

LECTURERS' AWARENESS, READINESS AND SELF-EFFICACY OF USING PODCAST FOR TEACHING IN TERTIARY INSTITUTIONS IN NIGER STATE, NIGERIA

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Abstract

This study investigated lecturers' awareness, readiness and self-efficacy of using podcast for teaching and learning in tertiary institutions in Niger state, Nigeria. The research was a descriptive type using the survey method. The sample was drawn from three federal institutions and three state colleges of education in Minna Niger State. The sample consisted of four hundred and twenty (420) lecturers from the 6 (six) tertiary institutions. Three Objectives and 3 corresponding research questions were raised to guide the study. An instrument tagged 'Lecturer' Awareness, Readiness and Self-efficacy in Podcast (LARSPQ)' was developed by the researchers. It consists of 31 items structured into four options, and was validated by four experts from Federal University of Technology, Minna, Nigeria. The data obtained from LARSPQ was pilot tested and analysed using Cronbach's alpha, 0.88 reliability coefficient was obtained. Ninety-five percent (95%) of LARSPQ were returned and 90% were used for data analysis. Mean and Standard Deviation were used to answer the research questions. Results of the study showed that lecturers aware of the use of podcasts in teaching, and ready to use podcasts in teaching. It was revealed that lecturers have no adequate knowledge and skills of using Podcast. The study recommends that lecturers should be trained on the use of podcasts for teaching their courses to improve the academic performance of students.

Keywords: Podcast, Lecturers, Awareness, Readiness, Self-efficacy, Tertiary Institutions

Introduction

Information and communications technology (ICT) is extending the boundaries to higher education and anywhere at any time. Effective learning takes place through the adoption and utilization of science and technology. Science and technology education form the grassroots for any sustainable national development by guiding against human societies from ignorance, illiteracy, disease and poverty (Owolabi & Omoniyi, 2014).

At this point, Federal Republic of Nigeria in the National Policy on Education (FRN, 2013) stressed that students should be fully equipped to live effectively in this modern age of science and technology, to also possess the mind of scientific and reflective thinking. It is therefore important for lecturers to have the basic knowledge of information and communication technology and its impact on the society at large. The main purpose of science and technology courses is to train individual learners suitable of utilizing the new and current technological discoveries in every field.

E-learning typifies an important element in ICT-technology which helps teachers/lecturers and students become actively engaged together in online collaborative work to assist and help

traditional learning methods to be effective (Behera, 2013; Kakbra & Sidqi, 2013). Mobile learning is a form of E-learning because it allow student to study even while travelling (Evans, 2008). Mobile learning can be referred to as a type of learning model which allows students to get and use learning materials through the use of internet and other portable devices anywhere and at anytime (Lan & Sie, 2010; Ozdamli & Cavus, 2011). Student/learners can request for any information about a specific subject matter on the internet through a mobile mean using podcasting.

Podcasting is very similar to mobile learning because learners can have access to teaching and learning in form of audio or video broadcasts on the move using any mobile device such as tablets, Smartphone's or cell phones. Broadcasts are published and send on the internet and instantly downloaded on to a desktop or laptop computer (Evans, 2008; Madiope, 2013). Podcasting had been considered as a supplementary method in the context of recent mobile learning technologies and applications (Bell, Cockburn, Wingkvist & Green, 2007; Heilesen, 2010).

Podcasting is the process of creation and regular distribution of information through the internet. Podcast includes audio, video, PDF and E-pub files which can be subscribed to and subscribers are then able to watch, hear it and spread the episodes to any types of media players (Hew, 2009). These podcasts are instantly downloaded for playback on mobile devices and/ or personal 'episode'. Thus, episodes in a series form a podcast 'channel', equivalent to that of radio and TV shows/channels. Furthermore, podcasting enables users to quickly and easily download multimedia files, including audio and video, for playback on mobile devices including iPods and other MP3 players (Bausch & Hen, 2006).

Podcasts can be viewed in three forms namely: audio-only podcast, enhanced podcast, and video podcast also known as vidcast or vodcast. Enhanced podcasts combine still images with audio files, audio-only contain audio files and video podcasts contain video files (Liu & McCombs, 2008; Salmon, Mobbs, Edirisingha & Dennett, 2008). Many researchers had accepted podcasting as a new and hot technology with wide possibilities which has capture the attention and imagination of practitioners from all areas of educational system across the globe (Sun, 2008). For instance, in the classroom, podcasting can be used effectively as a communicating tool due to its low cost and effectiveness. It accommodates individual learners with different learning needs (Schmisdt, 2012). Donnell and Berge (2012) identify four unique characteristics of podcasts that makes it interesting to students. First, they include the voice of the developer which makes information more personal than written words alone. Secondly, their inclusion can provide learners with control over their learning by providing them with options such as reading a book, listening to the podcasts, or using both. Thirdly, it makes students to listen to the portable files while engaging in other things. Fourthly, it makes lecturers and students to time-shift instructional materials or informational content.

Educational uses of podcasts was broadly categorized based on its continuum of use and they are: (a). Substitution (podcasts can be used as a substitute to the traditional lecture where students can access an entire recording of the lecture), (b) supplemental (podcasts can provide additional material or support to what is given in class time) and (c) creative (podcasts can be created by students and it helps them become more engaged in the learning through constructing knowledge rather than simply receiving it) (McGarr, 2009; Serry, 2012). Frydenberg (2006) noted that podcasting is very useful in disseminating course and information; its use becomes more beneficial when students are challenged to become

creators of the material to be disseminated as well as developing critical thinking skills and the nature of the activity therefore leads to a very engaging and worthwhile learning experience.

Tynan and Colbran (2006) reported that lecturers support the continuation of podcasting because it was very positive as it has been found previously. It had been reported that podcasts have great impact on students' academic performance. McKinney, Dyck and Luber (2009) conducted a study and found that students who attend lecture and also watched podcasts lectures largely outperformed those that attended the lecture without watching the podcasts. Harry and Park (2008) noted that the increasing use of podcasting in education has the potential to significantly change the teaching and learning experience of student. Other researchers have reported using podcasts to record tutorials (Tynan & Colbran, 2006) and deliver short recordings or "episodes" of core (Clark, Taylor, & Westcott, 2007; Laing & Wootton, 2007) or supplementary material (Bell, Cockburn, Wingkvist, & Green, 2007). With these benefits of podcasts, the yet unanswered question is that; are Nigeria lecturers and students really aware of podcasts?

In developed nations, Copley (2007) reported that many faculty members in higher institutions are aware of podcasts and they have started adopting it to deliver supplementary lectures materials for campus-based students. He also noted that podcasting is commonly used for distribution of lectures recorded for learner's to revisit and revise. Level of awareness of podcasts tool remains relatively low in developing countries and this affects the level of integration of ICT into Teaching and learning process. According Conole and Weller (2008) and Panke (2011), for ICT tool to be optimally integrated into teaching and learning process, there is necessity to get teachers and students aware of the existence, readiness to integrate and acquire some skills on the use of ICT tools for teaching. Podcast awareness is a novel while in developed countries a number of studies have been carried out (Abt & Barry, 2009; McKinney et al., Shaw, 2009; Mathison & Billings, 2010; Rezapour, Gorjian & Pakhakh, 2012; Farshi & Mohammadi, 2013; Liao, Chen & Tai, 2013).

For instance, Francom et al. (2011) in their study "The Effects of Podcasting on College Student Achievement and Attitude" found that podcast had positive effects on the students' performance. Students found the podcasts to be useful in helping to clarify terminology and theoretical constructs, as explained in the following quote from a student comment. Hearing a lecture a second time helps the theory to sink in and get the most out of the lecture. Other researchers have reported using podcasts to record tutorials (Tynan & Colbran, 2006) and deliver short recordings or "episodes" of core (Clark, Taylor, & Westcott, 2007; Laing & Wootton, 2007) or supplementary material (Bell, Cockburn, Wingkvist & Green, 2007).

Elliot, Scutter and King (2009) said that many lecturers have embraced the technology and now routinely podcast lectures. A literature overview of usage from United States universities presented by Deal (2007) affirmed that Podcasts have been incorporated into the curriculum in a variety ways to meet a range of learning objectives. Part of this study aimed at investigating lecturers' readiness to adopt the use of Podcasts in Nigerian tertiary institutions. Apart of from being ready to adopt this technology, what about the skills needed in using it (self-efficacy)?

Self-efficacy is a kind of ability to perform the actions required for success. It can also be viewed as a kind of skill someone has to operate a particular device for operation. Lecturers

with high self-efficacy would be expected to put more effort into tasks and be more persistent in their academic pursuits and also in the use of technology (Sander & Sanders, 2006). Bandura (2001), perceived self-efficacy affects an individual in all aspects of life including educational experiences. He also noted that they have low aspirations and weak commitments to the goal they choose to pursue. They fall easy victims to stress and depression. Lee et al. (2008) believe that the true potential of podcasting technology lies in its knowledge creation value and its use as a vehicle for disseminating learners generated content.

In view of the above, the study therefore investigates lecturers' awareness, readiness, and self-efficacy of using podcasts for teaching in tertiary institutions in Niger State, Nigeria.

Statement of the Problem

The digital age students are addicted to mobile phones for playing games, seeing movies, listening to music, chatting with friends, taking photographs, video and recording of events, among many time wasting activities. The results of these activities have started manifesting in their academic performance. The causes of this problem could be traced to students addicted to mobile devices for entertainments and social activities. The question is how do we curb the menace of mobile addiction or translate it into something meaningful and positive for learning? Incorporating podcast into the classroom settings will subdue the negative tendencies that mobile devices have on students' academic performance and enable them to derive their learning satisfaction through addiction. However, the effective use of podcasting in education is in its infancy in Nigeria. There are few studies that has been carried out in the area of podcasting in Nigeria (Mbah, Mbah, Iloene & Iloene, 2013), especially on the effect of podcasts on the performance of students. Podcast, being a recent technology, it is perhaps understandable that research into the area of podcasting in education is limited in Nigeria. Hence, this study set out to bridge the gap in the literature by investigating lecturer's awareness, readiness, and self-efficacy of using podcasts for teaching in tertiary institutions in Niger State, Nigeria.

Research Questions

The study sought answers to the following research questions:

- (i) Are lecturers aware of the use of podcast for teaching in tertiary institution?
- (ii) Are lecturers ready to use podcasts for teaching in tertiary institution?
- (iii) What is the level of lecturers' self-efficacy in using podcasts for teaching in tertiary institution?

Methodology

Descriptive research design of the survey type was adopted in this study. The population comprised of eleven tertiary institutions in Niger state. A multi-stage sampling technique was used to select samples from target populations for the study. Firstly, simple random sampling technique was used to select six tertiary institutions in Niger State. The population and sample size of the lecturers in selected institutions is 2,492 and 497 respectively as shown in Table 1.

Distribution of Sample Size

Name of Institutions	No. of Lectures	20% from each Institutions
Federal University of Technology, Minna (FUT)	820	164
Federal Polytechnic, Bida	620	124
Federal College of Education, Kontagora	283	57

IBB University, Lapai	320	64
College of Education, Minna	230	46
Niger State Polytechnic, Zungeru	210	42
Total	2,492	497

Proportionate random sampling technique was used to select 20% of the respondents from each institution in Niger State, Nigeria. A structured questionnaire was the instrument used for data collection in this study. The questionnaire contained two major parts, (A and B).

Part A dealt with the lecturers' biographical information such as respondents' institution. Part B comprised of three sections (I - III). Section I dealt with statement on 'Lecturers' Awareness on Podcasts Questionnaire (LAQ)'; Section II dealt with 'Lecturers' Readiness on the use of Podcasts Questionnaire (LRQ)'; while Section III dealt with 'Lecturers' SelfEfficacy on the use of Podcasts Questionnaire (LSQ).

Part B of the instrument consists of 31 phrased statements to preclude any response set. A modified four-point Likert scale was used. Section I which requests for information on respondents' awareness on podcast and contains 10 items, with response mode of Fully Aware (FA = 4), Aware (A = 3), Not Fully Aware (NFA = 2), Not Aware (NA = 1), Section II which requests respondents level of readiness to use podcast contains 10 items with response mode of Fully Ready (FR = 4), Partially Ready (PR = 3), Ready (R = 2), Not Ready (NR = 1), Section III which requests information on respondent's self-efficacy on the use of podcast contains 11 items with response mode of Strongly Agree (SA = 4), Agree (A = 3), Disagree (D = 2), Strongly Disagree (SD = 1).

The first draft of questionnaire was given to four senior lecturers from Science Education Department, Federal University of Technology, Minna for content and face validity. The pilot test was conducted in three tertiary institutions in Kwara State to test the reliability of the instrument. A total of forty lecturers of the following schools; College of Education Ilorin, University of Ilorin, and Kwara State Polytechnic were selected for the pilot study.

The data thus collected from the pilot study were statically analyzed for the purpose of reliability co-efficient using the Cronbach alpha. Consequently, reliability of 0.88 was obtained. This reliability co-efficient was considered adequate for the internal consistencies of the instruments. Four hundred and ninety seven (497) copies of questionnaire were administered while four hundred and twenty (420) questionnaires were retrieved and used for data analysis. Seventy seven (77) questionnaires were not returned by the respondents after four weeks of distribution. This represent fifteen per cent (15%) questionnaire mortality rate.

Results

Data collected on the basis of the research questions were analyzed using descriptive statistics (mean and standard deviation). The limit for decision rule: An average mean of 2.50 and above was considered as agreed, while an average mean of 2.49 and below were considered disagreed with respect to research questions. A mean of 2.5 according to David (2005) was used as a criterion to judge mean scores for four point item format. Therefore, the mean criterion of 2.5 was calculated from the sum of 4+3+2+1 divided by 4.

Research Question One: Are lecturers aware of the use of podcasts for teaching in tertiary institutions?

Table 2: Mean and Standard Deviation on Respondents on Awareness

S/N	I am aware that:	Mean	SD	Decision
1.	Podcast can be used for teaching in tertiary institutions	3.23	0.89	Agree
2.	Knowledge of using podcasts would assist me in teaching large class of students.	3.19	0.81	Agree
3.	Podcasts could be used to divert students' attention from using Mobile devices for social media and entertainment.	3.09	0.92	Agree
4.	Podcasts could be an effective means of delivering information on Mobile device via Internet.	3.15	0.82	Agree
5.	Podcasts can be used to post multiple choice questions to students mobile device.	3.03	0.91	Agree
6.	Podcasts can be used to create more interaction between lecturers and students.	3.02	0.89	Agree
7.	Video Podcasts (vodcast) could be used to solve some misconception problems in teaching and learning.	3.03	0.88	Agree
8.	The use of Podcasts could help to provide better learning experience and opportunity for students in higher institutions.	3.08	0.84	Agree
9.	Podcasts could be used for collaborative learning among undergraduate.	3.01	0.89	Agree
10.	Podcasts can provide immediate feedback to learning activities.	3.02	0.89	Agree
Cumulative Mean		3.08		

Decision Mean =2.50

Table 2 shows the perception of lecturers' awareness of the use of podcasts for teaching in tertiary institutions in Niger State. It was observed that all the respondents are in agreement with the awareness of using podcasts for teaching in tertiary institutions. This is because the cumulative mean 3.08 is greater than the decision mean 2.50.

Research Question 2: Are lecturers ready to use podcasts for teaching in tertiary institutions?

Table 3: Mean and Standard Deviation on Respondents on Readiness

S/N	Items	Mean	SD	Decision
1.	I am interested in using Podcasts for teaching my courses.	3.06	0.90	Agree
2.	I am ready to use Podcasts to teach when I have the Facilities.	3.26	0.82	Agree
3.	I will like to learn about using Podcasts for teaching.	3.22	0.79	Agree
4.	I am ready to attend workshops and seminars on the use of podcasts for teachingthe use of Podcasts for teaching.	3.26	0.84	Agree
5.	I will use Podcasts for sending lecture materials and assignments to students.	3.09	0.86	Agree
6.	I am ready to interact with my students via Podcasts	3.11	0.89	Agree
7.	I will like to use Podcasts to encourage students in	3.16	0.83	Agree

using mobile devices for learning rather than for entertainments and social media.

8. I am ready to provide immediate feedback to my students request through the use of Podcasts. 3.10 0.86 Agree
9. I will like to use Podcasts for presenting my lecture in video format. 3.04 0.89 Agree
10. I am ready to deliver my lecture using Podcasts in audio format. 3.03 0.94 Agree

Cumulative mean

3.13

Decision Mean = 2.50

Table 3 shows the perception of lecturers' readiness for the use of podcasts for teaching in tertiary institutions in Niger State. It was observed that all respondents are in Agreement with the readiness of using podcasts for teaching in tertiary institutions. This is because the cumulative mean 3.13 is greater than the decision mean 2.50.

Research Question 3: What is the level of lecturers' self-efficacy in using podcasts for teaching in tertiary institutions?

Table 4: Mean and Standard Deviation on Respondents on Self-efficacy

S/N	Items	Mean	SD	Decision
1.	Install Audacity software via Internet	2.96	0.89	Agree
2.	Open Audacity software through the Icon programme file	2.88	0.83	Agree
3.	Adjust the settings using the main control panel	2.90	0.89	Agree
4.	Record, play and pause my recording material	2.86	0.88	Agree
5.	Use edits tools such as Cut, Copy, Paste, Trim, Undo, Redo, Zoom in and out	2.96	0.89	Agree
6.	Use tools Toolbar for selecting volume adjustment, zooming and time-shifting of audio	2.92	0.85	Agree
7.	Connect the microphone, select the mixer, and check the input volume and save the file as MP3	2.88	0.89	Agree
8.	Recording from CD or DVD and Internet Radio	2.84	0.86	Agree
9.	Trimming the beginnings and ends of a clip	2.83	0.89	Agree
10.	Deleting unwanted audio and Noise removal	2.76	0.85	Agree
11.	Upload (Publish) the recorded materials to the Internet	2.88	0.94	Agree
	Cumulative Mean	2.88		

Decision Mean = 2.50

Table 4 shows the perception of lecturers' self-efficacy of using podcasts for teaching in tertiary institutions in Niger State. It was observed that the respondents are in agreement in their self-efficacy of using podcasts for teaching in tertiary institutions. This is because the cumulative mean 2.88 is greater than the decision mean 2.50.

Discussion

Research question one sought to know if lecturers are aware of the use of podcasts for teaching in tertiary institutions in Niger State. The results of the study revealed that respondents agree with the questions which have highest mean response. This indicates that most respondents agree that most lecturers are aware of the use of podcasts for teaching in tertiary institutions. This is in line with Smith and Doyle 2002 who noted that new ICT tools provide a channel through which lecturers' can enrich their awareness of podcasts for teaching.

Research Question two was set to investigate perception of lecturers' readiness for the use of podcasts for teaching in tertiary institutions. It was however discovered that lecturers in higher institutions of learning are ready to embrace the use of podcasts for teaching. This corroborates the study of Tubaishat and Lansari (2011) who observed that teachers and students are ready to embrace e-learning technology, but there needed to enhance their technical capacity through training for successful e-learning adoption. Though most students accept e-learning, they lack basic computer skills required of them to effectively use elearning platform. Their study revealed a positive correlation between computer literacy and e-learning acceptance.

Research question three unravelled the perception of lecturers on their self-efficacy in the use of podcast for teaching in higher institution. The findings indicate that lecturers have moderate efficiency in the use of podcast for teaching in higher institutions. This finding lends credence to the work of Lakhal, Khechine and Pascot (2007) who discovered that students who listened to a lecture podcast were more satisfied and therefore learned more effectively which shows that lecturers have self-efficacy in the use of podcast. This finding is also supported by Francom, Ryan and Kariuki (2011) who observed that podcasts had a positive effect on the students' achievement as the podcast group performed better than the non-podcast group which shows high level of self-efficacy in the use of podcast.

However, it contradicts the study of Adedeji (2011) who found out that there is low level of usage of ICT gadgets and non-availability of some ICT equipment with the sluggish use and integration of ICT. In the same vein contradicts the study of Ololube, Kpolovie, Amaele, Amanchukwu, and Briggs (2013) who discovered that Nigerian students and teachers have been unable to find effective ways to use technology in the classroom and other aspects of their teaching and learning.

Conclusion

Based on the findings of the study, the following conclusion was drawn.

Lecturers in higher institutions of learning are aware of the existence of podcast and its adequacy to embellish the teaching and learning processes as a supplementary material. The level of readiness of lecturers in adopting podcasts for their various classes is remarkable as this is enshrined in their urge to integrate technological innovations in their classroom as they are capable of sustaining and influencing students' interest and academic performance respectively. Lecturers have moderate self-efficacy in the use of podcast for teaching and learning in higher institution.

Recommendations

In the light of the findings of this research, the following recommendations are made:

1. Lecturers' should be given opportunity to identify and exploit the use of podcasts in their subject curriculum.

2. Tertiary institution administrators should also help by organizing seminars to educate lecturers' on the use of podcasts to teach and should recommend Edupodcast programs for the teaching and learning in Nigeria school system.
3. The use of podcasts for teaching can be added to the methods of teaching in tertiary instructions.
4. Lecturers' should determine appropriate learning period for teaching and learning the use of podcasts that can enhance their self-efficacy on podcasts.
5. Management of various higher institutions should provide enabling environment that can help lecturers' explore e-learning platform.

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