

Utilization of digital instructional technologies in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State, Nigeria

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ABSTRACT: This study examined utilization of digital technologies in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State, Nigeria. Three research questions and one hypothesis guided the study. Descriptive survey research design was adopted. The population of the study is 229 which comprises of 31 business education lecturers and 198 final year students of business education from tertiary institutions in Ebonyi State. There was no sample since the populations was manageable. The instrument for data collection was questionnaire. The instrument was validated by two experts in Business Education Department. The instrument had a reliability coefficient of 0.74 using Pearson product moment correlation coefficient method. Mean and standard deviation statistics was used to analyze the data collected while t-test was used to test the hypothesis. The results showed that multimedia projectors and interactive whiteboard were utilized in very low extent teaching business education students in tertiary institutions in Ebonyi State. business educator's often utilize web based technology in teaching business education students for improved office skill acquisition in tertiary institutions. The results also showed that there was no significant difference in the mean responses that business education lecturer and students do not differ significantly in their mean responses on the extent of utilizing digital technologies in teaching Business Education students for improved office skill acquisition in tertiary institutions in Ebonyi State. Based on the findings, the study recommended among others that: administrator of business education should sensitized business education lecturers on the importance of utilizing digital instructional technology in order to improved students skills acquisition of office skills.

Keyword: Business education, digital technologies, office skill, students, utilization.

INTRODUCTION

The advent of the digital communication technology in the academic field had marked a significant impact on the higher education. The transition from traditional modes of learning to the modern means of virtual learning had taken place in developed countries at a higher pace, but some educational institutions in Nigeria follow the technological advancements in a snail's pace. According to Schipper (2020), as technology becomes a daily part of life in the developed and developing world, so too has it becomes a part of the educational environment. The rapid

development and adoption of technology worldwide has led to a movement to integrate many of these tools into the classroom. School systems especially tertiary institutions worldwide are purchasing technologies to be integrated in their classrooms. The use of technology in the classroom has grown as communities accept the technologies in their day to day lives. Tinggen et al. (2019) observed that, to prepare students especially business education students for their lives after high school, there is growing need for training of business education students with the use of

technologies.

Business education is a programme of study that teaches the learners necessary skills, knowledge, attitude and competencies needed for employment, advancement on a job and self-reliance (Otum, 2018). It is one of the courses in tertiary institutions that give students opportunity to acquire relevant skills for self-development. The course provides occupational skills for its recipients in business or office related occupations either as employees or self-employed. Obi and Mary (2018) noted that in order to realize fully the potential contributions of business education towards imparting office skill acquisition for sustainable human capital development, emphasis must be placed on the broad goals of utilizing digital technologies in teaching and learning of business education courses in tertiary institutions. Teaching and learning business education courses without modern technology is nowadays impossible, not only because technology is part of our everyday life, but also because it can improve learning and students skills acquisition, if used effectively. Obi and Mary (2018) also pointed out that, in many tertiary institutions in Nigeria, business educators seem to persistently use textbooks and obsolete equipment in teaching students which does not equip students with skills that will prepare them to be effective in the work place. Such system of education is contrary to the very principle of business education. Hence, the need to utilize digital technologies that could foster students the acquisition of skills and prepare them to be effective in the work place after graduation.

The term utilization refers to the degree of usage of a given material in the execution of a given task (Uzuegbu et al., 2018). In the context of this study, utilization refers to the extent to which an instructional technology in business education is put into use by business education lecturers in teaching and learning in tertiary institutions. Utilization is the ability to employ appropriate resources or tools expertly and at the right time in order to attain goal or an objective. According to Kurt (2017), instructional technologies are those hardware and software used in classroom for the purpose of instructional process that help to provide exciting learning to the learner, and make the teacher to have creative way of making his work easier. Instructional technologies are those devices used to support teaching and learning (Seymoureducate, 2016). According to Costley (2019), it gives students opportunities to collaborate with their peers resulting in learning from each other.

Otum (2018) noted that teaching and learning with digital instructional technologies in the classroom provide students with a wide range of knowledge office skills for employment after graduation. According to Kurt (2017), digital technologies used in teaching and learning of business education programmes includes: multimedia projectors, interactive whiteboard (IWB), web based digital versatile disc rewritable disc (DVD-RW), and opaque projectors as well as computers, various software

applications, digital camera, scanners, photocopying machines, printers, the internet, audio/video conferencing and artificial intelligent (AI) (which is a group of related technologies that attempt to develop machines to emulate human-like qualities, such as learning, reasoning, communicating, seeing and hearing). According to Yelland (2001), the advancement of technology in this 21st century have made digital technology such as interactive white board, multimedia projector and web based instructional technologies an invaluable tools for teaching and learning for improved students office skills after graduation.

Shah and Khan (2015) stated that the advantages of utilizing multimedia projector in the classroom are many. Through participation in multimedia activities, students can learn: real world skills related to technology; the value of teamwork; effective collaboration techniques; how to present information in compelling ways; techniques for synthesizing and analyzing complex content; the importance of research, planning and organization skills; the significance of presentation and speaking skills; how to accept and provide constructive feedback; and how to express their ideas creatively. Ajayi et al. (2018) found that the use of slide projectors in teaching and learning increase students skills acquisition but teachers do not utilize it for teaching. In support of this, Shah and Khan (2015) and Okedeyi et al. (2015) who held that the utilization of multimedia projectors especially in PowerPoint presentations in teaching and learning of business education will help to improved office skills acquisition as compared to the traditional method of teaching. Ajayi et al. (2018) argued that ICT, which projector is part, based education, if properly utilized, can be made interactive and this can provide activity based teaching methods in which students can actively participate thereby providing experiences that would sink deeper into the students' memories than listening to verbal teaching.

In this study, interactive whiteboard is described by Nnajofo et al. (2020) as a technology that transmits computer screen to the whiteboard by means of a projector and that enables controlling the computer by only touching the whiteboard with a special pen. Al-Faki and Khamis in Trust et al. (2017) see interactive whiteboard as a large touch-sensitive display unit, connected to digital projector and computer. The interactive whiteboard has the capacity to manipulate data, project images and videos, include sound and allow for the data to be stored and retrieved and be manipulated once again. The use of these instructional technology devices in teaching and learning will attract the students' attention and increase students understanding during instructional delivery. According to Agbagbue (2018), there is a low utilization of instructional media in teaching business education in tertiary institutions.

According to Ward (2019), web based instruction implies teaching with electric means and through electronic device. Quadric (2017) observed that web-based instruction encompasses teaching and learning at all

levels, both formal and non-formal, that uses an information network, the internet and intranet (Local Area Network) or extranet (Wide Area Network) – whether wholly or in part, for course delivery, interaction and/or facilitation. However, Ajadi et al. (2018) observed that there is gross underutilization of web based technology in Nigerian tertiary institutions.

Chertavian (2020) also observed that the global trends in education have shown that students of various disciplines which business education students is included leave school without acquiring the prerequisite skills that foster individual, community or national development. According to ASTE (2012), teaching without digital technologies in business education programme are the most prominent among several reasons while students fail to acquire office skills needed to be more successful and ready for modern society. The ability and effectiveness of schools to prepare students for their futures through the teaching of 21st century skills has to be mixed with the use of digital technologies in teaching and learning. This is because, the style of teaching and level of interaction of teachers and students during instructional delivery plays key roles on the degree students gained 21st century skills. Technologies that were used more for presentation of information and lesson for interaction have a great impact on the students' acquisition of desired skills (Tingen et al., 2019). This implies that ignoring or not utilizing digital technologies in teaching of business education students is tantamount to the students being labelled as irrelevant and outdated by both the learners and other stakeholders such as potential employers after graduation. In spite of the importance of utilization of technologies in teaching business education courses for improved office skills acquisition, it seems no systematic investigation has been carried out in Ebonyi State, to establish the extent of utilization of digital instructional technologies in business education for improved office skills acquisition in tertiary institutions in Ebonyi state, Nigeria.

Statement of the problem

The use of digital technologies in education is growing at a rapid rate with the assumption that this equipment will help students to be more successful and ready for modern society after graduation. Again, this era of technology based, it is expected that business education students be taught with digital technologies in order to equip students with knowledge and ICT skills that will enable them compete globally with their counterparts. Scholars such as Fagbamiye (2020) have noted that students who learn in a technology rich environment experience positive effects on their skills acquisition especially in office skills. In the same line of thought, Becta in Eze and Ajah (2016) pointed out that instructional technology when utilized in teaching and learning enhance student's skills acquisition. However despite the importance of utilization of digital instructional

technologies in teaching and learning for improved student's skills acquisition, the level of utilization in business education programme in tertiary institutions in Ebonyi State is rather unknown. This is so because research on this area is either scanty or non-existent. It is based on this aforementioned problem that the researchers try to examine the extent of utilization of digital instructional technologies in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State.

Purpose of the study

The main purpose of this study is to examine the extent of utilization of digital instructional technologies in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State. Specifically, the study determines:

1. the extent of utilization of multimedia projectors in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State.
2. the extent of utilization of interactive whiteboard instructional technology in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State.
3. the extent of utilizing web based instructional technology in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State

Research questions

1. What is the extent of utilizing multimedia projectors in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State?
2. What is the extent of utilizing interactive whiteboard instructional technology in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State?
3. What is the extent of utilizing web based instructional technology in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State?

Research hypothesis

There is no significant difference in the mean ratings of business education lecturers and students on the extent of utilizing digital technologies in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State. The hypothesis was tested at 0.05 level of significance.

METHODOLOGY

The study made use of descriptive survey research design. The design is appropriate for the study because the researchers used questionnaire as instrument to collect data from the respondents and analyzed the data collected. The population of the study is two hundred and twenty nine (229) consisted of 31 business education lecturers and 198 final year business education students from three tertiary institutions in Ebonyi State. No sample was taken as the entire population was used for the study. The instrument used for data collection was questionnaire titled "utilizing digital instructional technologies in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State (UDITTBESIOSATIQ). The instrument was developed by the researchers and it was validated by three experts, two from business education and one from science education all from Ebonyi State University Abakaliki, Nigeria. Pearson's Product Moment Correlation was adopted to determine the consistency of the questionnaire items after a single administration of the instrument to 31 lecturers and 198 students from the Department of Business Education, from institutions in Enugu State. After analysis, a coefficient of 0.74 was obtained which shows that the instrument is reliable. The research questions was structured in a 4-point rating scale of Very High Extent (VHE) - 4 points, Highly Extent (HE) - 3 points, Low Extent (LE) - 2 points, and Very Low Extent (VLE) - 1 point. The researchers and two research assistants administered copies of the questionnaire to the respondents in their various schools. Out of the two hundred and twenty nine (229) copies distributed, only 150 were correctly completed and returned for use in this study. The research questions were analyzed using mean and standard deviation while the hypothesis was tested using t-test at an alpha level of 0.05. Any item with a mean rating of 2.50 or above was regarded as accepted while mean rating less than 2.50 was regarded as not accepted. For the hypotheses, any item with t-calculated value greater than critical value was rejected; otherwise, the hypothesis of no significant difference was accepted

RESULTS

Research question 1: *What is the extent of utilizing multimedia projectors in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State?* Data analysis in Table 1 shows a grand mean of 2.14 which indicate that business teachers utilized multimedia projectors in very low extent in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State. The standard deviations of 0.86 to 1.18 are within the same range showing homogeneity in responses.

Research question 2: *What is the extent of utilizing interactive whiteboard instructional technology in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State?* Analysis in Table 2 shows a grand mean of 2.08 which indicates that business educator's utilized interactive whiteboard in a very low extent in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State. The standard deviations of 0.54 to 0.81 are within the same range showing greater consensus of opinion.

Research question 3: *What is the extent of utilizing web based instructional technology in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State?* Analysis in Table 3 shows a grand mean of 2.67 which indicates that business educator's often utilize web based technology in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State. The information presented in Table 3 further showed that the mean scores of respondents ranged from 1.87 to 3.63. The standard deviations of 0.54 to 0.81 are within the same range showing greater consensus of opinion.

Research hypothesis

H₀₁: *There is no significant difference in the mean ratings of business education lecturers and students on the extent of utilizing digital technologies in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State.* Data analysis in Table 4 shows that business education lecturers and students do not differ significantly in their mean responses on the extent of utilizing digital technologies in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State. This is shown by the p-value of 0.07, which is greater than the significant level of 0.05. The null hypothesis of no significant difference between the two groups is therefore accepted.

DISCUSSION

The findings of the study indicated that business educators in tertiary institutions in Ebonyi State, Nigeria utilized multimedia projectors in very low extent in teaching business education students for improved office skills acquisition. The findings of the study are similar with the findings of Ajayi et al. (2018) who found that the use of slide projectors in teaching and learning increases students' skills acquisition but teachers do not utilize it for teaching. In support of this, Shah and Khan (2015) and Okedeyi et al. (2015) who held that the utilization of multimedia projectors especially in PowerPoint presentations

Table 1. Mean Response of utilizing multimedia projectors in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State.

S/N	Utilizing multimedia projectors	Mean	SD	Decision
1	Using multimedia projectors to demonstrate to students	2.00	0.91	Very low extent
2	Using slides in presenting a lesson	1.87	0.86	Very low extent
3	Using film strips to summarize information and ideas during lesson	1.80	1.03	Very low extent
4	Using overhead projector to demonstrate a lesson	2.13	0.94	Very low extent
5	Incorporating visual aspects to a presentation during lesson	1.83	0.99	Very low extent
6	Adding of new slides to make lesson more organized	2.35	0.74	Very low extent
7	Using video materials to illustrate images during lesson	1.98	1.18	Very low extent
8	utilizing multimedia projectors o editing text during lesson	2.40	0.99	Very low extent
9	Removing existing slides to make lesson more organized	2.48	0.54	Very low extent
10	Using computer images to design learning experiences	2.32	0.66	Very low extent
11	Using charts and graphs in presenting their lesson	2.45	0.68	Very low extent
	Grand mean (x) and SD	2.14	0.86	Very low extent

Table 2. Respondents mean Rating of utilization of interactive whiteboard instructional technology in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State.

S/N	Utilizing Interactive Whiteboard Technologies	Mean	SD	Decision
11	Linking objects to make classes non-linear	2.00	0.91	Very low extent
12	Using animation to enable students to learn faster and easier	1.87	0.86	Very low extent
13	Using LCD panels to present a common image to students	1.80	1.03	Very low extent
14	Using charts in presenting pictorial pictures	2.13	0.94	Very low extent
15	Adding interactive chats to every presentation	1.83	0.99	Very low extent
16	Using interactive whiteboard for drawings and diagrams	1.98	1.18	Very low extent
17	Using computer images to design learning experiences	2.40	0.99	Very low extent
18	Using interactive whiteboard for repeating and re-explaining a lesson	2.32	0.66	Very low extent
19	Using IWB for summarizing a lesson	2.45	0.68	Very low extent
20	Saving and printing what is on the board including notes made during the lesson	2.30	1.19	Very low extent
	Grand mean (x) and SD	2.08	0.94	Very low extent

Table 3. Respondents mean Rating of utilization of web based instructional technologies in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State.

S/N	Utilizing Web based Instructional Technologies	Mean	SD	Decision
21	Using video-conferencing during lesson	2.48	0.54	Very low extent
22	Using electronic books (e-books) to support teaching and learning	2.47	1.37	Very low extent
23	Asking students to present assignments using power point and projectors	2.09	1.31	Very low extent
24	Asking students to read e-books and journals	1.83	0.99	Very low extent
25	Asking students to search for educational materials online after lectures	3.35	1.32	High Extent
26	Requiring students to process assignment with the computer	3.59	1.55	High Extent
27	tele-conference with students to during teaching and learning	1.87	0.86	Very low extent
28	Sending feedbacks to students via-e-mail after lectures	1.80	1.03	Very low extent
29	Undertake courses on the internet with interactive features	2.47	1.37	Very low extent
30	Asking students partaking in online discussion forum	2.13	0.94	Very low extent
31	Undertaking online examinations	3.63	1.46	High Extent
32	Chatting online with colleagues and students	3.42	1.58	High Extent
33	Asking student to check results online	3.63	1.46	High Extent
	Grand mean (x) and SD	2.67	1.21	Low Extent

Table 4. Summary of t-test result of mean ratings of business education lecturers and students on the extent of utilizing digital technologies in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State.

Groups	N	Mean	SD	DF	P-value	Decision
Business education lecturers	25	3.15	0.70	227	0.83	Not significant
Business education students	125	3.13	0.67			

in teaching and learning of business education will help to improved office skills acquisition as compared to the traditional method of teaching. Ajayi et al. (2018) argued that ICT, which projector is part, based education, if properly utilized, can be made interactive and this can provide activity based teaching methods in which students can actively participate thereby providing experiences that would sink deeper into the students' memories than listening to verbal teaching. This means that the use of multimedia projectors in teaching should be properly rooted in the business education curriculum so that the level of computer literacy will be increased among business education students.

The findings of the study also indicated that business educator's utilized interactive whiteboard in a very low extent in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State. The finding of the study is in consonance with that of Agbagbue (2018) who found that there is a low utilization of instructional media in teaching business education in tertiary institutions. In support of this, Al-Faki and Khamis (2014) and Aytac and Sezgul (2012) reported business educators' inefficiency in the use of interactive whiteboard in teaching and learning. The authors further stated that interactive whiteboard allows advanced and careful lesson planning, freeing teachers to use the interactive whiteboard to generate efficient and effective learning. It gives teachers greater freedom during the lessons to attend to individual needs of students and to differentiate instructions.

The findings of the study in research question 3 revealed that business education lecturer often utilize web based instructional technologies in teaching business education students for improved office skill acquisition. This finding partly contradicts the findings of Ajadi et al. (2018) who argued that there is gross underutilization of web based technology in Nigerian tertiary institutions. The result in Table 4 which is for hypothesis revealed that there is no significant difference in the mean ratings of business education lecturers and students on the extent of utilizing digital technologies in teaching business education students for improved office skill acquisition in tertiary institutions in Ebonyi State. The null hypothesis of no significant difference between the two groups is therefore accepted. This is in contrast with the findings of Leem and Lim (2017) that discovered differences in support and opportunity to actively participate in web based technology programmes among Korean tertiary institutions.

Conclusion

Digital technologies are necessary instructional materials needed for the achievement of business education objectives, but this study found out that business education lecturers in tertiary institutions utilized this technologies in low extent for quality teaching of business education students. Utilization of multimedia projectors, interactive whiteboard, web based, video conferencing and digital games by business educator is very essential for students to acquiring current office skills and up-to-date their information necessary for academic excellence. On the basis of these findings therefore, it could be concluded that the utilization of digital instructional technology by business educator may help business education students acquire office skills that will help them to be self-sufficient in the competitive world of work

Recommendations

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

1. Management of tertiary institutions in Ebonyi State should provide business education departments with multimedia projectors instructional technologies for effective instructional delivery.
2. Management of tertiary institutions in Ebonyi State should provide business education departments with interactive whiteboard for effective instructional delivery.
3. Administrator of business education in should structure all courses into modules that could be taught through web base technologies facilities during instructional delivery.
4. The administrator of business education should sensitized business education lecturers on the importance of utilizing available instructional technology in order to improved students skills acquisition.

CONFLICT OF INTEREST

Authors declare that they have no conflict of interest.

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