UTILIZATION OF INTERACTIVE AND BROADCAST TECHNOLOGY SKILLS BY BUSINESS EDUCATION TEACHERS FOR TEACHING IN COLLEGES OF EDUCATION

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Abstract
This study aimed to examine the utilization of interactive and broadcast technology skills by business education teachers for teaching in colleges of education in Kwara State. Two specific purposes and two research questions were developed and answered while two research hypotheses were formulated and tested. Survey research design was used. 71 business education teachers from selected eight colleges of education in Kwara State were sampled as population for the study. A 20 items questionnaire tagged Utilization of Interactive and Broadcast Technology Skills by Business Education Teachers for Teaching Questionnaire (UIBTSBETTQ) with 4-point rating scales was the instrument used for data collection. The reliability of the instrument yielded 0.71. The data collected were analyzed using mean and standard deviation. The null hypotheses were tested using independent sample t-test and One-way Analysis of Variance at 0.05 level of significance. The study revealed that there was no significant difference in the mean responses of business education teachers on the utilization of interactive and broadcast technology skills for teaching in colleges of education based on gender and their years of experience. Based on the findings and conclusion of the study, it was recommended among others that Colleges of education authorities should take the issue of teachers development and re-training with all the seriousness it deserves by organizing workshops, seminars, conferences and in-service training for teachers of business education to acquire more interactive and broadcast technology skills.

Keywords: interactive technology, broadcast technology, technology skills and business education

Introduction

Technology skills in business education programme have posed many challenges to business educators in Nigeria. This is in line with the opinion of Achugbue (2013) that business education in colleges of education would achieve the goals of teaching if modern technological teaching aids like computers, electric typewriters, television sets, projectors, internet facilities, among others are adequately provided and utilized for teaching. Many colleges of education do not give adequate priority and attention to the acquisition and utilization of new instructional technology skills needed for teaching and learning.

The acquisition, possession and utilization of relevant interactive and broadcast technology skills by the business education teachers are imperative as observed by Onojetah (2014). Hence, business education professionals agreed that utilization of interactive and broadcast

technology skills by teachers have the prospects for improving teaching and learning of business education as well as enhancing the recipients' productivity. It is also evident as agreed by Amiaya (2016) that the traditional educational environments are not suitable for preparing learners to function or be productive in the workplace in today's society. Therefore, educational institutions that fail to incorporate acquisition of new technology skills into their programme cannot seriously claim to prepare their students for life in this 21st century technology driven economy.

Interactive technology is any technology that digitally facilitates interaction between people and allows for user content creation and manipulation (Vaterlaus, 2018). It is any form of technology that allows the users to interact with it and/ or other users by opening up a whole new realm of possibilities in communications, Manipulation of images and exploration. Dick and

Burrill (2016) defined interactive technology as any technology that allows for a two-way flow of information through an interface between the user and the technology; the user usually communicates a request for data or action to the technology with the technology returning the requested data or result of the action back to the user. Broadcast technology skills encompasses the use of advanced video and digital television (DTV), digital radio broadcasting (DRB) and data casting services to be carried over terrestrial off-air channels, satellite, cable, multipoint distribution system and local multipoint communications system (LMCS). The services using off-air and serve satellite channels are intended for portable and fixed reception (Oduntan, 2013).

However, Onokpaunu, (2016) described business education as that aspect of general education that prepares students for employment and advancement in a broad range of office occupations, accounting professions, marketing occupation, teaching profession and entrepreneurship ventures. Business education prepares its recipients to acquire viable skills that will enable them fit into various business organizations or be self-employed in the absence of paid job (Oladunjoye, 2016). Thus, business education helps individual to acquire saleable skills that will enable him/her fit into various business organizations or be self-employed in the absence of paid employment. Lecturers in business education at colleges of education still depend on traditional or conventional teaching method, emphases have been on lectures and presentations with tutorials and learning activities designed to consolidate and rehearse the content (Onyesom, 2014). Teaching and learning of business education have gone beyond teacher-centered passing instructions to the learners without much participation of learners. For teacher to avoid this he/she needs to understand teaching competencies, skills, principles, techniques, methodologies and so on for effective and efficient teaching-learning process of business education.

Statement of the Problem

Attention is presently shifting to the new trends in teaching and learning process. This new trend has also affected business education teachers in colleges of education with the advent of new technologies. However, Okoli and Wagbara (2016) observed that many teachers possessed interactive and broadcast technology skills but do not utilized it for effective and efficient teaching and learning process of business education in colleges of education in Nigeria, since many business education teachers/lecturers possessed relevant new technology skills and knowledge that are appropriate in imparting the right skills that are needed to operate in present day highly automated business world. Some lecturers are not skilled in using new technologies in teaching the students. This is why such lecturers prefer to stick to the traditional methods of teaching.

Purpose of the Study

The main purpose of this study was to examine the utilization of interactive and broadcast technology skills by business education teachers for teaching in colleges of education. Specifically, the study examined the following:

1. The extent of utilization of interactive technology skills by business education teachers for teaching effectiveness in colleges of education.
2. The extent of utilization of broadcast technology skills by business education teachers for teaching effectiveness in colleges of education.

Research Questions

1. To what extent do business education teachers utilized interactive technology skills for teaching effectiveness in colleges of education?
2. To what extent do business education teachers utilized broadcast technology skills for teaching effectiveness in colleges of education?

Research Hypotheses

H_{01}. There is no significant difference between the mean responses of male and female business education teachers on the utilization of interactive technology skills for teaching in colleges of education.

H[02.] There is no significant difference in the mean responses of business education teachers on the utilization of broadcast technology skills for teaching in colleges of education based on their years of experience.

Methods

This study adopted descriptive survey research design with 71 sampled Business Education lecturers drawn from selected eight Colleges of Education in Kwara State. The sampled population was used for the study since the population was manageable. This is in line with the view of Ademiluyi and Okwuanaso (2013) that it is ideal to study the entire population wherever possible. The instrument used was the Utilization of Interactive and Broadcast Technology Skills by Business Education Teachers for Teaching Questionnaire (UIBTSBETTQ). The Questionnaire consisted of 20 items based on the purpose of the study and research questions. The instrument was validated by three senior lecturers. Cronbach Alpha method was used to determine the internal consistency of the instrument which yielded a reliability coefficient of 0.71. Each of the items was assigned four response options of Very High Extent (VHE-4 points), High Extent (HE-3 points), Low Extent (LE-2 points) and Very Low Extent (VLE-1 point). Mean and standard deviation were used to answered research questions. The two null hypotheses of the study were tested using independent samples t-test and One-way Analysis of Variance at 0.05 level of significance. For the test of null hypotheses one and two, if the observed probability value is equal to or less than the fixed value 0.05, the null hypotheses was rejected and if the observed probability value is greater than the fixed value 0.05, the null hypotheses was retained.

Results

Research Question One: To what extent do business education teachers utilized interactive technology skills for teaching effectiveness in colleges of education?

Table 1: Mean and Standard Deviation of Responses on the Extent to Which Business Education Teachers Utilized Interactive Technology Skills for Teaching Effectiveness in Colleges of Education

S/N	ITEMS	$\overline{\mathrm{X}}$	SD	Remark
1	Interactive white boards or electronic board for teaching	3.14	0.76	High Extent
2	Interactive forms on the web to create feedback or ask Questions	3.25	0.73	High Extent
3	Videoconferencing or internet phone chat (Skype, Team Speak, etc.)	3.08	0.68	High Extent
4	Interactive on -line survey tools (Survey Monkey, Zoomerang, etc.)	3.07	0.78	High Extent
5	Using student response systems (clickers, wireless learning calculator systems, etc.)	3.22	0.70	High Extent
6	Instant messaging/chat room for teaching content delivery	3.21	0.65	High Extent
7	Interactive multimedia and presentation application for Teaching	3.20	0.71	High Extent
8	Using simulations, or virtual worlds (Ayiti, EleMental, Second Life, Civilization, etc.)	3.44	0.65	High Extent
9	Using interactive collaborative editing software (Wikis, Google Docs, etc.)	3.15	0.70	High Extent
10	Using online student video projects (using YouTube, Google Video, etc.)	3.15	0.62	High Extent
	Weighted Mean	**3.20**	**0.70**	**High Extent**

Source: Field survey, 2022

Table 1 revealed that the respondents use interactive white boards or electronic board for teaching (mean = 3.14), use interactive forms on the web to create feedback or ask questions (mean = 3.25), use Videoconferencing or internet phone chat (mean = 3.08). Table five also showed that the respondents use Interactive on-line survey tools (mean = 3.07), use student response systems (mean = 3.22), use instant messaging/chat room for teaching content delivery (mean = 3.21) and use interactive multimedia and presentation application for Teaching (mean = 3.20), use simulations, or virtual worlds (mean = 3.44), use interactive collaborative editing software (mean = 3.15), use online student video projects (mean = 3.15). All the 10 items have their standard deviation ranged from 0.62 to 0. 78 which are below the fixed value of 1.96. This means that the responses of the respondents were not too wide spread, the responses are slightly clustered to the mean. On the overall, the data analysed in Table 1 revealed that business education teachers utilized interactive technology skills for teaching effectiveness in colleges of education to a high extent (mean = 3.20, SD = 0. 70

Research Question Two: To what extent do business education teachers utilized broadcast technology skills for teaching effectiveness in colleges of education?

Table 2: **Mean and Standard Deviation of Responses on the Extent to Which Business Education Teachers Utilized Broadcast Technology Skills for Teaching Effectiveness in Colleges of Education**

S/N	ITEMS	$\overline{X}$	SD	Remark
1	Creating live streaming audio and video files (webcasting) for teaching content	3.17	0.68	High Extent
2	Online digital audio and video files (podcasting or net casting)	3.39	0.75	High Extent
3	Using digital audio and video recorder for teaching	2.78	0.66	High Extent
4	Creating online student audio and video projects	3.06	0.73	High Extent
5	Creating online interactive audio and video instructions	3.07	0.72	High Extent
6	produce and edit digital audio (web and CD based) for teaching contents	3.45	0.60	High Extent
7	produce and edit digital video (web and CD based) for teaching contents	2.97	0.69	High Extent
8	Develop a school based digital radio broadcasting	3.48	0.50	High Extent
9	Using digital broadcasting to substitute for the teacher on a temporary basis	3.13	0.72	High Extent
10	Using digital broadcasting program for virtual conference and discussion forums	3.40	0.73	High Extent
Weighted Mean		**3.19**	**0.68**	**High Extent**

Source: Field survey, 2022

Table 2 revealed that the respondents creates live streaming audio and video files (webcasting) for teaching content (mean = 3.17), use online digital audio and video files (podcasting or net casting) (mean = 3.39), use digital audio and video recorder for teaching (mean = 2.78), creates online student audio and video projects (mean = 3.07), produce and edit digital audio for teaching contents (mean = 3.45),

produce and edit digital video for teaching contents (mean = 2.97), develop a school based digital radio broadcasting (mean = 3.48), use digital broadcasting to substitute for the teacher on a temporary basis (mean = 3.13), and use digital broadcasting program for virtual conference and discussion forums (mean = 3.40). All the 10 items have their standard deviation ranged from 0.60 to 0. 75 which are below the fixed value of 1.96. This means that the responses of the respondents were not too wide spread, the responses are slightly clustered to the mean. On the overall, the data

analysed in Table 2 revealed that business education teachers utilized broadcast technology skills for teaching effectiveness in colleges of education to a high extent (mean = 3.19, SD = 0.68).

Hypotheses
$H_{01.}$ There is no significant difference between the mean responses of male and female business education teachers on the utilization of interactive technology skills for teaching in colleges of education.

Table 3: Summary of T-Test of the Difference between the Mean Responses of Male and Female Business Education Teachers on the Utilization of Interactive Technology Skills for Teaching in Colleges of Education

Group	N	Mean	SD	t-cal	Df	p-value	Decision
Male	53	3.17	0.34				
				1.059	69	0.293	NS
Female	18	3.27	0.34				

Source: Field survey, 2022   P>0.05

The data in Table 3 revealed that there are 53 male teachers and 18 female teachers. The responses of male and female teachers indicated that interactive technologies were utilized by business education teachers (X = 3.17; SD = 0.34) and (= 3.27; SD = 0.34). Their responses are close to the mean as the standard deviations are very low. The table revealed that there was no significant difference between the mean ratings of business education teachers on the utilization of interactive technology skills for teaching in colleges of education (t_{69} = 1.059, P>0.05). Therefore, the null hypothesis that states that there is no significant difference between the mean

responses of male and female business education teachers on the utilization of interactive technology skills for teaching in colleges of education was not rejected. This implied that male and female teachers did not differ in their responses regarding the utilization of interactive technology skills for teaching in colleges of education.

$H_{02.}$ There is no significance difference in the mean responses of business education teachers on the utilization of broadcast technology skills for teaching in colleges of education based on their years of experience.

Table 4: Summary of One-Way Analysis of Variance of the Difference in the Mean Responses of Business Education Teachers on the Utilization of Broadcast Technology Skills for Teaching in Colleges of Education Based on Their Years of Experience.

Group	N	Mean	SD	f-cal	Df	p-value	Decision
	24	3.19	0.33				
6 – 10 years	10	3.13	0.33				
				0.166	3.67	0.919	NS
11 – 15 years	24	3.20	0.29				
16 and above	13	3.15	0.30				

Source: Field survey, 2022   P>0.05

The data presented in Table 4 revealed that there are 24 respondents with 1 – 5 years of experience, 10 with 6 – 10 years, 24 with 11 – 15 years, 13 respondents with 16 and above years of experience. The calculated value of F is 0.166 (F_{cal} = 0.166). Since the observed p-value is 0.919 which is greater than the fixed p-value of 0.05 (P>0.05), the null hypothesis which stated that there is no significance difference in the mean responses of business education teachers on the utilization of broadcast technology skills for teaching in colleges of education based on their years of experience was therefore not rejected ($F_{3.67}$ = 0.166; P>0.05). This implied that there was no significant difference in the mean responses of business education teachers on the utilization of broadcast technology skills for teaching in colleges of education based on their years of experience.

Discussion of Findings

Research question one: Sought to determine the extent to which business education teachers utilized interactive technology skills for teaching effectiveness in colleges of education. The study showed that business education teachers utilized interactive technology skills for teaching effectiveness in colleges of education to a high extent on the use of interactive white boards or electronic board, interactive forms on the web to create feedback or ask questions and videoconferencing or internet phone chat. The findings also showed that business education teachers utilized Interactive on-line survey tools, student response systems, instant messaging, interactive multimedia and presentation applications, simulations, or virtual worlds, interactive collaborative editing software, and online student video project to a high extent.

This finding is in line with Adeola (2017) who revealed that the last two decades witnessed a proliferation of interactive technology tools in the education landscape. The use of tools such as the interactive white board, web 2.0 technologies, individual response pads, interactive multimedia, interactive forms, on-line survey tools, collaborative editing software, instant messaging/chat room and multimedia projectors are becoming popular (Borup & Graham, 2013).

Research question two: Sought to determine the extent to which business education teachers utilized broadcast technology skills for teaching effectiveness in colleges of education. The study revealed that business education teachers utilized live streaming audio and video files for teaching content, use online digital audio and video files, use digital audio and video recorder for teaching, creates online student audio and video projects, produce and edit digital audio for teaching contents, produce and edit digital video for teaching contents, develop a school based digital radio broadcasting, use digital broadcasting to substitute for the teacher on a temporary basis, and use digital broadcasting program for virtual conference and discussion forums were revealed to be utilized to a high extent by business education teachers for teaching in colleges of education.

This finding is in agreement with that of Adakole and Lasisi (2017) argued that every teacher is expected to use broadcast technology skills to enhance teaching and learning of all subjects because they keep learners engaged during the lesson and make them active participants in the instructional process.

The null hypothesis one: (Ho_1) stated that there is no significant difference between the mean responses of male and female business education teachers on the utilization of interactive technology skills for teaching in colleges of education. The study further revealed that there was no significant difference between the mean responses of male and female business education teachers on the utilization of interactive technology skills for teaching in colleges of education (t_{69} = 1.059; P=0.293>0.05).

The null hypothesis two: (Ho_2) stated that there is no significance difference in the mean responses of experienced and less experienced business education teachers on the utilization of broadcast technology skills for teaching in colleges of education. The findings further revealed that there was no significant difference in the mean responses of business education teachers on the utilization of broadcast technology skills for teaching in colleges of education based on their years of experience ($F_{3.67}$ = 0.166; P=0.919>0.05).

Conclusion

Based on the findings of the study, it was concluded that the responsibility of the teachers in any circumstance is the education of the students; and if the students are to receive the best type of skills, then the teachers ought to possessed and utilize the best type of skills. This therefore implies that the need for the utilization of interactive and broadcast technology skills by teachers of business education for effective teaching is imperative and perhaps necessary for the realization of the objectives of business education programme. If in any case the teachers lacked the relevant skills to utilize interactive and broadcast technologies then the ingenuity, agility, competence and skills of business education teachers and students that are crucial to their success and competitiveness would be compromised. This clearly indicates that business education programme would be producing graduates who would not be able to function effectively in the 21st century world of work and who cannot contribute anything meaningful to the development of an economy driven by technological innovation.

Recommendations

Based on the findings and conclusion of the study, the following recommendations were made:
1. Colleges of education authorities should take the issue of teachers' development and re-training with all the seriousness it deserves by organizing workshops, seminars, conferences and in-service training for teachers of business education to acquire more interactive and broadcast technology skills.
2. Business education teachers should endeavor to be up to date on the interactive and broadcast technology skills needed and utilized same for teaching. Teachers who are still deficient in the identified interactive and broadcast technology skills should also make personal efforts to update themselves in order to be more effective and efficient in teaching.
3. Government should make provision for these new technology tools to colleges of education in term of subvention, grants and intervention.

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