



PERCEIVED TEACHING INNOVATION REQUIRED FOR EQUIPPING BUSINESS EDUCATION GRADUATES FOR DIGITALIZATION IN COLLEGES OF EDUCATION IN DELTA STATE NIGERIA

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Abstract

The study investigated perceived teaching innovation required for equipping business education graduates for digitalization in Colleges of Education in Delta State, Nigeria. Four research questions guided the study. The study adopted descriptive survey design. The population of the study was 100 Business Education lecturers in Colleges of Education in Delta State and the entire population was used as the sample size. 43-item four-point Likert scale questionnaire was used as the instrument for the study. The instrument was validated by two experts. The reliability of the instrument was established using Pearson product moment correlation method and the reliability coefficient was 0.82. Four research questions guided the study. No hypothesis was tested. Research questions were analyzed using mean. The findings revealed that computer operating skill; computer-based preparation of financial, cost and management accounting records and reporting; Microsoft Word among others are digitalization skill; computers, laptops, tablets, desktops, monitors, modems, computer accessories; plotter, printer, scanner, text processing among others are ICT equipment and digitalization software; student/student interaction during lesson and practical: to improve understanding of the digitalization process; to improve effective understanding of digitalization skills; among others are student/student interaction during teaching and learning; and adequate time for practical: for better understanding of digitalization skills to enable students master digitalization skills; to enable students practice digitalization processes; to do digitalization assignment; to enable slow learners practice digitalization skills; to enable the teacher supervise the students individually during practical among others are the teaching innovation required for equipping business education graduates for digitalization are digital marketing skills required by business education graduates for employability. It was recommended based on the findings that the authorities of Colleges of Education should ensure that the digitalization skill revealed in the findings from the study are included in business education curriculum among others.

Keywords: *Digitalization Skills, ICT Equipment and software, Business Education, Innovation, Business Education Graduates.*

Introduction

Technological advancement all over the world is paving way for digitalization of operation of activities in organizations. In the nearest future, many organizations may be completely digitalized, thereby throwing the unprepared persons in any sector of the economy into labour market. Digitalization is a global phenomenon and organizations are working relentlessly towards digitalizing their operations. Digitalization is defined by Spacey (2020) as the process of changing an organization business processes, model, data processing, communication, marketing etc using new ways offered by digital technologies. Also, Berenika (2018) noted that digitalization is the transformation of business models and processes using technology. Moreover, Arvinder (2021) defined digitalization as changing the way we work in the organization model and processes using digital technologies. Digitalization is therefore, the use of computers and other information technologies to transform processes or roles that make up business operations. The use of technology to enhance, fasten and advance operations cuts across all organizations, industries, agencies, ministries, and parastatal. The advancement in technology comes with the introduction of new technologies every now and then into the society. As a result, the skills required to operate and manipulate the new technologies may not be the same skills used in operating the older technologies used in organizations. To this end, organizations desiring to digitalize operations need to send or organize training for their workers to acquire the new skills necessary to operate the new technologies in order to digitalize operations in the organizations (.Arvinder, 2021).



Similarly all institutions where technologies are used for operation, equally need to train their workers for the same purpose of learning new skills that will enable them operate the new technologies. Some institutions prefer to hire new personnel who are already equipped with the new skills required to operate the new technologies. Hiring new personnel with modern technology operating skills will result to laying off older personnel for not possessing new skills needed to operate new technologies (Umoru, 2020). Moreover, it is the duty of educational institutions to produce graduate with the requisite skills needed by the organization for digitalization. As part of educational institutions, colleges of education are not left out in the pursuit of producing graduates needed to operate digitalization technologies and by extension information and communication technologies (ICT). The colleges of education in Delta state produces graduates through business education programme. Business education programme is the programme that produces graduates of business education. Business education is the education that prepares the recipient in teaching skills, office skills, business skills and other valuable skills for occupation and self-employment (Uzoka & Okoli, 2022). Also, Ile, Ndubuisi and Ezeani (2022) noted that Business education is a branch of vocational education that equips its recipients with relevant skills needed in the world of work. Business education programme has been in existence for reasonable number of years and it is expected to continue to be a programme to be reckoned with. This is possible by providing basis that will make business education programme relevant to the business world and the society. Lawrence, Etong and George (2020) stated that business education graduates needs to acquire new skills for computerization, automation and mechanization to be relevant. As a result, it is necessary to bring about innovation in the teaching and learning of business education.

The innovation emanated from the need of the industries and society in seeking to adapt to the constant changing technologies and business operation processes as a result of technological advancement. There is need to introduce the teaching of digitalization skills in business education programme. It will enable the programme produce relevant graduates for the need of the business world. Digitalization skills involves the use of digital skills for digitalization. Ile, Ndubuisi and Ezeani (2022) stated that digital skills are the abilities of using digital technologies to transform business processes and services. Digitalization skills include; computer operating skill, word processing and communication skill, information skill, content creation skill, problem solving skill, digital business skill, digital accounting skills, digital marketing skills among others (Makosiewicz, 2022; Spacey 2020; and Ile, Ndubuisi and Ezeani 2022). In addition, digitalization requires information and communication technology (ICT) equipment to function very well. Apart from teaching the students' digitalization skills, it is imperative to train the students with information and communication technologies as it will form a strong bases for effective understanding and operation of digitalization. The (ICT) skill needed in this regard, covers the hardware operating skills and software utilization skills. Ile, Ndubuisi and Ezeani (2022) noted that (ICT) equipment are necessary for the acquisition of digital skills. Availability of the ICT equipment is essential for use by the teachers and the students. Okeke (2020) stated that the availability of facilities, equipment and materials are necessary for effective teaching. On the part of the teachers, possession of relevant skills in the use of the ICT hardware and software in teaching and learning process will pave a sure way for effective learning by the students on the use of ICT for digitalization.

In addition, the teachers need to introduce student/student interaction in teaching and learning. Student/student interaction enables the students to exchange ideas, buttress a point, clarify or ask questions for better understanding of the subject matter learnt. In other words, student/student interaction will enable the learners to explain or teach others what they have not learnt or understood on digitalization skills and knowledge both in the class during lesson and in the laboratory during practical. Johnson and Johnson (2018) noted that student/student interaction help students to gain effective understanding of the subject matter and better skill acquisition. Nevertheless, adequate allotment of time for practical will help the learners retain the digitalization skills they learnt. The teaching of digitalization skills in theory without practical is meaningless. The teachers need to extend the teaching of digitalization processes from theory to practical in the presence of the students for perfect understanding. The teachers need to guide the students individually to practice the digitalization skills learnt. As a result, reasonable time is to be allotted for practical on the timetable and availability of adequate ICT equipment will result to effective learning of digitalization skills. Ogunniyi and Nwalo (2016) noted that significant relationship exist between time allocation for practical and students' academic achievement. It is upon this background that the researcher deems it fit to carry out a study on the perceived teaching innovation required for equipping business education graduates for digitalization.



Statement of the Problem

Digitalization is a global phenomenon. All sector of the world economy are moving towards participating actively in digitalization era. The educational institutions across the globe are fast introducing new knowledge skills into the school curriculum in order to fit in squarely in industrial and organizational digitalization. Business education programme is part of global educational programme and the knowledge and skills possessed by the recipients currently cannot serve the purpose of digitalization in near future. This will result to not employing business education graduates which may eventually lead to the end of or scarce existence of business education programme. It is imperative to bring innovations in the teaching and learning of business education through improving on the knowledge and skills possessed by business education graduates which will help the graduates remain relevant and employable in the digitalization era that is fast approaching as a result of constant advancement in technologies. Hence the study on perceived teaching innovation required for equipping business education graduates for digitalization.

Purpose of the Study

The major purpose of the study is perceived teaching innovation required for equipping business education graduates for digitalization in Colleges of Education in Delta State. Specifically, the study seeks to:

1. Determine the extent to which the teaching of digitalization skill is required by business education graduates for digitalization.
2. Determine the extent to which availability of ICT equipment and digitalization software for teaching and learning is required by business education graduates for digitalization
3. Determine the extent to which the use of student/student interaction in teaching and learning digitalization skill is required by business education graduates for digitalization.
4. Determine the extent to which adequate time allotment for practical on the use of ICT equipment is required by business education graduates for digitalization.

Research Questions

The following research questions guided the study:

1. To what extent is the teaching of digitalization skill required by business education graduates for digitalization?
2. To what extent is availability of ICT equipment and digitalization software for teaching and learning required by business education graduates for digitalization?
3. To what extent is the use of student/student interaction in teaching and learning digitalization skill required by business education graduates for digitalization?
4. To what extent is adequate time allotment for practical on the use of ICT equipment and digitalization software required by business education graduates for digitalization?

Method

The study adopted a descriptive survey design. The descriptive survey design was appropriate because it is a design that enables a group of people to be studied by collecting and analyzing data from such group of people who are representative of the population (Okwor, 2011). The population for the study was a total of 100 Business education lecturers comprising 75 lecturers from Federal College of Education [Technical] Asaba, 12 lecturers from College of Education Warri and 13 lecturers from College of Education Mosogar respectively. There was no sampling because the population was of manageable size. The instrument for data collection was a structured questionnaire titled "Perceived Teaching Innovation Required for Equipping Business Education Graduates for Digitalization in Colleges of Education (PTIREBEGDCE)". The instrument contained 43 items and was structured on a four point rating scale of Very High Extent (VHE) 4 points, High Extent (HE) 3 points, Low Extent (LE) 2 points and Very Low Extent (VLE) 1 point. The cut off point for decision rule was 2.50. The instrument was validated by two experts in school of education, Federal College of Education [Technical] Asaba. The reliability of the instrument was established using pearson product moment correlation method occupied with official assignment. Mean was used to analyze the data collected to answer the research questions. Any item with mean of 2.50 or above is regarded as high extent while any item with mean less than 2.50 is regarded as low extent.

Results

Research Question One

To what extent is the teaching of digitalization skill required by business education graduates for digitalization?



Table 1: Mean and Standard Deviation of Responses on the extent to which the teaching of digitalization skill is required by Business Education Graduates for Digitalization.

S/N	Item statement	VHE 4	HE 3	LE 2	VLE 1	X	STD	Remark
1.	Computer operating skill	31	31	12	10	2.98	0.99	High Extent
2.	Computer-based preparation of financial, cost and management accounting records and reporting	35	30	13	6	3.12	0.92	High Extent
3.	Microsoft word .skill	58	23	3	0	3.65	0.55	High Extent
4.	Excel .skill	27	32	15	10	2.90	0.98	High Extent
5.	Power point skill.	40	29	13	2	3.27	0.81	High Extent
6.	Spreadsheet skill	30	34	10	10	3.00	0.97	High Extent
7.	Automation tools skill.	45	30	7	2	3.40	0.74	High Extent
8.	Automation software skill	13	48	15	8	2.79	0.82	High Extent
9.	Computer based inventory skill	30	35	10	9	3.02	0.95	High Extent
10.	Accounting software skill	29	31	14	10	2.94	0.99	High Extent
11.	Business Automation Skill	27	33	14	10	2.92	0.75	High Extent
12.	Practical knowledge of automating the recording of accounting transactions	15	46	18	5	2.85	0.78	High Extent
13.	E- Communication skill	27	32	16	9	2.92	0.96	High Extent
14.	E-Communication software skill	27	33	15	9	2.9	0.96	High Extent
15.	E-Marketing Skill.	33	32	13	6	3.10	0.91	High Extent
16.	E-Marketing software skill	42	35	4	3	3.38	0.74	High Extent
17.	E-payment skill.	29	31	15	9	2.95	0.97	High Extent
18.	E-Advertising skill	35	31	10	8	3.11	0.95	High Extent
Grand mean/STD						3.07	0.87	High Extent

The result of data analysis in table 1 reveals that the mean responses of the respondents range from 2.79 – 3.69., with a grand mean of 3.06. The result show that the respondents accepted all the items in the table as the teaching of digitalization skill required at high extent by business education graduates for digitalization.

Research Question Two

To what extent is the availability of ICT equipment and digitalization software for teaching and learning required by business education graduates for digitalization?

Table 2: Mean and Standard Deviation of Responses on the extent to which the availability of ICT equipment and digitalization software for teaching and learning is required by business education graduates for digitalization.

S/N	Item statement	VHE 4	HE 3	LE 2	VLE 1	X	STD	Remark
1.	Availability of computers, laptops, tablets, desktops, monitors, Modems, computer accessories	31	31	12	10	2.99	0.99	High Extent
2.	Availability of plotter, printer, scanner, text processing equipment, digital camera, etc	29	31	15	9	2.95	0.97	High Extent
3.	Availability of software like project inventory, image processing, digital adoption platform, electronic workplace, suites.	8	31	10	5	3.21	0.87	High Extent
4.	Availability of cloud-based CRMs, HCM platforms, digital, accounting tools, data protection	30	5	10	9	3.02	0.95	High Extent



tools, slides etc

Availability of ICT equipment and software:

5.	For demonstration of business automation	38	0	13	3	3.32	0.84	High Extent
6.	For practical by the students on digitalization processes	13	46	19	6	2.79	0.79	High Extent
7.	To learn skill that will pave way for healthy competitiveness on digitalization among other nations of the world	40	37	2	5	3.33	0.79	High Extent
8.	To effectively prepare business education recipients on digitalization for possible training of prospective learners.	33	32	13	6	3.10	0.91	High Extent
9.	Availability of ICT equipment maintenance personnel for efficient functioning ICT equipment during teaching and learning	38	31	12	9	3.24	0.82	High Extent
10.	Constant supply of power to operate ICT equipment during teaching and practical for digitalization	33	2	11	8	3.07	0.95	High Extent
Grand mean/STD						3.09	0.89	High Extent

The result of data analysis in table 2 reveals that the mean responses of the respondents range from 2.78 – 3.35., with a grand mean of 3.10. The result show that the respondents accepted all the items in the table a ICT equipment and digitalization software for teaching and learning required at high extent by business education graduates for digitalization.

Research Question Three

To what extent is the use of student/student interaction in teaching and learning digitalization skill required by business education graduates for digitalization? .

Table 3: Mean and Standard Deviation of Responses on the extent to which student/student interaction in teaching and learning digitalization skill is required by business education graduates for digitalization.

S/N	Item statement	VHE 4	HE 3	LE 2	VLE 1	X	STD	Remark
	Student/student interaction during lesson and practical:							High Extent
1.	To improve understanding of the digitalization process.	13	46	18	7	2.77	0.81	
2.	To improve effective understanding of digitalization skills	40	30	10	4	3.26	0.85	High Extent
3.	To enable the students who understood digitalization skill to teach those who did not understand for effective learning	40	29	12	3	3.26	0.83	High Extent
4.	To provide opportunity for slow learners to posses same level of digitalization skill with the fast learners	13	48	15	8	2.99	0.82	High Extent
5.	To provide opportunity for students to learn digitalization skills and practical in language other than	8	1	12	3	3.24	0.82	High Extent



English for better understanding

6.	To enable students to ask their fellow students questions in the area they did not understand and it improves understanding of digitalization skills	30	32	12	10	2.97	0.99	High Extent
7.	To increase the interest of students in learning digitalization skills	12	44	15	13	2.65	0.88	High Extent
8.	For fertilization of ideas on digitalization skills among learners to better understanding	40	31	10	3	3.29	0.81	High Extent
9.	To provide opportunity for every students to be carried along on digitalization process for better understanding	39	31	12	2	3.27	0.29	High Extent
10.	To enable the students to possess mastery of digitalization skills and processes	26	50	5	3	3.18	0.69	High Extent
Grand mean/STD						2.74	0.75	High Extent

The result of data analysis in table 3 reveals that the mean responses of the respondents range from 2.63 – 3.29., with a grand mean of 3.03. The result show that the respondents accepted all the items in the table as student/student interaction in teaching and learning digitalization skill required at high extent by business education graduates for digitalization.

Research Question Four

To what extent is adequate time allotment for practical on the use of ICT equipment and digitalization software required by business education graduates for digitalization?

Table 4: Mean and Standard Deviation of Responses on the extent to which adequate time allotment for practical on the use of ICT equipment and digitalization software is required by business education graduates for digitalization.

S/N	Item statement	VHE 4	HE 3	LE 2	VLE 1	X	STD	Remark
Adequate time for practical:								High Extent
1.	For better understanding of digitalization skills	30	35	10	9	3.02	0.95	
2.	To enable students master digitalization skills	27	33	14	10	2.92	0.75	High Extent
3.	To enable students practice digitalization processes	33	32	11	8	3.07	0.95	High Extent
4.	To do digitalization assignment	61	23	0	0	3.73	0.45	High Extent
5.	To enable slow learners practice digitalization skills	45	32	5	2	3.43	0.71	High Extent
6.	To enable the teacher supervise the students individually during practical	30	32	12	10	2.97	0.99	High Extent
7.	To enable teacher assist students with difficulties during practical on digitalization processes	27	33	15	9	2.93	0.96	High Extent
8.	To motivate the students to practice business automation	36	30	12	6	3.14	0.92	High Extent
9.	To enable students practice the use of ICT equipment for digitalization.	26	50	5	3	3.18	0.69	High Extent
10.	To enable the students exercise and perfect their ICT skill	27	32	15	10	2.90	0.78	High Extent
Grand mean/STD						3.13	0.84	High Extent



The result of data analysis in table 4 reveals that the mean responses of the respondents range from 2.73 – 3.42., with a grand mean of 3.03. The result show that the respondents accepted all the items in the table as adequate time allotment for practical on the use of ICT equipment and digitalization software required at high extent by business education graduates for digitalization.

Discussion of Findings

The findings from research question one revealed that Computer operating skill; Computer-based preparation of financial, cost and management accounting records and reporting; Microsoft word skill; Excel .skill; Power point skill; Spreadsheet skill; Accounting tools skill; Automation software skill; Computer based inventory skill;. Accounting software skill; Business Automation Skill; Practical knowledge of automating the recording of accounting transactions; E- Communication skill; E-Communication software skill; E-Marketing Skill; E-Marketing software skill; E-payment skill; and E-Advertising skill are the digitalization skill required by business education graduates for digitalization. The findings was supported by Makosiewicz, (2022) Spacey (2020) and Ile, Ndubuisi and Ezeani (2022) who stated that digitalization skills include computer operating skill, word processing and communication skill, information skill, content creation skill, problem solving skill, digital business skill, digital accounting skills, digital marketing skills among others.

The findings from research question two revealed that computers, laptops, tablets ,desktops, monitors, Modems, computer accessories; plotter, printer, scanner, text processing equipment, digital camera etc; software like project inventory, image processing ,digital adoption platform, electronic workplace, suites, cloud-based CRMs, HCM platforms, digital, accounting tools, data protection tools, slides etc; ICT equipment and digitalization software for demonstration of business automation. For practical by the students on digitalization processes, to learn skill that will pave way for healthy competitiveness on digitalization among other nations of the world, to effectively prepare business education recipients on digitalization for possible training of prospective learners. ICT maintenance personnel, constant power supply are ICT equipment and digitalization software required by business education graduates for digitalization. The findings was supported by.Ile, Ndubsiui and Ezeani (2022) and Okeke (2020) who noted that (ICT) equipment and digitalization software are essential for use by the teacher and the students for the acquisition of digital skills.

The findings from research question three revealed that Student/student interaction during lesson and practical: to improve understanding of the digitalization process; to improve effective understanding of digitalization skills; to enable the students who understood digitalization skill to teach those who did not understand for effective learning; to provide opportunity for slow learners to posses same level of digitalization skill with the fast learners; to provide opportunity for students to learn digitalization skills and practical in language other than English for better understanding; to enable students to ask their fellow students questions in the area they did not understand and it improves understanding of digitalization skills; to increase the interest of students in learning digitalization skills; for fertilization of ideas on digitalization skills among learners to better understanding; to provide opportunity for every students to be carried along on digitalization process for better understanding; to enable the students to possess mastery of digitalization skills and processes are student/student interaction in teaching and learning digitalization skill required by business education graduates for digitalization. The findings was supported by Johnson and Johnson (2018) who noted that student/student interaction help students to gain effective understanding of the lesson and better skill acquisition.

The findings from research question four revealed that Adequate time for practical: for better understanding of digitalization skills to enable students master digitalization skills; to enable students practice digitalization processes; to do digitalization assignment; to enable slow learners practice digitalization skills; to enable the teacher supervise the students individually during practical; to enable teacher assist students with difficulties during practical on digitalization processes; to motivate the students to practice business automation; to enable students practice the use of ICT equipment for digitalization; to enable the students exercise and perfect their ICT skill are adequate time allotment for practical on the use of ICT equipment and digitalization software required by business education graduates for digitalization. The findings was supported by Ogunniyi and Nwalo (2016) who noted that significant relationship exist between time allocation for practical and effective learning by the students.



Conclusion

Based on the findings of the study, it was concluded that business education graduates require computer operating skill; computer-based preparation of financial, cost and management accounting records and reporting; microsoft word skill; excel .skill; power point skill; spreadsheet skill; accounting tools skill; automation software skill; computer based inventory skill; accounting software skill; business automation skill; practical knowledge of automating the recording of accounting transactions; e- communication skill among others are digitalization skill; computers, laptops, tablets ,desktops, monitors, modems, computer accessories; plotter, printer, scanner, text processing equipment, digital camera among others are ICT equipment and digitalization software; student/student interaction during lesson and practical: to improve understanding of the digitalization process; to improve effective understanding of digitalization skills; to enable the students who understood digitalization skill to teach those who did not understand for effective learning; to provide opportunity for slow learners to possess same level of digitalization skill with the fast learners among others are student/student interaction during teaching and learning; and adequate time for practical: for better understanding of digitalization skills to enable students master digitalization skills; to enable students practice digitalization processes; to do digitalization assignment; to enable slow learners practice digitalization skills; to enable the teacher supervise the students individually during practical among others are the teaching innovation required for equipping business education graduates for digitalization.

Recommendations

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

- 1 The authorities of Colleges of Education should ensure that the digitalization skills contained in the findings from the study are included in business education curriculum.
- 2 The authorities of Colleges of Education should ensure the availability of adequate ICT equipment and digitalization software in Colleges of Education for efficient and effective teaching and learning of digital skills. The students may be taken to an ICT center..
- 3 The authorities of Colleges of Education should ensure that Business education lecturers in charge of teaching the digital skills are trained for effective delivery.
- 4 The Dean in charge of Business education programme in Colleges of Education should ensure that Business education students are allowed practical period of two to three hours a week in the computer room with availability of light to enable the students practice the digital skills for perfection.

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