

UTILIZATION OF DIGITAL MEDIA FOR INNOVATIVE LEARNING IN TEACHER EDUCATION AMONG STUDENTS OF FEDERAL COLLEGE OF EDUCATION OBUDU CROSS RIVER STATE, NIGERIA

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Abstract

The study investigated utilization of digital media for innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria. Two research questions guided the study and two hypotheses were formulated and tested for the study. The study adopted correlational survey design. The population comprised 300 academic staff in Federal College of Education Obudu Cross River State, Nigeria with a sample of 200 academic staff which was selected using simple random sampling technique. The instruments used for data collection were Utilization of Digital Media Questionnaire (UDMQ) and Innovative Learning in Teacher Education Questionnaire (ILTEQ). The instruments contain 15 items. The instruments were trial tested on 30 academic staff using Cronbach Alpha and a reliability coefficient of 0.87 was obtained. The instruments were structured on 4-point Likert scale of Strongly Agree (SA)=4, Agree (A)=3, Disagree (D)=2 and Strongly Disagree (SD)=1. Data collected were analyzed using Pearson Product Moment Correlation to answer the research questions and test hypotheses at 0.05 level of significance. The findings of the study showed significant relationship of utilization of electronic books and mobile phones with innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria. The study concluded and recommended that administrators of teacher education institutions should encourage utilization of digital media in order to enhance students' innovative learning.

Keywords: Digital media, electronic books, mobile phones, innovative learning

Introduction

Teacher education is the training given or provided in an institution to teachers or would be teachers to enable them acquire, inculcate and impart knowledge to their pupils or students. It is a programme that is related to the development of teacher proficiency and competence that would enable and empower the teacher to meet the requirements of the profession and face the challenges therein (Ugwoke, Ofoegbu & Ugwuanyi, 2012). Teacher education prepares two categories of teachers; teacher trainees and on-the-job trainees to acquire intellectual and attitudinal expectations, subject-matter knowledge and skills aimed to equip him or her for effective delivery at any level of schooling as well as socio-societal adaptations (Federal Republic of Nigeria, 2014).

Teaching is a complex activity and requires people with knowledgeable and competent skills to be effective in the task of instructional delivery to learners. Therefore teacher training institutes such as the Colleges of Education and Faculties of Education in Universities need to inculcate into prospective teachers values and skills as future teachers in the learning processes. Invariably, educational institutions, expectedly, need to anticipate new developments and prepare prospective teachers for their future role (Tella, 2011). In Nigeria, Colleges of Education are one of the teacher education institutions that are saddled with the responsibility of training prospective teachers for effective instructional delivery in primary and secondary schools.

Fundamentally Colleges of Education are to help prospective teachers demonstrate proper leadership qualities; exhibit the knowledge, skills and attitudes which will enable them to contribute to the growth and development of their communities in particular and their nation in general; help prospective teachers to be able to exhibit sound mastery of their subject areas and the ability to impart such knowledge to their students; enhance commitment to the teaching profession; apply the skills in the use of new technologies among others (FRN, 2014). According to FRN (2014), teacher education programmes shall be structured to equip teachers for the effective performance of their duties and Information and Communication Technology (ICT) training shall be incorporated into all teacher education programmes.

Today, rapid development of digital media and network recently affects significantly any aspects of human life, including learning activity. This development makes the learning activity occurring not only with limited information source but with more varying and opened one. Digital media involves the creation of audio, video, websites, social media and applications using technology such as the internet and electronics (Career Guide, 2022). Essentially, it's any form of media that relies on an electronic device for its creation, distribution, viewing and storage. Some examples of digital media include: Social networking platforms, web pages, electronic books, mobile apps and video animations. These digital media have brought about innovative learning in educational institutions including Colleges of Education.

Innovative learning in educational institutions especially teacher education institutions like Colleges of Education is the application of modern methods and tools to enhance students' learning. Innovative learning intends to raise productivity and efficiency of learners in order to improve learning quality. The essence of innovative learning at all levels of education is for effective understanding of school subjects. Vieluf, Kaplan, Klieme and Bayer (2012) state that the pressure to increase equity and improve educational outcomes for students is growing around the world. Learners need to utilize digital media to for effective learning. In teacher education, utilization of digital media in different forms could help prospective teachers become masters of their subjects of specialization. Different digital media such as computers, internet, electronic books, electronic dictionaries, animations, mobile phones and a lot more are utilized in teacher education institutions. However, the researchers' concerned is to investigate how utilization of electronic books and mobile phones as digital media enhance innovative learning among students in teacher education institutions.

Electronic book (e-Book) is a type of publications in digital format. This digital text publication is called e-Book, e-Text online-Book, and file-Book (Arthur, 2023). E-book is one of the digital media utilized to display multimedia information in concise and dynamic form. Into e-book, sound, graphics, picture, animation and movie shows can be integrated so that the information presented will be richer than that in conventional book (Alshehri 2019). E-books provide not only written information but also sound, picture, movie, and other multimedia elements for learners to utilize. Park, Kim and Yoo (2012) in their study in South Korea found that digital book gives positive response when it is used concomitantly with Problem Based Learning model. Kim and Quan-Haase (2013) also found that digital book is effective to improve the attraction of historical learning. Chan-Seok, Mihye and Kwan-Hee (2012) further found that the use of e-books can improve learning effectiveness and learning motivation. Learners could access e-books through multiple sources including computers, tablets and mobile phones.

Mobile phones are wireless handled device that allows users to make and receive calls, send text messages, multimedia messages, email, internet access, snap pictures and many other functions (Yuan & Liu, 2010).Utilization of digital media with e-books and cellular phone among the students in developing countries can improve the access to learning material and

education service, particularly in rural and remote areas (Kim & Quan-Haase, 2013). Research related to the students' attention and visual perception found that many students want to use more comfortable learning materials such as mobile phones so that they can learn whenever and wherever they are (El-Seoud and Alwadani, 2014). Utilization of mobile phones makes learner-centred learning possible by enabling learners to customize the transfer of and access to information in order to build on their skills and knowledge and to meet their own educational goals (Sharples, Taylor, & Vavoula, 2007). Utilization of mobile phones could positively effects learners' learning experience as learners take a greater responsibility for the learning process instead of being passively fed information by an instructor. Based on the above background, the researcher investigated utilization of digital media for innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria.

Statement of the Problem

Innovative learning has assumed to improve learners' learning effectiveness in various institutions of learning across the globe since the advent of digital media facilitated by Information and Communication Technology (ICT). It seems that many learners no longer rely on their teachers for aided learning but rather utilize various digital media such as computers, internet, e-books, mobile phones and many others to facilitate their learning. This practice seems to be a common place in various educational institutions including teacher education instructions. However, it has been observed by the researcher that the quality of learning outcome among students of Federal College of Education Obudu Cross River State, Nigeria is not proving worthwhile. Many students seem to fail in demonstrating mastery of what the curriculum of Colleges of Education has to offer to prospective teachers. It appears that most of the students in the college do not utilize digital media such as e-books and mobile phones for innovating learning. This seems to be affecting the realization of the mandate of teacher education in producing high quality teachers. It is against this background that the present study sought to investigate utilization of digital media for innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria.

Purpose of the Study

The purpose of the study was to investigate the relationship between utilization of digital media and innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria. Specifically, study sought to:

1. determine the relationship between utilization of e-books and innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria.
2. ascertain the relationship between utilization of mobile phones and innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria.

Research Questions

The following research questions guided the study:

1. What is relationship between utilization of e-books and innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria?
2. What relationship between utilization of mobile phones and innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria?

Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance:

1. There is no significant relationship between utilization of e-books and innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria.
2. There is no significant relationship between utilization of mobile phones and innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria.

Methodology

The study adopted correlational survey research design. The population comprised 300 academic staff in Federal College of Education Obudu Cross River State, Nigeria with a sample of 200 academic staff which was selected using simple random sampling technique. The instruments used for data collection were Utilization of Digital Media Questionnaire (UDMQ) and Innovative Learning in Teacher Education Questionnaire (ILTEQ). The instruments contain 15 items. The instruments were trial tested on 30 academic staff using Cronbach Alpha and a reliability coefficient of 0.87 and 0.93 were obtained. The instruments were structured on 4-point Likert scale of Strongly Agree (SA)=4, Agree (A)=3, Disagree (D)=2 and Strongly Disagree (SD)=1. Data collected were analyzed using Pearson Product Moment Correlation to answer the research questions and test hypotheses at 0.05 level of significance.

Results and Discussions

Test of Hypotheses

Hypothesis 1: There is no significant relationship between utilization of e-books and innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria.

Table 1:

Pearson Product Moment Correlation of Significant Relationship between Utilization of E-books and Innovative Learning in Teacher Education among Students of Federal College of Education Obudu Cross River State, Nigeria

Variables		Utilization of E-books	Innovative Learning
Utilization of E-books	Pearson Correlation	1	.091**
	Sig. (2-tailed)		.000
	N	200	200
Innovative Learning	Pearson Correlation	.091**	1
	Sig. (2-tailed)	.000	
	N	200	200

**. Correlation is significant at the 0.05 level (2-tailed).

The result in Table 1 showed that Pearson Product Moment Correlation of significant relationship between utilization of e-books and innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria was ($r=0.091^{**}$) and $P=0.000$. Since $r=0.091$ is less than 0.05, the null hypothesis was not accepted. This implied that there was a negative significant relationship of utilization of e-

books and innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria.

Hypothesis 2: There is no significant relationship between utilization of mobile phones and innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria.

Table 2:

Pearson Product Moment Correlation of Significant Relationship between Utilization of E-books and Innovative Learning in Teacher Education among Students of Federal College of Education Obudu Cross River State, Nigeria

Variables		Utilization of Mobile Phones	Innovative Learning
Utilization of Mobile Phones	Pearson Correlation	1	.072**
	Sig. (2-tailed)		.000
	N	200	200
Innovative Learning	Pearson Correlation	.072**	1
	Sig. (2-tailed)	.000	
	N	200	200

**. Correlation is significant at the 0.05 level (2-tailed).

The result in Table 2 showed that Pearson Product Moment Correlation of significant relationship between utilization of mobile phones and innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria was ($r=0.072^{**}$) and $P=0.000$. Since $r=0.072$ was less than 0.05, the null hypothesis was not accepted. This implied that there was a negative significant relationship between utilization of mobile phones and innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria.

Discussion of Findings

The findings of the study showed that there is positive significant relationship between utilization of e-books and innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria. This means that the less the utilization of e-books, the less innovative learning will improve students' learning in teacher education. This finding is contrary with the findings of Park, Kim and Yoo (2012) in their study in South Korea which found that digital book gives positive response when it is used concomitantly with Problem Based Learning model. The finding also disagreed with the finding of Kim and Quan-Haase (2013) which showed that digital book is effective to improve the attraction of historical learning. Furthermore, the finding is in disagreed with Chan-Seok, Mihye and Kwan-Hee (2012) who found that the use of e-books can improve learning effectiveness and learning motivation.

The findings of the study also showed that there is positive significant relationship between utilization of mobile phones and innovative learning in teacher education among students of Federal College of Education Obudu Cross River State, Nigeria. This means that the more utilization of mobile phones, the more innovative learning will improve students' learning in teacher education. This finding agreed with Kim and Quan-Haase (2013) whose

finding showed that utilization of digital media with e-books and cellular phone among the students in developing countries can improve the access to learning material and education service, particularly in rural and remote areas. The finding also aligned with El-Seoud and Alwadani (2014) who established that research related to the students' attention and visual perception found that many students want to use more comfortable learning materials such as mobile phones so that they can learn whenever and wherever they are. More so, the finding agreed with Sharples, Taylor and Vavoula (2007) who indicated that utilization of mobile phones makes learner-centred learning possible by enabling learners to customize the transfer of and access to information in order to build on their skills and knowledge and to meet their own educational goals.

Conclusion

Innovative learning is essential for prospective teachers in teacher education institutions especially in the era of Information and Communication Technology (ICT). Utilization of digital media such as e-books and mobiles proves to make learning more effective among learners. The study concluded that digital media such as e-books and mobile phones have positive significant relationship with innovative learning in teacher education among students in Federal College of Education Obudu Cross River State, Nigeria.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. The management of teacher education institutions such as Colleges of Education should ensure that prospective teachers are exposed to digital media such as e-book in order to enhance their innovative learning skills for better learning outcomes. This could be achieved through procurement and provision of internet services and computers in the institutions' libraries so as to provide learner opportunity to utilize such facilities.
2. The management of teacher education institutions should also ensure to give prospective teachers proper orientation on utilization of mobile phones for innovative learning so that it will not distract them from focusing on their studies rather than utilizing their mobile phones for academic purposes. This could be achieved through organization of orientation session by the management of the institutions to education learners on healthy ways of utilization of mobile phones.

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