



## E-Learning Platforms and Academic Achievement of Students in College of Education in Bauchi State

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### ABSTRACT

The current study was undertaken in order to determine the impact of e-learning platforms on the academic achievement of students in Adamu Tafawa Balewa College of Education Kangere, Bauchi State. The study adopted the descriptive survey design. The population for the study was made up of 7770 students of Adamu Tafawa Balewa College of Education Kangere, Bauchi State. 367 respondents were selected as the sample which was chosen through stratified random sampling. Data were collected through the use of structured questionnaire. The data were analyzed using percentage, mean and standard deviation. Findings of the study reveal that e-learning platforms have great deal of impacts on students' academic achievement, majority of students don't have access to e-learning facilities with exception of email facilities, scanner and internet service at their homes and computers, printers, email facilities and internet service in the college, e-learning platforms are not utilized by students and all the strategies identified are needed for improving students access to e-learning platforms among students of Adamu Tafawa Balewa College of Education Kangere, Bauchi State. The study recommended that the college should endeavour to establish more ICT centers and provide necessary facilities like computers, web-connectivity, constant electricity supply, e-Library, e-Journals, e-Books, screen touch electronic boards, multimedia projectors/PowerPoint and softwares for e-Learning in the college to enhance students' access to e-learning facilities.

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### INTRODUCTION

Teaching and learning process is witnessing an unprecedented technological advancement. Today learning process is changing from paper to paperless paradigm. Information and communication technologies (ICT) provide new opportunities for education and training, as they enhance learning and teaching,

facilitate collaborations, innovation and creativity for individuals and organizations (Ala-Mutka, Punie & Redecker, 2008). Nowadays, e-learning is one of the most important medium for learning among students in Nigerian Colleges of Education. E-learning is defined as a system based on technology, organization, and management which bestows upon the students ability to



learn via internet and enhance their academic achievement (Levy, 2006). E-learning makes use of telecommunications technology to get information in order to achieve the teaching and learning objectives (Bowles, 2000). It can be said that e-learning refers to the use of systems of electronic education such as computer, internet, multimedia disks, electronic magazines, virtual newscasts and many more whose purposes are to reduce time and expenses and achieve better, faster and easier learning (Zare, Sarikhani, Sarikhani, & Babazadeh, 2015).

Mohammad, Rahele, Mostafa and Vahid (2016) found that the use of e-learning in teaching-learning process improves students learning and creativity. The use of electronic technologies has led to the development of educational opportunities and helps students develop their skills. Many studies shows that e-learning can have a positive impact on learners' involvement, positive attitudes of teachers, personalized learning and learners' creativity (Mohammad, *et als* (2016). Mohammad, *et als* (2016) stated that there are six different types of e-learning; e-learning with physical presence and without e-communication (face-to-face), e-learning without presence and without e-communication (self-learning), e-learning without presence and with e-communication (asynchronous), e-learning with virtual presence and with e-communication (synchronous), e-learning with occasional presence and with e-communication (blended/hybrid-asynchronous) and e-learning with presence and with e-communication (blended/hybrid-synchronous).

The development of teaching and learning process in colleges of education in Nigeria in the 21<sup>st</sup> century will increasingly rely on various forms of e-learning platforms for students' academic

achievement. E-learning has become a new epitome and new underlying principles in Nigerian colleges of education with a mission to facilitate experience that can educate the students. E-learning has the potential to revolutionize the way we teach and how we learn. The world of technology continued to grow and today the whole world has become a global village. By the beginning of the 21<sup>st</sup> millennium, educational technology has stretched educational boundaries and created new development on a daily basis. One of these new developments is e-learning which is offering tremendous advantage to teaching and learning process (Abimbade, 2012).

Today e-Learning is widely used by students of tertiary institutions; in some colleges of education, e-learning have adds value to students' academic achievement. Much research has not been done on the impact of e-learning platforms on the academic achievement of students in colleges of education. E-learning has become a new paradigm in education with a mission to serve as a development platform for present-day society based on knowledge (Oluyemi, Charles, Lady and Uchechukwu, 2015). It is evident that the concept of e-learning is considered to be very attractive as a new learning model whose impact will be a positive one to the development of education in developing countries especially Nigeria. There is a growing interest on research into e-learning, contributions from Nigerian colleges of education remains one of the lowest ((Oluyemi, *et als.*, 2015), hence the need to determine the impact of e-learning platforms on the academic achievement of students in Adamu Tafawa Balewa College of Education Kangere, Bauchi State.

This study is informed by the benefits of e-learning as it's increasingly dominates the current learning approach due to the influence of Information and



Communication Technology which is dominating our day to day activities (Bass, 2016). Despite the benefits of e-learning in teaching-learning process, e-learning as a learning approach was not widely utilized by students in colleges of education in Nigeria (Haruna, 2019). Recently, Covid-19 pandemic imposed our educational system into deplorable state which necessitated the need for e-learning among students of colleges of education for their academic achievement. Needs for e-learning was emphasized by government, experts in education and various scholars in order to develop teaching-learning process. Various countries in the world are trying to streamline the teaching-learning process through e-learning platforms. Therefore, students learning in colleges of education in the 21<sup>st</sup> century will increasingly rely on various e-learning platforms (Haruna, 2019). We pass from the physical world to the virtual world, entering into information era and effective life in the information age requires an understanding of its characteristics (Mousazadeh, Maryam, Farzaneh, Seideh, Hamideh and Bagherian, 2016). Therefore, this study is set to determine the impact of e-learning platforms on the academic achievement of students in Adamu Tafawa Balewa College of Education Kangere, Bauchi State.

#### RESEARCH QUESTIONS

i. To what extent has e-learning impacted on students' academic achievement in Adamu Tafawa Balewa College of Education Kangere, Bauchi State?

- ii. To what extent e-learning facilities are available to the students of Adamu Tafawa Balewa College of Education Kangere, Bauchi State at home and at college?
- iii. What is the utilization level of e-learning platforms among students of Adamu Tafawa Balewa College of Education Kangere, Bauchi State?
- iv. What are strategies needed for improving the accessibility of e-learning platforms among students of Adamu Tafawa Balewa College of Education Kangere, Bauchi State?

#### METHODOLOGY

The study was a survey research of descriptive research design and the area of the study was Adamu Tafawa Balewa College of Education Kangere, Bauchi State with a population of 7770 students. Respondents were sampled from the 3-levels (NCE I, II and III) of the College making the total number of respondents to 367 using stratified random sampling. Structured questionnaire was developed and used as a tool for data collection. The questionnaire was four-point scale of Strongly Agreed (SA), Agreed (A), Disagreed (D) and Strongly Disagreed (SD) with numerical values of 4, 3, 2 and 1 respectively. The instrument was validated by five experts and tested for reliability using Cronbach alpha. The reliability coefficient of 0.81 was obtained. The data collected were analyzed using percentage, mean and standard deviation using SPSS package



**RESULTS**

**Table 1:** Responses on the impact of e-learning platforms on students' academic achievement in Adamu Tafawa Balewa College of Education Kangere, Bauchi State

S/No.	Statements	Percentage				Mean	Decision
		SA (4)	A (3)	SD (2)	D (1)		
1.	E-learning platforms increases access to learning opportunities among students	62.2%	22.6%	8.1%	3.2%	3.5	Agreed
2.	E-learning platforms help to express teaching ideas better, simplified and interested to learners	25.8%	22.5%	30.6%	17.7%	2.5	Agreed
3.	E-learning provide platforms for group learning thereby enhancing students' academic achievement	56.5%	25.8%	9.7%	6.5%	3.3	Agreed
4.	E-learning platforms are useful tool for curriculum delivery, assessment and research.	41.9%	21.0%	9.7%	16.1%	3.0	Agreed
5.	E-learning platforms assist students to learn independently	40.3%	35.5%	6.5%	17.7%	2.9	Agreed
6.	E-learning platforms enable students to develop capacities for high quality research and increase their ability to innovation	65.0%	22.4%	1.7%	6.9%	3.5	Agreed
7.	E-learning platforms is a source of up to date information for enhancing students' academic achievement	67.7%	22.6%	4.8%	4.8%	4.0	Agreed
8.	E-learning platforms provide easy access to quality learning materials and facilitate learning process.	56.9%	25.9%	1.7%	6.9%	3.8	Agreed
9.	E-learning platforms increase learners motivation and participation in academic activities	62.1%	25.9%	1.7%	6.9%	3.4	Agreed
10.	E-learning platforms is a productive learning approach that promotes self-study	27.6%	29.3%	17.2%	24.1%	2.6	Agreed
11.	E-learning platforms helps in storage and retrieval of learning materials to students	37.9%	13.8%	15.5%	29.3%	2.9	Agreed

**Source:** Field survey, 2019



Result in Table 1 shows the mean responses on the impact of e-learning platforms on students' academic achievement. The table revealed that all the items had their mean values ranged from 2.5 – 3.8 and were above the cut-off point

mean of 2.50 indicating that all the items were agreed by the respondents as the impact of e-learning platforms on students' academic achievement in Adamu Tafawa Balewa College of Education Kangere, Bauchi State.

**Table 2:** Availability of e-learning facilities among students of Adamu Tafawa Balewa College of Education Kangere, Bauchi State at home and at College

S/No.	Items	n	At Home		At College	
			FAH	%	FAC	%
1.	Computer (s)	367	85	23.2	281	76.6
2.	Projector (s)	367	11	03	26	07
3.	e-Library	367	00	00	00	00
4.	Printer (s)	367	52	14.2	244	66.5
5.	Web Based Learning	367	00	00	00	00
6.	E-mail Facilities	367	216	58.9	197	53.7
7.	Scanner	367	193	52.6	182	50
8.	e-Journals	367	00	00	00	00
9.	e-Books	367	44	13	00	00
10.	Screen Touch Electronic Board (s)	367	00	00	00	00
11.	Internet Service	367	315	85.8	245	66.8
12.	Multimedia Projectors/PowerPoint	367	00	00	00	00
13.	Digital Video Disk Players	367	00	00	00	00
14.	Softwares for e-Learning	367	29	7.9	00	00

*Source:* Field survey, 2019

**Key:**

- n = Sample size  
FAH = Facilities Available at Home  
FAC = Facilities Available at College  
% = Percentage

Table 2 above shows that majority of the respondents have email facilities, scanner and internet service at their homes and computers, projectors, e-library, printers, web based learning, e-journals, e-books, screen touch electronic boards, multimedia projectors/PowerPoint, digital video disk players and software for e-Learning were not available at their homes.

In the college majority of the respondents agreed that computers, printers, email facilities and internet service are available while Projector, e-Library, web based learning, e-Journals, e-Books, screen touch electronic boards, multimedia projectors/PowerPoint, digital video disk players and software for e-Learning were not available in the college.



**Table 3:** Mean Score of Utilization Level of e-learning Platforms among Students of Adamu Tafawa Balewa College of Education Kangere, Bauchi State

S/No.	Items	n	WU (4)	MU (3)	FU (2)	NU (1)	Mean	Decision
1.	Utilizing e-mail facilities for e-learning	367	27	43	56	241	1.47	Not Utilized
2.	Utilizing e-Journals for e-learning	367	00	00	00	367	1.00	Not Utilized
3.	Utilizing e-Books for e-learning	367	08	69	42	248	1.40	Not Utilized
4.	Utilizing Web-Based-Learning	367	22	74	31	240	1.50	Not Utilized
5.	Utilizing Softwares for e-Learning	367	00	00	00	367	1.00	Not Utilized
6.	Utilizing blog for e-learning	367	16	29	80	242	1.49	Not Utilized

*Source:* Field survey, 2019

**Key:**

- 4 = Well Utilized (WU)
- 3 = Moderately Utilized (MU)
- 2 = Fairly Utilized (D)
- 1 = Not Utilized (SD)
- n = Sample Size

Table 3 showed the mean score of respondents on utilization level of e-learning platforms among students of Adamu Tafawa Balewa College of Education

Kangere, Bauchi State. The table showed that the respondents agreed that all the identified platforms were not utilized for e-learning.

**Table 4:** Mean Score and Standard Deviation of the strategies needed for improving the accessibility of e-learning platforms among students of Adamu Tafawa Balewa College of Education Kangere, Bauchi State

S/No.	Items	Mean	SD	Remark
1.	Provision of adequate and functional e-learning facilities to the college by the government, Non-Governmental Organizations (NGOs) and other philanthropists	3.65	.73	Agreed
2.	Efforts should be put to ensure a continuous steady supply of electricity for proper running of e-learning facilities	3.45	1.08	Agreed
3.	Increasing students access to personal computers in their homes and college	3.47	1.06	Agreed
4.	Government to allocate more fund for installation, maintenance and getting access to e-learning platforms	3.52	1.06	Agreed
5.	Provision of digital libraries/e-libraries by the college	3.85	.76	Agreed
6.	College should employ competent and professional technologists and technicians to take care of e-learning facilities and to carry out routine maintenance	3.46	1.19	Agreed
7.	Classrooms be connected to the internet in order to enhance web-based instruction	3.70	1.01	Agreed



S/No.	Items	Mean	SD	Remark
8.	The College needs to provide opportunities for using multimedia courseware for e-learning.	3.45	1.23	Agreed
9.	Improving students' abilities on computer literacy	3.37	1.10	Agreed
10.	Improving students beliefs and views on the potential positive impacts of ICTs features and e-learning platforms for students' academic achievement	3.35	1.12	Agreed

**Source:** Field survey, 2019

Table 4 shows that the respondents agreed in all the 10 items as the strategies needed for improving the accessibility of e-learning platforms among students of Adamu Tafawa Balewa College of Education Kangere, Bauchi State. The

respondents' computed mean ranged from 3.35 – 3.85 which are greater than the cut-off point of 2.50. The standard deviation ranges from 0.76 – 1.23 which indicated that the respondents were close to one another in their responses.

#### FINDINGS OF THE STUDY

The following are findings of the study:-

- i. E-learning platforms have great deal of impacts on students' academic achievement in Adamu Tafawa Balewa College of Education Kangere, Bauchi State.
- ii. Majority of students don't have access to e-learning facilities with exception of email facilities, scanner and internet service at their homes and computers,

printers, email facilities and internet service in the college.

- iii. E-learning platforms are not utilized by students of Adamu Tafawa Balewa College of Education Kangere, Bauchi State.
- iv. All the strategies identified are needed for improving students access to e-learning platforms among students of Adamu Tafawa Balewa College of Education Kangere, Bauchi State.

#### CONCLUSION

E-learning platforms is an innovative approach for delivering electronically mediated, well designed, learner centred and interactive learning environments to students by utilizing the digital technologies. E-learning platforms

have the capacity to provide higher interactive potential for learners to develop their intellectual and creative ability. In a rapidly changing world of technology, it has become necessary for colleges of education to imbibe the culture of e-learning for their students.

#### RECOMMENDATIONS

- i. Adamu Tafawa Balewa College of Education Kangere, Bauchi State should endeavor to establish more ICT centers and provide necessary facilities like computers, web-connectivity, constant electricity supply, e-Library, e-Journals, e-Books, screen touch electronic boards, multimedia projectors/PowerPoint and softwares

in order to enhance students' access to e-learning facilities.

- ii. Students should be assisted by college, philanthropic organizations and individuals to possess Personal Computers at subsidized rates or through loans and grants.
- iii. Management of Adamu Tafawa Balewa College of Education Kangere, Bauchi State should seek for external and





internal assistance in the provision of e-learning facilities for their students'.

iv. The students need to develop personal interest in the use of Information and Communication Technology.

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