

## INFLUENCE OF UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) ON ACADEMIC PERFORMANCE OF STUDENTS IN BUSINESS EDUCATION PROGRAMME

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### Abstract

Information and Communication Technology encompasses a broad range of technologies and tools used to manage, store, transmit, and exchange information electronically. ICT includes both hardware (such as computers, smartphones, and servers) and software (applications and programs) as well as various communication technologies (like the internet, email, and social media platforms). The study uncovers the role of ICT in fostering self-directed learning, collaborative endeavors, and real-world relevance within the Business Education curriculum. To guide the researcher in carrying out this study, four research questions were raised and in a bid to answer the research questions, the descriptive survey research design was used. The population of the study comprised one hundred (100) 400 level business education students in the 2021/2022 Academic Session. A sample size of sixty respondents was used for the study, simple random sampling technique was used to select respondents. The research instrument used to collect data for the study was a structured questionnaire. The instrument was subjected to face validity and to determine the internal consistency of the instrument, a reliability test using Cronbach alpha method and the reliability coefficient of 0.75 was obtained. The study finds out that there is a significant positive correlation between ICT (Interactive Digital Whiteboards, Internet, Telephony and Recorded Broadcasting Technology) utilization and academic performance among Business Education students. Based on the findings it was concluded that Information and Communication Technology has a high influence on the academic performance of Business Education students. It was therefore recommended that ICT usage should be encouraged in business education programme.

**Keywords: Business Education, Academic Performance, Information and Communication Technology**

### Introduction

Business education is a branch of education that involves teaching the skills and operations of the business industry. Business education programmes are housed in the Department of Vocational and Technical Education, Faculty of Education, in some other institutions they are housed in the Faculty of Vocational and Technical Education and while in some other universities stands on own, this structure of domiciliation reflects the eclectic nature of business education. According to Njoku in Chukwuemeke and Igbinedion (2021), the objectives of business education are to empower business education students with suitable knowledge, values and skills to be able to perform particular functions in order to be self-reliant; to contribute optimally to the social and economic development of the nation; and for them to be appreciative of the world around them. If information and technology communication is embedded in business education

programme, it will enhance the achievement of the objectives that would promote the nation's economic growth and recipients' wellbeing. Well-being is a state of being healthy, happy or prosperous. It can also be seen as a state of doing well. In relationship to this study it is a state of being motivated. Business education students can be motivated to achieve the objectives of business education programme thereby enhancing their academic performance through information technology communication (ICT)

ICT plays an essential role in the Business Education programme. For students setting out on their educational journey, ICT can be a fundamental component of the learning experience. With the effective use of technology in classrooms, allied with more conventional teaching process, there's no limit to the positive development of young minds, whether that is in the guises of academic achievement and improved learning outcomes, enhanced creative thinking or the development of skills that will prove vital later in life, it helps to ensure a more efficient, effective learning. The lack of access to ICT resources (computers, internet, connection and many more) can potentially hamper the kind of education learners receive, with implications to their performance. A student with more access to computer and technologies due to the economic background of parent (guardian) tends to perform better in their academic than a student who has never been exposed to the use of these ICT gadgets.

Utilization means the ability to use something for practical purpose or the act of putting things or resources that are tangible or intangible to proper use. According to Okolocha & Nwadiani (2015), utilization of ICT in education refers to the use of computer based communication that is incorporated into instructional processes. When properly utilized, ICT can facilitate instructional advancements and reforms in business education programme. The use of ICT in business seems to make business education students well-grounded in technology thereby leading to their well-being and academic performance.

Academic performance refers to the measurement of the learning level achieved by students and is considered a key indicator of the effectiveness of educational institutions. Academic performance can be influenced by various factors including social, psychological, educational, economic, family, personal and institutional factor. In the study, the focus is on the institutional factor. The utilization of ICT by institutions may influence the academic performance of business education students.

When Business Education students do not acquire the necessary skills required for their development with the aid of ICT, it may result to poor academic performance of the said students. This will also affect them in the long run when they leave the four walls of the classroom. Having access to ICT in universities expose and prepare students of higher institution to real life work situation to be met after graduation outside the regular class room environment and experience. It serves as a smooth transition from the classroom to the world of work and further helps in the application of knowledge gained. Hence the study seeks to find out the role of Information and Communication Technology on business education students academic performance and four research questions were posited

1. To what extent do interactive digital whiteboards influence business education students' academic performance
2. To what extent do internets influence business education students' academic performance
3. To what extent do telephony influence business education students' academic performance
4. To what extent do recorded broadcasting technologies influence business education students' academic performance

## Information and Communication Technologies (ICT)

According to Bagne and Ross (2021), Information and Communication Technologies (ICT) is defined as the digital processing and utilization of information by the use of electronic computers. It comprises the storage, retrieval, conversion and transmission of information. It is a diverse set of technological tools and resources used to transmit, store, create, share or exchange information. These technological tools and resources include computers, the internet (websites, blogs and emails), live broadcasting technologies (radio, television and webcasting), recorded broadcasting technologies (podcasting, audio and video players, and storage devices) and telephony (fixed or mobile, satellite, video-conferencing, and so on.). Information and communications technology (ICT) is an extensional term for information technology (IT) that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals) and computers, as well as necessary enterprise software, middleware, storage and audiovisual, that enable users to access, store, transmit, understand and manipulate information. ICT is also used to refer to the convergence of audiovisuals and telephone networks with computer networks through a single cabling or link system. There are large economic incentives to merge the telephone networks with the computer network system using a single unified system of cabling, signal distribution, and management.

ICT is an umbrella term that includes any communication device, encompassing radio, television, cell phones, computer and network hardware, satellite systems and so on, as well as the various services and appliances with them such as video conferencing and distance learning. ICT also includes analog technology, such as paper communication, and any mode that transmits communication. ICT is a broad subject and the concepts are evolving. It covers any product that will store, retrieve, manipulate, transmit, or receive information electronically in a digital form (e.g., personal computers including smartphones, digital television, email, or robots). According to Owie and Igbinedion ICT has practically permeated every sphere of human endeavor and has relevance and applicability in such diverse areas as security, business settings, industrial environment and so on. Thus it has become imperative that people from all walks of life acquire some level of knowledge in the use and application of ICT. (Brown, Dehoney and Millichap 2020; Guri- Rosenblet, 2020; Dringues, 2020; Hrastinski, 2018; Kim and Bonk 2021).

ICTs are making dynamic changes in society. They are influencing all aspects of life. The influences are felt more and more at schools. According to Yesilyurt, Bastunk, Yesilyurt and Kara (2014) ICTs provide both students and teachers with more opportunities in adapting learning and teaching to individual needs. Information and Communications Technology (ICT) may influence student learning when teachers are digitally literate and understand how to integrate it into curriculum. When teachers are digitally literate and trained to use ICT, these approaches may lead to higher order thinking skills, provide creative and individualized options for students to express their understandings, and leave students better prepared to deal with ongoing technological changes in society and the workplace. (Coates, 2017; Koohang, Riley, Smith & Schrears 2019; Simens & Conole, 2019; Smith & Kurthen, 2017; Twigg, 2020, and Yusuf 2019). There are different types of ICT which can influence business education students' academic performance. However, this paper will be focusing on interactive digital whiteboard, internet, telephony and recorded broadcasting.

### Interactive digital whiteboard

The interactive digital whiteboard, also known as a smart board, is an interactive display in the format of a whiteboard that reacts to user input either directly or through other devices. It allows users to project files and manipulate them on a board's surface. An interactive whiteboard will only function when a computer, projector and LCD display are present. A whiteboard will display whatever is shown on a user's computer screen. When connected to a computer, the interactive whiteboard transforms into a large-scale, touch-sensitive version of a user's screen. The user can control the screen by touching it with a special pen or with a hand, rather than a mouse. It functions as an input device for your computer, enabling one to work in any application on the connected computer. Interactive digital whiteboards promote active participation and engagement in the learning process. It allows students to interact directly with the content displayed on the board, enabling them to manipulate objects, write, draw, or annotate. This hands-on approach stimulates

their involvement, increases motivation, and fosters a sense of ownership over their learning. It facilitates the integration of multimedia elements into lessons. Teachers can display images, videos, interactive simulations, and educational software directly on the board, making abstract concepts more tangible and engaging. Visual representations can enhance comprehension, improve retention, and cater to different learning styles.

### **Internet**

Internet which stands for Interconnected Network is a network system that connects millions of web servers. A global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols. It is a network of networks in which users at any one computer can if they have permission get information from any other computer (and sometimes talk directly to users at other computers). The internet provides instant access to a vast amount of information and educational resources. Students can conduct research, access digital libraries, online databases, and academic journals, allowing them to gather diverse perspectives and in-depth knowledge on various topics. This access to information enhances students' understanding, supports their learning, and encourages critical thinking.

### **Recorded broadcasting technologies**

Recorded broadcasting technologies such as radio, podcast and so on refer to various methods and systems used to capture, store, and transmit audio and visual content for broadcasting purposes. Recorded broadcasting technologies such as radio and podcasts offer opportunities to broadcast informative and instructional content that can supplement classroom learning. Educational radio programs can cover a wide range of subjects, including science, history, literature, and more. Similarly, recorded technologies, such as podcasts and audio lectures, provide students with on-demand access to educational content that they can listen to at their convenience. These resources may enhance students' understanding of topics, provide additional explanations, and broaden their knowledge base. Radio and recorded technologies can offer flexible learning options, allowing students to access educational content beyond traditional classroom settings. Students may listen to radio broadcasts or recorded materials while commuting, exercising, or engaging in other activities. This accessibility promotes continuous learning and can accommodate different learning styles and preferences.

### **Telephony**

Telephony refers to the technology and processes used for transmitting voice signals over a distance, enabling communication between individuals or groups separated by a physical distance. According to Rajesh (2020), telephony encompasses the systems, devices, and infrastructure involved in telephone communication. Telephony allows people to have real-time conversations through audio transmission. Telephony plays a significant role in enabling remote learning, especially during situations like the COVID-19 pandemic or in regions with limited access to physical educational facilities. With telephony tools, students may participate in virtual classrooms, access online lectures, submit assignments digitally, and engage in distance education programs. This flexibility can provide educational opportunities for students who would otherwise face barriers to attending traditional schools.

### **Methodology**

The study adopted a descriptive survey research design was for this study. A descriptive survey involves the selection of respondents (sample) from a large population to determine and report their view/opinions in the way things are. This design is suitable for this study because it sought the opinions of business education students on the role of Information and Communication Technology on Business Education students' academic performance. The population of the study comprised one hundred (100) Business education students in University of Benin, Benin City, Edo State. With sample size of sixty (60) business education students. The instrument for data collection from respondents was A-20 item questionnaire which was designed by the researcher and validated by three (3) experts. Means and Standard Deviation were used to analyze the data generated from the research questions. Items with mean score of 2.50 and above were

regarded as high extent of utilization while items mean score of below 2.50 were regarded as low extent of utilization.

**Research Question 1.** To what extent do interactive digital whiteboards influence business education students’ academic performance

**Table 1: Data showing the interactive digital whiteboards influence business education students’ academic performance**

S/N	Item Statement	N	Mean	S.D	Decision
1	Interactive digital whiteboards such as projector is in use in business education classes	60	2.9833	1.21421	High extent
2	The use of digital whiteboards such as projectors makes you feel engaged and motivated during lectures	60	3.1500	.79883	High extent
3	Do you think interactive digital whiteboards such as projector offer unique advantages over traditional teaching tools	60	3.4333	.69786	High extent
4	To what extent do you find interactive digital whiteboards such as projector enhance your classroom learning experience	60	3.4167	.69603	High extent
5	Has interactive digital whiteboards such as projector influence your ability to retain information	60	3.2333	.92730	High extent
<b>Cluster Mean</b>		<b>60</b>	<b>3.38</b>	<b>1.05</b>	<b>High extent</b>

In response to research question one. Table 1 shows the extent to which interactive digital whiteboards influences the academic performance of business education students. However, item 1-5 indicates high extent with mean ranging from 2.9 - 3.4. With these results above mean score shows the extent to which interactive digital whiteboard influences the academic performance of Business Education students is high

**Research Question 2**

To what extent does internet influence business education students’ academic performance

**Table 2: Data showing the internet influence business education students’ academic performance**

S/N	Item Statement	N	Mean	S.D	Decision
6	How frequently do you use online learning platforms to supplement your business education studies	60	2.9000	.89632	High extent
7	Has the internet positively influenced your access to information relevant to your business education	60	3.1500	.79883	High extent
8	Has the internet contributed to your overall grades in business education courses	60	3.2333	.59280	High extent
9	Has your academic performance improved due to your internet usage for educational purposes	60	3.2167	.71525	High extent
10	How effective do you find these online platforms in supporting your learning compared to traditional classroom instruction	60	3.2167	.90370	High extent
<b>Cluster Mean</b>		<b>60</b>	<b>3.27</b>	<b>0.93</b>	<b>High extent</b>

Table 2 shows a mean of above 2.50 for items 6-10 ranging from 2.9 - 3.2 are positive. With these results, the above mean score shows the extent to which internet influence the academic performance of Business Education students is high.

### Research Question 3

To what extent does telephony influence business education students' academic performance?

**Table 3: Data showing the internet influence business education students' academic performance**

S/N	Item Statement	N	Mean	S.D	Decision
11	How frequently do you use telephony (telephone communication) for academic related activities	60	3.5667	.74485	<b>High extent</b>
12	Has telephony positively influence your productivity and academic progress	60	3.1500	.75521	<b>High extent</b>
13	Has telephony facilitated communication with your instructors and classmates	60	2.9000	.81719	<b>High extent</b>
14	Do you properly manage time when engaging in telephony for academic purposes to balance it with other study related activities	60	3.3833	.73857	<b>High extent</b>
15	Do you think telephone is a suitable platform for addressing complex academic issues or questions	60	3.0000	1.04151	<b>High extent</b>
<b>Cluster Mean</b>		<b>60</b>	<b>3.42</b>	<b>0.93</b>	<b>High extent</b>

In response to research question three, the table shows a mean of above 2.50 for items 11 - 15 ranging from 2.9 - 3.5 are positive. With these results, the above mean score shows the extent to which telephony influence the academic performance of Business Education students is high.

### Research Question 4

To what extent does recorded broadcasting technology influence business education student's academic performance?

**Table 4: Data showing the recorded broadcasting technology influence of business education students academic performance**

S/N	Item Statement	N	Mean	S.D	Decision
16	How frequently do you personally use your mobile device to record lectures you attend for future references	60	3.3667	.71228	<b>High extent</b>
17	Has the use of other recorded broadcasting technologies such as radio and podcast enhanced your access to academic content	60	3.2667	.75614	<b>High extent</b>
18	Do you find recorded broadcasts convenient for studying at your own pace and time	60	3.0167	.77002	<b>High extent</b>
19	Does studying with recorded broadcasts ensure effective comprehension and retention of information	60	2.9667	.93820	<b>High extent</b>
20	Does recorded broadcasting technology allow you to focus better on complex topics	60	2.9333	.88042	<b>High extent</b>
<b>Cluster Mean</b>		<b>60</b>	<b>3.30</b>	<b>0.93</b>	<b>High extent</b>

In response to research question four, the table shows a mean of above 2.50 for items 16 - 20 ranging from 2.9 - 3.3 are positive. With these results, the above mean score shows the extent to which recorded broadcasting technology influence the academic performance of Business Education students is high.

### Discussion of Findings

The findings of research question 1 shows that interactive digital whiteboards can influence the academic performance of Business Education Students. The findings implied the extent to which the academic performances of Business Education Students are influenced by the interactive digital whiteboards is high.

This finding is in agreement with the work of Rajesh (2020), who stated that utilization of ICT in schools will in turn leads to sustainable growth of industry in the society.

The findings of research question 2 reveals the influence of internet on the academic performance of Business Education Students. The finding implies that the extent to which the academic performance of Business Education Students' is influenced by the internet is high. This finding is in consonance with Yesilyurt et al. (2014), who stated that possessing a computer at home with internet connectivity is just as critical for learners' academic performance as having self-learning skills.

The findings of research question 3 shows the influence of telephony on the academic performance of business education students. The findings implied that the extent to which the academic performance of business education students is influenced by telephony is high. This finding is in consonance with Warschaver, (2016) who stated that integrating mobile devices such as telephony in teaching and learning positively influenced students' performance.

The findings of research question 4 shows the influence of Recorded Broadcasting Technology on the academic performance of business education students. The implication of this finding shows that the extent to which the academic performance of business education students is influenced by Recorded Broadcasting Technology is high. This finding is in agreement with the work of Owie and Igbinedion (2022) who posited that ICT technology such as recorded broadcasting technologies are highly utilized in business education programme. Okolocha and Nwadiani (2015) also agreed with this finding as they posited that ICT resources such as recorded broadcasting technology is positively utilized in tertiary institutions.

## Conclusion

Information Communication and Technology (ICT) are reshaping the learning styles of many students in higher education. As a result, advances in technology create new opportunities for higher education; emerging technologies can be used to deliver instruction matched to the learning styles of the new genre of students. Therefore, it is critical for Higher education to make use of modern technologies as this will greatly influenced the academic performance of students as seen in this study. It becomes imperative to affirm that the usage of ICT is a viable tool that will enhance the academic performance of Business Education students.

## Recommendation

Based on the findings of this study, the following recommendations were made;

1. The use of ICT technologies such as interactive digital whiteboard, internet and others should be encouraged in business education programme for enhanced students' academic performance.

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