



EXTENT OF AVAILABILITY AND UTILIZATION OF MICROSOFT TEAM TECHNOLOGIES IN TEACHING AND LEARNING OF BUSINESS EDUCATION IN TERTIARY INSTITUTIONS IN CROSS RIVER STATE

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Abstract: This study examined the extent of availability and utilization of Microsoft teams technologies in teaching and learning of Business Education in Tertiary Institutions in Cross River State. To achieve the purpose of the study, two research questions were raised and two hypotheses were formulated to guide the study. The study adopted a survey research design. The population consisted of one hundred and thirty nine (139) business education lecturers in the study area, who were all involved in the study due to the manageable size of the population. A 30-item questionnaire titled “Extent of Availability Microsoft Teams Technologies for Teaching and Learning of Business Education Questionnaire” (EAMTTTLBEQ) was used for data collection. The data collected were analysed using the Cronbach Alpha statistical technique which yielded an overall reliability coefficient of 0.89. The data collected were analysed using mean (X), standard deviation (SD) and percentage to answer the research questions. Similarly, the null hypotheses were tested at 0.05 level of significance using ANOVA and independent t-test. The findings of the studies showed that; Microsoft technologies were available for teaching and learning business education content in tertiary institutions in Cross River State. There was High Extent (HE) of MS technologies utilization for lecture delivery in Tertiary institutions on Cross River State; and there is no significant difference in the mean ratings on the extent MS technologies utilization for class discussion in Cross River State Tertiary institutions based on school types and gender in tertiary institutions in Cross River State. Based on the findings of the study, it was recommended that; Government should provide enabling teaching and learning environments in all the tertiary institutions in the Cross River State and Nigeria at large to ensure effective utilization of Micro Soft team technologies.

Keys: *Extent, Availability, Utilization, Microsoft teams, Technologies and teaching/learning*

Introduction

In the midst of global panic emerging new technologies for effective teaching and learning known as zoom and microsoft team technologies. Information and Communication Technology means required analysis, manipulation, storage and distribution of information and the design and provision of equipment and software for these purposes (De Watteville and Gilbert, 2000). According to Iloanusi and Osuagwu (2011), information and communication technology (ICT) is the processing and maintenance of information, and the use of all forms of computer, communication network and mobile

technologies to mediate information. Iloanusi and Osuagwu further explained that information and communication technologies include all media employed in transmitting audio, video, data or multimedia such as cable, satellite, fiber optics, wireless (radio, infra-red, Bluetooth, Wifi). The network technologies include Personal Area Networks (PAN), Campus Area Network (CAN), Local Area Network (LAN), Wide Area Network (WAN), Metropolitan Area Network (MAN) and the internets. Computer technologies include all removable media such as optical discs, disks, flash memories, video books, multimedia projectors,



interactive electronic boards, and continuously emerging state-of-the-art PCs. And that mobile technologies include mobile phones, PDAs, palmtops, etc. These technologies have information as their material object.

In education, this technology covers the use of computers, radio, satellites, online self-learning packages, telepresence system interactive CDs, video, internet optical fibre technologies and all types of information Technology (IT) hardware and software (Egbe 2010). To Iloanusi and Osuagwu (2010), Information Communication Technology applied to education enhances the delivery and access to knowledge, and improves the curriculum. It produces richer learning outcomes compared to education without ICT. It encourages critical thinking and offers unlimited means of achieving educational goals.

So, the world of today is characterized by Revolutionary advances powered by Information and Communication Technology (ICT). The world is being reduced to a global village through the use of information and Communication Technology thus, ICT promotes National development and better relationship with other Nations. Adeshina (2015), describes ICT to be the Electronic and Communication Devices associated with human interactive materials that enable users to employ them for a whole range of teaching and learning process. Information Technology (IT) and Communication Technology (CT) (Iwu, 2006). ICT embraces all technologies for manipulative communication of information and also encompasses any medium used to record information such as: Radio, Television, etc; and technology for communication through voice and sound or images using microphone, camera, loudspeaker, telephone/ mobile phones (Osu, Udosen and Akpan, 2010).

Information and Communication Technologies (ICTs) are indispensable and have been accepted as part of the Contemporary World, especially in the Industrialized societies to the extent of giving a new phase to the education system in terms of pedagogical approach (Ololube, 2006). According to Fari (2010), Information and Communication Technology Facilities are described

as all the electronic gadgets available for the identification, generation, processing, storage, packaging, preservation, conservation and transfer of Information, regardless of time and distance constraints. In other words, Information and Communication Technologies are information handling tools used for producing, storing, processing, distributing and exchanging of information. Today, it is an increasingly powerful tool for participating in global markets, promoting political accountability, improving the delivery of basic services and enhancing local development opportunities (UNDP, 2006). ICT Facilities influence and affect peoples' private and corporate work life in one way or the other. These ICT facilities are all encompassing in areas like Technology, Socialization, Politics, Economics and Education, for global transformation. Therefore, it becomes pertinent for teachers, who serve as key implementers of the Nation's Educational policy, to be well-informed and adequately equipped with ICT facilities in order to function productively in this age of Information explosion and Technological advancement. According to Atah (2019) in Ukah and Atah (2022), utilization of social media does not rely solely on teachers and students. University administration can help by increasing staff development and securing facilities such as computers and other reprographic materials used for teaching and learning (Atah and Abeng 2019). According to Atah, Bessong and Ititim (2019), when facilities are properly managed, the teacher can teach the students from their comfort zone of their home. Agim, Atah and Ochui (2022), Utilization is the art of putting things or resources that are tangible or intangible to proper use.

The Federal Ministry of Education (2013) identifies the role of ICT policy on education amongst others as: The policy provides the needed guidance on what is expected in the entire process of ICT integration in education to all stakeholders in education. Its' implementation, therefore, should lead to a speedy transformation of the teaching, learning and administration of education. This in turn will foster the production of graduates in the education system that can survive in the contemporary



society, sustain national development and compete globally. The realization of this Policy Statement lies basically on the capability of the key implementers of the Nation's educational policy i.e. Teachers to integrate ICT-Driven Instructional Aids effectively through Computer Assisted mode of Instruction (CAI) in their day to day classroom activities for effective pedagogy. It is clear that ICT is a world of its own, it has various diversified aspects.

In the National Policy on Education, education is an instrument for effecting National Development (FRN, 2013). It makes the incorporation of ICT into teaching-learning process a vital instructional tool in fostering the national educational goals and development. To buttress this, Galenouh, Gordlier and Murphy (2004), opine that the development and role of ICT in educational sector is believed to set the pace for any form of innovation and changes that can ever happen to any nation. It was asserted by Albirini (2006), that the winds of change in today's education sector have made Information and Communication Technology to be programmed towards meeting the set educational goals. In facilitating effective teaching and learning in the modern classroom most ICT facilities and programmes play vital roles. ICT devices to be considered in this study are: Microsoft teams, zoom software and emailing programmes.

Microsoft Team is a digital hub that brings conversations, content, assignments, and apps together in one place, letting educators create vibrant learning environments (Allen, 2020). Build collaborative classrooms, connect in professional learning communities, and connect with colleagues all from a single experience. Microsoft Teams is a proprietary business communication platform developed by Microsoft, as part of the Microsoft 365 family of products. A team primarily competes with the similar service Slack, offering workspace chat and videoconferencing, file storage, and application integration. This device has helped a lot in promoting effective teaching and learning school system.

Availability according to the Collins English Dictionary, (2015) is when something is available for use or can

easily be bought or found. Availability of zooms technology is one of the basic requirements for successful adoption of e-learning technologies in tertiary institutions in Cross River State, Nigeria. Gabadeen, Alabi and Akinnubi, (2015) pointed that for e-learning to successfully utilized; it must be available, accessible for utilization and in good condition at all times. Some of the e-learning technologies include projectors, PCs, e-library, Google search, email, whatsapp among others. Availability of internet facilities particularly the intranet aid business education lecturers and students, with laptops to type and prepare power point and use of projector and prepare assignments. The authors also included that for these available e-learning technologies to be sustained needs to be maintained for continuous utilization.

Business education lectures in all ramifications would be able to utilize zooms and MS team technologies in classroom delivery based on distance, class assignment, among others. As the move towards MS team technologies in higher institutions continue to grow, the more important it becomes examine the availability of zooms and MS team technologies and extent of utilization in tertiary institutions. The drive to find out the availability and extent of utilization of MS team technologies in universities, necessitated this research.

Purpose of the Study

The main purpose of this study was to investigate the extent of availability and utilization of MS teams technologies in teaching and learning of business education in tertiary institutions in Cross River State. Specifically the study will seek to:

1. Ascertain the Microsoft team technologies available for lecture delivery in tertiary institutions in Cross River State
2. Ascertain how Microsoft team technologies is utilized for lecture delivery in tertiary institutions in Cross River State

Research Questions

In line with the general and specific objectives of this study, the following research questions was raised to guide the study:



1. What MS team technologies are available for lecture delivery in tertiary institutions in Cross River State?

2. To what extent are MS team technologies utilized for lecture delivery in tertiary institutions in Cross River State

Hypotheses

The following null hypotheses was formulated to guide the study and was tested at 0.05 level of significance:

Ho₁ There is no significant difference in the mean ratings of respondents on the extent MS team technologies are utilized for class discussion in tertiary institutions in Cross River State based on school types

Ho₂: There is no significant difference in the mean ratings on the extent MS technologies utilized for lecture delivery in tertiary institutions in Cross River State based on gender.

Methodology

This study examined the extent of availability and utilization of Microsoft teams technologies in teaching and learning of Business Education in Tertiary Institutions in Cross River State. To achieve the purpose of the study, two research questions were raised and two hypotheses were formulated to guide the study. The study adopted a survey research design. The population

consisted of one hundred and thirty nine (139) business education lecturers in the study area, who were all involved in the study due to the manageable size of the population. A 16-item questionnaire titled “Extent of Availability Microsoft Teams Technologies for Teaching and Learning of Business Education Questionnaire” (EAMTTTLBEQ) was used for data collection. The data collected were analysed using the Cronbach Alpha statistical technique which yielded an overall reliability coefficient of 0.79. The data collected were analysed using mean (X), standard deviation (SD) Similarly, the null hypotheses were tested at 0.05 level of significance using ANOVA and independent t-test. The mean ratings was interpreted using Available (A) and Not Available (NA). In order to interpret the result, 50% and above was used for availability while below 50% was for non-availability and the interpretation of results was based on alpha level of 0.05 with 137 degree of freedom.

Results of the Findings

Research Questions One

What MS team technologies is availability for lecture delivery in tertiary institutions in Cross River State?

The data providing answers to the above research question are presented in Table 1

Table 1: Simple percentages of Responses of Respondents on MS team technologies availability for lecture delivery in tertiary institutions in Cross River State (n = 139)

S/N	Items	YES	%	NO	%	Remarks
1	Electronic organizer	60	43.17	79	56.83	NA
2	Video system	100	71.74	39	28.60	A
3	Digital camera	110	79.14	29	20.86	A
4	Mobile phone	122	87.77	17	12.23	A
5	Interactive board	53	38.13	86	61.87	NA
6	Plasma screen	108	77.69	31	22.30	A
7	iPad	116	83.45	23	16.55	A
8	Internet facilities	123	88.49	16	11.51	A
Aggregate		790	71.22	320	28.78	Available

Note: N = Available and NA = Not Available

From the results displayed in Table 1, the result showed that the aggregate percentages for those who responded yes to the items 8-15 is 71.22% while those who responded No to the items 1-8 aggregated to 28.78%.

This implies that MS team technologies are available for lecture delivery in tertiary institutions in Cross River State.

Research Questions two



To what extent are Microsoft team technologies utilized for lecture delivery tertiary institutions in Cross River State?

The data providing answers to the above research question are presented in Table 2.

Table 2: Simple percentages of Responses of Respondents on Microsoft team technologies utilized for lecture delivery tertiary institutions in Cross River State (n = 139)

S/N	Items	HU	U	FU	NU	CB	OM	S.D	Remarks
1	Smart Phone basically used for interaction	68	47	14	10	2.5	3.24	.342	U
2	Internet facilities basically for connectivity	108	19	10	2	2.5	3.68	.776	U
3	Digital camera use for image viewing	46	62	17	14	2.5	3.00	.432	NU
4	Microphone mainly of voice	56	58	16	9	2.5	3.19	.602	U
5	Interactive board used of communication	16	28	11	84	2.5	1.83	419	NU
6	Flat screen mainly used for image display	46	59	28	6	2.5	3.24	.444	U
7	Smart Phone used on individual bases	108	21	10	-	2.5	3.70	.321	U
8	Video system for classroom interaction	72	39	28	-	2.5	3.32	.951	U
Grand mean						2.5	3.16	.321	Utilized

Note: CM=Criterion mean; OM=Obtained Mean; N = Utilized; NU = Not Utilized

The result in Table 2 showed that the grand mean of 3.16 is greater than the Criterion mean of 2.5. This implies that the respondents agreed that Microsoft team technologies are utilized for lecture delivery in tertiary institutions in Cross River State.

Hypothesis one

H₀₁ There is no significant difference in the mean ratings of respondents on the extent MS team technologies are utilized for class discussion in tertiary institutions in Cross River State based on school types

Table 3: One way analysis of the mean rating on extent of MS team technologies utilization for class discussion

The results in Table 3 showed that for electronic organizers (F=.130, p>.05), for video system (F3.747,

Table 4: Independent t-test of the mean Ratings of Responses of male and female on extent of MS team technologies utilization for class discussion

p<05), for digital camera (F=.135, p>05), for mobile phone (F=.120, p>. 05),, for interactive board(F=1.638, p>05),, for plasma screen(F=.940, p>05), for iPad (F=.377, p>05), and internet facilities (F=.104, p>05). This implies that there is a significant mean rating of school types in terms of availability of video however; there is no significant mean rating of school type in terms of internet facilities, interactive board, interactive board and iPad

Hypothesis two

H₀₂: There is no significant difference in the mean ratings on the extent MS technologies utilized for lecture delivery in tertiary institutions in Cross River State based on gender.



Items	Gender of staff	N	Mean	Std. Deviation	Df	t-cal	Sig	Remarks
1	Male	47	3.4468	.74625	137	1.771	.079	NS
	Female	92	3.1304	1.10162				
2	Male	47	3.0638	.94188	137	-1.031	.304	NS
	Female	92	3.2174	.76784				
3	Male	47	3.0638	1.18696	137	-1.402	.163	NS
	Female	92	3.3261	.96201				
4	Male	47	2.9362	1.13068	137	-1.446	.151	NS
	Female	92	3.1957	.92865				
5	Male	47	3.2553	1.07275	137	1.023	.308	NS
	Female	92	3.0435	1.19443				
6	Male	47	3.2979	.93052	137	.849	.397	NS
	Female	92	3.1413	1.07501				
7	Male	47	2.5957	1.01424	137	-1.438	.153	NS
	Female	92	2.8370	.89292				
8	Male	47	3.0851	.92853	137	.119	.903	NS
	Female	92	3.0652	.93532				
Gender	Male	47	13.87	2.98	137	1.721	.982	NS
	Female	92	13.62	3.04				

Note: level of Sig. = 0.05; NS = Not Significant; S = Significant.

The result of the t-test analyses presented in Table 4 above indicated that there is no significant difference in the mean rating of the respondents on perceived influence of gender on the utilization of zoom technology for lecture delivery in tertiary institutions . This is because data in Table 8 showed that the p-val .982 is greater than 0.05. since the p-values are greater than p(.05), this implies that there is no significant difference in the mean rating of male and female respondents of the perceived extent of utilization of MS technologies in lecture delivery in tertiary institutions Hence, the null hypothesis is retained

Discussion of the Findings

Availability of MS team Technologies for Lecture Delivery in Tertiary Institutions in Cross River State

In research question 2, the findings shows that Electronic organizer was not available; Video system was available; Digital camera was available; Mobile phone was available; interactive board was not available; Plasma screen was available; ipad was available; Internet facilities was available. However, the aggregate

percentages for those who responded yes to the items 1-8 is 71.22% while those who responded No to the items aggregated to 28.78%. This implies that MS team technologies are available for lecture delivery in tertiary institutions in Cross River State.

This is in line with Agbo (2016) that the following zome technologies are avaialable to use in school which include personel computer, CD-ROMS,MP3 players and mobile phone, internet facility, extranet, audio and video tape. The availability of these zome technologies are important to teaching and learning. This is soppoted by Bandele (2007) that zoom technologies are vital aid in the classroom instruction. To the author, zoom technologies are too significant to have and ignored and as a result, such facilities must be available in tertiary institutions. However, the findings is line with Agbo, (2016) whose findings showed that there are high availability, accessibility and utilization of computer materials in the education zone. However Atsumbe, Raymond, Enoch and Duhu (2012) study revealed that e-learning infrastructures are not adequate in the Tertiary



institutions for teaching and learning. The study of Adelabu, Adu and Adjogri (2014) equally disagreed with the findings of this study, whose findings revealed that e-learning infrastructures are not available to teachers and students to facilitate effective teaching and learning in order to brace up to present day educational challenges.

Hypothesis 2 the result in table 3 revealed that for electronic organizers ($F=.180, p>.05$), for video system ($F3.747, p<.05$), for digital camera ($F=.135, p>.05$), for mobile phone ($F=.120, p>.05$), for interactive board ($F=1.638, p>.05$), for plasma screen ($F=.940, p>.05$), for iPad ($F=.377, p>.05$), and internet facilities ($F=.104, p>.05$). This implies that there is a significant mean rating of school types in terms of availability of video however; there is no significant mean rating of school type in terms of internet facilities, interactive board, interactive board and iPad. This is not in line with Inije, Utoware, and Kren-Ikidi, (2013) that the Public Universities, State own University, Private Universities and Colleges of education may differ based on their availability of MS team technologies for lecture delivery. Ofodu (2007) agreed that e-learning technology resources were not adequately available in teaching business education in colleges of education due to government non challenge attitude towards provision of school resources.

Extent of Microsoft Team Technologies Utilization for Lecture Delivery in Tertiary Institutions in Cross River State

In research question 2, and table 4, the findings shows that Smart Phone basically used for interaction was utilized; Internet facilities basically for connectivity was utilized; Digital camera use for image viewing was not utilized; Microphone mainly of voice was utilized; Interactive board used of communication was not utilized; Flat screen mainly used for image display was utilized; Smart Phone used on individual bases was not utilized; Video system for classroom interaction was utilized for lecture deliver in tertiary institutions in Cross River State. The grand mean of 3.16 is greater than the Criterion mean of 2.5. This implies that the respondents agreed that Microsoft team technologies are utilized for

lecture delivery in tertiary institutions in Cross River State. In agreement with this findings Cletus, Bessong and Ititim (2022) study revealed that, there is high extent of ICT utilization among bursary staff in universities in Cross River State

The hypotheses 2, the result of the t-test analyses presented in Table 4 indicated that there is no significant difference in the mean rating of the respondents on perceived influence of gender on the utilization of MS technology for lecture delivery in tertiary institutions. This is because data in Table 4 showed that the p-val .982 is greater than 0.05. since the p-values are greater than $p(.05)$, this implies that there is no significant difference in the mean rating of male and female respondents of the perceived extent of utilization of MS technologies in lecture delivery in tertiary institutions Hence, the null hypothesis is retained.

This is in consonance with Okoro (2020) whose finding also revealed that there is no significant difference in the mean rating between male and female lecturers on Microsoft Team Technologies Utilization for Lecture Delivery in universities in south-south Nigeria.

Conclusion

It was concluded that MS team technologies should be supplied for business education teaching and learning in tertiary institutions in Cross River State and the extent of MS team technologies utilization for lecture delivery in Tertiary institutions in Cross River State were in High Extent

Recommendations

Based on the findings of the study, the research recommended that:

1. Government should provide enabling teaching and learning environments in all the tertiary institutions in the Cross River State and Nigeria at large to ensure effective utilization of Micro Soft team technologies
2. Government should provide training centres for training and retraining of lecturers to acquaint themselves with the development of nascent technologies.



3. Adequate provisions of e-learning facilities should be made by the management of institutions so as to improve teaching and learning.

REFERENCES

Adnirin, O. (2012). Appraising the relationship between ICT usage and integration and the standard of teacher education programs in a developing economy. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*. 2 (3):70 – 85

Adomi, E.E. (2020). *An assessment of computer literacy skills of professionals in Nigeria University Libraries*. Library Hi Tech News 23(2) 10-14.

Agbo, I. I. (2016). Availability, extent of accessibility of computer material secondary schools in Onueke education zone. Unpublished dissertation submitted to Department of Science Education, Ebonyi State University, Abakaliki.

Agim, V. U., Atah, C. A. ., & Ochui, M. O. (2022). Influence of e-mail and youtube platform utilization on academic performance of business education students in University of Cross River State. *Academic Journal of Current Research*, 9(2), 72–82. Retrieved from <https://www.cirdjournal.com/index.php/ajcr/article/view/647>

Atah, C. A. & Abeng, C. O. (2019). Influence of Institutional Variables and Employability Skills Acquisition among Business Education Students of Tertiary Institutions in Cross River State, *Nigeria International Journal of Vocational and Technical Education Research* Vol.5, (1) 1-12. <https://www.eajournals.org/journals/international-journal-vocational-technical-education-research-ijvter/vol-5-issue-1-february-2019>

Atah, C. A., Ukah, T. A. & Crossdale, O. J. (2019). Utilization of Microsoft Excel and Peer Tutoring in teaching accounting for the acquisition of Vocational Skills among Business Education Students of Colleges of Education in Cross River State, Nigeria. *European Journal of Accounting, Finance and Investment* ISSN 3466 – 7037 Vol. 5, (7), 84-92

Bandale, T. U. (2007). ICT in education: E-primers for the information economy, society and policy. *Journal of Distance Education*, 9(4), 1-7.

Bessong, E. B.; Atah, C. A. & Ititim, D. U. (2019). Influence of Intranet and Telecommunication Facilities among Administrative Staff of Vocational Education in Tertiary Institutions in Cross River State, Nigeria. *International Journal of Education and Evaluation* ISSN 2489-0073 Vol. 5 (3) 84-95 <https://iardpub.org/journal/?j=IJEE> or

<https://iardpub.org/get/IJEE/VOL.%205%20NO.%203%202019/INFLUENCE%20OF%20INTRANET.pdf>

Cletus Akpo, A. ., Bessong, E. B., & Ititim, D. U. (2022). Extent of ict and office management among bursary staff in universities in cross river state extent of ict and office management among bursary staff in Universities in Cross River State. *Developing Economy Journal*, 8(8), 1–6. Retrieved from <https://cirdjournal.com/index.php/dej/article/view/798>

Dubu, T. O. (2012). “Extent of utilization of available e-learning technology by Business Educators in Tertiary institutions in Delta State” *UNIBEN*, Nigeria.

FRN (20013). *National policy on education* (6th edition). Lagos: NERDC Press.

Gilbert, B. A. (2010). Glossary: The hottest buzz word in the industry. Retrieved on March, 2018, from [http://1/ Glossary hottest buzz.com](http://1/Glossary%20hottest%20buzz.com).

<http://cird.online/EJFAI/index.php/vol-5-no-7-july-2019/>

Iwu A. O. (2006). *Principle of Science and Science teaching in Nigeria (An introduction)*. Enugu Jones communication publishers.

Ofodu, I. K. (2007). *Introduction to survey research design*. Survey Research Laboratory (SRL) fall 2002 Seminars Series.

Okoro, O. O. (2020). E-Learning in Nigeria: Problems and prospects. *Being a keynote address presented at the 2010 Annual conference of Faculty of Education, Nnamdi Azikiwe University Awka*.

Ololube, A. O. (2006). Utilization of e-learning facilities in preparing business education students for the world of



work. *Association of Business Educators of Nigeria Journal*, 5 (1) 200 – 207

Ukah, T. A. ., & Atah , C. A. (2022). Influence of social media utilization and academic rendition of business education students in University of Cross River State (UNICROSS), NIGERIA. *Academic Journal of Current Research*, 9(1), 17–22. Retrieved from <https://www.cirdjournal.com/index.php/ajcr/article/view/618>

Utoware, J. O. A. & Keren-Ikide, C. P. (2013). Lecturers and students perception on e-learning as technology tool for studying business education in Nigerian tertiary institutions in south-south state. *Journal of Business Education* 3(4)44-61