



## PERCEIVED DIGITAL SKILLS REQUIRED BY BUSINESS EDUCATORS FOR EFFECTIVE INSTRUCTIONAL DELIVERY IN COLLEGES OF EDUCATION, DELTA STATE

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### Abstract

*The study examined the perceived digital skills required by Business Educators for effective instructional delivery in colleges of education, Delta State. Two research questions and a null hypothesis guided the study. Descriptive survey research design was adopted for the study. The population was 86 Business Educators in the three colleges of education in Delta State. The entire population was studied because of the manageable size. A 29 item structured questionnaire were used to gather data. The instrument was validated by three experts. The reliability test yielded a coefficient of 0.78. Mean and standard deviation were used to answer research questions while t-test statistics was used to test the null hypothesis at 0.05 level of significance. The findings revealed that; digital skills are highly required by Business Educators for enhancing and evaluating classroom instruction delivery in Colleges of Education in Delta State and that Business Educators' gender did not significantly influence the ratings of the respondents. Based on the findings, it was recommended amongst others that; Business educators, as a matter of remaining relevant in the profession should engage on digital skills training and re-training for capacity building and should strive to utilize those digital skills in instructional delivery so as to produce graduates for the 21<sup>st</sup> century workplace.*

**Keywords:** Digital Skills, Business Educators, Instructional Delivery, Colleges of Education.

### Introduction

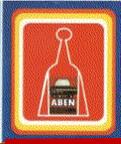
Globally, the world is gradually being digitalized. Automation has taken the place of manual tasks, in business and government offices, politics, medicals, engineering, and the education sector is not left out. The introduction of computer and information and communication technology in the education programme, right from the pre-primary through tertiary institution is an indication that the conventional method of teaching and learning has taken a u-turn and the teacher who is the instructional expert must brace up with the trend, by possessing the digital skills needed for effective learning to take place.



Digital skills refer to exhibiting proficiency in creating, managing and successfully completing a task through digital technologies. In educational delivery, it is the task of the teacher to develop their own digital skills that would be adequate for them to carry out their instructional process effectively and can positively impact on their students' learning. Selwayn (2016) posits that digital technology should have a significant presence in higher education to enhance teacher's pedagogical digital skills and provide online platforms in order to increase collaboration and communication between students as well as between students and their teachers. Digital skills are broadly defined as those competences demonstrated in using digital devices, online communication applications and networks to access and manage information. According to Akanne (2022), digital skill is the ability to use digital devices (computers and smartphones) and software packages to create useful information. The author listed digital skills to include:

1. Basic computing: which covers the ability to use Microsoft Word, Excel, PowerPoint, internet usage (create online account; send and check e-mail; fill out an online form and use social media).
2. Graphics Design: this include the ability to use computer application package like CorelDraw, Inkspace, Adobe Photoshop, etc, to create graphic images such as logos, posters, flyers, letterheads amongst others, and which can be printed as hard-copy or published online.
3. Content Creation: this include blogging, graphics design, video editing and production, audio editing and production, infographic designs, data visualization abilities, etc.
4. Computer Coding: the ability to create computer programming for digital solution to problems associated with computer automation and security outfit.
5. Word-Press Web Design: ability to design websites, for blogging, portfolio, corporate, e-commerce websites, etc.
6. Digital Marketing: ability to use the internet and online based technologies to promote goods and services via online platforms like blogs, email and social media
7. Copywriting: ability to use appropriate written text on product for the purpose of advertisement or marketing. Copywriting engages catchy words to convince buyers.
8. Data Science: this involves the ability to collect, evaluate and process data in order to support decision-making using sophisticated software like a programming language in handling big data.
9. Block-Chain Technology: this is a digital ledger of transactions that duplicate and distribute across the entire network of computer systems on that block-chain. This makes it almost impossible to change or cheat the system.

Digital skills are considered important as educational technology tools and software solutions are deeply fixing its roots and branches into the fabrics of the society, as educational sector is not left behind. There are a lot of benefits accruing to teaching and learning with the digital skills application, which are: the learner can participate from long physical distance teaching during online class without being physically present with the teacher in the classroom. While the teacher can deliver the lecture at any comfortable time and place when connected to the internet with the right technology and software. Also, in a case of unforeseen closure of schools as experienced during the corona-virus pandemic (COVID-19). Professor Eva Cendon from Fernuniversitat in Hagen asserted that such unpredicted situation has shown us that we need to be equipped – apart from adequate infrastructure and bandwidth, that, teachers need digital skills and competencies to transform our well established face-to-face teaching into teaching in a virtual environment. The author empathically emphasized that, it is not a question of digital skills becoming part of education and teaching, but of education and teaching becoming more strongly part of a digitalizing world. Hence, a digitally skillful teacher is required to have the ability to use computer application packages such as Microsoft Word, Excel, PowerPoint, the Google Classroom application to send out notice, carryout discussion, create classes, submit assignment, write examinations, grade marks and for sharing ideas among students. Equally, the



ability to use Zoom Cloud Meeting application to share lesson plan, give instruction, swap files with students, communicate directly with the group or individuals as they all see each other and enables synchronous learning. Other social media platforms such as WhatsApp, to stimulate collaborative works, sharing of audio lessons, sending of documents (Ms-Word, PDF, video and audio files) and for communication between teacher and student through audio and video calls. Furthermore, the teacher's ability to use interactive whiteboard (which works with computer and a digital projector to display what's on the screen, while using electronic stylus pen or finger to interact with the computer by interacting with the image on the whiteboard. Others include ability to use Cloud-based collaboration tools, like Google-Drive, Drop-Box, Microsoft Team Viewer. Consequently, in order to ascertain the teaching and learning outcome through evaluation, the teacher needs digital skill in creating online quiz and displaying results through computer-based test (CBT). Also, evaluate web contents, link and apply rightly, online citations.

Business educators are specialized teachers who have undergone professional training in teacher education programme, equipped with the pedagogical competencies to teach business subjects in educational institutions (Obi & Arhueremu, 2020). Therefore, business educators who teach in colleges of education, which is one of the tertiary institutions are expected to have the requisite literacy and pedagogical digital skills and maximally utilize them in the course of teaching and learning, so as to achieve the mandate of business education programme as enshrined in the National Commission for Colleges of Education (NCCE, 2020). The objectives include: to produce well qualified and competent NCE graduates in business subjects who will be able to teach business subjects in secondary schools and other related educational institutions; to equip students with necessary competencies so as to qualify them for a post-NCE degree programme in business education and to equip graduates with the right business competencies to enable them engage in a life of work in the office as well as for self-employment, amongst others. This is in line with the assertions of Bupo (2011), that effective utilization of digital skills, helps to expand access to education, strengthen the relevance of education to increasingly digital workplace and raises educational quality by making teaching and learning process more engaging to real life practices. Salin and Mahmor (2018) affirms that educators' applying digital technologies in instruction, enhances students' responsibility, cooperation and activity in learning.

An instruction embraced all activities engaged in by the teacher with the aim of facilitating change in learner's behaviour using different delivery mechanism approach. Instructional delivery is seen as the process showing every activity the teacher and the learner does in a classroom setting. It means every effort the teacher makes in order to have a fruitful time with the students by exposing the contents, employing methods, strategies, the students' interaction with the environment, resources available and even the evaluation process. Also when a teacher consciously utilizes his training, knowledge, skills and values and relays it in order to change the behavioural position of the learner, he is carrying out instructional delivery (Wordu, Akor & Ojorka, 2018).

It is no news that digital technology has become a pedagogical tool for teachers of higher education in recent times. A teacher's digital competence can consist of "a set of skills, abilities, and attitudes that the teacher must develop to incorporate digital technologies into their practice and professional development". According to Esteve-Mon, Cela-Ranilla and Gisbert-Cervera (2016), Digital competence is not only having certain abilities, knowledge and attitudes but also the capacity to put these in action and mobilize them in certain educational context. Insteford and Munthe (2017) asserted that educators are expected to enhance their pedagogical digital skills and that of their students. Regrettably, Pangrazio (2020) stated that despite the popularity of digital devices and educational tools, educational institutions and teachers are still struggling on how to integrate technologies into the curriculum and prepare students for their digital futures. Therefore, teachers



require pedagogical digital skills to be able to integrate technologies successfully into their teaching and conduct online classes with their students.

### **Statement of the Problem**

Websites, social media and virtual walk-throughs have improved the tertiary institutions educational hunt. Some tertiary institutions are actively putting technology of all sorts in the hands of students and using digital learning more than before, because of its capability to positively transform teaching and learning processes. The effective use of digital learning tools in classrooms can increase students' or learners' engagement, help teachers improve their lecture delivery and facilitate personalized learning. Besides, it can help students build essential 21<sup>st</sup> century skills. More so, virtual classrooms, video, and other technology tools cannot only make class livelier, but also create more inclusive learning environments that foster collaboration, inquisitiveness and enable teachers to collect data on students' performance at any time. But the challenge is that, many lecturers in tertiary institutions (colleges inclusive) are yet to fully harness and employ the potentials of modern technology in instructional delivery in its full capacity. It appears the reason may be lack of digital competence or inadequate digital skills as postulated by Esteve-Mon, Cela-Ranilla and Gisbert-Cervera (2016), who all opined that digital competence is not only having certain abilities, knowledge and attitudes but also the capacity to put these in use and mobilize them in certain educational context. It is on this premise that the researchers decide to embark on this study; to determine the digital skills required by business educators for effective instructional delivery in colleges of education in Delta State.

### **Research Questions**

1. What are the digital skills required by business educators for enhancing classroom instructional delivery in Colleges of Education in Delta State?
2. What are the digital skills required by business educators for evaluating classroom instruction in Colleges of Education in Delta State?

### **Research Hypothesis**

The following null hypothesis was tested at 0.05 level of significance:

**H<sub>0</sub>:** There is no significant difference in the mean responses of male and female Business Educators on the digital skills required for effective instructional delivery in colleges of education in Delta State.

### **Method**

Descriptive survey research design was adopted for the study. The total population for the study was 86 business educators from the three colleges of education in Delta State, namely: Federal College of Education (Technical), Asaba (59); Colleges of Education, Warri (13) and Colleges of Education, Mosogar (14). The instrument used for data collection was a structured and validated questionnaire with 29 items, structured on a five points rating scale of Very Highly Required (VHR); Highly Required (HR,4); Moderately Required (MR,3); Rarely Required (RR, 2) and Not Required (NR, 1). The reliability of the instrument was determined using split half method and subjected to Cronbach Alpha statistics, which yielded reliability coefficient scores of 0.83. The researchers distributed 86 copies of the questionnaires to the respondents with the help of two research assistants who were duly briefed on what to do. All the 86 questionnaires were correctly completed, returned and used for analysis. Mean and standard deviation were used to answer the research questions while the null hypothesis was tested using t-test statistics at 0.05 level of significance. The decision rule was based on the condition that any questionnaire item with mean score of 4.50 – 5.00 is very highly required; 3.50 – 4.49 is highly required, 2.50 – 3.49 is moderately required, 1.50 – 2.49 is rarely required and 0.50 – 1.49 is not required. The cumulative mean of 3.00 and above denotes "Required (R)" while



mean less than 3.00 means “Not Required (NR)”. The null hypothesis was rejected if the calculated value exceeds the table value or otherwise accepted.

## Results

**Research Question 1:** What are the digital skills required by business educators for enhancing classroom instructional delivery in Colleges of Education in Delta State?

**Table 1: Respondents’ Mean Ratings on the digital skills required by business educators for enhancing classroom instructional delivery in Colleges of Education in Delta State?**

(N = 86)

S/N	Skills in Online Instructional Delivery:	Mean	SD	Remark
1.	Ability to use Google Duo to communicate individuals as they see each other	4.21	0.86	HR
2.	Ability to use Skype in sharing ideas among students and many more.	3.62	0.62	HR
3.	Ability to use video conferencing to conduct classes with a good number of students from different locations at the same time.	4.60	0.49	VHR
4.	Ability to use Facebook messenger to make learners share ideas and solve problems collectively.	4.37	0.61	HR
5.	Ability to use WhatsApp to present voice notes	4.23	0.68	HR
6.	Ability to use Keynote to make presentations using smart phone instead of computers to create animations.	3.74	0.75	HR
7.	Ability to use PowerPoint to present lectures. Seminars, etc.	4.60	0.49	VHR
8.	Ability to use Slidebean to separate content creation from the slide design during presentation.	4.42	0.62	HR
9.	Ability to use Polymersearch to transform data from spreadsheet into intelligently generated visualizations.	3.47	0.81	MR
10.	Ability to use Flowvella to embed text, images, PDFs videos gallery objects in easy linkable screens.	3.53	0.68	HR
11.	Ability to use Grammarly check for spellings and pronunciations.	4.44	0.63	HR
12.	Ability to use ProWriting aid to analyze your writing and highlight potential.	3.35	0.72	MR
13.	Ability to use Adobe Premiere Rush to shoot, edit and share online videos anywhere.	4.27	0.62	HR
14.	Ability to use inShot App to create high quality, 360 degree videos with phones to share on social media.	4.09	0.76	HR
15.	Ability to use plagiarism Checkers like Turnitin to check possible sources of researchers.	4.47	0.66	HR
16.	Ability to use Google Keep to record plain-text notes and organize, edit and share them with	4.20	0.73	HR



17	others using suite of collaboration tools.	4.35	0.65	HR
18	Ability to use icloud drive to store notes and other data for future use.	3.65	0.75	HR
19	Ability to use Microsoft Team to stimulate collaborative work	3.73	0.85	HR
20	Ability to use Digital visualizers to swap files with students	3.14	0.56	MR
21	Ability to use Dropbox to enhance involvement in public discussions.	3.88	0.79	HR
22	Ability to use Google drive to create and edit document online while collaborating in real-time with other users.	4.37	0.70	HR
	Ability to use cloud-meeting to share lesson plans, give instruction and synchronous learning.			
<b>Cluster Mean/SD</b>		<b>4.03</b>	<b>0.68</b>	<b>HR</b>

Table 1 shows that items 3 and 7 were rated very highly required by the respondents with mean scores of 4.60 respectively. Items 1-2, 4-6, 8, 10-11, 13-19, 21 and 22 with mean scores ranging between 4.47 and 3.53 were rated as highly required while items 9, 12 and 20 with mean scores of 3.47, 3.35 and 3.14 respectively were rated by the respondents as moderately required. The grand mean of 4.03 indicates that the items in the table are accepted by the respondents as digital skills required by business educators for enhancing instructional delivery in colleges of education in Delta State.

**Research Question 2:** What are the digital skills required by business educators for evaluating classroom instruction in Colleges of Education in Delta State?

**Table 2: Respondents' Mean Ratings on the digital skills required by business educators for evaluating classroom instruction in Colleges of Education in Delta State?**

(N = 86)				
S/ N	Statement:	Mean	SD	Remark
1..	Ability to use online survey tools to identify individual learning styles.	3.87	0.81	HR
2.	Ability to use Google forms to get opinion on any topic.	3.24	0.61	MR
3.	Ability to use Socrative to create the choice to ask a multiple choice, true/false, or a short answer quizzes.	4.60	0.49	VHR
4.	Ability to use Spring Suite to build quizzes with 14 question templates, branching and flexible scoring	4.30	0.65	HR
5.	Ability to use Survey Anyplace to create a multi-question survey before or after the chat.	2.24	0.78	RR
6.	Ability to post test/exam into the online platform and apply password.	4.40	0.64	HR
7.	Ability to make adjustments and follow timing for quiz.	4.08	0.75	HR
<b>Cluster Mean/SD</b>		<b>3.82</b>	<b>0.68</b>	<b>HR</b>



The results in Table 2 reveals that item 3 was rated very highly required with mean score of 4.60. Items 1, 4, 6 and 7 with mean scores ranging between 3.87 and 4.40 were rated as highly required. Item 2 has mean score of 3.24, which is moderately required while item 5 has a mean score of 2.24 as rarely required. All the items except item 5 were accepted by the respondents as digital skills required by business educators for evaluating online teaching in colleges of education in Delta State. While the grand mean of 3.82 indicates that the skills are highly required by business educators.

### Test of Null Hypothesis

**Table 3: Summary of t-test Analysis of Male and Female Business Educators' Mean Ratings on digital skills required for effective instructional delivery in colleges of education in Delta State**

Variable	N	Mean	SD	Df	$\alpha$ -Level	t-cal	t-crit	Decision
Male	37	3.31	0.43	84	0.05	-1.265	0.210	Not Rejected
Female	49	3.22	0.26					

The data in Table 3, indicates that the t-calculated value is -1.253 and the t-critical value is 0.011, at 0.05 level of significance and 84 degree of freedom. This means that there is no significant difference between the mean ratings of business educators on the digital skills required for effective instructional delivery in colleges of education in Delta State based on gender. Since the t-calculated value is less than t-critical value, the null hypothesis is therefore retained.

### Discussion of Findings

Findings from research question one revealed that the respondents considered all the constructs in Table 1 as digital skills required by business educators for effective instructional delivery. This means that business educators should acquaint themselves with the skills to use Google Duo, Skype, Facebook messenger and WhatsApp for sharing information with students, video conferencing to conduct classes, PowerPoint to present lectures and be able to separate content creation from the slide design during presentation. Furthermore, business educators should be able to use Flowvella App to embed texts, images, video and apply Grammarly to checkmate spellings and pronunciations on lesson contents. It is required of business educators to have the ability to apply plagiarism checker, use diverse range of online collaboration tools like Microsoft Team, so as to stimulate collaborative teaching and learning in an online platform. Ability to use Cloud-meeting to share lesson plan, pass instructions and synchronize learning is also required of business educators in order to enhance teaching and learning process in a digital era. This corroborates with the findings of Ajie-Uche, Efughi and Ajaero (2018), who asserted that business education lecturers in south-south Nigeria need capacity building in the following internet skills: ability to create web page for teaching, ability to upload lecture notes or other materials on the web, skills in slide presentation, retrieving and replying email and ability to display teleconferencing skills among others. When these digital skills are in place, according to Bupo (2011), it helps to expand access to education, strengthen the relevance of education to increasingly digital workplace and raises educational quality by making teaching and learning process more engaging to real life practices.

Findings from research question two on digital skills required by business educators for evaluating classroom instruction, indicates that ability to use online survey tool, Google forms, Socrative and Spring suite applications, post/or send tests/examination online and protect it with password and make adjustments for timing of already scheduled quiz are all required as rated by the respondents. Online assessment or evaluation has to do with the use of technology to manage and deliver assessment on students' academic performance within a fixed time schedule and internet



coverage location. Some of the most widely used forms of online assessment according to Bupo and Ohaka (2020) are students' response system, self and peer-assessment, e-submission and e-marking, e-test, e-quizzes and e-exams to mention, but a few. It should be noted that the essence for the use of online platforms for student's assessment is to provide a more convenient, objective and reliable medium for the gathering of relevant information about students' educational and academic performance; determine the level of interest of a student about a particular academic endeavor and to pass objective judgement regarding their learning (Lynch in Bupo&Ohaka, 2020). It behooves the researchers to state that digital skills on evaluation is a requirement for every 21<sup>st</sup> century teacher so as to compliment and achieve the purpose of online teaching and learning.

Finally, the results of the findings on hypothesis formulated, revealed that no significant difference exists between male and female business educators on digital skills required for effective instructional delivery in colleges of education in Delta State. This result is in line with the findings of Tang (2018) who submitted that irrespective of gender, digital skills is sine qua non for all lecturers to be effective in teaching.

### **Conclusion**

Based on the findings, it was concluded that digital skills for enhancing classroom instructional delivery and for evaluating classroom instructions are highly required by business educators in colleges of education for effective instructional delivery, and more so, they are considered important educational technology tools and software solutions that can deeply fix the gap between analog and conventional system of instructional delivery in this modern age.

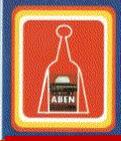
### **Recommendations**

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

1. Business education curriculum planners should as a matter of necessity and arising to global trend, incorporate relevant digital skills in the business education programme and from time to time review the curriculum as more technological development evolves.
2. Business educators, as a matter of remaining relevant in the profession should engage on digital training and re-training for capacity building.
3. Business educators should strive to utilize those digital identified skills in instructional delivery so as to produce graduates for the 21<sup>st</sup> century workplace.

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