

TEACHER'S ATTITUDE TOWARDS USE OF MULTIMEDIA FOR TEACHING IN COLLEGES OF EDUCATION IN NIGER STATE, NIGERIA

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Abstract

The study investigated teachers' educators' attitude towards use of multimedia for teaching in colleges of education in Niger state. The study was conducted using descriptive survey method. The sample of the study comprised of two hundred and eight (208) teachers drawn from the two colleges of education in Niger state. The instrument used for data collection was adapted and modified for the purpose of the study. The instrument was validated and the reliability of the instrument was ascertain using Cronbach Alpha computation and a threshold which is 70 alpha level was obtained for all the variables (perceived usefulness, perceived ease of use, and attitude towards use of multimedia) of the study. Based on the objectives of the study, three research questions were formulated to guide the study. The data collected was subjected to descriptive statistic analysis. The finding of the study revealed that majority of the respondents agreed that multimedia tools are useful for teaching, while some handful strongly disagree; they also agree that multimedia is easy for teaching; the finding showed that the respondent has positive attitude towards multimedia use for teaching;. Based on these findings, the following recommendations' were made: that more enabling environment should be created for the use of multimedia for teaching; that government should continuously equipping the two colleges with modern multimedia tools; that periodic seminal and workshop should be given to sustain and increase the teacher educator competence on multimedia use among others

Keywords: Multimedia Use, Perceive usefulness, Perceive ease of use and Teacher Educators

Introduction

The new and innovative approach that multimedia technology brought to education has challenged the traditional approach to teaching in the present digital world of learning. In fact, evidence abounds on the improvement recorded in teaching and learning process through the use of Information technology which enables easy use of multimedia for teaching. However, successful use of multimedia through computer technology in an educational programme depends on the attitude of teachers, lecturers and other stakeholders in the education industry (Sabzian, & Gilakjani, 2013).

The quality of teaching and learning process can be improved through a variety of delivery method using technologies such as computers, educational software, network systems and databases. The use of teaching aids are said to increase interest and stimulate minds of students that belong to cyber age which is the catalyst for teaching and learning (Rahimi & Yadollahi, 2011). A number of studies has indicated that teacher's attitude towards the use of multimedia directly influences the acceptance, continual use and integration of such technologies in teaching. Several studies such as those of Venkatesh, Morris, Davis, and Davis,

(Venkatesh, 2003; Morris, 2013) have investigated various factors that influence the use of multimedia.

The factors found to influence teachers and lecturers attitudinal behaviour towards use of multimedia have been explored in several studies (Inan & Lowther, 2010); Teo, Ursavvas & Bhcekapili, 2011; Chen & Tseng, 2012; Karaca, Can & Yildirin, 2013; Yilmaz & Bayraktar, 2014). Findings from these studies have classified the factors affecting teacher's attitude towards technology use into internal and external factors and variables.

The factors/variables include teacher's internal belief about the technology formed by the degree to which teachers will perceive favourable or unfavourable towards the technology. The external factors include subjective norms (Venkatesh, Morris, Davis & Davis, 2003); organizational structure (Rogers, 2003); technical factors such as complexity of a technology (Rogers, 2003; Weller, 2007) and environmental factors such as Information and Communication Technology (ICT) infrastructure, ICT features and support and many more (Chien, Wu & Hsu, 2014). Some of these studies have evaluated teacher's attitudes towards using multimedia in learning and yet, they have reported conflicting results.

Hayes and Robinson (2002) assessed the attitude of students who use multimedia computer-assisted instruction in a course by employing two different attitude questionnaires. Results indicated a positive attitude towards using multimedia as part of their learning. Interestingly also a slight number indicated that they favoured traditional instruction over the multimedia computer assisted instruction. This belief could possibly be as a result of the manner in which the multimedia was used in the course. In another study of adult learners, Kirkwood (2003) surveyed students' attitudes towards multimedia technology at the Open University in United Kingdom. In contrary, a study conducted by Korte and Husing (2007) revealed that the teachers do not possess positive attitude to multimedia use because they seem not to see the benefit of using it for teaching. Results indicated that some teachers seem to have positive attitude about the use of multimedia technologies in teaching, while some teacher does not. Despite conflicting result, the government continued to invest heavily on provision of multimedia technology resources which was the hall-mark for 21st century teaching and learning, multimedia technology found to be more effective in facilitating quick understanding of concepts among students as against traditional method of teaching. In Nigeria, much success has not been recorded in the use of multimedia and computer technology resources for teaching (Oshinaike & Adekunmisi, 2012). Therefore, this study was carried out to determine the attitudinal factors influencing use of multimedia for teaching among teacher educators.

Oshinaike and Adekunmisi (2012) observed that fear and negative attitude retard the progress in implementing ICT policies and use of multimedia for teaching. Ugwu (2011) attributed the negative attitude of individual lecturers to fear and anxiety over job insecurity and displacement, which erroneously they associate with the use of ICT related tools for teaching. Olubiyo and Shehu (2011) noted that the implication of such attitude is that even where the ICT facilities are available, such facilities will not be exploited as those who should use them do not appreciate the need for such facilities.

(i) Attitude (AT): is defined as "a summary evaluation of teacher educator toward use of multimedia for teaching.

- (ii) **Multimedia:** is defined as “the combination of various digital media such as text, images, sound and video, into an integrated multi-sensory interactive application or presentation to convey a message or information to an audience
- (iii) **Teaching:** is a scientific process of leading the learner to acquire new skills, knowledge and other capabilities necessary for academic and professional qualification (Okai et al., 2005).
- (iv) **Perceived Ease of Use (PEOU):** “The degree to which teacher educators believes that using amultimedia system for teaching would be free of efforts
- (v) **Perceived Usefulness (PU)** “The degree to which a person believes that using a particular system would enhance his or her job performance” (Davis 1989:320).
- (vi) **Behaviour:** Behaviour is a complex cognitive process which is a part of personality. It is the way a person reacts towards a particular situation, event, and object.
- (vii) **Teacher Educator:** refers to a person who is involved in teaching, research and auxiliary administrative assignment in a teacher training institution(s).
- (viii) **Pre-Service:** A pre-service teacher is a college student involved in school based field training before they undertake any teaching under the supervision of their lecturer.

Statement of the study

In spite of the benefit and advantages of using technological packages for teaching and learning, evidence abound that most lecturers of colleges of education do not use multimedia for teaching and learning. Although many teachers believe emerging technologies are an important component in education, their lack of knowledge and experience lead to a lack of confidence to attempt to introduce them into their instruction. Some teacher educators have embraced the emerging technology while others have resisted the innovation. There exists a significant resistance to use of technology by teacher educators in colleges of education provide evidence. This resistance to use of technology (Multimedia) has become a determining factor for research into the attitude and behaviour on the use of multimedia in COE. It has also presented the gap the studies intend to fill and to identify the factors related to lecturers' technology acceptance due to the crucial roles that the teacher educators are playing in the preparation of the teacher for Nigerian society.

Purpose of the study

The purpose of this study was to investigate the attitude of teacher educators toward the use of multimedia for teaching pre-service teachers. The study tends to achieve the following objectives.

- (i) To determine the attitude (AT) of teacher towards the use of multimedia.
- (ii) To determine the factors influencing teachers attitude towards the use of multimedia.

Research Questions

In line with the purpose of the study, three research questions were raised for the study:

- (i) What is the attitude (AT) of teacher educator towards the use of multimedia for teaching?
- (ii) How does perception usefulness (PU) influence the use of multimedia for teaching?
- (iii) Does perceived ease of use (PEOU) influence the use of multimedia for teaching?

Methodology

The research design need for the study was a descriptive survey, method, the design is deemed appropriate for describing the, attitude and perception of the influence of multimedia tools in

college of education setting in Niger State of a population in relation to a specific phenomenon in an educational setting (Copper & Schindler 2001), The variables of interest of the study are: attitude towards use of multimedia, usefulness and ease of use of multimedia for instruction. The population of the study was made up of both male and female lecturers of College of Education in Niger State Colleges of Education, Minna and Federal College of Education Kontagora. The population of the study comprised of six hundred and one (601) academic staff in College of Education Minna and Federal Colleges of Education, Kontagora. A total of two hundred and eighty-eight (288) academic staff from Federal college of education Kontagora and three hundred and thirteen (313) from Niger State College of Education Minna constitute the population of the study.

The sample size for the study was computed as recommended by Krejcie and Morgan (1970), for this study a sample size of two hundred and eight (208) academic staff was used for the study. A purposive sample technique was adopted to sample the respondents of the study.

The research instrument used for the study was a structured questionnaire. The questionnaire 5 – Likert scale responses, that is (5) strongly agreed (SA), (4) agreed (A), (3) neutral or undecided (N/U), (2) disagreed (D), (1) strongly disagreed (SD). The questionnaires were adapted from the survey instrument developed by Davis et al (1995), Spotts & Bowman (1995) and Wills et al (1995), but modified in line with the objectives of the study.

Findings of the Study

Research Question One: What is the attitude (AT) of college of education teachers towards the use of multimedia for teaching?

Table 1: Mean and standard deviation of attitude toward multimedia use for teaching among teachers in college of education

S/N	Items	SA	A	N	D	SD	M	SDev
1.	I like using multimedia for teaching	99 (47.6%)	82 (39.4%)	9 (4.3%)	18 (8.7%)	—	4.25	.89
2.	I enjoy using multimedia for teaching	96 (46.2%)	79 (38.0%)	10 (4.8%)	5 (2.4%)	18 (8.7%)	4.28	.96
3.	I encourage others to use multimedia ICT tools for teaching	101 (48.6%)	90 (43.3%)	—	9 (4.3%)	8 (3.8%)	4.10	1.17
4.	I can support any multimedia incline activities	47 (22.6%)	71 (34.1%)	5 (2.4%)	32 (15.4%)	53 (25.5%)	3.12	1.55
5.	I feel confident when I use multimedia in class for teaching	29 (13.9%)	65 (31.2%)	15 (7.2%)	11 (5.3%)	88 (42.3%)	2.69	1.59
6.	I feel pressure to use multimedia technology for teaching	36 (17.3%)	97 (46.6%)	9 (4.3%)	10 (4.8%)	56 (26.4%)	3.22	1.49
7.	I believe the more a teacher uses multimedia ICT tools the better the students will	62 (29.8%)	130 (62.5%)	—	5 (2.4%)	11 (5.3%)	4.09	.93

8.	comprehend the lesson I cannot think of when last i use multimedia for teaching	59 (28.4%)	144 (69.2%)	5 (2.4%)	—	—	4.25	.49
9.	Our school relies very much on use of multimedia	66 (31.7%)	123 (59.1%)	4 (1.9%)	15 (7.2%)	—	4.15	.77
10.	It take me much time to prepare multimedia for teaching	86 (41.3%)	118 (56.7%)	4 (1.9%)	—	—	4.39	.52

Key: SA: Strongly Agree; A: Agree; N: Neutral; D: Disagree; SD: Strongly Disagree
M: Mean; SDev: Standard Deviation

Data analysis as shown in Table 2 revealed that response to items 1, 2 and 3 revealed that majority of the respondents 99 representing 47.6%, 96 (46.2%) and 101 representing 48.6% of the respondents strongly agree with the statement, while 18 respondents each for item 1 and 2 representing 8.7% indicate to disagree as well strongly disagree with the statement. Similarly, items 4, 5, 6, 7, 8, 9, and 10 with the following respondents 71(34.1%); 65(31.2%); 97(46.6%); 130(62.5%); 144(69.2%); 123(59.1%) and 118(56.7%) indicated to agree with the statements, while 53(25.5%); 88(42.3%); 56(26.4%); 11(5.3%) respondents indicated to strongly disagree with items 4, 5, 6, and 7. Only item 9 shows that 15(7.2%) respondents indicated to disagree with the statement. The mean and standard deviation of all the 10 items indicated as follow: item1 (M=4.25, SD=.89); item 2 (M=4.28, SD=.96), Item 3 (M=4.10, SD=1.17), Item4 (M=3.12, SD=1.55), Item5 (M=2.69, SD=1.59), Item6 (M=3.22, SD=1.49), Item7 (M=4.09, SD=.93), Item8 (M=4.25, SD=.49), Item9 (M=4.15, SD=.77) and Item10 (M=4.39, SD=.52) respectively.

Research Question Two: How does College of education teachers perceive multimedia to be usefulness for instruction?

Table 2: Mean and standard deviation of perception of usefulness of multimedia for teaching among teachers in college of education

S/N	Items	SA	A	N	D	SD	M	SDev
1	Using multimedia tools will enhance my effectiveness on the job	26 (12.5%)	108 (51.0%)	22 (10.8%)	33 (15.8%)	12 (10.1%)	4.25	.90
2	Using multimedia tools improve my job performance	30 (14.4%)	113 (54.3%)	15 (7.2%)	34 (16.3%)	16 (7.7%)	3.64	.97
3	Using multimedia tools improve my productivity	42 (20.2%)	133 (63.9%)	4 (1.9%)	9 (4.3%)	20 (9.6%)	4.38	.79
4	Using multimedia enables me to accomplish tasks more quickly	25 (12.0%)	138 (66.3%)	4 (1.9%)	20 (9.6%)	21 (10.1%)	4.39	.87
5	Using multimedia tools makes it easy to do things	39 (18.8%)	126 (60.6%)	17 (8.2%)	11 (5.3%)	15 (7.2%)	3.71	.92

6	I enjoy teaching using multimedia	32 (15.4%)	107 (51.7%)	38 (18.7%)	31 (14.9%)	—	4.41	.79
7	I believe using multimedia improves the quality of my work	36 (17.3%)	97 (46.6%)	9 (4.3%)	10 (4.8%)	56 (26.4%)	3.22	1.49

Key: SA: Strongly Agree; A: Agree; N: Neutral; D: Disagree; SD: Strongly Disagree
M: Mean; SDev: Standard Deviation

The data analysis as shown in (Table 3) above revealed that the respondents that agree on items 1, 2, 3, 4, 5, 6 and 7 constitute the majority with 108(51%) on item1, 113(54.3%) on item 2, 133(63.9%) on item 3, 138(66.3%) on item 4, 126(60.6%) on item 5, 107(51.7%) on item 6, and 97(46.6%) on item 7 respectively. Similarly, the respondents that indicated to strongly disagree with items 1 were 21(10.4%), item 2 were 16(7.7%), item 3 were 20(9.6%), item 4 were 21(10.1%), item 5 were 15(7.2%), 6, and 7 were 56(26.4%).: However, there were respondents that disagree with some statement, for instance 26% of them strongly disagree with statement : "I believe using multimedia will improves the quality of my work" The mean and standard deviation of each of the item are as follow: item 1 (M=4.25, SD=.900), Item 2(M=3.64,SD=.97), Item3 (M=4.38, SD=.99), Item 4(M=4.39, SD=.87), Item 5(M=3.71, SD=.92), Item 6(M=4.41, SD=.79) and item 7 (M=4.34, SD=.74) respectively.

Research Question Three: How does college of education teachers' perceived the use of multimedia to be easy for teaching?

Table 3: Frequency count, mean and standard deviation of perception of ease of use of multimedia among teachers in college of education

S/N	Items	SA	A	N	D	SD	M	SDev
1	I use multimedia tools for teaching and learning	91 (43.8%)	98 (47.1%)	10 (4.8%)	—	9 (4.39%)	3.39	1.19
2	I find different instructional package easy for me to use	23 (11.1%)	130 (62.5%)	22 (10.8%)	24 (11.5%)	9 (4.3%)	3.51	1.15
3	I use e-mail and other internet resources for teaching	105 (50.5%)	88 (42.3%)	10 (4.8%)	—	5 (2.4%)	3.80	1.10
4	Learning to operate multimedia tools would be easy for me.	117 (58.2%)	71 (34.1%)	10 (4.8%)	5 (2.4%)	5 (2.4%)	3.61	1.13
5	I would find the technology easy to use	111 (53.4%)	82 (38.4%)	10 (4.8%)	—	5 (2.4%)	3.78	1.04
6	It would be easy for me to become skillful in the use of the technology/multimedia	26 (12.5%)	127 (61.1%)	34 (16.3%)	11 (5.3%)	10 (4.8%)	3.67	.91
7	I do not need much training to use multimedia technology for instruction/lecture?	90 (43.3%)	108 (52.8%)	4 (1.9%)	-----	5 (2.4%)	3.59	1.17

Key: SA: Strongly Agree; A: Agree; N: Neutral; D: Disagree; SD: Strongly Disagree
M: Mean; SDev: Standard Deviation

Data analysis as shown in (Table 3) above revealed that respondents 105(50.5%), 117(58.2%) and 111(53.4%) strongly agree to items 3, 4 and 5, while respondents 5(2.4%), 5(2.4%) and 5(2.4%) indicated to strongly disagree item 3, 4 and 5. Similarly, items 1, 2, 6, and 7, with the following respondents 98(47.1%); 130(4.5%); 9(4.3%); and 108(52.8%) indicated to agree with the statements, while 9(4.3%); 9(4.3%); 10(4.8%); and 5(2.4%) respondents indicated to strongly disagree with items 1, 2, 6, and 7. The mean and standard deviation of all the 7 items indicated as follow: item1 (M=4.25, SD=.90); item 2 (M=3.64, SD=.97), Item 3 (M=4.38, SD=.79), Item4 (M=4.39, SD=.87), Item5 (M=3.71, SD=.92), Item6 (M=4.41, SD=.79), Item7 (M=4.34, SD=.74), respectively.

Discussion

The study examined the attitudinal related behavior of college of education teachers toward use of multimedia for teaching and learning function. The findings of the study revealed that majority of the teachers has good disposition in terms of future use of multimedia for teaching. This finding is supported by the position of Lin and Wang (2012) that intention to use a system would be driven by the tendency that the system can provide critical benefit in improving student learning. The finding is also supported by the earlier finding of Smedly (2011) which explore acceptance of e-learning by student in Jordan and concluded that intention to use any system for learning is a function of its usefulness.

In a 2011study that stated that if teacher have favourable attitude toward technology, they are likely to integrate it into their teaching. Similarly, the study also supported Becker (1999); Zhao and Frank (2003) study that found that teacher who place more positive value on information system tend to use multimedia more frequently in their instruction.

Furthermore, the study revealed that majority of the respondent found multimedia useful for teaching by implication they are going to use it for teaching, this finding was in agreement with Suki and Suki (2011) that perception of usefulness of information system directly link with attitude towards use of technology. The finding also supported Osei-Bryson (2012) that showed that perception of usefulness had a positive relationship with user intention towards technology use for teaching..

In line with the finding of the study that showed that majority of the respondent found multimedia easy to use and by implication they are likely going to use it. This finding supported the finding of David et al. (1989); Venkatesh (2000) and Adedoja et al (2013) that revealed that the easier a technology is to use, the more useful such technology is and more likely its usage for teaching. The study also supported Al – alak and Alnawas (2011), that argued that perceived ease of use helps in reducing uncertainty of innovations leading to individuals to adopt e-learning technology.

Recommendations

Based on these findings, the following recommendations were made:

- (i) That periodic training and workshop should be organized for teacher educators in other to increase their competence and effectiveness in the deployment of multimedia resources for teaching
- (ii) That college of education in Niger state should be equip with additional instructional resources (multimedia tools) for effective teaching of pre-service teachers
- (iii) That facilitating condition and enabling environment such as constant electricity and support system should be given to teacher educators in other to increase their constant

- use of multimedia which will invariably increase their perception of usefulness and ease of use of the tool for teaching
- (iv) Management should constantly encourage teacher educator to use multimedia tool by introducing reward system so as to encourage and motivate the teacher.

Conclusion

The study was carried out to examine the attitudinal related behavior of college of education teachers toward multimedia tools for teaching. The variables examined based on existing theory on factors that could influence acceptance decision of information system for teaching used in the study are (perceived usefulness, perceived ease of use, behavioural intention and attitude towards use) were the independent variables of study, while acceptance to use is the dependent variable. Descriptive survey was used to prosecute the study and the data collected was subjected to descriptive analysis using frequency count, percentages, mean and standard deviation as well as t-test was used to answer all the research questions of the study. The finding showed that the teachers educators in college of education in Niger state agree that multimedia tool are useful, they are easy to use, yet some handful respondents disagree to some of the statement. In fact greater percentage possessed positive attitude and good behavioural disposition to multimedia use for teaching. The study revealed that both male and female does not differ in term of their attitude towards use of multimedia for teaching, but significant difference was observed between their behavioural intentions towards use of the multimedia for teaching.

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