
**INFORMATION AND CRITICAL THINKING SKILLS AS CORRELATES OF
WORKPLACE PERFORMANCE OF BUSINESS EDUCATION LECTURERS IN
TERTIARY INSTITUTIONS IN RIVERS STATE.**

By

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ABSTRACT

The study investigated information and critical thinking skills as correlates of workplace performance of business education lecturers in tertiary institutions in Rivers State. Correlation survey design was adopted for this study. This study was carried out in Rivers State. The population of this study consists of 108 business education lecturers in tertiary institutions running business education programme in Rivers State. Census sampling technique was adopted for this study. Two (2) sets of questionnaires titled 'Digital Skill Utilization of Business Education Lecturers Questionnaire (DiSUBELQu)' and 'Workplace Performance of Business Education Lecturers Questionnaire (WoPoBELQu)' was used for the study. The researcher employed face and content validity method. Pearson Product Moment Correlation Coefficient (PPMC) indicated a reliability coefficient of 0.81 while the dependent variables representing Workplace Performance of Business Education Lecturers Questionnaire (WoPoBELQu) was equally computed and 0.74 reliability coefficient was obtained. Thus, both instruments were deemed reliable for this study. The researcher used Pearson Product Moment Correlation (PPMC) to analyze and answer the research questions that were stated regarding the relationship between digital skill utilization and workplace performance of business educators and to test the hypotheses that were formulated at 0.05 level of significance. On this basis the study concluded that there is a very strong and positive relationship between information skills utilization and workplace performance of business education lecturers. And also showed a moderate and positive relationship between critical thinking skill utilization and workplace performance of business education lecturers. One of the recommendations made was that business education lecturers should endeavor to utilize their information skills effectively so that information would be accurate and timely.

KEYWORDS: Information and Critical Thinking Skills, Workplace Performance, Business Education Lecturers, Tertiary Institutions and Rivers State.

INTRODUCTION

The advancement in technological offerings around the globe and their subsequent integration into every human activity that were formally done manually has significantly expanded the basic literacy required to function effectively in human society to include digital landscape where

individual and corporate organization interact and collaborate in order to achieve personal and/or organizational goal using digital platforms Adedeji (2020). Hence, to function effectively and efficiently in this technological driven world, individuals whether for personal purpose or for career purpose are required to be digitally literate. Digital skills are defined as a range of abilities to use digital devices, communication applications and networks to access and manage information (Newman, 2023).

Like general skills digital skills are knowledge competencies and attitude required for the effective and efficient utilization of digital technologies to extract and utilize information capable of improving one's personal and career like as well as productivity from different sources and in different formats (United Nation-Commission on Science and Technology for Development, UN-CSTD, 2018). Although, digital tool knowledge is a basic aspect of digital competency framework, the concentration in this study is on digital skills which are basic abilities that users of digital technologies must possess in order to effectively and efficiently utilize digital technologies to meet their person goals and contribute to national development.

Odu and Omosigho (2020) asserted that digital skills encompass information skills, technical ICT skills for using the internet, and critical thinking skills for selecting, accessing and using the information. United Nation Education Scientific and Cultural Organization (UNESCO, 2018) noted that digital skills include competencies that are referred to as computer literacy, ICT literacy, information literacy and media literacy. A cursory examination of the existing evidence relating to the categorization of digital skills shows that there are varying opinions as to their constituent. However, within the context of this study, digital skills utilization would be viewed into five categories which are information skills utilization, ICT skills utilization critical thinking skills utilization, digital problem-solving skills utilization and word-processing skill utilization which are informed by the essential responsibilities carried out by business educations across the education sectors using technological offerings. Matthew (2020) averred that business educators and management personnel also perform functions that are related to information management such as receiving recording, arranging, analyzing and transmitting vital information for the purpose of facilitating decision making.

A business educator's job performance can impact any tertiary institution growth and success, and as a result, business educators' job performance has become a key parameter in determining the institution's likelihood of success or failure. Job effectiveness refers to an educator's ability to perform effectively in agreement with the job requirements to achieve the university goals and objectives. An educator's job performance is influenced by a combination of qualitative traits, such as an individual's abilities, competencies, motivation, and dedication. In addition, personal discipline, communication skills, organizational training, and individual self-development are some of the other required abilities. As a result, digital skills or working knowledge of computers and the internet, are required for 21st-century public university business educators to improve job effectiveness.

STATEMENT OF PROBLEM

There is no doubt that today many Nigerians from different works of life can have access to wide range of information in different formats due to the advancement and access to technological tools such as personal computer, smart phones and internet connectivity. Nevertheless, the researcher observed that there is obvious digital divide amongst many Nigerians as a lot of persons both educated and not educated especially the older ones as, they lack the abilities to use many technological tools to access relevant and reliable information. In some cases, older Nigerian employees (business educators inclusive) are skeptical of using technological devices to access information that affects their personal life such as financial information, health information and

commercial information as well as that which affects their job performance.

RESEARCH OBJECTIVE

- Examine the relationship between information skills utilization and workplace performance of business education lecturers in tertiary institutions, in Rivers State.
- Investigate the relationship between critical thinking skills utilization and workplace performance of business education lecturers in tertiary institutions in Rivers State.

RESEARCH QUESTIONS

- What is the relationship between information skills utilization and workplace performance of business education lecturers in tertiary institutions in Rivers State?
- What is the relationship between critical thinking skills utilization and workplace performance of business education lecturers in tertiary institutions in Rivers State?

RESEARCH HYPOTHESIS

H₀₁: There is no significant relationship between information skill utilization and workplace performance of business education lecturers in tertiary institutions in Rivers State.

H₀₂: There is no significant relationship between critical thinking skill utilization and workplace performance of business education lecturers in tertiary institutions in Rivers State.

CONCEPTUAL REVIEW

CONCEPT OF WORKPLACE PERFORMANCE

According to Georgeta and Cuza (2018), job performance is the quality and quantity of employee's contribution to employer's activities using personality factors, skills and abilities necessary. Sarasvathy (2019) defined job performance as the result of series of behaviours exerted towards the accomplishment of job responsibilities or tasks performed on a daily basis aimed at achieving the general goals. Kaluyu, et al (2018) defined job performance as an individual quality and quantity of outcome in a particular job. For Markus (2019), job performance on a general note has to do with contribution of an individual to the overall success of an organization. The author also averred that there is a general consensus that job performance consists of two interplaying components which are task performance and contextual performance.

Task performance has to do with specific work outcomes based on work role behavior that contribute to the attainment of organizational goals, while contextual performance is concerned with contribution to the well-being of an organization through team work, hence, in today's workplace, half of the employers preferred employees with critical thinking skills who can discern on the abundant flow of information available through established digital platforms and provide reliable ones for job performance (Allen, 2019).

The importance of employee's productivity to the general performance of firms has continued to spur the drive to increase job performance amongst employee. To ensure institutions/organization attention to individual employee's job performance as means of determining contribution made to the overall success of organization. Job performance is the quality and quantity of employee's contribution to employer's activities using personality factors, skills and abilities necessary. In the same vein, Sarasvathy (2019) defined job performance as the result of series of behaviours exerted towards the accomplishment of job responsibilities or tasks performed on a daily basis aimed at

achieving the general goals.

Malafi et al. (2020) posits that task performance should measure based on identified specific tasks that make up a job and estimates the extent to which employee is able to actualize them. Contextual performance is concerned with contribution to the well-being of an organization. In other words contextual performance has to do with individual behavior that contributes to organizational effectiveness through its effects on the psychological, social and organizational context of work.

One way individuals can contribute to the context of work is by affecting other individuals in the organization so that they become more likely to carry out their job responsibilities which will aid in actualization of organizational general goal. There are different positions as to the measurement of job performance Kaluyu et al (2018) observed that job performance can be measured as either excellent, good, neutral, satisfactory or poor. Job performance should be contextual based and it should be aimed at measuring what the participant can do and not what the participant will do. However, Freeze and Ford (2020) noted that this is not the situation in workplace because all employees are required to work seamlessly and collaboratively towards the attainment of the general goals of the organization irrespective of their position. Hence, performance measurement cannot be restricted to how far the employee has actually achieved the task given to him only but must include how far the employee has been able to contribute to team performance. The employee performing his assigned responsibility and even going beyond his own tasks to help others achieve their workplace goals.

CONCEPT OF BUSINESS EDUCATION

The term business education has been viewed differently by scholars. A generally acceptable definition has been difficult to arrive at because research and theoretical formulations have continued to grapple with the problem, providing as many definitions as there are experts. Some schools of thought believe that business education is a programme of study to produce teachers for secondary and post-secondary schools. Hence they view business education as education for business teachers – a specialized and professional arm of the technical and science education focused at preparing and equipping those to impact business skills and competences to students and other business trainees.

Another school of thought views the concept of business education as education for business. Supporting this view, Ubulom and Ukwuije (2018) assert that business education is an aspect of educational programme which prepares students for careers in business. It is education needed to teach people business, education needed to handle personal affairs and education needed about business in order to be good citizens of society. Even Osuala (2009) supports this view when he opined that business education is a programme of instruction which consists of two major parts: whereas one part consist of office and vocational education for office career through refresher and upgrading education; the other part consists of a programme to provide students with information and competencies which are needed by all in managing personal business affairs or using the services of the business world. Otamiri (2008) viewed business education as a fusion of pedagogical and entrepreneurial preparation. He maintained that business education therefore involves the study of technologies and related sciences and the acquisition of practical skills (including teachings skills), attitudes, understanding and knowledge related to occupation in various sectors of the economy and social life.

Business education means many things to many people. Agwumezie (2014) sees business education as a programme in education that prepares students for entry into and advancement of jobs within the business. Aliyu (2015) have it as a programme one needs to be proud of if properly designed, adequately prepared and religiously harmonized. Aliyu further affirms that business education is an educational programme which involves acquisition of skills, knowledge and

competences which makes the recipient/beneficiary proficient. It is an umbrella under which all business programmes take a shield, such as marketing, business administration, secretarial studies and accounting.

To Igboke (2017), business education is a dynamic field of study geared towards preparing youths and adults for and about business. It is a preparation for a career in business when instruction is designed to prepare youths and adults for actual practice in the world of business. On the other hand, education about business involves preparation of youths and adults for intelligent and effective consumption of economic goods and services offered to society in our free enterprise economy. However, business education will produce responsible, productive, and self-reliant citizens. This highlights the importance of business education in inculcating in the recipient's knowledge, values, attitudes and skills needed in the business world.

INFORMATION SKILLS UTILIZATION AND WORKPLACE PERFORMANCE OF BUSINESS EDUCATION LECTURERS

These are competencies needed to utilize technological offerings in the most appropriate way which are enshrined in the existing literature. Although, different authors and institutions have designed their own information competency framework to suit the context of their application, some of the positions of individual authors and institutions relating to information skills are reviewed in this study in order to identify the clusters of skills to be assessed in this study.

According to Leu, Wilson, Kennedy and Forzani (2021), for effective online information usage, one requires additional online reading comprehension practices, skills and dispositions of information skills are needed by employees for job performance. Ifijeh et al (2021) contended that the ability to utilize technological tools to effectively generate, utilize and communicate information instructions a vital tool that can guarantee job performance. Hence individuals who cannot deploy and utilize technological offerings to access and utilize quality information relating to their jobs may find it difficult to improve on their performance at workplace. Will (2022) pinpoint that understanding the relationships between information skill, creativity and job performance could not only help the employees to understand the importance of information skills but can also influence the workplace by providing employers with guidance for planning training to enhance employees information skills. Earlier studies on information skills and development show mixed results. Smith, Given, Julien, Ouellette and DeLong (2020) discovered that many internet users have an inflated perception of their information skills while in real sense, they lack the ability to access information efficiently and competently, evaluate it and use it accurately and creatively for personal work purpose. Similarly, Ahmed, Raja and Zulkarnain (2021) asserts noted that information is needed for decision making.

Ukachi (2018) discovered that artisans' level of information skills increased following their exploration of technological gadgets such as android and smart-phones which the study had established to be the main means through which they acquire their information skills. According to Andrea (2020), information skills is more than just the ability to utilize, information processing and retrieval, participation in social networks for creating and sharing knowledge and a wide range of abilities in using digital technologies. The author explained that these skills can be categorized into three groups of skills namely: ICT skills, technological skills and information skills, although these clusters of skills seem to be same, their content is not same ICT skills are enabling skills that allows individual to actively participate in a society where service and cultural offerings are driven by these of computer and distributed through the internet.

Technological skills are skills that enable one to have a deeper understanding of digital technologies and how to utilize them in computation: while information skills have to do with the

ability to optimally access, identify retrieve, process and use digital information.

In the opinion of Leu et al. (2021) ability to identify information need can be defined as the aptitude of business educators to know when authorized information consumers need information. It deals with the ability to identify, locate, evaluate and effectively use that information for the issue or problem at hand. Ikenwe and Anaehobi (2020) defined ability to identify information need as the competency level of business educators on the extent to which they can access information as it correlates to the demand of information users. According to Martini (2018), the ability to identify information need is skills and techniques required by the aforementioned persons to detect the information-hunger of potential authorized information users.

For Kunz, Rittel and Stone (2023), in today's turbulent and changing information environment, there is an urgent need to understand and grasp the complex process of identifying information needs' in order to provide reliable and accurate information to facilitate decision making. Homer (2022) opined that business educators need to develop essential skills for carefully identification, analyze and classify the information needs of users (including all potential users and non-users as well) from time to time in order to meet their information needs. In the view of Ellis, Cox and Hall (2019), information needs can be defined as the gaps in the current knowledge of the user. The authors also noted that apart from the expressed or articulated needs, there are unexpressed needs which the user is aware of but does not like to express, hence business educators in an institution must be able to bring to light these needs in order to ensure availability of accurate and reliable information.

CRITICAL THINKING SKILLS UTILIZATION AND WORKPLACE PERFORMANCE OF BUSINESS EDUCATION LECTURERS.

Today's internet and social media platforms users have access to unlimited information in different formats from different sources. Most information made available on the internet and social media platforms are not authentic and reliable. Utilizing them can bring personal harm to individuals, their employers and the society at large. Supporting this, Chukwu (2021) noted that fake information is a killer and as such to avoid utilizing fake and unreliable information. Tan and Guo (2021) postulated that internet and ICT users must be able to identify questions that would enable them locate information, critically evaluate information and its usefulness, and synthesize the information into an answer before communicating the answer to others. The ability to perform these information sourcing and filtering tasks as noted by Tan and Guo, requires internet and social media users to possess essential digital literacy skill that would enable them to sort through the fluidity and unmanaged information for authenticity, reliability, and validity. Gibson (2018) stressed the need for online information users to develop critical thinking skill as digital literacy skill for interpreting information from different media in this era of technological advancement.

According to Ferdinald (2020), critical thinking skills, are essential for individuals to analyze, Synthesize, evaluate, and reasons through the abundant information accessible through digital platforms such as internet and social media. Leu et al. (2021) posits that coordinating and synthesizing vast amounts of information in different media formats from unlimited possible sources require the use of critical thinking skills to determine if information is relevant, reliable, and authentic. For Efung, Young, Bryan and Mark (2019), critical thinking skill is made up of analysis and problem solving skills, judgment and decision making skills and made up of analysis and problem solving skills, judgement and decision making skills and technical skills in area of problem solving. However, researchers noted that it is not enough to simply access the information from digital platforms but one must also have the ability to acquire and absorb knowledge therein efficiently and effectively. According to Morin and Thomas (2022), critical thinking skill enable

one to distinguish between logical reasoning and personal opinion by analyzing and comparing information made available by online users.

Ferdinald (2019) is of the view that critical thinking is not an innate ability; one needs to be trained to become analytical, fair and open-minded in accessing massive information in order to be informed about certain phenomenon.

Ejiogu et al. (2019) give five examples of critical thinking skills as analytical thinking, good communication, and creative mind, open-minded, problem solving and asking thoughtful questions. The authors stressed that critical thinking skills dimension include ability to identify assumptions, ability to establish causal relationship, ability to avoid bias and fallacies, and ability to evaluate alternative information.

In the view of Taala, Franco and Brown (2019), the application of critical thinking skill in discerning wrong information covers a broad range of skills that includes the following; verbal reasoning skills argument analysis, thinking as hypothesis testing, dealing with likelihood and uncertainties, and decision-making and problem solving skills. According to Allen (2019), to discern wrong information, business educators must possess the ability to investigate the source, ability to dig deeper, and ability to check whether other reliable sources provide same information, this is because discerning wrong information can be one of the most complex tasks business educators may encounter. However, if they have the required abilities, they could be able to make meaningful decision as to discerning wrong information which can hinder performance.

METHODOLOGY

Correlation survey design was adopted for this study. This study was carried out in Rivers State. The population of this study consists of 108 business education lecturers in tertiary institutions running business education programme in Rivers State. Census sampling technique was adopted for this study. Two (2) sets of questionnaires titled ‘Digital Skill Utilization of Business Education Lecturers Questionnaire (DiSUBELQu)’ and ‘Workplace Performance of Business Education Lecturers Questionnaire (WoPoBELQu)’ was used for the study. The researcher employed face and content validity method. Pearson Product Moment Correlation Coefficient (PPMC) indicated a reliability coefficient of 0.81 while the dependent variables representing Workplace Performance of Business Education Lecturers Questionnaire (WoPoBELQu) was equally computed and 0.74 reliability co-efficient was obtained. Thus, both instruments were deemed reliable for this study. The researcher used Pearson Product Moment Correlation (PPMC) to analyze and answer the research questions that were stated regarding the relationship between digital skill utilization and workplace performance of business educators and to test the hypotheses that were formulated at 0.05 level of significance.

RESULTS AND DISCUSSION OF FINDINGS

Presentation of Research Questions

Research Question 1: What is the relationship between information skills utilization and workplace performance of business education lecturers in tertiary institutions in Rivers State?

Table 1: Correlation Coefficient between Information Skills Utilization and Workplace Performance of Business Education Lecturers.

Variables	N	ΣX ΣY	ΣX^2 ΣY^2	ΣXY	r	Remarks
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Information Skills Utilization	108	342.5	1128.0	890.3	0.85	Very Strong/Positive Relationship
Workplace Performance	108	280.4	738.0			

Source: Researcher's Fieldwork (2023)

Table 1 reveals that the correlation coefficient between information skill utilization and workplace performance of business education lecturers in tertiary institutions in Rivers State is 0.85. This shows a very strong and positive relationship between information skills utilization and workplace performance of business education lecturers. However, this implies that if information skills utilization as a variable of digital skills utilized accurately, business education lecturer's workplace performance would be high. This finding is in line with the view of Leu, Wilson, Kennedy and Forzani (2021) that for effective online information usage, one requires additional online reading comprehension practices, skills and dispositions of information skills are needed by employees for job performance.

Research Question 2: What is the relationship between critical thinking skill utilization and workplace performance of business education lecturers in tertiary institutions in Rivers State?

Table 2: Correlation Coefficient between Critical Thinking Skill Utilization and Workplace Performance of Business Education Lecturers.

Variables	N	ΣX ΣY	ΣX^2 ΣY^2	ΣXY	r	Remarks
Critical Thinking Skill Utilization	108	328.1	1050.2	817.0	0.55	Moderate/Positive Relationship
Workplace Performance	108	280.4	725.1			

Source: Researcher's Fieldwork (2023)

Table 2 shows the correlation coefficient between critical thinking skill utilization and workplace performance of business education lecturers in tertiary institutions in Rivers State is 0.55. This shows a moderate and positive relationship between critical thinking skill utilization and workplace performance of business education lecturers. However, this implies that critical thinking skill workplace performance as a variable of digital skill utilization is utilized effectively, business education lecturer's workplace performance would be high. This finding is in line with the view of Leu, Wilson, Kennedy and Forzani (2021) that for effective online information usage, one requires additional online reading comprehension practices, skills and dispositions of information skills are needed by employees for job performance.

PRESENTATION OF NULL HYPOTHESES

Hypothesis 1: There is no significant relationship between information skill utilization and workplace performance of business education lecturers in tertiary institutions in Rivers State

Table 3: Test of Correlation of Relationship between Information Skill Utilization and Workplace Performance of Business Education Lecturers at 0.05 Level of

Significance

Variables	N	Df	r-cal	r-critical	LS	Decision
Information Skill Utilization	108	106	0.85	0.196	0.05	Significant /Rejected
Workplace Performance	108					

Source: Researcher Fieldwork (2023)

Table 3 shows that the calculated R-value of 0.85 is greater than the r-critical value of 0.196. Therefore, since the computed R-value is greater than r-critical value, the hypothesis which states that there is no significant relationship between information skill utilization and workplace performance of business education lecturers in tertiary institutions in Rivers State is hereby rejected. However, this implies that there is a significant relationship between information skill utilization and workplace performance of business education lecturers in tertiary institutions in Rivers State.

Hypothesis 2: There is no significant relationship between critical thinking skill utilization and workplace performance of business education lecturers in tertiary institutions in Rivers State.

Table 4: Test of Correlation of Relationship between Critical Thinking Skill Utilization and Workplace Performance of Business Education Lecturers at 0.05 Level of Significance

Variables	N	Df	r-cal	r-critical	LS	Decision
Critical Thinking Skill Utilization	108	106	0.55	0.196	0.05	Significant /Rejected
Workplace Performance	108					

Source: Researcher’s Fieldwork (2023)

Table 4 shows that the calculated R-value of 0.55 is greater than r-critical value of 0.196. Therefore, since the computed R-value is greater than r-critical value, the hypothesis which states that there is no significant relationship between critical thinking skill utilization and workplace performance of business education lecturers in tertiary institutions in Rivers State is hereby rejected. However, this implies that there is a significant relationship between critical skill utilization and workplace performance of business education lecturers in tertiary institutions in Rivers State.

CONCLUSION

The study examined the relationship between digital skills utilization and workplace performance of business education lecturers. Based on the findings of this study, it can be deduced that there is a very strong and positive relationship between information skills utilization and workplace performance of business education lecturers. The study also showed a moderate and positive relationship between critical thinking skill utilization and workplace performance of business education lecturers. Therefore, the aforementioned lecturers are expected to utilize their digital skills for effective performance and productivity which in turns boost students’ academic performance.

RECOMMENDATIONS

- Business education lecturers should endeavor to utilize their information skills effectively so that information would be accurate and timely.
- Business education lecturers should endeavor to discern between right and wrong judgment by skillfully conceptualizing facts in order not to hinder their performance.

REFERENCES

- Adedeji, M. (2020). Digital literacy and its relationship with employee performance in the 4IR. *Journal of International Business, Economics and Entrepreneurship*, 4(2), 29-37.
- Agwumezie, G. U. (2014). *Transfer of training: Action-packed strategies to ensure high payoff from training investments*. Perseus Books Press.
- Ahmed, R.B. Raja, I. & Zulkarriain, S. F. (2021). Learning analytics should not promote one size fits all: The effects of instructional conditions in predicting academic success. *Internet and Higher Education*, 28, 68–84.
- Aliyu, O. R. (2015). The role of digital technologies in open innovation processes: *An Exploratory Multiple Case Study Analysis*. *R & D Management*, 50(1), 12-21.
- Allen, D. H. (2019). Assessment of digital competence of employees and teaching staff at the technical college of management – Kufa. *International Journal of Innovation, Creativity and Change*, 12(12), 1027-1044.
- Chukwu, W. P. (2021). Effects of perceived information technology object, perceived information technology knowledge and perceived information technology operation on employees productivity. *International Journal of Small Business and Entrepreneurship Research*, 7(4), 24-34.
- Ejiogu, T., Young, I., Bryan, O. D. & Mark, W. (2019). On the issues of digital competence in educational contexts – *A Review of Literature*. *Educ Inf Technol*, 23, 1005–1021.
- Ellis, T. J., Cox, C. & Hall, P. S. (2019). Strategies and challenges of information and communication technology (ICT) infrastructure development for university education in Nigeria. *Revitalization of African Higher Education*, 318-327.
- Ferdinald, P. D. (2020). *Emerging Skills for Information Service Delivery Being a Webinar Paper Presented at the NLA Maiden Webinar with the Theme: Emerging role of librarians during and post COVID-19 era*.
- Freeze, K. C. & Ford, U. J. (2021). Measuring relationship between digital skills and employability. *European Journal of Business and Management*, 5(24), 124-134.
- Georgeta, I. & Cuza, L. S. (2018). ICT skills and job performance of librarians in public universities in north central, Nigeria. *Atbu Journal of Science, Technology and Education*, 8(1), 154-166.
- Gibson (2018) United Nation Commission on Science and Technology for Development, Un-CSTO, (2018).
- Ifejeh, Y. G., Iwu-James, S. & Adebayo, C. (2021). Technological innovation, digital competence and job performance of secretaries in public tertiary institutions in Ogun State, Nigeria. *International Journal of Innovative Science and Research Technology*, 6(12), 5-12.
- Igboke, H. C. (2017). Digital divide: Impact of access. *The International Encyclopedia of Media*

Effects, pp. 1-11.

- Ikenwe, O. & Anachobi, G. O. (2020). Integrating digital literacy into outreach services for underserved youth populations. *Reference Librarian*, 50(1), 85-98.
- Kaluyu, C., Cole, V. F. & Okor, H. N. (2018). Digital literacy: A conceptual framework for survival skills in the digital era. *Journal of Educational Multimedia and Hypermedia*, 3(1), 40-61.
- Kunze, S. F., Rittle, K. & Stone, A. K. (2023). Problem and prospect E-learning in Nigerian universities. *International Journal of Technology and Inclusive Education (IJTIE)*, 3(2), 320-327.
- Leu, W., Wilson, O. L., Kennedy, G. & Forzan, V. (2021). Skills requirements of academic librarians for the digital library environment in Nigeria, Nsukka. *A case study of University of Nigeria, Nsukka*. www.iifactor.com
- Malafi, K. U., Liu, B. & Golstein, C. K. (2020). Role of employee training and experience on the adaption of computerized maintenance management system. *Journal of Strategic Management*, 5(4), 5-18.
- Markus, P. I. (2019). IT capability and digital transformation: A firm performance perspective. *Thirty Seventh International Conference on Information Systems*, Dublin 2016.
- Matthew, S. L. (2020). *Digital skills of teachers of Russian Universities*. E3S Web of Conferences. Kazan National Research Technological University.
- Moriro, S. A. & Thomas, P. U. (2022). Digital competence and lifelong learning of university undergraduates in Nigeria: how interconnected are they? *Journal of Information Science, Systems and Technology*, 5(3), 18-42.
- Newman, F. O. (2023). *Foundation of educational research*. Minson Publishers.
- Odu, O. S. & Omosigho, M. (2020). Information literacy skills and use of electronic resources by undergraduate students amid the COVID-19 pandemic lockdown in Nigeria. *Communicate: Journal of Library and Information Science*. 24(1), 1-16.
- Osuala, B. S. (2009). *Developing teacher's digital competence: Approaches for art and design teacher educators in Uganda*. Oslo Metropolitan University, Norway.
- Otamiri, S. A. (2008). Building digital competencies to benefit from frontier technologies. *United Nations Conference on Trade and Development*. <https://www.un.org/publications>.
- Sarasvathy, K. (2019). *Survey Research, a Simple Introduction*. Survey Research Definition.
- Smith, O. V., Given, H., Julien, F.B., Ouellatte, I. U. & Delong, O. (2020). The internet and social life. *Annual Review of Psychology*, 573-590.
- Tala, G., France, A. A. & Brown, G. S. (2019). Assessment of digital competencies of university faculty and their conditioning factors: case study in a technological adoption context. *Journal of Education Science*, 11(1), 1-15.

Tan, P. T. & Guo, T. (2021), Gibson (2018). *Emerging Skills for Information Service Delivery Being a Webinar Paper Presented at the NLA Maiden Webinar with the Theme: Emerging role of librarians during and post COVID-19 era.*

Ubulom, K. C. & Ukwuije, D. O. (2018). Declining employee performance in public sector organizations: an etiological study of public sector organizations in Pakistan. *Journal for Studies in Management and Planning*, 1(5), 70-77.

Ukachi, A. I. (2018). Entrepreneurship education: A tool for sustainable business education. *Business Education Book of Reading*, 1(11), 67.

Will, Y. A. (2022). The success case method: A strategic evaluation approach to increasing the value and effect of training. *Advances in Developing Human Resources*, 7(1), 86-101.