level of significance and the summary is thus presented in table 3.

**H<sub>01</sub>:** There is no significant difference between the mean ratings of male and female lecturers on the computer application skills required by Business Education lecturers in Rivers State Owned Universities.

**Table 3:** Summary of t-test of the difference between the mean ratings of male and female lecturers on the computer application skills required by Business Education lecturers in Rivers State Owned Universities.

Group	No	Mean	STD	t-cal	df	p-value	Decision
Male	31	4.8	0.41	6.000	19	0.000	Rejected
Female	26	3.6	1.23				

The data presented in Table 3 show that the study involved twenty male and ten female Business Education lecturers. The male lecturers reported a mean score of 4.8 with a standard deviation of 0.41, whereas the female lecturers recorded a mean score of 3.6 and a standard deviation of 1.23. These results indicate that both male and female lecturers perceive digital computer application skills as highly essential for effective instructional delivery in Rivers State-owned universities. The calculated p-value of 0.000, which is less than the 0.05 significance level, signifies a statistically significant difference between the mean ratings of male and female lecturers. Consequently, the null hypothesis, which posited that no significant difference exists between the perceptions of male and female lecturers regarding required computer application skills, is rejected.

**Discussion of Findings**

The findings presented in Table 1 indicate that respondents recognized the critical importance of specific computer application skills, including desktop publishing, database management, PowerPoint presentation, and webpage design, for Business Education lecturers to deliver instruction effectively in Rivers State-owned universities. This outcome corroborates the position of Ademiluyi,

Adegboye, and Akande (2022), who emphasized that proficiency in desktop publishing and database management is integral to efficient instructional delivery in higher education settings. Similarly, the results support the observations of Kolo, Oghomwen, and Adakole (2022), who highlighted that digital database skills are essential for facilitating teaching and learning processes in the contemporary technology-driven educational environment. The findings suggest that lecturers must develop and maintain these competencies to ensure that instructional delivery aligns with current digital standards and pedagogical expectations.

Table 2 further underscores the importance of internet skills as a vital component of effective instructional delivery for Business Education lecturers. The data indicate that lecturers require the ability to conduct online classes through video conferencing tools, utilize messaging platforms such as Facebook Messenger for collaborative problem-solving, and employ applications including WhatsApp, YouTube, Instagram, and Telegram for interactive teaching and voice note dissemination. These findings are consistent with the assertions of Unwuchola, Atanu, and Loveth (2021), who stressed the significance of internet proficiency, which encompasses navigating web browsers, managing electronic mail, engaging in video conferencing, creating digital visual content, and effectively using social media and search engines to support learning. The implication is that Business Education lecturers must possess robust internet skills to facilitate meaningful interaction, enhance learner engagement, and optimize instructional outcomes in the digital era. Overall, the findings highlight that the combination of computer application and internet competencies is indispensable for modern teaching, particularly in technologically evolving educational contexts.

## **CONCLUSION**

The study's findings indicate that Business Education lecturers in Rivers State-owned universities require proficiency in computer applications, including desktop publishing, database management, PowerPoint presentations, webpage design, and internet-based skills, to deliver instruction effectively. These results suggest that the acquisition and application of digital competencies play a critical role in enhancing teaching and learning outcomes, particularly in ICT-related courses. Developing these skills enables lecturers to integrate technology meaningfully into their instructional practices, thereby improving learner engagement, facilitating efficient information management, and ensuring that instructional delivery aligns with modern educational and technological standards.

## **RECOMMENDATIONS**

Based on the findings, the following recommendations were made:

1. Universities should organize regular training and professional development programs to equip Business Education lecturers with essential computer application and internet skills.
2. University management should encourage and support lecturers to actively integrate digital skills into their teaching methodologies.

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