



## **Application of Information and Communication Technology in teaching Business Education Courses in tertiary institutions in Rivers State**

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### **ABSTRACT**

This study investigated the application of Information and Communication Technology in teaching Business Education Courses in tertiary institutions in Rivers State. Two specific purposes, two research questions and two hypotheses were formulated to guide the study. The descriptive survey research design was adopted for the study. The population and sample of the study consisted of 137 Business Education lecturers from tertiary institutions that teach Business Education Courses in Rivers State. A structured questionnaire was used for the study. The instrument was subjected to face and content validity by three experts. Cronbach Alpha reliability test was conducted using Statistical Package for Social Science (SPSS, version 20.0) to test for the reliability of the instrument. This gave an average reliability index 0.93. The data collected were analyzed using mean and standard deviation to answer the research questions. The two null hypotheses were tested at 0.05 level of significance using independent t-test statistics and all computations were done using SPSS version 20.0. The findings revealed that Business Education lecturers in Federal tertiary institutions in Rivers State apply video conferencing and digital collaboration to a moderate extent. It was also discovered that Business Education lecturers in State tertiary institutions in Rivers State apply mobile technologies and internet in teaching Business Education courses to a moderate extent; while they apply video conferencing and digital collaboration to a high extent in teaching Business Education courses. Based on these findings, it was recommended among others that Business Education departments in Federal and State tertiary institutions in Rivers State should form synergy with ICT centres to enable them train and retrain the trainers in the use of ICT tools such as video conferencing, and digital collaboration.

### **Introduction**

Business Education plays a vital role in the economic and industrial development of the nation. It is that arm of the educational sector that provides the needed man power with requisite skills, attitude and knowledge for the sustenance of economic growth of a nation. According to Auwal, in Ukata, Adejola and Okoye, (2018), Business Education can be seen as the process of training that enables the learner to acquire skills that will enhance his ability to fit into the world place of work. The content of Business Education programme is all encompassing. Courses in Business Education are gotten from fields such as Business Management, Secretarial Administration (Information and Communication Technology or Information Management System), Accountancy Education, Business Administration, Education Psychology, Business Law, Sociology and Philosophy of Education, Management and Marketing to mention but a few (Ukata, Adejola & Okoye, 2018). Some major objectives of Business Education are:

- i. To provide training on successful financial management of business.
- ii. To provide specialized training on various aspects of business.
- iii. To build cultural and ethical foundation for the development of needed attitudes, skills and knowledge required in the business world.
- iv. To develop a mature understanding of the nature of the business environment.
- v. To provide training on leadership skills in business.

Business Education courses are studied globally in almost every institution of higher learning. American Vocational Association (AVA) in Onasoga (2011), described Business Education as a programme of instruction which consists of two parts; namely;

1. Office education, a vocational education programme for office careers, through initial, and upgrading education leading to employability and advancement in office occupations; and
2. General Business Education, a programme to provide students with information and competencies which are needed by all in managing personal business affairs and in using the services of the business world.

Business Education is an educational programme which is designed to prepare students for advancement in life as well as handle their personal business affairs and function as intelligent consumers and citizens. Business Education creates and ushers into the society, individuals who are useful as employees or entrepreneurs. It is focused on job creation and entrepreneurship development. The general aim of Business Education is to

provide students with saleable skills and competencies that are needed to improve the productive capacity of citizens and produce better consumers of goods and services (Onasoga, 2011).

Abdulkarim (2019) noted that Business Education is designed to turn out the right caliber of manpower with the requisite competencies for contributing to the production process in today's digital economy. Consequently, it will be disheartening if graduates who have gone through Business Education courses are found wanting in the world of work especially with regard to the application of ICT tools which have permeated the business world.

Application means the action of putting something into operation. Necessary Information and Communication Technology tools that should be applied in the teaching and learning of Business Education courses in tertiary institutions of learning include all communication device or application that encompasses radio, television, cellular phones, computer and network hardware and software, multi-media online technologies, digital collaboration tools, as well as the various services and applications associated with them such as video conferencing and self learning packages, to mention but a few.

Traditionally, teaching is seen as the process of making an impression on passive learners. The teacher hammers into the empty heads of learners and impacts knowledge, skills and values. The teacher is the receptacle or more or less, a reservoir of knowledge and the learner is seen as devoid of all knowledge (tabular rasa), the learner has no need to question but receive whatever is offered to him by the teacher.

However, teaching has gone beyond this in modern times. Teaching today focuses on the process of helping learners to acquire knowledge, skill and attitude capable of changing their behaviour towards societal issues or they can apply in repositioning themselves and their immediate environment (Porter, 2019). This means that rather than the teacher assuming the role of a repository of knowledge 'Mr know it all', teachers in the present day are required to engage their students in the process of developing knowledge, skills and attitude that would make them self-reliant when it comes to problem solving and decision making. Teaching helps individuals to learn how to learn, so that they can easily ascertain how and where to obtain needed information when the need arises. Therefore, teaching develops in the learner the habit of enquiry and being a life-long learner. The teacher serves as a catalyst that makes students desire to learn. Consequently, teaching is a two-way communication process which consists of setting the stage for interaction between the teacher and the learner so as to effect learning (Abdulkarim, 2010).

The emergence of Information and Communication Technology since the twentieth century has brought about noticeable growth in the economy of every nation. The increase in knowledge based industries and the dearth of skilled workers highlights to schools the importance of creating individuals who are capable of entering and participating in the presently dynamic and flexible world of work (Jardine, 2012). The nature with which technologies have enabled businesses, governments and schools to be flexible and increase productivity drives the integration of Information Communication Technology tools in the everyday operations of established entities. This is why many small, medium and large scale businesses placed significant premium on the need to be on networked information systems and prefers personnel who can help them drive such systems to achieve their predetermined objectives (Andrea, 2011). It also indicates that in a rapidly connecting world, the education of students, who are expected to fit into these businesses should be technology inclined.

Information and Communication Technologies is used to perform the functions of storing, retrieving, processing, transferring and receiving information (Ajisafe, 2004). The introduction of Information and Communication Technology tools in teaching Business Education courses, no doubt, will improve the efficiency and effectiveness of Business Education, and this, in turn will change the pedagogical delivery. Omolade in ProjectClue (n.d), opines that there are three methods that can be used in teaching Business Education which are, formal, non-formal and informal education. Akinpelu, Adewale and Otunia in ProjectClue (n.d) also added that Information and Communication Technology tools such as computers, teleconferencing, video conferencing, electronic mail, internet, digital collaboration tools and others can be applied in the use of the three methods of teaching Business Education.

Information and Communication Technology tools when applied in teaching Business Education courses will be advantageous to lecturers, students and other stakeholders in Business Education in the following ways:

- (i) Enhance the development of standard through the development of curriculum design and innovation. This will ensure that appropriate human and material instructional aids are put in place for effective teaching and learning.
- (ii) Assist lecturers to be involved in an interactive teaching and learning process which will facilitate the acquisition of ICT skills which are relevant in social life and the world of work.
- (iii) Provide access to information with the use of new technologies which will motivate the spirit of professionalism in Business Education.
- (iv) Increase motivation of teachers and students for in-depth research for knowledge in Business Education, Information and Communication Technologies and General Education.

The areas where Information and Communication Technology tools can be applied in teaching Business Education courses according to Umoru and Nnaji (2015) include: Computer Assisted Learning (CAL), Computer Aided Instruction (CAI), Computer Managed Learning (CML), Computer Assisted Testing (CAT), Computer Aided Design (CAD), Drills and Practice, Simulation etc. Ordu and Abdulkarim (2020) also noted that the integration of ICT tools in teaching Business Education courses can be ensured through computer-based instruction, computer-assisted instruction, web-based learning, distance education, online instruction, multimedia instruction, networked learning and electronic learning. Other areas where ICT is applied in Business Education include computerization of the students' record, library automation, teaching office automation using the model office and driving Business Education research activities are not also left out of the list.

It is important from the foregoing discourse to note that ICT tools application in teaching Business Education plays a dual role, the first being to equip the students with the ability to use standard software programs that are found in the workplace for the purpose of learning business routine activities such as documentation, financial records keeping, electronic marketing, virtual management and so on. The second is to help those saddled with the responsibility of facilitating learning and examining learning to improve on their productivity. Consequently, applying ICT in teaching and learning Business Education would enable students to learn how to input, review, design and present information in a productive and

efficient manner using both predesigned and self designed formats. This is achieved through learning of Business Education courses involving the use of computer software and other hardware such as, micro soft office, CorelDraw, smart board, search engines, goggle, blogs, Podcasts, social networks tools and multimedia projectors to compose business document, store, present and publish them online where necessary and so on.

The application of multimedia tools in education enhances knowledge sharing process and influences creative thinking in individuals. CAL provides both visual (character / graphic) display, and audio (sound) via a set of speakers. This system facilitates the work of lecturers by allowing students learn at their own pace without stress (Osuala in Onasoga, 2011).

This implies that:

- i. Video sessions can be recorded for students to watch in their own time before undertaking corresponding tasks during school hours with the teacher.
- ii. There is more space for individual and group studies in learning resource centres, on-line data base, etc.

Business Education courses such as marketing, Accounting, Business Law, Office Technologies etc can be taught through the application of multimedia tools.

Other areas where Information and Communication Technology tools can be applied for teaching Business Education courses are:

- i. The internet which is basically, for communication and information, enables students acquire the latest know-how on assigned topics. A lecturer can easily inform students to research on particular topics from the internet and make notes on them.
- ii. Digital collaboration tools which support student collaboration and provides interactive experiences between lecturers and students.
- iii. Mobile technologies such as the iphone, laptop, smart phones etc can be used to connect to lecturers and other learners around the globe. This increases positively, interactions, discussion and perspective.

Morrison and Congress in Onasoga (2011), observed that proposals for ICT to be applied in education are so varied that it is no longer an exaggeration to presume that there are ways of applying ICT tools in teaching and learning of every subject / course. The need for application of ICT tools for teaching Business Education courses cannot be over emphasized. It creates, facilitates, and delivers learning at any time and place, in an affordable environment. It makes learning easy and flexible. It is learner centred. Teaching and learning materials can be customized to meet the needs of the learner. It also saves the time and energy of the teacher in demonstrating difficult concepts, theories and principles. ICT tools are in no way affected by noise but encourage information verification. It discourages confusion and lack of assimilation faced by most students of tertiary institutions as a result of over filled classrooms. Information and Communication Technology tools when applied in teaching help teachers obtain adequate and accurate feedback from learners. This makes the lecturer active in a bid to prepare the next instruction for students.

The application of ICT tools for teaching Business Education Courses help students to be independent learners, develops critical thinking and problem solving abilities. In addition to the benefits above, Oladunjoye and Morrison in Onasoga (2011) agreed that a reasonable number of Business Education graduates are most likely to find employment in technologically adaptive organizations that are designed to operate in speed and efficiently produce and distribute products and services to consumers.

In spite of all the benefits accrued to the application of ICT tools for teaching, the researcher are of the opinion, that ICT tools may not be adequately applied for teaching Business Education courses in tertiary institutions in Rivers State. This is because according to Suryani (2010) the following difficulties may hinder the above listed benefits.

- A. Technological Difficulties: These may be due to lack of computer facilities. It could also be that even if the institutions have updated some of the available ones may lack maintenance.
- B. Lecturers' Refusal: Lecturers may be afraid of being embarrassed because they do not know how to operate the available ICT tools and so may want to maintain the status quo of traditional pedagogy and this may influence junior ones who are more knowledgeable in the area.
- C. Financial Difficulties: A lot of public institutions receive poor funding from governments. These schools are not able to buy and maintain ICT tools.
- D. Students Refusal: They may not have ICT tools at home. They may find it difficult to access these tools at school. They may also feel that there is no need for them to be able to operate the ICT tools.
- E. School Organizational Issues: Most school teachers may prefer traditional pedagogy. Most technologists may not want to share their knowledge with the lecturers. Most schools feel it is okay if they do not have ICT tools.

In the light of the foregoing difficulties, the researchers are concerned if ICT tools are applied in teaching Business Education courses in tertiary institutions in Rivers State based on the fact that most of these enumerated difficulties are visible in the institutions offering the programme. Nevertheless, the application of modern Information and Communication Technology in Business Education cannot be underestimated because there are evidences of it promoting effectiveness and efficient business operations for which students of this programme are trained (Project Writers, 2015). It is for this reason that Ubulom and Ogwunte (2017) described Business Education as that aspect of vocational educational programme designed to provide individuals with the requisite practical business and vocational attitudes, understanding, knowledge, skills and values that will enable them function effectively in the world of work and be self reliant. Therefore, a study on the application of ICT tools in teaching Business Education courses would be of significance to both lecturers and students of tertiary institutions in Rivers State, especially as it would create awareness of the state of ICT tools that is being applied in teaching Business Education courses.

Research works have been carried out on benefits of utilizing Information and Communication Technologies in teaching and learning (Suryani, 2010; Yushaua & Nannim, 2018; Ratheeswari, 2018). For instance, Onasoga (2011) carried out a study titled, "Availability and Utilization of Information and Communication Technology (ICT) resources in teaching". Also, Ogundele and Lawal (2016) carried out another study on, "Influence of New Technologies on the teaching of Business Education courses". However, despite the works done by these researchers, it is important to note that not much has been done in the area of application of Information and Communication Technology tools in relation to teaching Business Education courses in tertiary institutions in Rivers State. Thus, the need to empirically investigate the application of ICT tools in

teaching Business Education courses in tertiary institutions in Rivers State cannot be over emphasized if the existing gap in literature must be filled. It is this need that inspires the current study with the hope that the findings would create awareness and stimulate the desire to revolutionize Business Educators' way of thinking, teaching and working in the present dispensation of globalization facilitated by digitalized operations and connectivity.

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### Statement of the Problem

In recent times, Information and Communication Technology has provided educators with tools that can be utilized to enhance and complement their traditional approaches to teaching and learning as well as collaboration globally. It is for this reasons that the United Nation Education, Scientific and Cultural Organization (UNESCO) set standard for modern technologies to be integrated in all facets of tertiary education (Onasoga, 2011). Thus, every educational system both within developed and developing economies is expected to strive to ensure the integration of modern technologies in teaching and learning that complies with their local context. Business Education as one of the educational programmes offered at the tertiary institutions in Nigeria is not left out in this regard, especially as a programme designed to prepare its recipients for the 21<sup>st</sup> century digital business world.

In view of the foregoing, it is expected that a basic requirement in teaching Business Education courses in this 21<sup>st</sup> Century is the ability of the teacher to apply digital technologies in preparing learners to be able to participate in a net-worked, knowledge based economy. Teaching Business Education is a deliberate effort to facilitate the acquisition of skills, attitude and knowledge. However, if where teachers lack the skills of applying basic Information and Communication Technology tools such as video conferencing, the internet, digital collaboration, multi-media online technologies as well as computer based technologies which are essential requirements for Business Education model office, it may pose serious challenge to their application in teaching and learning. Project Writers (2015) opined that the teaching and learning process in Business Education in Nigeria tertiary institutions is still at its crudest form. According to the authors, students still rely on acquiring knowledge via textbook and lecturers' class verbalization of knowledge and skills. The traditional method of teaching where the teacher acts as a repertoire or custodian of knowledge still exists. In addition, the situation where students copy what is being taught by the lecturer and are then expected to vomit such verbatim during examination is still at play. This has led to a huge amount of failure in examinations because students are not well grounded in that area. This has also resulted in graduates of Business Education being unemployed after schooling for the fact that they cannot effectively fit into the world of work and business, which is presently technologically driven.

In the light of the above, the researchers are inspired to investigate the extent of application of Information and Communication Technology in teaching Business Education courses in tertiary institutions in Rivers State.

### Purpose of the Study

The main purpose of this study was to examine the extent of application of Information and Communication Technology in teaching Business Education Courses in tertiary institutions in Rivers State. Specifically, the study seeks to:

1. Determine the extent of application of video conferencing in teaching Business Education courses in Federal and State tertiary institutions in Rivers State.
2. Determine the extent of application of digital collaboration teaching Business Education courses in Federal and State tertiary institutions in Rivers State.

### Research Questions

The following research questions would guide the study:

1. To what extent is video conferencing applied in the teaching of Business Education courses in Federal and State tertiary institutions in Rivers State?
2. To what extent is digital collaboration applied in the teaching of Business Education courses in Federal and State tertiary institutions in Rivers State?

### Hypotheses

The following null hypotheses formulated would be tested at 0.05 level of significance

- i. There is no significant difference in the mean response of Business Education lecturers in Federal tertiary institutions and State tertiary institutions on the extent to which video conferencing is applied in teaching Business Education courses in Rivers State.
- ii. There is no significant difference in the mean response of Business Education lecturers in Federal tertiary institutions and State tertiary institutions on the extent to which digital collaboration is applied in teaching Business Education courses in Rivers State.

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### Methodology

The descriptive survey research design was adopted for the study and the population of the study consisted of all the 142 lecturers of the Department of Business Education in the four tertiary institutions in Rivers State that teach Business Education courses which includes Rivers State University (19), Ignatius Ajuru University (54), University of Port Harcourt (32) and Federal College of Education Technical Omoku (37), the entire population was used as a sample because the population is small of a manageable size.

The researchers designed an instrument titled "Application of Information and Communication Technology for Teaching Business Education Courses Questionnaire (AICTTBECQ)". The Instrument was divided into two sections (A & B). Section A deal with the types of institutions of the respondents, while section B deals with data related to each of the research questions raised. The questions posed for the study guided the construction of the questionnaire which was structured as very high extent (VHE) = 4 Points, High Extent (HE) = 3 Points, Moderate Extent (ME)

= 2 Points and Low Extent (LE) = 1 Point. The instrument was subjected to face and content validation by two experts in the Department of Business Education and One expert in Measurement and Evaluation all in Faculty of Education, Rivers State University Port Harcourt. To determine reliability of the instrument, copies of the instrument were administered to a sample of 30 Business Education lecturers in Federal University Otuoke that were not part of the study. Cronbach alpha reliability test was used to analyze the data. The computation gave reliability indexes of 0.90, 0.88, for the two clusters in the instrument. This gave the average reliability index of 0.93. The instrument was administered personally to the respondents by the researcher and three other research assistants. A total of 140 copies of the instruments were administered and retrieved on the spot. Data collected were analyzed using mean and deviation statistics, while z-test was used to test the hypotheses at 0.05 level of significance.

In terms of taking decision, mean score of 3.50 – 4.00 was accepted as VHE, mean score of 2.50 - 3.49 was accepted as a HE, mean score of 1.5 - 2.49 was accepted as ME, mean score of 2.50-4.49 was accepted as ME, while any mean below 1.50 – 2.49 was regarded as the LE, and mean score of 1.00 – 1.49 was accepted as VLE. Also, the decision for the hypotheses is when the calculated z-value is less than the critical value of +1.96, the null hypotheses is accepted and rejected when the calculated z-value was greater than the critical z-value of +1.96

## Results

**Research Question 1:** To what extent is video conferencing applied in teaching Business Education courses in Federal and State tertiary institutions in Rivers State?

**Table 4.1: Summary of Mean and Standard Deviation on Video Conferencing Applied in Teaching Business Education Courses in Tertiary Institutions in Rivers State.**

N/S	Sensing technologies items	Federal (n = 64)			State (n = 63)		
		Mean	SD	Decision	Mean	SD	Decision
1	Apply Google hangout for interactive sections with students in Business education	2.15	1.18	ME	3.47	1.07	HE
2	Utilizes Skype to connect to students for the purpose of instruction	1.85	1.04	ME	2.70	0.68	HE
3	Have several zoom meetings with students for the purpose of teaching courses	2.19	1.10	ME	3.69	0.66	VHE
4	Utilizes Adobe Connect to deliver instructions to students	1.89	1.02	ME	1.92	0.48	ME
5	Uses shared screen in collaborating technology to teach Business education courses	2.64	1.07	HE	3.52	0.99	VHE
6	Uses Moodle to delivery course materials to students	2.21	0.99	ME	2.66	0.67	HE
<b>Grand mean</b>		<b>2.15</b>	<b>1.01</b>	<b>ME</b>	<b>2.99</b>	<b>0.76</b>	<b>HE</b>

Source: Field Survey, 2021

Table 1 reveals that the respondents from Federal tertiary institutions in Rivers State are of the opinion that to a high extent they use shared screen in collaborating technology in teaching Business Education courses with mean score of 2.64 and standard deviation of 1.07. The respondents from Federal tertiary institutions also opined that to a moderate extent they apply Google hangout for interactive sections with students in Business education, utilize Skype to connect to students for the purpose of instruction, have several zoom meetings with students for the purpose of teaching Business Education courses.

**Research Question 2:** To what extent is digital collaboration applied in teaching Business Education courses in Federal and State tertiary institutions in Rivers State?

**Table 2: Summary of Mean and Standard Deviation on Digital Collaboration Applied in Teaching Business Education Courses in Tertiary Institutions in Rivers State.**

N/S	Sensing technologies items	Federal (n = 64)			State (n = 63)		
		Mean	SD	Decision	Mean	SD	Decision
1	Uses Skype to collaborate in teaching Business Education	2.02	0.97	ME	2.66	0.70	HE
2	Refers students to connect to Google Drive and collaborate during instruction	2.30	1.04	ME	2.70	0.66	HE
3	Utilize zoom meetings to collaborate in teaching Business Education courses	2.23	1.05	ME	2.88	0.58	HE
4	Applies flip Grid technology to enhance instructions in Business education	1.92	1.00	ME	3.41	1.08	HE
5	Uploads YouTube video ant for students to download as part of instructions in Business Education courses	2.28	1.15	ME	3.44	1.04	HE
6	Utilizes Google Apps to create digital contents for teaching Business Education courses	2.26	1.09	ME	2.91	0.68	HE
<b>Grand mean</b>		<b>2.17</b>	<b>1.05</b>	<b>ME</b>	<b>3.00</b>	<b>0.79</b>	<b>HE</b>

Source: Field Survey, 2021

Table 2 shows that the respondents from Federal tertiary institutions opined that to a moderate extent they use Skype to collaborate in teaching Business Education courses, refer students to connect to Google Drive and collaborate during instruction, utilize zoom meetings to collaborate in teaching Business Education courses, apply flip Grid technology to enhance instructions in Business education, uploads.

The results related to this specific purpose revealed that Business Education lecturers in Federal tertiary institutions in Rivers State to a moderate extent apply video conferencing in teaching

Business Education courses, while their counterparts from State tertiary institutions in Rivers State to a high extent apply video conferencing in teaching Business Education courses. The results of test of hypothesis relating to this specific purpose also show that there is significant difference in the mean response of Business Education lecturers in Federal tertiary institutions and State tertiary institutions on the extent to which video conferencing is applied in teaching Business Education course in Rivers State. These results emanated from the fact that respondents from Federal tertiary institutions opined that to a moderate extent they apply Google hangout for interactive sections with students Skype to connect to students for the purpose of instruction, zoom meetings with students for the purpose of teaching courses, utilize Adobe Connect to deliver instructions to students in Business Education and use Moodle to delivery course materials to students; while their counterparts from State tertiary institutions in Rivers State opined that to a very high extent they have several zoom meetings with students for the purpose of teaching courses, blackboard collaborating technology to teach, Google hangout for interactive sections, Skype to connect to students for the purpose of instruction and Moodle to delivery course materials to students of Business Education. These showed clearly the difference in the mean responses of Business Education lecturers from the federal and state tertiary institutions on the application of video conferencing in teaching Business Education courses. These findings are supported by the discovery of Paderanga (2013) who noted that video conferencing is applied in teaching and learning as a medium of instruction.

**Hypothesis 1:** There is no significant difference in the mean response of Business Education lecturers in Federal tertiary institutions and State tertiary institutions on the extent to which video conferencing is applied in teaching Business Education course in Rivers State.

**Table 3: Summary of Independent t-test on the Difference in the Mean Response of Business Education Lecturers in Federal tertiary Institutions and State Tertiary Institutions in Rivers State on Video Conferencing.**

Variable	N	Mean	Std. Deviation	Df	t-cal	t-crit	Decision
Federal	64	2.15	1.01	135	0.74	-6.13	0.000
State	63	2.99	0.76				

Table 4.7 shows  $t = -6.13$ ,  $df = 145$ ,  $p < 0.05$  at 0.000. Therefore, since p value calculated at 2-tailed test of 0.000 is less than the p-value provided at 0.05, the null hypothesis is rejected. Therefore, it means that there is significant difference in the mean response of Business Education lecturers in Federal tertiary institutions and State tertiary institutions on the extent to which video conferencing is applied in teaching Business Education courses in Rivers State.

**Hypothesis 2:** There is no significant difference in the mean response of Business Education lecturers in Federal tertiary institutions and State tertiary institutions on the extent to which digital collaboration is applied in teaching Business Education courses in Rivers State.

**Table 4: Summary of Independent t-test on the Difference in the Mean Response of Business Education Lecturers in Federal Tertiary Institutions and State Tertiary Institutions in Rivers State on Digital Collaboration.**

Variable	N	Mean	Std. Deviation	Df	Std Error	t	Sign for 2 tailed p-value
Federal	64	2.17	1.05	135	0.72	-6.23	0.000
State	63	3.00	0.79				

Table 3 shows  $t = -6.23$ ,  $df = 135$ ,  $p < 0.05$  at 0.000. Therefore, since p value calculated at 2-tailed test of 0.000 is less than the p-value provided at 0.05, the null hypothesis is rejected. Therefore, it means that there is significant difference in the mean response of Business Education lecturers in Federal tertiary institutions and State tertiary institutions on the extent to which digital collaboration is applied in teaching Business Education courses in Rivers State.

## Discussion

The results relating this specific purpose showed that digital collaboration to a moderate extent is applied in the teaching of Business Education courses in Federal tertiary institutions; while in State tertiary institutions, they apply same technologies to high extent in Rivers State. The results of test of hypothesis relating to this specific purpose show that there is significant difference in the mean response of Business Education lecturers in Federal tertiary institutions and State tertiary institutions on the extent to which digital collaboration is applied in the teaching of Business Education courses in Rivers State. These results emanated from the fact that Business Education lecturers in Federal tertiary institutions opined that to a moderate extent they use Skype to collaborate in teaching Business Education, refer students to connect to Google Drive and collaborate during instruction, utilize zoom meetings to collaborate in teaching Business Education courses, apply flip grid technology to enhance instructions in Business education, uploads YouTube video ant for students to download as part of instructions in Business Education courses, and utilize Google Apps to create digital contents for teaching Business Education courses; while their counterparts in State tertiary institutions opined that to a high extent they use Skype to collaborate in teaching Business Education, refer students to connect to Google Drive and collaborate during instruction, utilize zoom meetings to collaborate in teaching Business Education courses, apply flipgrid technology to enhance instructions in Business education, uploads YouTube video ant for students to download as part of instructions in Business Education courses, and utilize Google Apps to create digital contents for teaching Business Education courses. These findings are supported by the assertion of Harris (2019) that as we live in a digital age, digital collaboration are used to ensure students regularly shuffle between learning apps and social communication platforms to learn what is being taught. The findings also corroborate the explanation of Shultis (2020) who explained that digital collaboration is fast gaining acceptance and used in business courses to facilitate team work through online platforms, also Aiim (2021) reported that collaborative technologies are highly utilized by educators to connect and establish work relationship while working together to achieve a common purpose.

## Conclusion

Based on the findings of the study, the researcher concluded that lecturers in Federal and State Tertiary Institutions apply video conferencing, digital collaboration as information and communication technology for teaching and learning of Business Education.

## Recommendations

Based on the findings of this study and the conclusions drawn, the following recommendations are put forward for implementation:

- i. Business Education lecturers in Federal tertiary institutions in Rivers State should be train and retrained by their employers in order to boost their confidence in the application of ICT tools such as video conferencing, digital collaboration, mobile technologies, multimedia technologies, internet and Computer Based Technology.
- ii. Management and tertiary institutions should organize workshops for business education lecturers in order to acquire basic knowledge and skills that would enable them apply video conferencing, digital collaboration, mobile technologies, multimedia technologies, internet and Computer Based Technology.

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