INFLUENCE OF DIGITAL PROFICIENCY LEVEL SKILLS ON ACCESS, OPERATION AND DECISION MAKING IN DIGITAL ENVIRONMENT BY BUSINESS EDUCATION LECTURERS IN SOUTH-SOUTH NIGERIA

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Abstract
The purpose of this study was to determine the influence of digital proficiency level skills on access, operation and decision-making process by business education lecturers in digital environment in universities in South-South Nigeria. Three research questions guided the study. The study adopted a descriptive survey design. The population of the study consisted of 58 business education lecturers from six universities that offer business education in South-South Nigeria. The entire population was studied because it was small and manageable. A structured instrument called "Digital Proficiency level skills questionnaire" with a 4-point rating scale was used to obtain data. The instrument was face-validated by three experts and a trial test was conducted to obtain a reliability coefficient of .87 using Cronbach Alpha formular. With the help of four research assistants, 54 copies of the instrument were retrieved for analysis. Mean statistics was used to answer the research questions. The study revealed that there was great influence of digital proficiency level skills on access, operational activity and decision-making process of business education lecturers in the digital environment. It is recommended among others, that business education lecturers should engage students in the use of digital technology for their learning, critical thinking and problem-solving processes
Key Words: digital proficiency, skills, digital environment

Introduction

In countries around the world, experts believe that the world economies are currently running on creativity, innovation and collaboration powered by information and communication technology. Jobs that require skilled labour force are being created to replace jobs that, in the past required mere literacy and numeracy. This is because the society has become more complex than ever before and is saddled with complex problems that need solutions. In addition, technology is increasingly substituting manual labour and is being infused into most aspects of life and work. It is commonly believed that to thrive in today's economy; workers need a different mix of skills than in the past. In addition to foundation skills like literacy and numeracy, Laudon and Laudon (2012) stated that they need competencies like collaboration, creativity and problem solving, as well as character such as persistence, curiosity and initiative. Change and competitiveness in the labour market have also heightened the need for individuals to acquire these skills. Acquisition of these skills has become the traditional focus of education around the world and Nigeria cannot afford to be left out. It is also discovered that historically, being able to understand written texts and quantitative relationships was sufficient for entry into a job. Presently, such skills represent just a starting point on the path towards mastering the 21st century skills

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that border most in digitization. For instance, students are expected to acquire the following three level skill including foundational literacy skills, competences, as well as character qualities to access and operate in the view digitized work environment.

Digitization, according to Rouse (2007) is the process of converting information into a digital format. In this format, information is organized into discrete units of data called bits that can be separately addressed usually in multiple-bit groups called bytes. This is the binary data that computers and many devices with computing capacity such as digital cameras and digital hearing aids can process. Rouse further stated that text and images can be similarly digitized. According to the author, digitizing information makes it easier to preserve access and share.

Proficiency in digitization is measured in three different levels according to Digital Conference (2016). The levels are digital literacy level, digital competence level and digital expertise level. The proficiency of an individual depends on a number of factors such as exposure, training experience, practice, accessibility to devices and the individual's passion for knowledge. However, Digital Competence Network (2017) postulated five areas of digital competence which include information and data literacy, communication and collaboration digital content creation, safety and problem solving.

Digital literacy level is an elementary stage in which an individual acquires essential ICT skills and knowledge to make use of some common applications effectively. These skills are the entry point to digital environment which eventually enables the individual to develop more specialized skills and knowledge. Without these skills and knowledge, the individual finds it difficult to perform common tasks in the workplace and stands the risk of exclusion. The European Commission Digital Literacy Group in Digital Competence (2016) defined digital literacy as the basic set of skills required to support the development of digital competence which is one of the sets of competencies identified as key for every person to operate successfully in today's knowledge based economy. It involves the ability to find, evaluate, utilize, share and create content using information technologies and the internet. For instance, knowing how to answer your emails, to access a company's files on Google drive or to tweak a website's code are all digital literacy skills that are increasingly sought after in today's job market.

Digital competence level in turn, encompasses the knowledge and skills required to use ICT more competently in a particular social, educational or work context. This level of digital proficiency skills is developed based on what the individual intends to apply them. It comprises the related skills and knowledge that one needs to exploit ICT efficiently for one's own purpose be it for personal or professional life. Here the individual carries out domain-specific interaction with different forms of digital media such as computer, internet, white board, flatbed scanner, digital camera, microphone, audio and video recorders, editing software, website and storage (McGrourty, 2010). Furthermore, the individual applies different modes of interacting with the digital media in looking for information, presenting information, acquiring skills and knowledge, using e-content, solving problem using computer simulations, communicating with others, collaborating in on-line communities, participating in social websites, chats and fora.

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The digital competence level goes beyond mere acquisition of digital literacy. It is more engaging and involves ability to use technology to investigate, create and communicate in order to remain relevant and more active in school or workplace. Since it is context specific, an individual that is given a specific task is able to choose and use in a most effective way, a digital tool to accomplish the task.

In a school setting, digital competence represents the individual's ability to use digital technologies in a typical learning context. A student might use the skills to search, categorize, and evaluate information for his research project or class assignment; record and store digital, video, photos and audio during class or field experience; edit, share, annotate and remit digital art pieces, as well as understand and avoid the threats to one's privacy while communicating or interacting online. Similarly, the teacher may apply the skills in finding, evaluating and using digital learning resources for his subject, documenting and analyzing learning process and results using digital tools, leading online group work, as well as facilitating students' inquiry-based learning projects, among others.

Zehnder (2017) described digital expertise as a level of digital proficiency in which an individual possesses high level of ICT skills and knowledge in the use of specific applications and tools, over and above levels commonly required. The author further explained that the individual can fully exploit the potential of ICT in solving critical societal problems. These skills and knowledge make the individual a recognized expert in the use of a particular application in organizational or institutional decision-making. Digital expertise is needed in advanced work schedules that require high level thinking for result-oriented decisions. Zehnder (2017) lamented that there is a growing consensus among practitioners in the corporate governance world that boards are lacking the digital and technological expertise needed to keep pace in today's ever-changing cyber-connected world. Not only are these competencies important for an individual's personal development, they contribute significantly to the productivity of organizations, and ultimately, to the economic growth and competitiveness of nations. This study therefore seeks to determine the influence of digital proficiency level skills on access, operation and decision-making by Business Education Lecturers in digital environment.

Purpose of the Study

The main purpose of this study was to determine the influence of digital proficiency level skills on access, operation and decision-making process by business education lecturers in digital environment in universities in South-South Nigeria. Specifically, the study was to:

1. determine the influence of digital literacy level skills on access to digital environment by business education lecturers in universities in South -South Nigeria.
2. determine the influence of digital competence level skills on operation in digital environment by business education lecturers in universities in south-South Nigeria;

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3. determine the influence of digital expertise level skills on decision-making process in digital environment by business education lecturers in universities in South-South Nigeria.

Research Questions

The following research questions guided the study:

1. How great is the influence of digital literacy level skills on accessibility to digital environment by business education lecturers in universities in South-South Nigeria?
2. How great is the influence of digital competence level skills on operational activity in the digital environment by business education lecturers in universities in South-South Nigeria?
3. How great is the influence of digital expertise level skill on decision-making process in digital environment by business education lecturers in universities in South-South Nigeria?

Research Method

The study adopted a descriptive survey design and was carried out in South-South Nigeria. The population of the study consisted of 58 business education lecturers in University of Uyo, University of Calabar, University of Benin, Rivers State University of Science and Technology, Port Harcourt, Niger Delta University, Yenogoa, and Cross River State University of Technology, Calabar that offer business education programme. The entire population was studied since it was small and manageable. A structured instrument called "Digital Proficiency Level Skills Questionnaire" (DPLSQ) with a 4-point rating scale of very great influence, great influence, small influence and no influence, was developed by the researchers and used to collect data for the study. The instrument was face-validated by three research experts in ICT in University of Uyo. A reliability coefficient of .87 was obtained using Cronbach Alpha after the instrument was trial-tested on 10 business education lecturers in Nnamdi Azikiwe University, Awka who were not part of this study. They were chosen because they possess the same characteristics as the respondents of this study and operate a similar curriculum in the business education programme. The researchers with the help of four research assistants resident in the institutions administered the instrument and retrieved 54 copies for analysis. Mean statistics was used in answering the research questions. Decisions were based on real limit of the Mean rating.

Results

Research Question 1

How great is the influence of digital literacy level skills on accessibility to digital environment by business education lecturers in universities in South-South Nigeria?

Table 1: Mean statistics on influence of digital literacy level skills on access to digital environment by business education lecturers

A	Items On Digital Literacy	Mean	Remark
1	Understanding the digital culture	3.16	GI
2	Navigating into the digital	3.24	GI

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3	Locating digital content	3.40	GI
4	Using the various digital tools	3.19	GI
5	Understanding limitations of digital tools	3.20	GI
	Cluster Mean	**3.24**	**GI**

Data analysis on Table 1 shows a cluster mean of 3.24 indicating that digital literacy level skills have great influence on accessibility to digital environment by business education lecturers in universities in South-South Nigeria.

Research Question 2

How great is the influence of digital competence level skills on operational activity in the digital environment by business education lecturers in universities in South-South Nigeria?

Table 2: Mean Statistics on influence of digital competence level skills on operational activity in digital environment by business education lecturers.

S/N	Item Statements On Digital Comp. Level Skills	Mean	Remark
1	Recording video/audio clips	3.10	GI
2	Editing video/audio clips	3.15	GI
3	Creating digital portfolio	2.89	GI
4	Working with image files	3.50	VGI
5	Using search tools rightly	3.72	VGI
6	Leading online group discussion/conference	3.63	VGI
7	Validating digital content	3.12	GI
	Cluster Mean	**3.30**	**GI**

The result on Table 2 above shows a cluster mean for all the items of 3.30 indicating that there is great influence of digital competence level skills on operational activity in the digital environment by business education lecturers in universities in South-South Nigeria. This result implies that business education lecturers in the universities require these skills in order to effectively carry out their operational activities in the digital environment.

Research Question 3

How great is the influence digital expertise level skills on decision making in digital environment by business education lecturers in universities in South-South Nigeria?

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Table 3:Mean statistics on influence of digital expertise level skills on decision-making process in digital environment by business education lecturers.

S/N	Items on digital expertise level skills	Mean	Remark
1	Working on complex tasks in spreadsheet	3.62	VGI
2	Managing an extensive data base	3.48	GI
3	Analysing digital content	3.51	VGI
4	Critically using the digital content	3.45	GI
5	Converting digital content	3.32	GI
6	Updating (modifying) digital content	3.60	VGI
7	**Cluster Mean**	**3.49**	**GI**

Result on Table 3 above shows a cluster mean of 3.49. This indicates that there is great influence of digital expertise level skills on decision-making process in digital environment by business education lecturers. What this result implies is that business education lecturers in universities require digital expertise level skills to make decision in the digital environment concerning their teaching (learning and research activities).

Findings

1. There is great influence of digital literacy level skills on the business education lecturer's accessibility to the digital environment.
2. There is great influence of digital competence level skills on the business education lecturers' operational activity in the digital environment.
3. There is great influence of digital expertise level skills on decision-making process in the digital environment by business education lecturers in universities.

Discussion

The findings of the study generally show there is great influence of the three levels of digital proficiency on the activities of business education lecturers in the digital environment. A business education lecturer is expected to be digitally literate, having basic skills on how to access and utilize digital tools to obtain intellectual and social information for his students from the wide spectrum of digital environment. He is also expected to carry out a fairly efficient operational activity to aid his teaching from the digital environment. Similarly, because of an array of information in the digital environment, decision-making process is made easier when handling complex tasks and managing extensive data base. This assertion is in line with digital competence (2016) which stated that these skills are essential for specialized role such as a finance officer working on complex tasks in spreadsheets or a communications executive working with presentations or managing an extensive database. Literature on the study also revealed that an individual can use a number of different digital tools or media to explore the digital environment. McGourty (2010) corroborated this by listing tools of digitization to include computer, digital camera, microphone, audio and video recorders, editing software, website and storage. These are devices with which the individual can easily access the digital environment. The study also revealed that the Business Education Lecturer requires digital competence in finding,

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evaluating and using digital learning resources for his students. According to Zehnder (2017), digital competencies of the teacher, among others, include finding, evaluating and using digital learning resources for his subject, planning and reflecting on one's professional development using personal e-portfolio, leading on-line group discussion and facilitating students' inquiry-based learning projects using online project management tools.

Conclusion

Most operations in recent times are digital-based than analogue. In every sphere of life, whether social, economic, educational, political or even religious, activities bothering on search for and use of information for solving societal problems are based on digitization. It is generally observed that in education, learning has become easier, more result-oriented and goal-achievable due to easy access to information through the use of digital technology platforms. Both the teachers and the students make use of these tools to prosecute their teaching/learning processes. Acquisition of digital skills has, therefore, become a traditional focus of many educational institutions in recent times because of its far-reaching implications to employability of graduates presently and in the future.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Public awareness on digitization must be created among students in universities in order to sensitize them on its relevance to learning.
2. Emphasis on digitization of instructional content should be made on the curriculum whenever it is being reviewed.
3. Business education students should be encouraged to utilize available digital tools for their assignments, group discussions and research.
4. Business education lecturers should engage students in the use of digital technology for their learning, critical thinking and problem solving processes.

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