



## **ENHANCING INFORMATION AND COMMUNICATION TECHNOLOGY-BASED INSTRUCTION FOR SUSTAINABILITY OF BUSINESS EDUCATION PROGRAMMES IN THE NEW NORMAL: EMPIRICAL EVIDENCE FROM DELTA STATE, NIGERIA**

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### **Abstract**

*The study examined strategic measures for enhancing ICT-based instruction for sustainability of Business Education programme in the New Normal using tertiary institutions in Delta State as case study. The study answered three research questions and tested three null hypotheses using descriptive survey research design. The population for the study was 128 Business Educators (Lecturers and Instructors) in four public tertiary institutions in Delta State. The entire 128 Business Educators were involved as respondents for the study; hence, there was no sampling. Structured questionnaire was developed by the researchers for data collection. The questionnaire was face-validated by three experts. Reliability of the questionnaire was ascertained using Cronbach Alpha reliability technique which yielded a coefficient of 0.884. Data were collected with the help of four research assistants from the four tertiary institutions used for the study. The data collected were analysed using mean, standard deviation and t-test statistics. The result of the study established 12 justifications for enhancing ICT-based Business Education instruction in the new normal, 11 strategic measures for enhancing ICT-based Business Education instruction in the new normal, and identified nine current challenges undermining effective use of ICT-based instruction in the new normal. The results of hypotheses tested showed no significant ( $p < 0.05$ ) differences in the mean ratings of Business Education Lecturers and Instructors on justifications, strategic measures and current challenges in enhancing ICT-based instruction for sustainability of Business Education programmes in the new normal in Delta State. The study therefore recommended improved training and capacity building of personnel, adequate provision of ICT learning resources, improved supervision and funding of Business Education programmes by state and federal government for sustainability of Business Education instruction in the new normal.*

**Keywords:** *Business Education, Instruction, ICTs, New normal, Delta State.*



## **Introduction**

The world is fast moving towards education for skill acquisition and self-employment which can be offered through quality technical and vocational education. Business Education is an aspect of vocational education in Nigeria with the mandate of training recipients for self and paid jobs in contemporary business world. According to Ugwuogo (2013), Business Education is an aspect of vocational education that provides instruction and preparation for office occupations such as secretary, shorthand-typist or stenographer, bookkeeper, data processor, word processor, computer analyst and accountant. Business Education is a course that prepares students for entry into and advancement in jobs within business and it is equally important because it prepares students to handle their own business affairs and to function intelligently as consumers and citizens in a business economy (Inegbedion, Njoku, Ekpenyong, Umoru & Hakeem, 2015). In the opinion of Nwuzoh (2016), Business Education is the type of education that gives individual the needed skills and knowledge to succeed in small, medium or large scale businesses. Sherif (2021) stated that Business Education provides individuals with the knowledge, skills, and competence they need to carry on their businesses both small, medium, and large scale businesses. Okifo and Ayo (2015) noted that the goals of Business Education is the production of manpower who possesses the requisite knowledge, skill and attitude for harnessing other resources and bringing them into a cooperative relationship yielding the goods and services demand by society for the satisfaction of their wants and needs.

Business Education is an indispensable vocational education subject that inculcates in the learners, the knowledge of understanding business problems, and how to overcome them in the long run. Osuala (2004) reported that Business Education is a programme of instruction which consists of two parts (i) Office education, a vocational programme of office careers through initial, refresher and upgrading education and (ii) General business education a programme to provide students with information and competences which are needed by all in managing personal business affairs and in using the services of the business. Business Education programmes all over the world like other aspects of education have been devastated and truncated by the outbreak of COVID-19 as schools and training centres were shutdown to curtail the spread of the deadly virus.

COVID-19 is an infectious virus that was first identified in December 2019 in Wuhan, Hubei, in China. As of the end of September 2020, more than 33 million cases had been reported across 188 countries including Nigeria with more than 1 million deaths. COVID-19 is highly contagious and so any residual contamination, no matter how small, can pose a threat to healthcare workers and patients (Armellino, *et al*, 2020). The outbreak of COVID-19 pandemic created the largest disruption of education systems in history, affecting nearly 1.6 billion learners in more than 190 countries and all continents. Closures of schools and other learning spaces impacted about 94 per cent of the world's student population, up to 99 per cent in low and lower-middle income countries of the world (United Nations, 2020).

The effect of the COVID-19 panic had caused massive changes to our daily lives, changes that have often happened rapidly and abruptly with a wide range of experiences and emotions (Purdue University, 2021). COVID-19 had changed the very basis of what we do and how we do it. It had forced a radical look at how we assemble, our social patterns, and way of life, with most governments imposing laws and rules ranging from the closure of public events and institutions to the wearing of masks in public, number of people allowed in gatherings among other new normal protocols. Clopton, Skaar and Schmitz (2021) affirmed that adapting to the new normal associated with COVID-19 was difficult for actors in all sectors including education sector.



The new normal is continuing to change and there is no clear timeline for when we can expect our lives to return to the “old normal” many of us long for. Fana (2021) stated that since outbreak of COVID-19, there had been surge in adoption in information and communication technology-based teaching and learning with global educational technology investments reaching more than \$18 billion as expenses on apps, virtual tutoring, video conferencing, and online learning in order to minimize human contacts to suppress the spread of the COVID-19.

Information and Communication Technology (ICT) tools are important in training, educating and for capacity building programs which play key role in educational process (Nwosu, John & Akorede, 2018). According to Nwabueze (2011), ICTs as a broad-based technology which uses equipment, applications, methods and management that support the creation, storage, manipulation and communication of information. Federal Ministry of Education (2010) described ICTs as encompassing all equipment and tools (inclusive of traditional technologies of radio, video and television to the newer technologies of computers, hardware, firmware and so on), as well as the methods, practices, processes, procedures, concepts and principles that come into play in the conduct of the information and communication activities. Technological advancements in this pandemic era have revolutionized every field of life; teaching is no exception. UNESCO (2019) affirmed that Information and Communications Technology (ICT) has played a crucial role in the development of education across the globe. ICT-based instructional materials cover five different types which include: print, audio/video, radio and TV, computers and the internet for presentation, demonstration, drill and practice, interaction, and collaboration to add value to teaching and learning. Maharaj-Sharma, Sharma and Sharma (2017) stated that governments all over the world have in recent times made policies on information and communication technology in education and have made enormous investments in initiatives aimed at integrating information and communication technologies in schools. For instance, educational organizations in countries like Australia, India, Finland, the UK, the USA, South Korea, and others are intensely utilizing the ICT curriculum and development to resolve the communication and technological differences.

With the technology revolution, it seems that there are deliberate intentions, almost at the global level, to encourage teachers to include ICTs and ICT-based activities in the range of instructional technologies they adopt in their classroom teaching (Morris, 2012). ICT-based learning has progressed to become an integral part of the education system (Edu, 2020). For instance, Kim, Pak and Cho (2021) stated that to scale up pedagogical innovation using information and communications technology (ICT), educators have shifted the focus of professional development from primarily an individualist endeavour to a collective approach in teachers' social networks and intensified ICT-based teaching and learning, which is more eminent in the new normal era of the pandemic. It is imperative to state that despite the pandemic, teaching and learning in Nigerian education system must continue to take place unimpeded in order to catch up with other countries that are building education capacities through the new normal. Hence, this study examined Information and Communication Technology-based instruction for sustainability of Business Education programmes in the new normal using empirical evidence from Delta State, Nigeria

### **Research Questions**

In line with the specific purposes, the study answered three research questions which are:

1. What are the justifications for enhancing ICT-based Business Education instruction in the new normal in Delta State?



2. What are the strategic measures for enhancing ICT-based Business Education instruction in the new normal in Delta State?
3. What are the current challenges undermining effective use of ICT-based instruction in Business Education in the new normal in Delta State?

### **Research Hypotheses**

**H<sub>01</sub>:** There is no significant difference in the mean ratings of Business Education Lecturers and Instructors on the justifications for enhancing ICT-based Business Education instruction in the new normal in Delta State.

**H<sub>02</sub>:** There is no significant difference in the mean ratings of Business Education Lecturers and Instructors on the strategic measures for enhancing ICT-based Business Education instruction in the new normal in Delta State.

**H<sub>03</sub>:** There is no significant difference in the mean ratings of Business Education Lecturers and Instructors on the current challenges undermining effective use of ICT-based instruction in Business Education in the new normal in Delta State.

### **Methodology**

The study was carried out to investigate information and communication technology-based instruction for sustainability of Business Education programmes in the New Normal using empirical evidence from Delta State, Nigeria. To carry out the study, three research questions were answered while three null hypotheses were tested. The study adopted descriptive survey research design. Descriptive survey design was found appropriate for this study because copies of well structured questionnaire were administered to collect data from the respondents (Business Education lecturers and Instructors) to answer the research questions and test the hypotheses.

The population for the study was 142 Business Educators (125 Business Education Lecturers and 17 Business Education Instructors) from four tertiary institution offering Business Education programmes in Delta State which are: Delta State Univeristy, Abraka, Federal College of Education Asaba, Delta State College of Education, Agbor and Delta State College of Education, Warri. The entire population of 142 Business Educators were used as respondents for the study due to the manageable size, hence, there was no sampling. Data were collected using a well structured questionnaire. The questionnaire was structured into four sections A, B, C and D. Section A was designed to collect personal data of the respondents such as their official status as Lecturers or Instructors, their institutions among others. Sections B, C and D were structured in line with the three specific purposes of the study. The response options for the three sections of the respondents were: Strongly Agreed (SA); Agreed (A); Disagreed (D) and Strongly Disagreed (SD) with corresponding values of 4, 3, 2, and 1 respectively.

The instrument was face-validated by three experts who were Business Education lecturers from University of Benin, Edo State. All corrections suggested by the experts were properly incorporated into the final draft of the questionnaire used for data collection. The reliability of the instrument was ascertained using Cronbach Alpha reliability methods which yielded a reliability coefficient of 0.873. Data for the study were collected with the help of four research assistants from the four tertiary institutions for the study. With effective monitoring, all the 142 copies of questionnaire administered were retrieved and properly completed indicating 100% return rate.

Data collected were analysed using mean and standard deviation for answering the research questions while t-test statistics were used for testing the null hypotheses at 0.05 level of



significance. Using 2.50 as cut-off point, any item with mean value of 2.50 and above was interpreted as “Agreed” while items with mean values less than 2.50 were interpreted as “Disagreed”. The hypothesis of no significant difference was accepted when the t-calculated (t-cal) value was less than the t-critical (t-tab) value of 1.96 at 0.05 level of significance while hypothesis of no significant difference was rejected when the t-calculated (t-cal) value was greater than the t-critical (t-tab) value of 1.96 at 0.05 level of significance.

## RESULTS

### Research Question One

What are the justifications for enhancing ICT-based Business Education instruction in the new normal in Delta State?

**Table 1: Justifications for Enhancing ICT-based Business Education instruction in the New Normal in Delta State (n = 142)**

SN	Justification for enhancing ICT-based instruction include:	$\bar{X}$	SD	Rmks
1	ICTs enhances the modes of communication to reduce risk of spread of COVID-19	3.46	0.49	Agree
2	ICTs offers better teaching and learning methods in the COVID new normal era.	3.68	0.60	Agree
3	ICTs instructional materials stimulate students for learning in COVID-19 era and beyond	3.56	0.44	Agree
4	ICT-based instruction enhances students assimilation and retention of learning.	3.37	0.81	Agree
5	The use of ICTs provides opportunities to enhance experiential learning for students in COVID-19 era	3.53	0.49	Agree
6	It eliminates distance barrier between teacher and learners in COVID new normal era.	3.50	0.56	Agree
7	ICT-based instruction offer students opportunities to play back audio and video of interactions for better understanding	3.33	0.47	Agree
8	The use of ICTs makes research more easier during COVID-19 with less risk of spread of the virus.	3.71	0.57	Agree
9	ICT-based instruction provides automatic solutions to manual paper-based process and procedures.	3.45	0.49	Agree
10	The use of ICTs enhances information sharing among students for academic excellence during COVID-19 new normal without risk	3.76	0.84	Agree
11	ICTs make educators create engaging, interesting and well-designed classroom activities in COVID-19 pandemic and new normal era.	3.54	0.49	Agree
12	ICT-based instruction promote and improve the digital culture in schools in COVID-19 pandemic	3.67	0.55	Agree
	<b>Pooled Mean</b>	<b>3.54</b>	<b>0.57</b>	<b>Agree</b>

*Note:  $\bar{X}$  = Mean; SD = Standard Deviation; n = number of respondents.*



The mean ratings of the responses of the respondents in Table 1 ranged from 3.33 to 3.76 which are all greater than the cut-off point value of 2.50 on 4-point rating scale. This indicates that the 12 identified items in the table are agreed by the Business education lecturers and instructors to be justifications for enhancing ICT-based Business Education instruction in the new normal in Delta State. The standard deviation values of the 12 items in the table ranged from 0.44 to 0.84 which indicated that the responses of the respondents are close to the mean and one another.

**Hypothesis One**

**H0<sub>1</sub>:** There is no significant difference in the mean ratings of Business Education Lecturers and Instructors on the justifications for enhancing ICT-based Business Education instruction in the new normal in Delta State.

**Table 2: Test of Significant Difference in the Mean Ratings of Business Education Lecturers and Instructors on the justifications for enhancing ICT-based Business Education instruction in the new normal in Delta State**

Variables	N	$\bar{X}$	SD	DF	Std. Error	t-cal	t-tab	Level of sig.	Rmks
Bus. Edu. Lecturers	125	3.69	0.52						
Bus. Edu. Instructors	17	3.40	0.64	140	0.072	2.18	1.96	0.05	<b>Sig.</b>

**Note:** Sig. = Significant at 0.05.

The data presented on the t-test statistics in Table 2 shows that the t-calculated (t-cal) value of 2.18 was greater than the t-table (t-tab) value of 1.96 at 0.05 level of significance and 140 degree of freedom. This indicates that there was significant ( $p < 0.05$ ) difference in the mean ratings of the responses of Business Education Lecturers and Instructors on justifications for enhancing ICT-based Business Education instruction in the new normal in Delta State. Hence, the null hypothesis of no significant ( $p < 0.05$ ) difference in the mean ratings of the responses of Business Education Lecturers and Instructors is rejected on hypothesis one.

**Research Question Two**

What are the strategic measures for enhancing ICT-based Business Education instruction in the new normal in Delta State?

**Table 3: Strategic measures for enhancing ICT-based Business Education instruction in the new normal in Delta State (n = 142)**

SN	Strategic measures for enhancing ICT-based instruction include:	$\bar{X}$	SD	Rmks
1	ICT-based learning help to minimize human to human contacts in the new normal	3.46	0.60	<b>Agree</b>
2	Adopt online conferences, workshops and meetings to curtail spread of COVID-19 cases among learners and teachers.	3.50	0.56	<b>Agree</b>
3	Adequate provision of ICT-based instructional resources to facilitate learning activities in COVID-19 and new normal era.	3.73	0.60	<b>Agree</b>



4	Steady access to internet connectivity for uninterrupted ICT usage for learning in COVID-19 and new normal era.	3.66	0.47	<b>Agree</b>
5	Subsidized internet connection to alleviate high cost of internet services for online teaching and learning in the new normal era.	3.53	0.83	<b>Agree</b>
6	Regular disinfestations of classroom, laboratories and libraries within school environment.	3.49	0.61	<b>Agree</b>
7	Uninterrupted power supply to schools for effective ICT-based instruction in the COVID-19 and new normal era.	3.24	0.87	<b>Agree</b>
8	Improved funding for adequate provision of required ICT facilities for digital instruction in the new normal.	3.62	0.48	<b>Agree</b>
9	Improved training of teachers and students in effective ICT-based instruction in the new normal era.	3.54	0.61	<b>Agree</b>
10	Policy framework for ICT-based instruction and assessment in Nigeria schools in the new normal era.	3.70	0.45	<b>Agree</b>
11	Collaborations with developed nations for information transfer through online learning in the new normal era.	3.63	0.49	<b>Agree</b>
<b>Pooled Mean</b>		<b>3.55</b>	<b>0.60</b>	<b>Agree</b>

**Note:**  $\bar{X}$  = Mean; SD = Standard Deviation; n = number of respondents.

The mean ratings of the responses of the respondents in Table 3 ranged from 3.24 to 3.73 which are all greater than the cut-off point value of 2.50 on 4-point rating scale. This implies that the 11 identified items in the table are agreed by the Business education lecturers and instructors to be strategic measures for enhancing ICT-based Business Education instruction in the new normal in Delta State. The standard deviation values of the 11 items in the table ranged from 0.45 to 0.87 which indicated that the responses of the respondents are close to the mean and one another.

**Hypothesis Two**

**H0<sub>2</sub>:** There is no significant difference in the mean ratings of Business Education Lecturers and Instructors on the strategic measures for enhancing ICT-based Business Education instruction in the new normal in Delta State.

**Table 4: Test of Significant Difference in the Mean Ratings of Business Education Lecturers and Instructors on the strategic measures for enhancing ICT-based Business Education instruction in the new normal in Delta State**

Variables	N	$\bar{X}$	SD	DF	Std. Error	t-cal	t-tab	Level of sig.	Rmks
Bus. Edu. Lecturers	125	3.56	0.47						
Bus. Edu. Instructors	17	3.54	0.49	140	0.023	0.38	1.96	0.05	<b>NS</b>

**Note:** NS = Not Significant at 0.05.



The data presented on the t-test statistics in Table 4 reveals that the t-calculated (t-cal) value of 0.38 was less than the t-table (t-tab) value of 1.96 at 0.05 level of significance and 140 degree of freedom. This indicates that there was no significant ( $p < 0.05$ ) difference in the mean ratings of the responses of Business Education Lecturers and Instructors on the strategic measures for enhancing ICT-based Business Education instruction in the new normal in Delta State. Consequently, the null hypothesis of no significant ( $p < 0.05$ ) difference in the mean ratings of the responses of Business Education Lecturers and Instructors is accepted on hypothesis two.

### Research Question Three

What are the current challenges undermining effective use of ICT-based instruction in Business Education in the new normal in Delta State?

**Table 5: Current challenges undermining effective use of ICT-based instruction in Business Education in the new normal in Delta State (n = 142)**

SN	Challenges undermining the use of ICT-based instructions include:	$\bar{X}$	SD	Rmks
1	Poor funding of Nigerian public school system including technical and vocational training schools.	3.74	0.60	Agree
2	Poor maintenance culture of available ICT facilities in Nigerian public schools.	3.50	0.50	Agree
3	Poor internet coverage and connectivity for effective online teaching and learning in the new normal era.	3.35	0.57	Agree
4	High cost of procuring and maintaining ICT facilities for teaching and learning in the new normal era.	3.47	0.49	Agree
5	Poor ICT-based instructional skills among most Business educators in Nigerian schools and colleges.	3.32	0.47	Agree
6	Unstable electricity supply to power ICT facilities for online teaching and learning in the new normal era.	3.73	0.54	Agree
7	High cost of data subscription for internet services where available for online teaching and learning in the new normal era.	3.57	0.55	Agree
8	Theft and threats to ICT facilities installations in Nigerian schools by thieves.	3.36	0.59	Agree
9	Lack of policy framework for effective provision of ICT facilities in schools.	3.21	0.48	Agree
	<b>Pooled Mean</b>	<b>3.47</b>	<b>0.53</b>	<b>Agree</b>

**Note:**  $\bar{X}$  = Mean; SD = Standard Deviation; n = number of respondents.

The mean ratings of the responses of the respondents in Table 5 ranged from 3.21 to 3.74 which are all greater than the cut-off point value of 2.50 on 4-point rating scale. This shows that the 9 identified items in the table are agreed by the Business education lecturers and instructors to be current challenges undermining effective use of ICT-based instruction in Business Education in the new normal in Delta State. The standard deviation values of the 9 items in the table ranged from 0.47 to 0.60 which indicated that the responses of the respondents are close to the mean and one another.



**Hypothesis Three**

**H0<sub>3</sub>:** There is no significant difference in the mean ratings of Business Education Lecturers and Instructors on the current challenges undermining effective use of ICT-based instruction in Business Education in the new normal in Delta State.

**Table 6: Test of Significant Difference in the Mean Ratings of Business Education Lecturers and Instructors on the current challenges undermining effective use of ICT-based instruction in Business Education in the new normal in Delta State**

Variables	N	$\bar{X}$	SD	DF	Std. Error	t-cal	t-tab	Level of sig.	Rmks
Bus. Edu. Lecturers	125	3.46	0.71						
Bus. Edu. Instructors	17	3.49	0.68	140	0.027	0.45	1.96	0.05	<b>NS</b>

**Note:** NS = Not Significant at 0.05.

The data presented on the t-test statistics in Table 6 shows that the t-calculated (t-cal) value of 0.45 was less than the t-table (t-tab) value of 1.96 at 0.05 level of significance and 140 degree of freedom. This signifies that there was no significant ( $p < 0.05$ ) difference in the mean ratings of the responses of Business Education Lecturers and Instructors on the current challenges undermining effective use of ICT-based instruction in Business Education in the new normal in Delta State. Therefore, the null hypothesis of no significant ( $p < 0.05$ ) difference in the mean ratings of the responses of Business Education Lecturers and Instructors is accepted on hypothesis three.

**Discussion of Findings**

This study identified justifications for enhancing ICT-based Business Education instruction to include the fact that ICT-based instructions enhance modes of communication to reduce risk of spread of COVID-19, offer better teaching and learning methods in the COVID new normal era, stimulate students for learning in COVID-19 era and beyond, enhances students assimilation and retention of learning, provides opportunities to enhance experiential learning for students in COVID-19 era, eliminates distance barrier between teacher and learners in COVID new normal era and offer students opportunities to play back audio and video of interactions for better understanding among others. In agreement with this finding, Mukhtar, Javed, Arooi and Sethi (2020) found that online learning during the pandemic helped to ensure remote learning as students could conveniently access teachers and teaching materials easily without location barrier. Online teaching and learning also reduced use of travelling resources and ease administrative tasks such as recording of lectures and marking attendance, encouraged student-centeredness and students had become self-directed learners. Khan (2020) highlighted the six major benefits of online or ICT-based learning during Covid-19 Pandemic to include: increased efficiency of teaching and learning, flexibility of instruction, enhanced learning experience, useful to develop future skills and affordability of learning in the new normal era.



This study identified strategic measures for enhancing ICT-based Business Education instruction to include: enhanced ICT-based learning to minimize human to human contacts in the new normal, adoption of online conferences, workshops and meetings to curtail spread of COVID-19 cases among learners and teachers, adequate provision of ICT-based instructional resources to facilitate learning activities in COVID-19 and new normal era, steady access to internet connectivity for uninterrupted ICT usage for learning in COVID-19 and new normal era, subsidized internet connection to alleviate high cost of internet services for online teaching and learning in the new normal era, regular disinfections of classroom, laboratories and libraries within school environment and uninterrupted power supply to schools for effective ICT-based instruction in the COVID-19 and new normal era among others. The findings of the study agreed with that of Dhawan (2020) who found that learning needs during pandemic were met through prerecording video lectures, testing the content, and always keeping Plan B ready so that the teaching and learning process cannot be hampered. Online courses during the lockdown made learning dynamic, interesting, and interactive. Partlow and Gibbs (2003) reported that the online learning programmes are creative, interactive, relevant, student-centered, and group-based. In addition, Snelling and Fingal (2020) identified ten strategies for online learning during a coronavirus outbreak to include: digital equity, establish daily schedules, provision of robust learning, designing of independent learning, choosing the right tools and stick with them and provision of clear expectations to teachers and learners. .

This study identified current challenges undermining effective use of ICT-based instruction to include: poor funding of Nigerian public school system including technical and vocational training schools, poor maintenance culture of available ICT facilities in Nigerian public schools, poor internet coverage and connectivity for effective online teaching and learning in the new normal era, high cost of procuring and maintaining ICT facilities for teaching and learning in the new normal era, poor ICT-based instructional skills among most Business educators in Nigerian schools and colleges and unstable electricity supply to power ICT facilities for online teaching and learning in the new normal era among others. Mukhtar, Javed, Arooi and Sethi (2020) in a study identified some of the challenges of ICT-based learning during the pandemic to include lack of immediate feedback, teachers were unable to assess students' understanding during online lecturing and that learners also reported limited attention span and resource intensive nature of online learning as major limitation and set back. Li and Lalani (2020) identified some of the challenges of online instruction during pandemic as unreliable internet access to participate in digital learning most especially in developing countries like Nigeria.

## **Conclusion**

The study examined strategic measures for enhancing ICT-based instruction for sustainability of Business Education programme in the New Normal using tertiary institutions in Delta State as case study. Using descriptive survey research design, the findings of the study identified 12 justifications for enhancing ICT-based Business Education instruction in the new normal, 11 strategic measures for enhancing ICT-based Business Education instruction in the new normal, and 9 current challenges undermining effective use of ICT-based instruction in the new normal. The results of hypotheses tested revealed that significant ( $p < 0.05$ ) difference in the mean ratings of Business Education Lecturers and Instructors on justifications for using ICT-based instruction but no significant ( $p < 0.05$ ) differences in the mean ratings of Business Education Lecturers and Instructors on strategic measures and current challenges in enhancing



ICT-based instruction for sustainability of Business Education programmes in the new normal in Delta State.

### Recommendations

The study therefore recommended:

- i. Improved training and capacity building of Business Education lecturers and instructors for effective engagement in online learning in the pandemic era.
- ii. Adequate provision of ICT learning resources to support ICT-based learning and online instruction in Business Education and aspect of Nigerian education.
- iii. Improved supervision and funding of Business Education programmes by state and federal government for sustainability of Business Education instruction in the new normal.
- iv. Development of robust policy framework for implementation of ICT-based curriculum and instruction in the pandemic era and beyond.

### References

- Armellino, D. G. K., Thomas, L., Walsh, T & Petraitis, V. (2020). Comparative evaluation of operating room terminal cleaning by two methods: Focused multivector ultraviolet (FMUV) versus manual-chemical disinfection. *American Journal Infection Control*. 24 (1), 157 – 173.
- Clopton, K., Skaar, N & Schmitz, S. (2021). Adapting to a New Normal During COVID-19. Retrieved 13th August, 2021 from <https://www.coe.uni.edu/welcome-college-education>.
- Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Journal of Educational Technology Systems*. 49(1): 5 – 22.
- Edu, S. (2020). What is ICT in Education? Advantage & Disadvantage. Retrieved 13th August, 2021 from <https://www.edusys.co/en-in/index.html>
- Fana, A. (2021). Covid-19 and The New Normal: Why educational edifices might be a thing of the past. Retrieved 13th August, 2021 from <https://www.techengage.com>.
- Federal Ministry of Education (2010). *National Policy on Information and Communication Technologies (ICT) in Education*. Abuja: FME.
- Inegbedion, J. O., Njoku, C. U., Ekpenyong, L. E., Umoru, T and Hakeem, O. L. (2015). *Fundamentals of Business Education*. Lagos: National Open University of Nigeria
- Khan, N. (2020). Six benefits of online learning during Covid-19 Pandemic. Retrieved 23 July, 2021 from <https://www.phoneworld.com.pk/author/nayab/>
- Kim, J., Pak, S & Cho, Y. H. (2021). The Role of Teachers' Social Networks in ICT-Based Instruction. *Asia-Pacific Edu Res* (2021). <https://doi.org/10.1007/s40299-020-00547-5>
- Li, C & Lalani, F. (2020). The COVID-19 pandemic has changed education forever. This is how. Retrieved 23 July, 2021 from <https://www.weforum.org/agenda/achieve/>
- Maharaj-Sharma, R., Sharma, A & Sharma, A. (2017). Using ICT-based Instructional Technologies to Teach Science: Perspectives from Teachers in Trinidad and Tobago.. *Australian Journal of Teacher Education*, 42(10), 22 - 35.
- Morris, D. (2012). ICT and educational policy in the UK: Are we on the way towards e-maturity or on the road to digital disaster? *Research in Teacher Education*, 2(2), 3 - 8.
- Mukhtar, K., Javed, K., Arooi, M and Sethi, A. (2020). Advantages, Limitations and Recommendations for online learning during COVID-19 pandemic era. *Pak Journal of Medical Sciences*, 5 (36), 27–31. doi: [10.12669/pjms.36.COVID19-S4.2785](https://doi.org/10.12669/pjms.36.COVID19-S4.2785)



- Nwabueze, J. C. (2011). The Relevance of Information and Communication Technologies in Teaching and Learning. *Journal of Information Technology*, 3 (2): 89 – 100.
- Nwosu, J. C., John, H. C and Akorede, O. J. (2018). Availability and accessibility of ICT- based instructional tools in medical colleges in Ogun State, Nigeria. *Educational Research and Reviews*, 13(11), 391 – 398.
- Nwuzoh, I. (2016). Problems and Prospects of Business Education in Nigeria. Retrieved 3rd August, 2018 from <http://www.infoguidenigeria.com/>
- Okifo, J. & Ayo, A. O. (2015). Business Teacher Education (BTE); A Panacea for Human Capital Development in Nigeria. *Journal of Education and Practice*, 6 (16), 63 – 70.
- Osuala, E.C., (2004). *Principles and Methods of Business and Computer Education*. Enugu, Enugu State: Cheston Agency Ltd.
- Partlow K. M., Gibbs W. J. (2003). Indicators of constructivist principles in internet-based courses. *Journal of Computing in Higher Education*, 14(2), 68–97.
- Purdue University. (2021). Adjusting to the New Normal. Retrieved 13th August, 2021 from <https://www.purdue.university/caps/contact/index.html>.
- Sherif, A. (2021). History of Business Education in Nigeria. Retrieved from [www.https://naijaquest.com/](http://www.naijaquest.com/)
- Snelling, J and Fingal, D. (2020). Ten strategies for online learning during a coronavirus outbreak. . Retrieved 23 July, 2021 from <https://www.iste.org/>
- Ugwuogo, C. C. (2013). Business Education and National Development: Issues and Challenges. *Journal of Educational and Social Research*, 3 (4): 129 – 134.
- UNESCO. (2019). *Beijing consensus on artificial intelligence and education*. Paris: UNESCO.
- United Nations. (2020). Policy Brief: Education during COVID-19 and Beyond. Retrieved 19 December, 2020 from <https://www.un.org/sites/un2.un.org/files/>