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### ABSTRACT

*The purpose of the study was to access the application of digital skills and the future of business education in Nigeria. The study was guided by three research questions. A descriptive survey research was adopted for the study. The population of the study was 90 business educators from public universities in South South Nigeria. The entire population was used as sample for the study. The instrument for data collection was a four-point rating scale of 18 item questionnaire which was validated by an expert. The reliability of the instrument was determined using Cronbach Alpha which yielded a reliability index of 0.77. Pearson product moment correlation coefficient was used to determine the relationship. The result showed that business educators in South South Nigeria require good knowledge-base of computer and digital skills to enhance effective teaching delivery. Base on the findings of the study: adequate funding should be provided by appropriate authorities to secure modern e-learning software technologies to enhance effective teaching and sustenance of business education programme in the future.*

**KEYWORDS:** Digital Skills, Software and Programming Skills

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### INTRODUCTION

Learning digital skills will help you boost your teaching abilities and your professional chances. Digital skills are broadly characterized as the ability to access and handle information using digital devices for communication, application, and networking. To keep up with the rapid progress of technology, schools are continually changing their curricula. This includes using computers in the classroom, using educational software to teach courses, and making course materials available to students online. In accordance with these, because business education is concerned with the teaching of skills (digital skills, business skills, and teaching skills), attitudes, competencies, and knowledge required for a successful business career, it is pertinent to state that the development of business

skills and knowledge in modern society could be improved through the use of computers (Heitin, 2016). As technology advanced, it appeared that e-learning would eventually supplant traditional schooling. E-learning is increasingly focusing on the manner in which content is taught, as we are now in the midst of a digital era. The method is more enticing to both teachers and students. Online courses are increasingly more participatory and taught in a different manner than traditional schooling. As a result, students are frequently taught literacy skills like how to check reliable learning materials online, cite websites, and avoid plagiarism.

Google and Wikipedia are frequently used by students for school activities and research; these are common tools that facilitate modern education. To this end, digital technology has impacted the way material is taught in the classroom. With the use of technology rising over the past decade, business educators are altering traditional forms of teaching to include course material on concepts related to digital literacy. Okoye (2016) notes that business educators have also turned to social media platforms to communicate and share ideas with one another. Social media and social networks have become crucial parts of the information landscape in education. As a result, developing teachers' digital competence (TDC) should begin during initial teacher training and continue throughout the subsequent years of practice. This is with the aim of using digital technologies (DT) to improve teaching and professional development because new models of learning are being developed with digital literacy in mind (Umukoro, 2014; Udo, 2015). Digital skills are mostly knowledge-based activities, with an emphasis on the use of technology. However, the key issue is that these skills need to be embedded within the knowledge domain in which the activity takes place. This means that a business educator should be able to design a robot as instructional material to teach a particular content. Thus, the use of digital technology needs to be integrated and evaluated through the knowledge base of the subject area (Dooley 2013). The new model of digital teaching in the classroom has aided in promoting global connectivity and enabled students to become globally-minded citizens. Many students are using social media to share their areas of interest, discuss take-home assignments, and source educational materials for their projects, which has proved helpful in boosting their level of engagement with educators. Cruz (2020), who conducted a study on 268 students from two Moscow schools, discovered that a combination of social media use and school activities guided to enhance teacher success and boosted student performance. The students were encouraged to search and develop their social network skills to solve educational issues and boost cognition. Also, the speed with which one can access enormous amounts of data from these networks has made social media a valuable cognitive tool.

Quible (2011) Digital skills are important because they emphasize e-learning and how modern work is conducted using the appropriate machines and communication facilities. Digital skills are simply necessary skills that enhance effective classroom teaching in

teaching professions. These requirements (skills) are likely to grow as education and business become increasingly digital. Trucano (2015), stated that, acquiring digital skills will allow you to compete in the future context of business education effectively. The increasing need for digital skills will, in the future, push out all manual roles and activities, and every activity will hinge on digital skills. The author carried out a study on skill practice and discovered that, as of 2019, 82% of job opportunities required digital skills. These skills will also enhance career staying power once it is acquired. Possessing specific digital skills, such as performance measurement, will reduce a worker's risk of automation by 59%. Other digital skills listed by the author include: PPC marketing, SEO, email marketing, mobile design principles, mobile optimization, omni-channel marketing, improving customer experience with digital technologies, social media marketing, performance measurement, web analytics, benchmarking, audience, and segmentation, social listening, and learning how AI can change your business and personality. Kehinde (2017) noted that schools and businesses are experiencing negative impacts due to a lack of digital skills and have not been proactive in rectifying the problem due to a lack of facilities, gadgets, and finance to upgrade workers' digital skills. The author also noted that 58% of workplaces have not engaged in any digital skills training for employees. The high cost of training is the most common impediment, but the onus remains on school authorities, industries, and small businesses to up-skill their employees. In the writings of Warschauer, Mark, Matuchniak, and Tina (2010), the basic digital skills needed in a day-to-day professional or personal context were defined as: "digital foundation skills, Communication, handling information and content, transacting, and problem-solving

## **SOFTWARE SKILLS**

Software skills are a specific subset of computer skills, and they enable content management. Software skills specifically refer to how to use computer programs. Software skills allow the use of applications on a computer. For instance, a teacher needs to use digital instructional material to execute a lesson or schedule of duties. Or, you may have to use Microsoft Word to prepare lecture notes, PowerPoint presentations for lectures, publishable articles, and professional correspondence in the office. The software skills used on the job will depend on the nature of your task. Some jobs, like that of a professional teacher, require working with specific digital skills. According to Kehinde (2017), the number of areas in which technology can be used within a school or business organization has grown such that everyone, including teachers, needs computer skills. Using technology allows teaching and learning to become more interesting, effective, and efficient as technology can automate repetitive tasks for the learners' understanding and also speed up common processes like computation of results. In addition, software products allow many workers to finish their jobs quicker, which in turn increases turnover. As a result, most modern institutions and employers look for some degree of computer skills when hiring employees. Therefore, every business educator must possess some quality of digital skill to enable them to fit into any workplace as opportunity arises in the future. Accordingly, Cruz (2020), having basic digital skills will greatly improve your chances of getting a job or

being a better employee in your current position. Employers expect at least basic computer literacy from their employees in order to improve the flow of assigned tasks. There are many areas of software skills, such as: operating systems such as Windows, office suites such as Microsoft Office, presentation systems, spreadsheets, accounting, typing speed, word processors, and databases. Software skills are very important because technology has taken over learning institutions and the modern workplace. Every individual needs it.

According to Trucano (2015), the following software skills are valued across learning institutions and industries: communication tools, social media, spreadsheets, word processing and desktop publishing tools, presentation tools, computer programming, databases, and graphic design. Modern learning requires the use of computers, mobile devices, or software applications for effective delivery. Having a working knowledge of software skills will enable you to learn how to use new programs. Software skills require the development of tools that are used to write and test code. Common development tools include integrated development environments for writing and editing code, source control management for team collaboration and managing changes and innovation, and automated testing and deployment to an application server for future use.

In his writings, Trucano (2015) made a comparison of how often the average person used a computer 20 years ago as opposed to today. There is an expectation that these innovations in technology will persist into the future. Having baseline knowledge about computer software can greatly assist business educators in remaining relevant in the future. Therefore, key skills for software development are necessary. These include problem-solving skills, teamwork skills, accuracy and attention to details, understanding the latest trends and their role in a commercial environment, self-development skills to keep up to date with fast-changing trends, mathematical aptitude, excellent organizational and time management skills, and programming language. Cruz (2020) noted that presentation software is a popular tool used by teachers and organizations to concisely and clearly communicate with a team or a large audience. This is crucial for teachers who organize lesson plans and use PowerPoint in the presentation of the lecture to the learners or audience. Therefore, every business educator must possess software knowledge and skills to enable them to present their lecture, strengthen their work performance, and prepare them for career advancement in the field of business education. According to Warschauer, Mark, Matuchniak, and Tina (2010), software skill knowledge in office suites is a dependable productivity program that facilitates the smooth operation of small scale businesses and the like. Office suites are a collection of performance software that can help with various work tasks, even in classroom management. It has become a factor of consideration for a lot of employers, so knowing the ins and outs of how to use it is very helpful for daily activities.

## **COMPUTER PROGRAMMING SKILLS**

Computer programming is a skill directly related to technology, like web development or quality assurance. Dooley (2013) writes that programming skills enable individuals to perform a job more effectively. For instance, an accountant should know how to code and perhaps use programming skills to automate common processes in the workplace. Many professions that were once managed with a pen, paper, and filing system

are now managed through technology. A prime example of these is accounting procedures. The use of Excel in small and large businesses alike utilizes accounting systems to manage their incomes, expenses, and many other financial activities. Being proficient in one or more of these systems can greatly improve your business' success. Accounting systems include Quickbooks, Xero, Wave, Free Agent, and Spend Wise.

In the writings of Noel (2017), computer programming is the process of designing and building an executable computer program to accomplish a specific computing result or to perform a specific task. Programming involves tasks such as analysis, generating algorithms, profiling algorithms' accuracy and resource consumption, and the implementation of algorithms in a chosen programming language (commonly referred to as "coding"). The source code of a program is written in one or more languages that are meaningful to programmers rather than machine code, which is directly executed by the central processing unit. According to Koetsier and Teun (2011), the purpose of computer programming is to find a sequence of instructions that will automate the performance of a task (which can be as complex as an operating system) on a computer, often for solving a given problem. Programming skill proficiency frequently necessitates expert knowledge in a variety of subjects, including application domain knowledge, specialized algorithms, and formal logic.

Elshoff, James, Marcotty, and Michael (2016) opined that the final computer programming approach must satisfy some fundamental properties, such as:

- a. Reliability: This depends on conceptual correctness of algorithms, and minimization of programming mistakes, such as mistakes in resource management.
- b. Robustness: how well has the programme anticipates problems due to errors. This includes situations such as incorrect, inappropriate or corrupt data, availability of memory and network connections, user error, and unexpected power outages.
- c. Usability: the ergonomics of a programme: this is the ease with which a person can use the programme for its intended purpose or in some cases even unanticipated purposes. This involves a wide range of textual, graphical, hardware elements which improve clarity, cohesiveness and completeness of the programme.
- d. Portability: the range of computer hardware and operating system platforms which the source code of a programme should be compiled, interpreted and test run. This depends on differences in the programming facilities provided by the different platforms, including hardware and operating system resources.

- e. Maintainability: this is the ease with which a programme can be modified by its present or future developers
- f. Efficiency/performance: this measures the system resources, programme, processor time, memory space, slow devices, and network bandwidth.

Koetsier and Teun (2011) noted that computer programming must be readable and consistent in style. This implies that the programming must be able to read and comprehend existing source code; it must serve its purpose; there must be a controlled flow of information; and the source code must function. It affects the aspects of quality, portability, usability, and most importantly, maintainability.

## **FUTURE OF BUSINESS EDUCATION**

Technology has become an integral part of the instructional process, resulting in the development of new concepts in the instruction of business education. The use of information and communication technology (ICT) gadgets and machines has made teaching and learning business education interesting, easier, concrete, real, and more result-oriented. The introduction of ICT has brought about concern for the use of digital skills to impart knowledge. Specifically, business education is a component of a vocational education program that prepares individuals for careers in business and to be intelligent economic consumers of goods and services (Ugwoke, 2011). Therefore, for a business education program to sustain its relevance in the future, it must provide for the needs of individuals and that of society, and it must embrace current trends in modern technologies in order to meet the academic and economic demands of society. A business education program in Nigeria is indispensable. It is an important agent of economic, social, and technological development, whether as a means of developing human capacity, increasing labor force participation, modernization, industrialization, or environmental development, or as a matter of personal freedom and populace empowerment. Business education is a comprehensive discipline; it assists with proper documentation, presentation, and reporting of the financial position of a firm, thereby making easy evaluation and implementation of the entire economic activities within an organization possible. This means that business education develops skills and an ethical conscience in safeguarding and protecting the organization's economic resources.

The future of business education is focused on economic, political, social, and technological advancement. Oguejiofor and Nwogu (2014) stated that in this era of technology and globalization, business education has contributed a lot to the economic development of every nation in the areas of employment, self-reliance, marketable skills, and accountability. Nwabufor (2013) stated that business education is a discipline that exposes recipients to a diversity of curricula; hence, it is this type of education that inculcates the values, knowledge, attitude, and skills needed in the e-business world. The author also viewed business education as the total learning experience that the learner will acquire under the guidance of approved education agencies in order to realize his or her needs, interests, and aspirations for the benefit and growth of the individual and society. In

the writings of Omanyo and Oluwade (2015), business education aims to prepare learners in the following areas: for entry into a chosen career or employment and advancement in the same occupation; to meet the manpower needs of the nation; to increase the employment options available to learners; to enable the learner to select an occupational area of his capability; and to serve as a motivating factor to enhance learning in all occupations. In conclusion, the authors emphasize that business education is a skill program that enables learners to acquire relevant and employable skills in their area of interest. Business education offers digital skills, marketable skills, entrepreneurial skills, online skills, and teaching skills. According to Ezenwafor (2012), new technologies in business education programs for teaching and learning include: CD-Rom for information collection and storage; using microcomputers with software applications to write or produce documents; skilled keyboarding; e-mail; internet browsing; Windows Messenger; and Yahoo! Chat; using opaque projectors, slide projectors, and multimedia projectors; utilizing e-banking, e-commerce, and e-economies; and utilizing various compute

### **STATEMENT OF THE PROBLEM**

Despite the importance of digital skills in the world, there is a skills gap in business education in the areas of software, programming, digital communication, and robotic design for teaching and learning business education in Nigerian educational institutions. This digital skills gap is more pronounced in highly-skilled professions like teaching. This problem runs deep because there is no adequate equipment experience, a good learning environment, modern gadget facilities, or other technologies to effectively carry out a business education program. Indeed, the issue of digital skills is a problem currently facing practicing business educators because they do not possess basic digital skills. One of the aims of integrating new technologies is to improve the quality of education and expand access to education to accommodate new technologies. The education sector is expected to be technologically driven and requires that technological resources be fully integrated into it. Unfortunately, the education sector seems to be lacking the necessary technological resources to bring the Nigerian education sector up to par with international standards. Business education programs, being skills development programs, seem to be worst hit by the dearth of requisite technological tools on the one hand and the skills needed to effect the integration on the other. The consequence is that the program is faced with the challenge of producing unskilled labor for global competitiveness. The digital skills gap has consequences for business education graduate job seekers, students learning business education, and the industry itself. Looking at the future and contributions of business education to the Nigerian economy, there is a need for every business educator to acquire basic digital skills to enhance effective teaching and also impact the acquisition of adequate digital skills by Nigerian graduates. To this end, this study seeks to examine some basic digital skills that will close the gap such that the future of business education aligns with the increasing trend of technology and the economic problems in Nigeria.

### **PURPOSE OF THE STUDY**

The main purpose of this study is to examine the use of digital skills and the future of business education in Nigeria. Specifically, the study sought to:

1. to examine the relationship between application of software skills and the future of business education in South-South Nigeria.
2. to examine the relationship between development of computer programming skills and the future of business education in South-South Nigeria.
3. to examine the joint relationship between application of software skills, development of computer programming skills and the future of business education in South South Nigeria.

## **RESEARCH QUESTIONS**

The following research questions guided the study.

1. What is the relationship between application of software skills and the future of business education in South South Nigeria?
2. What is the relationship between development of computer programming skills and the future of business education in South-South Nigeria?
3. What is the joint relationship between application of software skills, development of computer programming skills and the future of business education in South-South Nigeria.

## **METHODOLOGY**

The study adopted a descriptive survey design. The research was conducted at public universities in south-central Nigeria. The population for the study consisted of ninety business educators from universities in south-south Nigeria. The entire population was used as a sample for the study. The researcher developed a 18-item structured questionnaire titled "Application of digital skills and the future of business education in south-south Nigeria" (ADSFBEQ), which was used for data collection. A four-point rating scale of strongly agreed (SA) = 4 points, agreed (A) = 3 points, disagreed (D) = 2 points, and strongly disagreed (SD) = 1 point was adopted. The instrument was validated by an expert to ensure face and content validation. A pre-test study was carried out on ten (10) business educators who were not part of the study. A reliability index of 0.77 was obtained using the Cronbach Alpha approach. Ninety-three copies of the questionnaire were sent out via email to colleagues to administer to respondents, and the same were returned through Speed Post. The analysis was done based on the response rate. The data collected was processed with the use of the Statistical Package for Social Sciences (SPSS) version 20.

## **RESULTS**



**Research Question One:** What is the relationship between application of software skills and the future of business education in South-South Nigeria?

**Table 1: Relationship between application of software skills and the future of business education. N = 90.**

Variables	$\Sigma X$	$\Sigma X^2$	$\Sigma XY$	r
	$\Sigma Y$	$\Sigma Y^2$		
Future of Business Education (X)	10210	114510	2001749	0.80*
Software skills Application (Y)	15003	210041		

**Source:** Data Collection.

Table 1 presents a calculated r-value of 0.80 between application of software skills and the future of business education, this means that the relationship between the future of business education and application of software skill is positive. Therefore, business educators must possess software skills to enhance effective teaching in a large class setting, presentation of lesson and also to meet the needs of business education in the present technological era.

**Research Question Two:** What is the relationship between development of computer programming skills and the future of business education in South-South, Nigeria.

**Table 2: Relationship between development of computer programming skills and the future of business education. N = 90.**

Variables	$\Sigma X$	$\Sigma X^2$	$\Sigma XY$	r
	$\Sigma Y$	$\Sigma Y^2$		
Future of Business Education (X)	10210	114510	2001749	0.80*
Programming skills (Y)	16041	205022		

**Source:** Data Collection.

Table 2 shows a calculated r-value of 0.86 between development of computer programming skills and the future of business education. Therefore, the relation between future of business education and development of computer programming skills is positive. This implies that business educator must acquire the skills of computer programming which will enhance them design and present the contents of their lessons effectively.

**Table 3: Joint relationship between application of software skills, development of computer skills and the future of business education**

Source of Variables	SS	Std. Error	R	R2
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Regression	4180.171	5.426	.603	.416
Residual Total	6271.741			

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**Source:** Data Collection.

Table 3 shows substantial joint relationship between application of software skills, development of computer programming skills and the future of business education with  $R = .603$ . The nature of relationship reveals that application of software skills and development of computer programming skills has a higher influence on the future of business education in Nigeria. The  $R^2 = .416$  shows the strength of the relationship between the variables.

## DISCUSSION OF FINDINGS

The result on Table 1 revealed a r-value of 0.08, indicating a positive relationship between the application of software skills and the future of business education. The study also indicated that every business educator must acquire software skills to enhance effective teaching and impart knowledge to learners. Technology has overtaken the learning environment, such that admissions, payment of fees, assignments, lectures, seminars, the filling of forms, and other activities are carried out through a digital process. The study collaborates with Trucano (2015), who observed and made a comparison of how often an average person used a computer 20 years ago as opposed to today. There is an expectation that these innovations in technology will persist into the future. Having baseline knowledge about computer software can greatly sustain one's job and assist business educators to remain relevant in the future. Therefore, key skills for software development are necessary for effective teaching and task delivery. The study is in support of Kehinde (2017), who noted that the number of areas in which technology can be used within a school or business organization has grown such that everyone, including teachers, needs computer skills. Using technology improves the effectiveness and efficiency of teaching and learning by automating repetitive tasks for the learners' understanding and speeding up common processes such as computation of results. In addition, software products allow many workers to finish their jobs quicker, which in turn increases turnover.

The results in Table 2 indicate a calculated r-value of 0.86, indicating a positive relationship between the development of computer programming skills and the future of business education. This means that business educators should be able to develop lesson plans using computers to facilitate the process. The study is in line with Dooley (2013), who observed that programming skills enable individuals to perform a job more effectively. For instance, an accountant should know how to use coding languages and perhaps use programming skills to automate common work processes. Many professions that were once managed with a pen, paper, and filing system are now managed through technology. A prime example of these is accounting procedures. The use of Excel in small and large businesses alike utilizes accounting systems to manage their incomes, expenses, and many other financial activities.

## **CONCLUSION**

The development of digital skills among business educators is very important for the future of business education in Nigeria to be sustained. Therefore, the application of skills in the teaching and learning of business education is very important in order to sustain business education for global competitiveness. The development of programming skills will enable business educators to tailor their lessons, modules, and content to the lesson's objective and the learner's needs. There are employment opportunities for business educators in the area of digital skills; therefore, business educators are encouraged to enter this field.

## **RECOMMENDATION**

Based on the findings of the study the following recommendations were made:

1. Adequate funding should be provided by appropriate authorities to secure modern e-learning software technologies in order to enhance effective teaching and sustenance of business education in future.
2. Digital skills training should be encouraged by relevant authorities such as sponsoring business educator for seminars, conferences and workshops.
3. Business education programme should be re-structured to meet current technological trend and global competitiveness in the use of software in teaching.

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