



EMERGING TECHNOLOGIES FOR ONLINE TEACHING AND LEARNING OF ACCOUNTING IN PUBLIC TERTIARY INSTITUTIONS

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Abstract

The need to minimize the difficulties faced by accounting lecturers when choosing digital tools for instruction necessitated the study, to identify the emerging technologies that could be used for online teaching and learning of accounting. Descriptive survey research design was used. The population of the study consisted of 116 accounting lecturers from public tertiary institutions in Anambra State. Census sampling was done as the whole population was studied. The instrument for data collection was the questionnaire which was validated by three experts. The reliability coefficient of the instrument was obtained using Cronbach Alpha's method and the reliability coefficient of 0.84 was obtained. Data collected were analyzed using percentage, frequency distribution and chi-square. Percentage and frequency distribution were used to answer the research question, while the Chi-square test of association was used to test the null hypothesis at 0.05 level of significance. Findings from the study revealed that the respondents identified the emerging technologies for online teaching and learning of accounting to include; mobile learning devices, powerpoint videos, zoom, youtube, linkedin, google form, zipbooks, cogbooks, among others. Also, the findings revealed that there was no significant association in the respondents' ratings on emerging technologies for online teaching and learning of accounting as a result of gender. It was recommended among others that, administrators of higher institutions should ensure availability and accessibility of the identified emerging technologies for online teaching and learning of accounting.

Keywords: Emerging technologies, Accounting education, Technology advancement, Gender.

Introduction

Advances in technology have spurred changes on how human beings interact, communicate, learn and teach. Technology permeates nearly every aspect of our existence from shopping and banking, to communication and education (Tariq et al., 2012; Özüdoğru, 2021). It has provided new educational opportunities in institutions of learning, as learners are able to learn independently, and can access all learning materials at any time and from anywhere where internet is limitless with the use of emerging technologies.

Emerging technologies are technologies whose development and applications are still expanding fast, and their technical and value potential are still largely unrealized (Kufeoglu, 2022). They are technologies whose practical applications are still largely not utilized. They are capable of influencing the process and outcome of teaching and learning process in Nigerian tertiary institutions (Enang, 2022). The number of emerging technologies available to support teaching and learning is growing exponentially (Annemieke, Annegret & Jenine, 2012). Emerging Technologies may be classified according to one's perception on these tools. They can be classified according to type, design or structure. They can also be classified according to the senses they engaged during the teaching and learning processes namely; Aural instructional media (technologies that stimulate the sense of hearing), Visual media (projected and non-projected technologies that could stimulate the sense of sights) and Audio-visual media which are technologies that can transfer and transmit learning experiences through seeing and hearing simultaneously (Mormah & Basse, 2019). The authors maintained that emerging technologies include electronic media devices and facilities that ensure e-learning such as; broadband desktop, laptop, tablets, Ipads, smartphones and other mobile learning devices; radio, cassette tapes, audio streams, downloadable packages, internet services, television and interactive boards. Others include: virtual realities, wearable



technologies, artificial intelligent tools, digital learning tools and platforms (Okon, 2021); Ubiquitous Computing (UC); Collaboration Technologies (CT); Extended Reality (ER), Artificial Intelligence (AI) and BlockChain (Enang, 2022).

The drive and adoption of emerging technologies have become necessary in accounting education due to the fact that currently, majority of the accountant jobs are becoming more sophisticated than before. Effective utilization of emerging technologies in the teaching and learning of accounting would equip the accounting students with the technological skills required for adaptation in the contemporary business world. It would also provide them the platform for technological excellence in the globalized world. Hence, tertiary institutions in developing nations should therefore embrace the use of emerging technologies and blend them with the face-to-face traditional method of instruction, to enhance their relevance in the face of technological advancement and challenges. But, lack of technology identification and acquisition has been the major problem facing the education industry (Okoro, 2021). This entails that, the level of adoption and integration of emerging technologies in accounting education, could depend on the identification and acquisition of the right technologies for teaching and learning of accounting.

Accounting education is the type of education that equips the recipients with the necessary competencies needed for financial and economic resource management (Obidile, 2021). It is a course of study which aims to equip its recipients with the necessary competencies needed for proper recording, planning and utilization of financial resources for decision making in the face of alternative course of actions. Accounting measures the results of an organization's economic activities and conveys this information to a variety of users, including investors, creditors, management and regulators (Jui & Wong, 2013). One of the primary objectives of accounting education is to prepare students for a successful professional life (McVay et al. 2008). For the teaching and learning of accounting to still maintain its relevance in the face of technological upheaval; accounting teachers should optimally integrate emerging technologies in the teaching and learning of accounting so as to prepare the students to fit into the kind of jobs which presently exist. But, incorporation of technologies in education may not be successful without adequate measures being taken to identify and provide the necessary technologies. Efforts should therefore be made by accounting lecturers to continually adapt to the challenges brought about by the technological advancement, through the identification and integration of emerging technologies in-order to maintain the global best practices in accounting education. Accounting lecturers are made up of male or female facilitators. There could be varied opinions in their responses. Hence, the use of gender as a moderating variable.

Statement of the Problem

The recent advancement and introduction of several emerging technologies in education sector, have necessitated the application of emerging technologies for online teaching and learning processes, including the teaching and learning of accounting. It therefore becomes important that accounting lecturers should identify those emerging technologies that could be used for online teaching and learning of accounting. Considering the peculiarities in the Nigerian environment, it is obvious that some technologies could be easily adopted and utilized than others. It therefore becomes pertinent to identify the emerging technologies that could be used for online teaching and learning of accounting.

Research Question

1. What emerging technologies could be used for online teaching and learning of accounting?

Null Hypothesis

1. There is no significant association in the male and female accounting lecturers' responses on emerging technologies for online teaching and learning of accounting.

Methods

Descriptive survey research design was adopted for the study. The population of the study consisted of 116 accounting lecturers from public tertiary institutions in Anambra State. The instrument for data collection was a structured questionnaire, titled 'Questionnaire on Emerging Technologies for Online Teaching and Learning of Accounting (QETOTLA)'. The instrument was divided into two sections, A and B. Section A contained items on the respondents' demographic data, while section B contained items addressing the research question. The response options of the questionnaire were; Agree (A) and Not Agree (NA). The instrument for the study was validated by three experts, two from the Department of Technology and Vocational Education and one from Department of Accountancy, all in Nnamdi Azikiwe



University, Awka. For the reliability test, 10 copies of the questionnaire were distributed to accounting lecturers in Delta State, who were not part of the population. Data collected from the reliability test were analyzed and a reliability coefficient of 0.84 was obtained. Data for the study were collected by the researchers with the help of four research assistants. Out of the 116 copies of the questionnaire distributed, 94 copies were collected (36 males and 58 females) and were used for data analysis. Data collected were analyzed using percentage, frequency distribution and chi-square. Percentage and frequency distribution were used to answer the research question, while the Chi-square test of association was used to test the null hypothesis at 0.05 level of significance. Chi square was used in order to analyze the categorical data and assess the association between the variables. The null hypothesis was upheld if the p-value was greater than 0.05, otherwise, it was rejected. Statistical Package for Social Sciences (SPSS 25) was used for analysis of data.

Results

Table 1: Respondents’ Percentage Responses and Chi-Square Analysis on Emerging Technologies for Online Teaching and Learning of Accounting

R	Digital Tools	Male				Female				Chi-square	
		A		NA		A		NA		χ ²	Sig
		F	%	F	%	F	%	F	%		
1	Mobile devices learning	34	94.4	2	5.6	56	96.6	2	3.4	6.30 ^a	0.21
2	Power point videos	34	94.4	2	5.6	56	96.6	2	3.4	5.62 ^a	0.18
3	Zoom	32	88.9	4	11.1	56	96.6	2	3.4	5.60 ^a	0.16
4	Youtube	32	88.9	4	11.1	54	93.1	4	6.9	4.92 ^a	0.10
5	LinkedIn	30	83.3	6	16.7	54	93.1	4	6.9	4.82 ^a	0.13
6	Google form	30	83.3	6	16.7	52	89.7	6	10.3	4.30 ^a	0.18
7	ZipBooks	26	72.2	10	27.8	48	82.8	10	17.2	4.16 ^a	0.16
8	CogBooks	25	69.4	11	30.6	46	79.3	12	20.7	3.90 ^a	0.18
9	Course Mgt System	25	69.4	11	30.6	44	75.9	14	24.1	3.65 ^a	0.11
10	Quora	24	66.7	12	33.3	43	74.1	15	25.9	3.43 ^a	0.24
11	Trello	23	63.9	13	36.1	42	72.4	16	27.6	3.40 ^a	0.21
12	Livescribe	23	63.9	13	36.1	42	72.4	16	27.6	3.26 ^a	0.27
13	Zotero	22	61.1	14	38.9	42	72.4	16	27.6	3.16 ^a	0.21
14	Miro	22	61.1	14	38.9	40	69.0	18	31.0	3.12 ^a	0.23
15	TopHat	22	61.1	14	38.9	39	67.2	19	32.8	3.01 ^a	0.29



Data in Table 1 reveal the percentage responses and the chi square test of association. The data revealed that majority of male and female accounting lecturers responded affirmatively, with the percentage scores ranging from 61.1-94.4 and 67.2-96.6 for males and females respectively. This means that the 15 items are emerging technologies that could be used for online teaching and learning of accounting. The chi-square test of association shows no significant association in the ratings of the respondents as a result of gender. This means that the responses of the respondents were not influenced by gender.

Discussion of Findings

Findings from the research question revealed that the emerging technologies identified by accounting lecturers for the teaching and learning of accounting include; mobile learning devices, powerpoint videos, zoom, youtube, linkedin, google form, zipbooks, cogbooks, course management system, quora, trello, livescribe, zotero, miro and tophat. The respondents clearly identified the emerging technologies that could be used in our environment with the traditional face to face method of teaching. Identification of these technological tools by accounting lecturers indicates that they are in tandem with the emerging technologies that could be used for instruction in our environment. This finding confirms the results of similar studies such as Paz (2017); Ukata and Udeh (2022) which found Course management system, Podcast, Blogs, E-portfolio, Zotero and TopHat as emerging technologies that could be used in the teaching and learning of accounting.

Finding regarding the test of significant association using the chi-square, revealed that there was no significant association in the respondents' ratings on emerging technologies for online teaching and learning of accounting as a result of gender. This means that gender did not influence their responses. This entails that the emerging technologies were identified by the respondents irrespective of their gender. The identification of the emerging technologies in the teaching and learning of accounting by male and female accounting lecturers becomes necessary so as to ascertain the emerging technologies that could be used to deliver electronically mediated instruction inside and outside the classrooms, in the teaching and learning of accounting; as the problem of technology inclusion in education could not only be the acquisition of requisite machinery, but also non-identification of appropriate technologies that could be used in the teaching and learning processes. As Haleem, et al., (2022) maintained that the inability to identify the digital tools and resources that could be used for instruction could hinder successful integration of technologies in the teaching and learning processes.

Conclusion

The study concluded that the identified emerging technologies in this study and other studies should be incorporated for online teaching and learning of accounting, so as to enhance its relevance in the face of technological advancement and challenges.

Recommendations

Consequent upon the findings and conclusion arrived at, the study recommends that;

1. Administrators of higher institutions should ensure availability and accessibility of the identified emerging technologies for online teaching and learning of accounting.
2. Accounting lecturers should make efforts to develop themselves in the use of the emerging technologies for online teaching and learning of accounting through training and retraining.

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