



## PERCEIVED IMPACT OF E-LEARNING TECHNOLOGY UTILIZATION IN ACCOUNTING EDUCATION

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### Abstract

*The study examined the perceived impact of technology utilization in accounting education in selected tertiary institutions in Rivers State. The research adopted the descriptive survey design. Two research questions and two hypotheses were posed to guide the study. The population for the study comprised 58 Business Education Lecturers and 43 Postgraduate Business Education Students (accounting option) from Rivers State University (RSU) and Ignatius Ajuru University of Education (IAUOE), making a total of 95 respondents. However, a total of 64, comprising 28 lecturers and 36 students were used for the study based on the number of instruments retrieved. The Instrument used for data collection was a structured questionnaire titled “Perceived Impact of Technology Utilization Questionnaire” (PITUQ). The reliability of the research instrument was obtained using test-retest method; Pearson Product Moment Correlation coefficient of .80 was obtained. The instrument was validated by two experts from the Departments of Business Education (Accounting Option) and Measurement and Evaluation in Rivers State University, Port Harcourt. Successfully retrieved questionnaires were analyzed using mean to answer the Research Questions and t-test for testing the hypothesis at .05 level of significance. The results obtained identified e-learning technologies that can be utilized for teaching and learning accounting education. The study also found that technology utilization has positive impacts on teaching and learning Accounting Education. It was therefore recommended amongst others that government, relevant stakeholders, educational planners, internet service providers and tertiary institutions must synergize to create conducive atmosphere for usage of the various e-learning and social networking technologies.*

**Keywords:** *Technology, Technology utilization, Accounting, Accounting Education, E-learning technologies.*

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## **Introduction**

Technology is the systematic application of practical knowledge considered useful for the society and for those who utilize them for practical task in a new way (European Space Agency, 2012). Technology has changed the way things are done in almost all facets of life, including education. According to Amiaya (2014) technology is made up of Information Communication Technologies (ICTs) and e-learning facilities presented by several tools such as computers, internets, software, teleconferencing, and World Wide Web to acquire, organize, process, store, retrieve and disseminate information to bring about effective exchange of information in communication. Amesi and Akpomi (2013) wrote that although the word Technology was often associated with technical education in most institutions in Nigeria, but has today, affected society and its surroundings in several ways and also helps to empower lecturers and students in more ways than have been imagined previously. The role of technology in teaching and learning is rapidly becoming the most important and widely discussed issue in contemporary educational policies (Kolo, 2015). There is no doubt that technology has radically and positively impacted on education and the growing pace of technology will continue to increase even in the future. Rhodes (2013) found that the integration of new technologies with particular interest on accounting software packages into accounting education delivery in tertiary education would align accounting education to accounting practice. This could place the accounting graduate and employer in agreeable terms, thereby, increasing the value of the modern graduate. The whole process of education, particularly the way educators and students gain access to knowledge and information has been greatly influenced by technology. Graduates of accounting education and their roles in the world of work may likely be viewed from this perspective due to developments in technology.

Accounting Education is a major part of Business Education, geared towards producing accountants for workplace. Accounting Education is offered as an option of business education at different levels of tertiary institution with the aim of equipping students with suitable skills required for teaching, working as accounting officers, accountants or self-practicing accountants (Ezeani & Akpotohwo, 2014). This implies that accounting education is education for self-reliance, aimed at equipping individuals with relevant and necessary skills to fit into the position of accountants in the work place. Aspects of accounting education include: cost



accounting, taxation, financial management, electronic accounting or accounting information system, auditing, financial accounting, management accounting, accounting instruction, record keeping, budgetary accounting and governmental accounting (Ezeani, 2008, Salome & Chukwunwendu, 2014). Accounting Education has advanced to accomplish business requirements and also prepare students for market demands (Yap, Ryan, and Yong 2014). As a result of this, accounting education must provide students with the required skills and knowledge needed to become competent professionals in a dynamic business world.

Accounting Education in recent times has been influenced through the utilization of technologies such that teaching and learning processes are being adjusted daily to meet the challenges of this digital information age. The utilization of technologies in accounting education will largely contribute to the development of accounting skills and competencies, allowing for more emphasis to be placed on accounting concepts, issues and ideas. Accounting functions in modern times have changed from that of technical jobs to client oriented practices, involving the use of modern technologies. However, despite these impacts, Omatayo and Umoru (2015) recalled that effective technology utilization has always been challenged by factors such as poor power supply, lack of internet connectivity, inadequate funding of e-learning projects, high cost of technologies, insufficient technologies, among others. While some instructors in accounting education have willingly embraced these technological innovations in their classrooms (Craig & Amernic, 2006) others have resisted the trend.

Technology in accounting education refers to modern facilities introduced into the accounting field to enable accounting educators prepare their students for the world of work. They include the varied technologies utilized in teaching and learning of accounting courses. Simsek (2005) described this link between education and technology as the application of scientific information and processes to the problems of education such that one has a way of looking at instructional problems and exploring possible solutions to those problems. Amiaya, (2014) also described technologies as ICTs, e-learning tools and devices that have changed classroom experience and brought about innovations in the teaching and learning of accounting in tertiary institutions. The author further asserted that modern technologies such as the aforementioned have been found to possess the capacity to improve instructional delivery in education. Nnadi, Ubulom and Dambo (2017) added that the growing



numbers of students taking accounting courses in tertiary institutions and the demand on lecturers to give effective feedback on course works have necessitated the use computing devices in accounting assessments. In a technology driven society as in present times, there is need for effective and efficient utilization of modern ICTs and e-learning technologies available in accounting education in tertiary institutions. Thus, to achieve this task, accounting curriculum must integrate contents that allow students to be informed and savvy with web-enabled communication, accounting packages such as QuickBook and Peachtree, Virtual Learning Environments (VLEs), Microsoft office tools, etc (Albrecht & Sack, 2000, Miles, 2016, Tucker, 2017 and Leonard 2018).

Nwagbo and Ugwuanyi (2011) asserted that many educational institutions now utilize e-learning technologies as a complement for teacher led teaching. The authors added that these technologies are now becoming increasingly popular as they are used for tutoring, managing courses, providing simulations, programming and problem solving. E-learning technologies that can be utilized in accounting education include digital library, e-mail, accounting e-books, on-line collaborative work space, video conferencing, tele-conferencing, accounting packages such as QuickBooks and Peachtree, Virtual Learning Environment (VLE), Optical Character Recognition (OCR) Tools. Oyebisi, Ayodotun and Olugbenga (2015) also recommended accounting software application packages that could be used for recording and processing accounting operations such as accounts payable, accounts receivable, payroll, and trial balance, within functional modules. They include: Peachtree, Quickbook, Lotus 123, Super calc etc.

The need for e-learning has now become increasingly important more than ever. E-learning can help accounting students in developing their literacy and in numeracy skills. With e-learning there is a shift from the traditional approach of pedagogy to modern methods of teaching where technology plays a significant role. E-learning technologies are one of the recent technological developments in education that has been proven to enhance learning in various ways and has gradually become an indispensable and integral part of the teaching and learning process especially at the tertiary education levels. E-learning technologies are sub systems within Information and Communication Technologies. Inije, Utoware and Kren-Ikidi (2013) described e-learning as an electronic learning or process which enhances the delivery and administration of learning opportunities and support through computer



networked and web based technologies to help individual performances and development. It involves the utilization of technologies such as e-library, e-mail, PowerPoint, video conferencing, internet and web browsing to mention a few applicable in education. Avani and Mohammed (2017) described the act of teaching with technology as “Active Learning”. Their findings also revealed that technology based learning improved the corroboration of accounting subject, and led to a projection that students taught with technology have higher chances of a successful future career, against students learning with books only.

### **Statement of the Problem**

Tertiary institutions in recent times have placed more emphasis on student centered instruction through the use of technologies; as such it has become increasingly acceptable and prevalent amongst tertiary institutions. The use of e-learning technologies is a modern trend that enhances teaching and learning. Despite the growing trend, some researchers have lamented on the slow pace of their utilization in accounting education (Agboeze, Ugwoke & Onu, 2012). There have been expectations as to the impact of technology utilization in accounting education, though there are many research studies on accounting education and technology, empirical studies relating to the impact of technology utilization with particular emphasis on e-learning technologies in accounting curriculum seem to be limited. It is in a bid to close the identified gap in literature that this study sought to identify e-learning technologies available for accounting education and the extent of utilization in accounting education.

### **Research Questions**

The following research questions guided the study:

1. What e-learning technologies can be utilized in teaching and learning accounting education?
2. What are the impacts of utilizing e-learning technologies for teaching and learning of accounting education?

### **Research Hypotheses**

The following hypotheses were tested at 0.05 level of significance.

1. There is no significant difference in the mean ratings of lecturers and students on e-learning technologies that can be utilized in teaching and learning accounting education in selected Rivers State Tertiary institutions.



2. There is no significant difference in the mean ratings of lecturers and students on the impact of utilizing e-learning technologies for teaching and learning of accounting education in selected Rivers State Tertiary institutions.

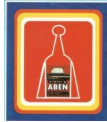
### **Method**

This study adopted the descriptive survey research design, as an appropriate tool for assessing opinions of lecturers and post graduate students on the impact of technology utilization. The population of the study comprised 58 business educators and 43 post graduate business education students (accounting option), a total of 95 respondents drawn from the department of business education in two selected Rivers State tertiary institutions, Rivers State University (RSU) and Ignatius Ajuru University of Education (IAUOE) Port Harcourt. The entire population size was studied because of the small size of the population. The instrument used for data collection was a 15 item structured questionnaire titled “Perceived Impact of Technology Utilization Questionnaire” (PITUQ), drafted by the researcher. The questionnaire items were subjected to face and content validation by two experts from business education (accounting option) and measurement and evaluation. A reliability coefficient of 0.80 was obtained using test re-test method, making the instrument suitable for use. The instrument was drafted using four (4) point rating scale ranging from Strongly Agree to strongly disagree for research questions. Data was analyzed using the mean for the research questions and t-test to test the hypotheses at 0.05 level of significance. The mean was obtained by the summation of all responses as assigned to a rating scale in an item divided by the total number of responses:  $4+3+2+1/4 = 2.50$ . The decision rule was that any mean value of 2.50 and above was considered accepted/utilized while mean values below 2.5 were rejected/not utilized. The decision rule for the test of hypotheses is: If the t-calculated is greater than the t-critical, the null hypothesis is rejected but accepted if the t-calculated is less than t-critical at .05 level of significance.

### **Results**

#### **Research Question 1**

What e-learning technologies can be utilized in teaching and learning accounting education?



**Table 1:** Mean responses of lecturers and students on e-learning technologies that can be utilized in teaching and learning accounting education. (N=64)

S/N	Statement	Lecturers			Students		
		Mean	SD	Decision	Mean	SD	Decision
1.	e-library	2.60	0.72	Accepted	3.07	0.81	Accepted
2.	Tele/Video Conferencing	2.52	0.75	Accepted	3.00	0.89	Accepted
3	Virtual Learning sites	2.90	0.66	Accepted	2.67	0.73	Accepted
4.	e-books	2.75	0.83	Accepted	2.55	0.88	Accepted
5.	QuickBooks	3.75	0.47	Accepted	3.65	0.5	Accepted
6.	Sage	3.10	0.94	Accepted	3.64	0.47	Accepted
7.	Peachtree	2.55	0.85	Accepted	2.62	0.48	Accepted
8.	Super Calc	2.64	0.65	Accepted	2.59	0.66	Accepted
9.	Lotus 123	2.58	0.58	Accepted	2.70	0.50	Accepted
<b>Grand Mean</b>		<b>2.88</b>	<b>0.74</b>	<b>Accepted</b>	<b>3.10</b>	<b>0.66</b>	<b>Accepted</b>

Source: Survey Data 2019

Results from Table 1 above revealed that respondents agreed on all items with mean values above the criterion value of 2.50, indicating that the identified e-learning technologies can be utilized in the teaching and learning of accounting education.

### Research Question 2

What is the impact of utilizing e-learning technologies for teaching and learning of accounting education?

**Table 2:** Mean responses of lecturers and students on the impact of utilizing e-learning technologies for teaching and learning of accounting education. (N=64)

S/N	Statement	Lecturers			Students		
		Mean	SD	Decision	Mean	SD	Decision
1.	Provides a variety of sources of information for lecturers and students.	3.40	0.92	Accepted	3.50	0.63	Accepted
2.	Provides an avenue to improve the standard of accounting education globally.	4.00	0.77	Accepted	3.29	0.55	Accepted
3	It promotes conducive and collaborative teaching and learning environment.	2.90	0.95	Accepted	2.86	0.99	Accepted
4.	It encourages productivity and professional effectiveness and efficiency.	3.10	0.74	Accepted	3.64	0.78	Accepted
5	It encourages and promotes technological competencies and skills of lecturers and students by equipping them technologically.	3.30	0.90	Accepted	3.21	0.59	Accepted
<b>Grand Mean</b>		<b>3.34</b>	<b>0.86</b>	<b>Accepted</b>	<b>3.30</b>	<b>0.71</b>	<b>Accepted</b>



The data presented in Table 2 revealed that the respondents agreed on all items relating to the their perceptions on the impact of technology utilization in the teaching and learning of accounting education, with a grand mean of 3.34 and 3.30 for lecturers and students respectively. This implies that there are benefits in utilizing e-learning tools in teaching and learning.

### Test of Hypotheses

#### Hypothesis 1

There is no significant difference in the mean ratings of lecturers and students on e-learning technologies that can be utilized in teaching and learning Accounting Education in selected Rivers State Tertiary institutions.

**Table 3:** *T-test analysis of mean differences in the responses of lecturers and students on e-learning technologies can be utilized in teaching and learning Accounting Education.*

Respondents	N	Mean	SD	Df	L/S	T-cal	T-crit	Decision
Lecturers	28	2.88	0.74	62	0.05	-1.29	2.0	Accepted
Students	36	3.10	.66					

Source: Survey Data 2019.

Table 3 revealed a t-calculated value of -1.29 less than the t-table value of 2.0 with a degree of freedom of 62 and 0.05 level of significance, indicating the acceptance of the null hypothesis that there is no significant difference in the mean rating of lecturers and students on e-learning technologies that can be utilized in teaching and learning accounting education in selected Rivers State Tertiary institutions.

#### Hypothesis 2

There is no significant difference in the mean rating of lecturers and students on the impact of utilizing e-learning technologies for teaching and learning of accounting education in selected Rivers State Tertiary institutions.

**Table 4:** *T-test analysis of mean differences in the responses of lecturers and students on the impact of utilizing e-learning technologies for teaching and learning of Accounting Education in selected Rivers State Tertiary institutions*

Respondents	No	Mean	SD	Df	Level of Sign	T-cal	T-crit	Decision
Lecturers	28	3.34	0.86	62	0.05	0.03	2.0	Accepted
Students	36	3.30	0.71					

Source: Survey Data 2018.



Table 4 revealed a t-calculated value of 0.03 less than the t-table value of 2.0 with a degree of freedom of 62 and 0.05 level of significance, indicating the null hypothesis is accepted and upheld that here is no significant difference in the mean rating of lecturers and students on the impact of utilizing e-learning technologies for teaching and learning of accounting education in selected Rivers State Tertiary institutions.

### **Discussion of Findings**

The data presented in Table 1 provided answers to Research Question 1 which indicated the acceptance of respondents on the e-learning technologies that could be utilized in teaching and learning accounting education. This finding is in line with the assertion by Miller, Nwaekete and Akiti, (2015) that e-learning tools such as e-library, e-Books, Quickbook, Sage, Super Calc, VLEs and Peachtree can be utilized in accounting education.

Findings with respect to Research Question 2 as presented in Table 2 showed the acceptance of respondents on the impact and importance of technology utilization in accounting education. Both lecturers and students perceived that accounting education would be more easily and positively impacted on if the identified new technologies are integrated in the teaching and learning process. This finding aligns with the opinions of Enoche (2015) and Jimoh (2015) that e-learning technologies have significant impact on teaching and learning through creating access to variety of learning resources, immediacy to learning, encouraging collaborative learning, making learning more interesting and simple, creating access to on-line libraries, multiple communication channels among others. The test of the two hypotheses, presented in Tables 3 and 4 revealed that lecturers and students in the selected tertiary institutions did not differ significantly in their mean responses.

### **Conclusion**

The study investigated the perceived impact of technology utilization on Accounting Education in Rivers State tertiary institutions. It revealed that e-learning technologies like e-library, video/tele conferencing, e-presentation, e-book, e-lecture (virtual learning), QuickBooks, Sage, Peachtree, Supercalc among others could be utilized in teaching and learning accounting education. The study also identified impact of technology utilization to include stimulating students' interest, promoting technological competence and professional effectiveness among others. Thus lecturers and students must be equipped with the knowledge of utilizing technology in this era of rapid technological advancement.



## Recommendations

Based on the findings and conclusion of the study, the following recommendations were made:

1. Accounting Educators and Students should seek and discover new and relevant technologies that could be integrated in Accounting Education. This will enhance the professional knowledge of both Lecturers and Students of Accounting Education and position them for global competition.
2. Government and Administrators of Tertiary institutions should provide the enabling environment, provide necessary and accessible facilities, as well as train Accounting Lecturers to enhance the use of e-learning tools for effective teaching and learning. This is better prepare the Accounting Graduate for a competitive and technology driven world of world.

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