

Evaluating Undergraduates' attitude towards the use of podcast for learning selected Educational Technology concepts

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1. Abstract

The study evaluated students' attitude towards the use of podcast in learning selected Educational Technology concepts. It also examined gender difference in the attitude of students towards the use of podcast. An intact class of 25 undergraduates from the University of Ilorin, Nigeria was used as samples for this study. A 9-item researchers' designed questionnaire was used to collect data for this study. Data gathered from the administration of the questionnaire were analyzed using Mean and Standard deviation. Findings revealed that students have positive attitude towards the use of podcast (average mean response = 3.34 out of 5). It was also revealed that there was no significant difference between male and female attitude towards the use of podcast ($t(23) = 0.411, p > 0.05$). Based on the findings, it was recommended that efforts to integrate podcast into higher education should be made by all stakeholders at the university level.

2. Keywords: Attitude, Gender, Podcast, Undergraduates, Higher Education

3. Introduction

Technology has revolutionized in higher education over the years and it has greatly improved the teaching and learning process. Most especially, digital native students are getting bored with the conventional

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lecture method and are approaching learning from a very different perspective. In the view of this, students' levels of engagement tend to be low, which may cause their learning to suffer and at the end affect their academic performance (Sun, Martinez & Seli, 2014). It is of high importance that the conventional lectures should be supplemented with online innovative tools like podcast which can stimulate and arouse students' interest to learn effectively which will greatly influence their academic performance positively. Most students use their mobile devices for entertainment purpose (listening to music, chatting on social media sites) which distracts them from learning. If there are educational/lecture podcast that they can download to their mobile devices, it may improve their study habits and positively influence their performances in the courses they offer. Since podcast gives learners an anywhere anytime learning experience using their various mobile devices. Students' attitudes are the good indicators of their approach to the educational technologies and these approaches differentiate users from each other (Graff, Davies & McNorton, 2004). Studies on students' attitude towards the use of podcast began to appear in the literature in 2006 (Chester, Buntine, Hammond & Atkinson, 2011). Studies have found out that positive attitude towards using podcast can lead to students' better learning (Bolliger, Supanakorn & Boggs, 2010; Fernandez, Simo & Salan, 2009; Heilesen, 2010; Oliver, 2005; Walls, Kucsera, Walker et.al, 2010). Evans (2008) reported that traditional learners found the use of podcast satisfactory, effective, and engaging. Podcast can be used to supplement the teaching and learning of any course in higher education not just Educational Technology concepts used in this study and a number of studies have proved that and they include: astronomy (Gay, Bemrose-Fetter, Bracey & Cain, 2007), education (Walls et al., 2010), information systems (Laing & Wootton, 2007), information and communications technology (Evans, 2008), engineering (Berger, 2007), Health sciences (Lane, 2006), medicine (Petrovic, Kennedy, Chang & Waycott, 2008) and so on. Students have reported a range of reasons for using podcasts which includes picking up missing information, revisiting complex material, working through material at one's own pace, and catching up on a lecture that was missed (Brookes, 2010; Chester et al., 2011). However, examination review is the most frequently reported reason for using podcasts (Copley, 2007; Gosper, McNeill, Woo et al., 2007; Janossy, 2007; Laing & Wootton, 2007; Williams & Fardon, 2007). A number of studies on students' positive attitude towards the use of podcast have been established in literature. Brookes (2010) reported that students' attitude were positive toward the use of podcast. Carvalho, Cruz and Moura (2008) in their study reported that students' attitude towards the use of podcast was positive as only one student hated podcasts. Most of the students preferred to listen to podcasts than rather reading the content from a book. Farshi and Mohammadi (2013) conducted a study on the use of podcasts in effective teaching of Vocabulary: Learners' Attitudes, Motivations and

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Limitations and their findings revealed that learners had positive attitude towards using podcast for learning English vocabularies. In a study by Heilesen (2010), it was concluded that students had positive attitude towards podcast and reports of rejection of podcast were very rare. Gribbins (2007) found that students had a positive attitude towards using podcasts for online classes. Shaw (2009) found that student attitudes toward podcasts were positive. Wilczak (2013) indicated that students had positive attitudes toward the use of podcast. Even though the studies reported the positive attitude of students towards using podcast, a study by Walls, et al. (2010) revealed students' negative attitude after using podcast. The study further reported that students were not motivated or eager to use educational podcast that was produced.

Gender has also been identified as one of the factors that could differ in the attitude of learners towards the use of ICT-based tools like podcast. However, based on the literature the researchers could find, there are few studies that have researched into gender as a variable that could differ among learners. Chester et al. (2011) observed that there was no significant gender difference with respect to attitudes toward the use of video podcast among university students. Kay and Edwards (2012) found that there was no gender difference in students' attitude toward some worked example video podcast. But the study of Bolliger et al. (2010) reported that females had more positive attitude towards the use of podcast than males. However, research on gender differences in the use of technology in general (American Association of University Women (AAUW), 2000; Barker & Aspray, 2006; Sanders, 2006; Kay 2008) suggested that male students might respond more positively to podcasts. Podcast has not fully been used to supplement learning in higher education sector in Africa, especially Nigeria, unlike the developed countries. There is still comparatively little research into students' attitude towards the use of podcast and that arouse the need for this study, that is, to examine whether students would like use podcast as a supplementary tool for learning.

3.1 Research Questions

The following research questions were raised to guide the study:

1. What is the attitude of students towards the use of podcast for learning Educational Technology concepts?
2. Is there any difference between male and female students' attitude towards the use of podcast?

3.2 Research Hypothesis

Based on research question 2, the null hypothesis was formulated and tested in the study.

H_{01} : There is no significant difference in the male and female students' attitude toward the use of podcast.

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4. Methodology

4.1 Participants

The participants of the study were from an intact class in University of Ilorin, Nigeria. Prior to this study, an evaluation of the students' performance has been carried out where the students were exposed to the podcast and the effect of podcast was determined using quasi-experimental research method of the pre-test posttest control group design. Twenty-five second year undergraduates participated in this study. Out of the 25 students, 15 were male and 10 were female.

4.2 Materials

Questionnaire

A 9-item researchers' designed questionnaire was used to investigate students' attitude toward the use of podcast using the 4-point Likert scale (namely, 1 as Strongly Disagree, 2 as Disagree, 3 as Agree and 4 as Strongly Agree). It was validated by four educational technology experts and its reliability was determined in a single administration on ten education undergraduates' which yielded a reliability coefficient of 0.706 using the Cronbach's alpha formula.

4.3 Podcast

Four enhanced podcasts (still pictures with audio) on selected Educational Technology concepts namely: Instructional Media: Typology and Relevance in instruction; Design and production of 2-dimensional instructional materials; Selection and utilization of instructional materials; and Instructional systems design were developed for students. The students downloaded the podcasts from the blog where it was uploaded. The screenshots of podcast is shown in figure 1.

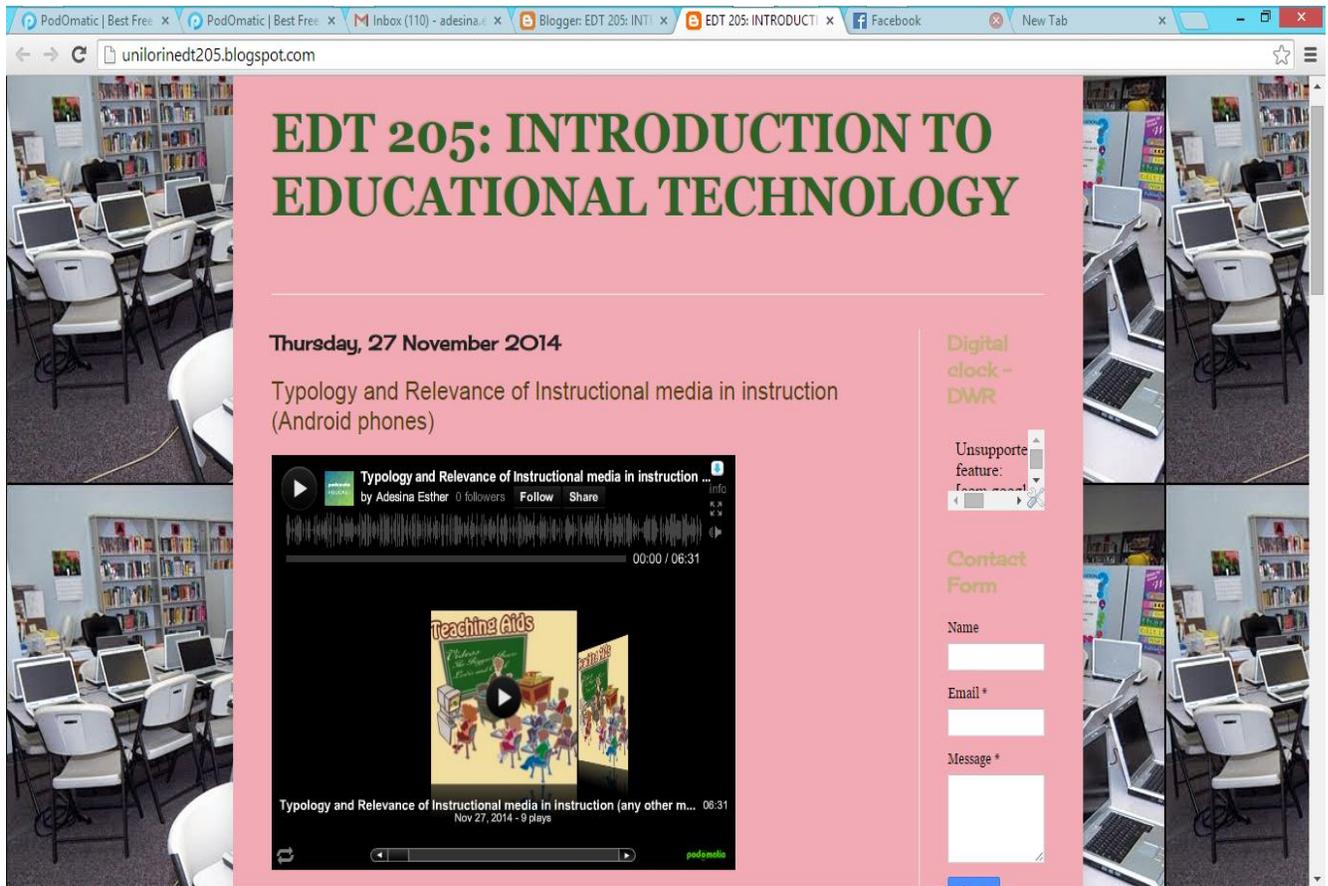


Figure 1: Screenshot of the podcast

4.4 Procedure

At the first week, students were given the url of the blog where they will download the podcasts from. The podcasts were uploaded weekly for the period of four weeks. In order to watch and use the podcasts, students had to connect to internet. After four weeks, a 4-point likert scaled questionnaire was administered to the students. Twenty five students submitted the questionnaire and copies of the questionnaire were taken for data analysis. The data was analyzed using descriptive statistics of mean and standard deviation with aid of SPSS version 20.0.

5. Results

The results are presented based on the research questions and hypothesis.

Research Question One: What is the attitude of students towards the use of podcast for learning Educational Technology concepts?

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In answering research question 1, the researchers collected data on students' attitude towards the use of podcast. A total of 25 students accessed the podcast and completed the questionnaires. 70% of the students accessed the podcast from their android and blackberry mobile devices, while 30% of them accessed the podcast with laptop. They responded to ten questionnaire items and their responses were analyzed using mean score. The result is presented in Table 1.

Table 1: Mean scores on students' attitude toward the use of podcast for learning Educational Technology concepts

S/N	Statement	N	SA	A	D	SD	Mean	Decision
1	I am aware that podcast can be used for educational purposes	25	20	5	0	0	3.8	Agree
2	I found the podcast useful for educational technology concepts	25	16	7	1	1	3.52	Agree
3	I found the podcast to be educational	25	17	7	0	1	3.6	Agree
4	I found the podcast to be entertaining	25	3	9	9	3	2.56	Agree
5	Listening to the podcast helped clarify my understanding of the educational technology concepts	25	10	11	3	1	3.2	Agree
6	I felt that listening to the podcast was not a productive use of my time	25	12	8	3	0	3.44	Agree
7	Listening to the podcast after the lecture enabled me to understand the concepts better	25	8	12	3	2	3.04	Agree
8	I find the podcast useful because it will enabled me to listen to the lectures repeatedly and at my own convenience	25	16	4	3	2	3.36	Agree
9	It would be very good for lecturers to supplement classes with podcasts	25	17	4	4	0	3.52	Agree
	Grand Mean						3.34	

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Note: SA-Strongly Agree, A-Agree, D-Disagree, SD-Strongly Disagree

Table 1 shows the responses of students on their attitude towards the use of podcast. The table reveals that the mean score for each of the ten items on the questionnaire is above 2.50 while the grand mean score of the ten items is 3.34. This indicates that students have positive attitude towards the use of podcast for learning Educational Technology concepts.

The average mean score 2.50 was calculated by adding up each value of the 4-point likert scale and dividing by 4 (SA=4, A=3, D=2, SD=1, 4+3+2+1=10 divided by 4 = 2.5)

Hypothesis One: There is no significant difference in the male and female students' attitude toward the use of podcast. To determine whether there was significant difference in the male and female students' attitude towards the use of podcast, the null hypothesis was tested by using t-test as shown in Table 2.

Table 2: T-test result on male and female students' attitude towards the use of podcast

Gender	N	X ⁻	SD	Df	T	Sig	Remarks
Male	15	3.34	0.47	23	0.411	0.685	Not Sig.
Female	10	3.26	0.48				

Note: X=mean, SD=Standard deviation, Df=degree of freedom, T= t-test value

From table 2, it can be deduced that there was no significant difference between male and female attitude towards the use of podcast. This is reflected in the result: $t(23) = 0.411, p > 0.05$. Thus, the hypothesis is not rejected. By implication, the stated null hypothesis was established thus: there is no significant difference in the male and female students' attitude toward the use of podcast. Based on the mean scores in table 2, it means that both male and female students had high positive attitude towards the use of podcast.

6. Discussions

The result of the mean scores indicated that the students had positive attitude towards the use of podcast for learning Educational Technology concepts. The result agreed with the earlier findings of Brookes (2010) who reported that students' attitude were positive towards the use of podcast. It also agrees with the finding of Carvalho et al. (2008) whose findings reported that students' attitude towards the use of podcast were positive. Farshi and Mohammadi's (2013) findings is in line with the result of this study as it revealed that learners had positive attitudes towards using podcast for learning English vocabularies. It is also in line with the findings of Wilczak (2013) who indicated that students had positive attitude towards the use of podcast. The results of the t-test established no significant difference between male and female students' attitude towards the use of podcast. The result agrees with the earlier findings of Chester et al. (2011) and Kay & Edwards (2012) whose studies found that there was no significant gender

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difference in students' attitude towards the use of podcast. This finding however contradicts the earlier finding of Bolliger et al. (2010) which reported that females had positive attitude towards the use of podcast than males.

7. Conclusion

The findings of the study established that students have positive attitude towards the use of the podcast. The findings also revealed that there was no gender difference in the attitude of students towards the use of podcast. Podcast is a valuable online learning technology that can be incorporated into undergraduate study of educational technology concepts and other courses. It pleased the students because they could learn at any place and anytime. They were motivated to listen to the lectures in the podcast. However, it was both fun and challenging for them.

8. Recommendation

From the findings of this study, this recommendation was made: integrating podcast as a supplementary tool for teaching in the university will be a welcomed idea by students. Efforts to integrate it should therefore be made by all stakeholders at the university level.

9. References

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