Delivery of Electrical/Electronic Courses through the Use of Social media by Teachers during Pandemic and Beyond in Colleges of Education in Lagos state

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Abstract
The study examined the delivery of Electrical/Electronic courses using social media by teachers in colleges of Education in Lagos state. Three research questions guided the study. The study adopted a descriptive survey research design and the population comprised of 75 Teachers. The instrument for data collection was a structured questionnaire. Three lecturers in the Department of Technology Education, University of Lagos, validated the instrument. The reliability of the questionnaire items was established using Cronbach alpha method and a co-efficient of 0.83 was obtained. The researcher administered 75 copies of the questionnaire to the respondents with the help of research assistants. Weighted and criterion value mean of 2.50 were used to interpret the result and standard deviation was used to validate the closeness of the respondents from the mean and from each other in their responses. The study identified that the delivery of Electrical/Electronic courses using social media in colleges of Education is low. It identified Five problems militating against the use of social media for effective delivery of Electrical/Electronic courses in colleges of Education. The study recommended adequate training for Teachers on the use of social media to enhance instructional delivery of Electrical/Electronic courses in colleges of education in Lagos State.
Keywords: pandemic Electrical/Electronic courses, social media, Teachers, College of Education.

Introduction

In the year 2019 the Entire World witnessed a pandemic known corona virus or COVID-19 appeared that had killed a few thousand Chinese within the fifty days of spread and thousands of other citizens suffered. The novel virus was nominated as COVID-19 novel coronavirus by the Chinese scientists (Shereen et al. 2020). Later on, in a shorter period, this COVID-19 spread worldwide. Several country's economies were severely affected due to COVID-19. Further, the outbreak changed the operating conditions all over the globe within a short time. The consequences of the pandemic were unstoppable and uncontrollable for many countries of the world. As a result, almost 120 countries stopped face-to-face learning; approximately more than a billion students' education was effected worldwide during the pandemic. Most of the higher education system were operating through the E-learning (Azzi-Huck and Shmis 2020; Shahzad et al. 2020a, b). Meanwhile, to tackle the COVID-19 pandemic, almost all the world, and including Nigeria ministry of education, issued the order to close the school and higher education as an emergency measure to stop the spreading of the infection. This led to the embrace of E-learning Technology, during and beyond the era of pandemic.

E-learning Technologies have changed the traditional way of Teaching and learning in education to the modern way of learning, (Di Vaio et al. 2020a). Thus E-learning is covered under a larger term of technology-based learning through websites, learning portals, video conferencing, YouTube, mobile apps,

and thousand of free available websites. Currently, E-learning is enhancing students' knowledge, even the academic staff and professional and industry people skills through the internet (Adams et al. 2018; Chopra et al. 2019). Most of the higher education and universities are providing online courses for their students within and off campuses. The growth of the online education market is expected 16.4% annually over the forecast period. With the massive growth of the internet, maybe tertiary education teaching and learning models will be changed in 10 to 15 years during and after the pandemic period. Information and knowledge come in many forms including DVDs, eBooks, and YouTube videos. The role of a newspaper has changed thanks to the Internet and its social media. The emerging role of social media in teaching-learning process cannot be ignored. It not only provides students access to useful information but also connects them with learning groups and other educational systems that make their overall learning process more interesting and engaging (Anderson, & Dron, 2011). It has gained incredible popularity over the past few years as an open source of information and knowledge sharing platform. Social platforms like Facebook, LinkedIn, TikTok YouTube, X handle and Instagram are being used by almost everyone. These social channels are all about collaborating, networking, sharing and generating knowledge and content – something which is of great value in the context of education. popular Social Media tools are Twitter(X), TikTok Facebook, wattsapp, YouTube and Skype. Social Media can be an effective tool for teaching and learning in Colleges of education. It can help connect students to information and help them generate a dialogue with their teacher and other students about a course.

The social media technologies – often referred to as Web 2.0 –encompass a wide variety of web-related communication technologies such as blogs, wikis, online social networking, virtual worlds and other social media forms. Much has been said about the unique character of the social media technologies, the features that unite these seemingly disparate technologies under a single umbrella. These characteristics of social media can be summarized by the 5 C's (Friedman and Friedman 2018): communication, collaboration, community, creativity, and convergence. Social media are Internet-based channels that allow users to opportunistically interact and selectively self-present, either in real-time or asynchronously, with both broad and narrow audiences who derive value from user-generated content and the perception of interaction with others (Bryer, & Zavattaro, 2011). There is a need for modern teachers to learn how to effectively use WhatsApp in order to assimilate themselves into the students' present pattern of learning and make education part of the students' digital activity and lives. Several valuable reasons have been advanced and social media requires internet for connectivity (Berger, 2001).

Internet is the connection of computers communicating simultaneously for the exchange of information. It refers to computer-based global information system. The Internet is composed of many interconnected computer networks (Encarta, 2009). Each network may link tens, hundreds, or even thousands of computers, enabling them to share information at processing power. The Internet has made it possible for people all over the world to communicate with one another effectively and inexpensively. Internet increases people's social capital, increasing contact with friends and relatives who live nearby and far away (Barry, 2001). Unlike traditional broadcasting media, such as radio and television, the Internet does not have a centralized distribution system (Encarta, 2009). Instead, an individual who has Internet access can communicate directly with anyone else, post information for general

consumption, retrieve information, use distant applications and services. Internet services should be fully utilized in the process of teaching and learning.

Teaching is the process of assisting an individual to acquire knowledge, skill and attitude through instruction. Ogwo and Oranu (2006) viewed teaching as the science and art of assisting a person to learn. The authors stated further that the science of teaching involves the use of acquired knowledge from natural and behavioural sciences in order to help appreciate the circumstance and personality of the learner while the art aspect of teaching involves the use of creative and administrative skills in aiding delivery of instruction. Olaitan, Alaribe and Nwobu (2010) added that teaching is the process of helping an individual to learn through instruction by a teacher

A teacher is an individual who is trained in pedagogy and technical area of a particular subject to impart knowledge, skills and attitudes to students. Teacher according to Encarta (2009) is somebody who teaches especially as a profession. A teacher is an individual who professionally teaches technical or technology subjects in a school. Bakare (2010) stated that teachers are found in the teaching of both vocational and technical education subjects like Electrical/Electronic courses.

Electrical/Electronic courses are subjects that are taught in Nigeria tertiary institutions which is aimed at preparing students to be proficient in the knowledge of electrical and electronics phenomenon. Electrical and Electronics involves the application of Electrical Science and Technology to meet the needs of the society. These amongst others include Electronic circuit design, Communications, Antennas, Micro-waves, Signal processing, Computers, Control systems, Electronic device, Energy conversion, Power systems, among, some of these courses are taught in some colleges of Education

College of Education is a three year tertiary level of learning that helps to prepare teachers in different areas such as agriculture, business and technical. Colleges of education, according to Ellah (2007), are tertiary educational institutions that prepare intermediate level teachers for a minimum of three years to make them qualify to teach their respective subjects. They are under the control of the National Commissions for Colleges of Education (NCCE) which uses the minimum standard to monitor the implementation of programmes of the colleges.

Statement of the problem

Pandemic such as COVID 19, Ebola virus and others has changed the world systems including instructional delivery With modern technological advances, most countries of the world have started embarking on the e-learning education system, and Nigeria as a country, especially at this time of pandemic, cannot afford to remain behind, social media as one of the technological breakthroughs must be fully embraced for efficient instructional delivery and learning. Most teachers in Nigeria still prefer to use face to face teaching methods/strategies for implementing their courses instead of the e-teaching facilities made available through social media. This inability of these teachers to use e-teaching facilities could be attributed to inadequate experiences or competences in social Media. The world has gone digital in almost all aspects. the advances in technology have empowered several methods of doing things quite different from the conventional methods. Social media is a consequence of these developmental strides. Social interactivity has never flourished as perceived in this 21st Century. This study is aimed at finding out the Delivery of Electrical/Electronic courses through the use of social media by teachers during Covid-19

and beyond in colleges of Education, Lagos state in Nigeria

Purpose of the study

The general purpose of the study was to examine the delivery of Electrical/Electronic courses using social media by teachers in colleges of Education in Lagos State. Specifically the sought to:

1. find out the extent of Delivery of Electrical/Electronic courses through the use of social media in colleges of Education Lagos state.
2. find out the problems militating against the delivery of electrical/electronic courses using social media
3. find out the training needs of teachers on the utilization of social media in the delivery of electrical/electronic courses through social media.

Research Questions

The following research questions guided the study

1. To what extent is the Delivery of Electrical/Electronic courses through the use of social media in colleges of Education Lagos state?
2. what are the problems militating against the delivery of electrical/electronic courses using social media?
3. What are the training needs of teachers on the utilization of social media in the delivery of electrical/electronic courses through social media?

Methodology

The study adopted descriptive survey research design and was carried out in Lagos state. There are five Colleges of Education in Lagos state but only one college and one University of Education are offering Electrical/Electronic courses namely Federal College of Educatiom (Technical) Akoka (FCET), and Adeniran Ogunsanya College of Education now University of Education Ijaniki .A total of 75 teachers were used in the study. There was no sampling because the entire teachers were used and the number is manageable. The instrument for data collection was a structured questionnaire. The instrument was divided into two parts (I & II): part I was concerned with the biodata of respondents; part II had three sections (A, B, C), each corresponding to research questions1, 2, and 3 respectively. Each item in section A was assigned four response options of Highly extent (HE=4), Good Extent (GE=3), Low Extent (LE=2) and Very Low Extent(VLE=1) each item in section B and Cwas assigned four response options of Strongly Agree (SA=4), Agree (A=3), Disagree (D=2) and Strongly Disagree (SD=1) The instrument was face-validated by three experts from the department of Technology Education at the University of Lagos Nigeria. The reliability of the instrument was calculated using the Cronbach alpha method which yielded a co-efficient of 0. 83 The researcher with the help of two research assistance administered 75 copies of the questionnaire and all were successfully retrieved for data analysis. Statistical tools such as mean (x) and standard deviation were utilized in the study. Weighted and criterion value mean of 2.50 were used to interpret the result and standard deviation was used to validate the closeness of the respondents from the mean and from each other in their responses. For section A, any item with mean value equal to or greater than 2.50 was regarded as High Extent (HE) while items with mean value less that 2.50 was regarded asLow Extent(LE) by the respondents. For section B and C any item with mean value equal to or greater than 2.50 was regarded as. Agreed while items with mean value less than 2.50 was regarded as disagreed respectively

Results

The results of the data analyses are presented below in accordance with the research questions.

Research Question 1

To what extent is the Delivery of Electrical/Electronic courses through the use of social media in colleges of Education in Lagos state?

Data for answering research question one are presented in Table 1

Table 1: Mean Responses of the Respondents on the extent the Delivery of Electrical/Electronic courses through the use of Social media in colleges of Education in Lagos state

S/N	Items	X	SD	Remark
1	Uses social media for teaching	2.30	0.45	LE
2	send and receive electronic messages via social media	2.11	0.61	LE
3	Create group platform for students in social media	2.46	0.56	LE
4	give students assignment through social media	2.43	0.48	LE
5	upload and download lecture materials via social media	2.21	0.57	LE
6	lectures can be access via YouTube	2.40	0.64	LE
7	Conduct test via social media	2.32	0.55	LE
8	Publish result via social media	2.25	0.59	LE

Key; X= mean ,SD=standard deviation, decision X< 2.50 LE=LowExtent

Data on table 1 revealed that all eight items had their mean values ranged from 2.11 to 2.46 which are below the criterion value point of 2.50, indicating that the extent of delivery of Electrical/Electronic courses through social media is low. The standard deviation of all the items ranged from 0.45 - 0.64 indicating that the respondents were not far from the mean and from one another in their response.

Research Question 2

What are the problems militating against the delivery of electrical/electronic courses through social media?

Data for answering research question two are presented in Table 2

Table 2: Mean Responses of the Respondents on the problems militating against the delivery of electrical/electronic courses through social media

S/N	Items	X	SD	Remarks
1	High cost of data	3.36	0.57	Agree
2	Epileptic power supply	2.85	0.68	Agree
3	Narrow internet broadband	3.46	0.76	Agree
4	Lack of motivation	3.22	0.79	Agree
5	Security treat	2.63	0.61	Agree

Key; X= mean ,SD=standard deviation, decision X≥ 2.50 Agree

Data on table 2 revealed that all five items had their mean values ranged from 2.63 to 3.36 which are above the criterion value point of 2.50, indicating that all the respondent agreed onthe challenges faced by teachers on the utilization of social media in the teaching of Technical courses.. The standard deviation of all the items ranged from 0.57 - 0.79 indicating that the respondents were not far from the mean and from one another in their response.

Research Question 3

What are the training needs of teachers on the utilization of social media in the

delivery of electrical/electronic courses through social media?

Data for answering research question three are presented in Table 3

Table 3: Mean Responses of the Respondents on the training needs of teachers on the utilization of social media in the delivery of electrical/electronic courses through social media

S/N	Social Media	X	SD	Remarks
1	can use Blackberry Messenger	2.04	0.65	Disagree
2	use Whatsapp to teach	2.11	0.74	Disagree
3	use Facebook for teaching	1.64	0.66	Disagree
4	conversant with Twitter	2.43	0.59	Disagree
5	can use Skype to teach	1.51	0.51	Disagree
6	teach through YouTube	2.10	0.61	Disagree

Key; X= mean ,SD=standard deviation, decision X> 2.50 Disagree

Data on table 3 revealed that all six items had their mean values ranged from 1.51 to 2.43 which are below the criterion value point of 2.50, indicating that all the respondent disagreed onthe six items which implies that teachers need to be trained on the use of social media for instructional delivery of Electrical/Electronic coursesThe standard deviation of all the items ranged from 0.51 - 0.74 indicating that the respondents were not far from the mean and from one another in their response.

Discussion of Findings

The findings in Table 1revealed that the delivery of electrical/electronic courses through social media is low, many electrical/electronic teachers cannot use social media for teaching, cannot send and receive electronic messages via social media, send and receive electronic messages via social media, Create group platform for students in social media, give students assignment through social media, upload and download lecture materials via social media, conduct test via social media among others . This finding is in line with the finding of (Bryer & Zavattaro, (2011) who stated that social network application in teaching and learning is low; Griesemer (2012). wondered and stated thus: "while literature continues to promote mobile learning and, in particular, the use of mobile phones for teaching and learning in blended and open distance learning (ODL) to bridge the digital divide, many Teachers still struggle to understand and engage with it. Findings in Table 2 revealed that there are some problems militating against the delivery of electrical/electronics courses through social media, these among others include, High cost of data, Epileptic power supply, Narrow internet broadband. This finding corresponds with Ryan, Magro, Sharp (2011) which stated that high cost of data in many countries creates problem for effective use of social media. Findings in Table 3 revealed that Electrical/Electronic teachers need to be trained in the use and application of social media packages for effective delivery of Electrical/Electronic courses in Colleges of Education in Lagos state. This finding corresponds with Zhao and Cziko (2001) which stated that it is necessary for all teachers to undergo training and be literate in the use of social media network.

Conclusion

Social media as one of the technological breakthroughs must be fully embraced by teachers in teaching and learning. Social media should not only be used for charting, but it should be fully utilized by teachers Electrical/Electronic courses for instructional delivery. modern technological advances in the world in this 21st century has made most countries of the world to embrace

the use of social media in teaching and learning and Nigeria cannot afford to remain behind.

Recommendations

- Education managers should create substantial awareness through her agency on the importance of using social media for the teaching and learning
- Teachers should be trained on the use of social media to enhance instructional delivery
- Regular Power supply should be provided so that users of social media can charge and recharge their devices.
- The internet Broadband should be increased to enhance better internet accessibility.

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