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Influence Of E- Learning Applications On Academic Performance Of Adult Learners With Special Needs In Tertiary Institutions In Sokoto State, Nigeria.

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ABSTRACT
The paper looked at the Influence of e-learning applications on Adult learners' Academic performance in tertiary institutions in Sokoto state, Nigeria, The study employed descriptive survey design and the sample size of 350 respondents were selected representing the total population of 786 Adult learners with the help of Research Advisory (2006) table of selecting Samples from population. Close and open ended Questionnaires' were used to collect data from the respondents. The data collected were analyzed using correlation to determine relationship using frequency and percentage with the help of SPSS version 20. The research findings showed that, the Adult learners had Key interest on the use of e-learning applications. Therefore, it was recommended that, government should give priority to the used of e-learning application in Sokoto state tertiary Institutions for effective and Quality education in the state. The used of e-learning application should be encouraged at all level of education in order for our learners to compete with global learners of any Institutions. More funds should be Invest in the Field of (ICT) Information communication technology to enhance Training and retraining of Staff to enable them improve teaching and learning process through the use of different e-learning applications.
Keywords: - E-learning Applications, Adults with special Needs and Academic Performance.

INTRODUCTION

An electronic learning system is computer based technology which includes information and communication technology tools. This type of system might be synchronous or asynchronous; becoming an important part of education and it is well known for its inspired technique designed for learning purpose Pattnaya Pattnaik, (2016). Virtual learning environment is nothing but the integration of digital technology into the teaching learning process. The elements of an electronic learning system consist of three layers and nine functional components Kunifujm Miura (2011). The nine functional components are Educators and Learners, Learning Infrastructure, Information and Communication Technology (ICT) tools, Teaching Content, and Assessment. The most important element in educational technology is not only creating an environment for learners to learned the content but also providing them with a concepts that will encourage them to think about good innovative and creative ideas. particularly in higher education, learners like to learn new things beyond the syllabus Scardamalia (2003).

E-Learning is an important form of distance education. In olden times, students stayed inside the campus or nearby campus during the duration of their higher education program. Now it is changed to an out of the campus experience. One of the objective of e-Learning is to improve the learning ability of traditional and non-traditional students by providing relevant e-Learning methods and materials. It is clearly known that distance education provides adult learners with the advantage of life-long learning due to its flexibility. Distance education is defined as the planned teaching and learning activities provided through the use of a communication channel within an institutional organization without any time and place limitations Moore, (2011). With the widespread adoption of the Internet and online tools as the communication medium, online distance education empowered the flexibility of educational opportunities. Considering the advantages of online distance education, adults compose the largest audience for online distance education. Xie (2001) and consequently the limits of the diversity expand in online distance education practices. Specifically, they display significant differences from traditional students in terms of their academic, psychological, and life characteristics Richardson (1998). Besides, their engagement in education is more irregular and varied compared with the traditional ones McGivney (2004). This variation and irregularity is due to the fact that they mostly continue their education with their work and family responsibilities. With all these in mind, adult learners' unique characteristics cause unique challenges for them, which affect the way they continue their education or participate in online distance educational processes.

Open praxis intern/ition/ll council for open and distance education open praxis, vol. 11 issue 1, January–March 2019, pp. 5–22 6 Mehmet Kara et al. Adult Learning Adult learners have distinct characteristics in comparison to traditional students. Firstly, they are aware of why and what they need to learn Knowles, (1996). It is also known that the adult learners, who have diverse educational background and goals, want to reflect their experiences on their educational process. Lindeman,(2015). They are different from other learners in terms of their responsibilities in their daily lives, which influence their educational experience. Cercone, (2008). For this reason, there is a need for an educational environment where adult learners are allowed to determine their own educational processes; to share their ideas comfortably; and to sustain their educational process alongside their private lives. Thus, online distance education environment offers appropriate opportunities through the flexibility it provides for adult learners, who are aware of their own learning responsibilities and are required to manage their own learning processes. In spite of the increase in the number of adult learners and consequently in the diversity of the students in online distance education, the number of the studies related to them are fewer in the literature than those studies about traditional learners

Chu & Tsai, (2009) in Remedios & Richardson, 2013). Adult learners can be classified as young and older adults depending on their ages. However, adult learner can be defined as the ones who continue their education by balancing their family and work and are generally older than 22. and these characteristics makes them quite different from traditional learners. Although these differences might provide adult learners with some advantages in educational processes, they might lead to various challenges as well. As a consequence, these point out the need to plan educational environments and processes in accordance with these learners' characteristics. Adult Learners in Online Distance Education Considering the learner-centered nature of all instructional design models, it is a necessity to design and implement online distance education programs that meet the needs of diverse learners including adults. This requires a sound understanding of the link between adult learners' characteristics and the appropriateness of the online environments for their online experiences. Learners can manage learning processes wherever and whenever they desire through the online learning environments. Additionally, adult learners have an opportunity to engage in more interaction via the tools (e.g. discussion and chat) offered by online learning environments (Kim, Liu & Bonk, 2005). By this way, they can develop virtual teaming skills and control their own learning processes (Kim, Liu, & Bonk, 2005). Interaction is also considered as a key factor in online distance education and it is a good predictor of learning (Picciano, 2002). Online distance education also provides an opportunity for learners to engage in individualized instruction and thus learning processes can be planned in harmony with their characteristics Mean (2009).

Furthermore, one of the most fundamental and crucial benefits of online distance education for adults is the opportunity for life-long learning. In addition to the advantages of distance learning mentioned above, it is known that especially adult learners face particular challenges during their online education. Computer and Internet self efficacy of adult learners play a significant role in online learning processes Johnson, Morwane, (2018). The learners who have low perception of competency in these issues or the older adult learners might have challenges in this process and this might cause learner dropout (Appana, 2008). The problems related to learner support might also be experienced in

Statement of the Problem

E-learning becomes paramount in solving most of the Educational challenges particularly in Nigerian tertiary Institutions and Sokoto state in particular, learning through the use of electronic gadgets facilitate teaching and learning particularly during pandemic such as corona virus and Ebola when almost all Nigerian Educational Institutions were shutdown as measure of preventing spread of the diseases among people.

The situation in most of the Sokoto state tertiary Institutions is alarming in terms of Internet facilities, electronic gadgets, e-resources that facilitate the learning among other problems includes inadequate manpower, lack of interest in the side of Adult-learners and poor utilisations of resources. Muhammad (2013)

Therefore, this research need to be carry out in order to come up with measures that would motivate both lecturers and learners to appreciate the used of e-learning for better performance of the Adult – learners, consequence to that, might effect the Adult learners ability to perform better resulting to global changes in education, many countries have gone far nothing could interrupted their Academic calendar.

Research objectives

(1) To examine the influence of zoom application on the performance of Adult-leaners in Tertiary Institutions in Sokoto state.
(2) To determine the Influence of WhatsAppp application on the performance of Adult-learners in tertiary Institutions in Sokoto state
(3) To ascertain the Influence of Facebook application on the performance of Adult-learners in Tertiary Institutions in Sokoto state.

Research Questions

(1) What is the Influence of Zoom application on Adult Learners in Tertiary Education in Sokoto state.
(2) What is the Influence of WhatsAppp application on Adult learners Academic Performance in Sokoto state.
(3) What is the Influence of Facebook application on Adult Learners Academic Performance in Sokoto state.

RESEARCH METHODOLOGY

The research adopt descriptive survey design in order together information from various respondents in various tertiary Institutions in Schools state the choice of this research design was suitable and consider appropriate because of its advantages of ascertaining the attributes of a large population from a group of individuals. As far as this research is concern the entire adult learners with special conditions form the population of the study.

Population of the Study

The population of the study is relatively large in size since it consist all final year students of four different Tertiary Institution in Sokoto State, Shehu Shagari College of Education Sokoto, Sokoto State University, Usman Danfodio University Sokoto and Sokoo state Polytechnics and with total number of about 786 Adult Learners.

Sample Size

A sample of the study consisted of all the four Tertiary Institutions in Sokoto metropolis. The sample size of the study was determined based on Research Advisory (2006). Adult Learners (786) the participants

selected were in a better position to describe the Influence of E- Learning Applications On Academic Performance of Adult Learners With Special Needs In Tertiary Institutions In Sokoto State, From Adult Learners population of 786 only 350 were selected in number the selection was based from the 4 Tertiary Institutions listed above.

Therefore, the total numbers of the population were 786 and sample size was 350, from the whole number of the population. Simple random sampling was used to select the participants from these particular Four Institutions in order to give equal opportunity to population in participation. The summary was given below. For simple random sampling, the researcher wrote names of Adult Learners in their respective Institutions on pieces of paper, which were folded, put in a box and mixed together. A paper was picked at random by selected Adult Lerner's without replacement till the required number was reached.

Table 1.1 Population, sample size and sample Technique

Category of participant.	Population	Sample size	Sample techniques
SSCOE SOKOTO	220	100	
UDUS SOKOTO	220	100	
SSU SOKOTO	200	80	Simple random sampling
POLY TECHNICS SOK	146	70	
Total	**786**	**350**	

Source: field study (2023)

Data Collection Instrument and Methodology

Closed ended Questionnaires were used to gather information from the selected sample of the Schools which helped the researchers analyze the data and made generalizations. The items of the instrument (Questionnaires') were adequately checked and validated by the experts in Department of Educational Science, Curriculum and Department of Psychology to ensure Content Validity. the content validity index (CVI) was computed as below.

CVI = n/N; where n is the number of items which was declared relevant; N is the total number of items in the instrument.

$$CVI = \frac{\text{Agreed items by judges as suitable}}{\text{Total number of items being judge}} = \frac{39}{40} = \mathbf{.97}$$

For the instrument to be accepted as valid, average index should be 0.7 or above (Amin, 2005). Therefore, since computed values was . 97 which was greater than 0.7, the instrument was considered valid.

Reliability

The Reliability determines whether the research instrument is reliable and consistence. Therefore, it can be adopted for collection of data Kaplan (1999). A pilot test was conducted where a tenth of the questionnaires were given to some Students, who are not Part of the participants of this study. The data collected was tested by the used of split half reliability method, the researcher gave 22 copies of the instrument within the population which will not be put on the final sample. After the administering, the researchers divides the instrument into two equal halve of odd and even numbers this was correlated using Cronbach alpha in the SPSS soft ware version 20. The result was presented in tabular format.

Table 2.1: Reliability Statistics

Cronbach's Alpha	N of Items
0.93	41

Source: Result of Analysis (2023)

For the instrument to be accepted as reliable, average index should be 0.7 or above Amin (2005), Therefore, since computed values were greater than 0.7 i.e. 0.93, the instrument was considered reliable. For the analysis of data collected, Frequencies and Percentage were used to answer research questions with the help of SPSS Package Version 20.

What is the Influence of Adult learners using Zoom, WhatsAppp and Facebook Applications on their Academic Performances. In Tertiary Institutions in Sokoto State

DATA ANALYSIS INTERPRETATION AND RESULTS

Table 3.1: Attitudes of Adult learners with Special conditions on E-learning Applications

S/n	Items	Agree (F / %)	Disagree (F/ %)
1.	I prepare zoom Application in learning	303/86	47/14
2.	Zoom Application ease suffering and Physical Stress	180/ 51	170/49
3.	Learning through zoom enable me to concentrate better.	264/75	86/25
4.	Learning through zoom reduce Educational cost	321/92	29/8
5.	Zoom Application make interaction highly Attractive	335/96	15/4
6.	I learn a lots through the used of WhatsAppp	345/99	5/ 1
7.	I used whats'up in Receiving current Information	320/91	30/9
8.	What'up enable me to access Educative video clips	330/94	20/6
9.	I participated in educative programs organized organized by Academic Communities	309/88	41/12
10.	I used to learned through the used of WhatsAppp Audio clips	317/91	33/9
11.	Facebook created learning faster than Normal class rooms	310/88.6	40/11.4
12.	I prepared the used of Facebook in learning than physical contacts	200/57.1	150/42.9
13.	I Solved my Academic task through accessing data from facebook	250/71.4	100/28.6
14.	Does the e-learning Applications are at your Disposals	50/14.3	300/85.7
15.	I used face book to Interracted with Foreign Students	210/ 60	140/40
	Total	**350 F**	**100%**

Sources: Field data 2023

Table 3.1 Indicate that Students positive Attitude towards e-learning Applications on Academic Programs, Considering the Result of the items analyses using frequencies and percentage. For instance, I prepare zoom Application in learning , shows that 303 respondent which amounted to 86 % agree with the item out of 350 returned scales. Zoom Application ease suffering and Physical Stress, shows that 180 respondents were with the item which amounted to 51 % and only 170 respondent disagree with the statement which amount to only 49%. Learning through zoom enable me to concentrate better. the result revealed that, 264 respondent agree with the statement which constitute 75%. Learning through zoom reduce Educational cost, the outcomes shows that, about 321 respondents representing 92% are in agreement with the statement. More over, 335, respondents believed that, Zoom Application make interaction highly Attractive at item 5 with about 96 % against 04 % disagreement with the item. I learn alots through the used of Whats'App. The statement indicated that, 345 respondents representing 99% are in agreement with the statements against 1% who dis agree with the Statements. I used whats'App in Receiving current Information the statement got 320 respondents who agreed representing 91% against 9% with dis agreement. WhatsAppp enable me to access Educative video clips 94% of the respondents are in agreed with the statement against 6% who dis-agreed. Item number nine shows that, I participated in educative programs organized organized by Academic Communities the respondent that agreed with the statement are 309/88 while those who are against are 41/12. Another statement that shows:- I used to learned through the used of WhatsAppp Audio clips 91% of the respondents agreed with statement while 9% are in disagreement. Facebook created learning faster than Normal class rooms this statement has about 320 respondents representing 88.6% who are in agreement with the statement. I prepared the used of Facebook in learning than physical contacts the results shows 57.1% agreed with the statements while 42.9 are against. I Solved my Academic task through accessing data from Facebook 250 respondents agreed with the statement representing 71.4% while 28.6 are in Disagreement with the statement. Does the e-learning Applications are at your Disposals the results indicated that, about 300 respondents representing 85.7% are in Disagreement with the statement. I used face book to Interacted with Foreign Students the statement shows that, about, 210 respondents representing 60% are in agreement with the statement while 140 respondents dis - agreed with the statement representing 40%.

Therefore, the above analyzed items signified that Adult learners Shows their Willingness of shift from idea of Traditional learning to the idea of E-learning which will bring about sustainability in Educational systems of Adult learners with Special conditions in Sokoto state Tertiary Institutions

Table 3.2: Summary of Pearson Product Moment Correlation Co-efficient between Zoom Learning Application and Adult Learners' performance in Tertiary Institutions in Sokoto state

		Zoom Application	Adult learners' performance
Zoom Application	Pearson Correlation	1	0.681**
	Sig. (2-tailed)		0.000
	N	350	350
Adult leaners' performance	Pearson Correlation	0.681**	1
	Sig. (2-tailed)	0.000	
	N	350	350

Source: Result of Analysis (2023)

According to Table 3.2, the Pearson product moment correlation index obtained on the Zoom learning and Learners' performance is r = 0. .681**.. It is positive with sig=0.000 < p = 0.05, implying that Zoom Application and Adult learners' performance were statistically and significantly related. This finding implied that, used of Zoom Application resulted into improved Adult Learners' performance in Tertiary Institutions in Sokoto state.

Table 3.3: Pearson Product Moment Correlation Co-efficient between Using WhatsApp and Adult learners' performance in Tertiary Institutions in Sokoto state.

		WhatsAppp Application	Adult learners' performance
Instructional organizing	Pearson Correlation	1	.650**
	Sig. (2-tailed)		.000
	N	350	350
Teachers' performance	Pearson Correlation	.650**	1
	Sig. (2-tailed)	.000	
	N	350	350

Source: Result of Analysis (2023)

According to Table 3.3, the Pearson product moment correlation index obtained on the WhatsAppp and Adult learners' performance is r = 0. 650** It is positive with sig=0.000 < p = 0.05, implying that WhatsAppp and Adult learners' performance were statistically and significantly related. This finding implied that WhatsApp Application resulted into improved Adult learners' performance in Tertiary Institution as it positively and effectively enhance teaching and learning process

Table 3.4: Summary of Pearson Product Moment Correlation Co-efficient between Face book and Adult learners' performance in Tertiary Institutions in Sokoto state.

		FaceBook Application	Adult Learners' performance
Instructional controlling	Pearson Correlation	1	.793**
	Sig. (2-tailed)		.000
	N	350	350
Teachers' performance	Pearson Correlation	.793**	1
	Sig. (2-tailed)	.000	
	N	350	350

Source: Result of Analysis (2023)

According to Table 3.4, the Pearson product moment correlation index obtained on Face book and Adult learners' performance is r = 0. 793** It is positive with sig=0.000 < 0.05, implying that Facebook Application and Adult learners' performance were statistically and significantly related. This finding

implied that Face book Application improved Adult learners' performance in Tertiary Institutions in Sokoto state.

Table 3.5: Model Summary Coefficients to determine the predictors of e-learning Applications and Adult learners' performance in Tertiary Institutions in Sokoto state.

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.486	.227		7.140	.000
Zoom App	0.201	.161	.664	8.105	.000
What's up	0.116	.166	.211	8.466	.000
Face book	0.645	.113	.828	19.275	.000

Source: Result of Analysis (2023)

To find out how each of the variables contribute to the equation, the study established that Zoom App, What's App and Face book were significant predictors of Adult learners' performance in Tertiary Institutions, (Beta 0.664, 0.211 and 0.828; Sig=0.000, 0.000 and 0.000 < p=0.05) respectively. This showed that e-learning Applications (Zoom, WhatsApp and Face book) had a significant influence on Adult learners' performance in Tertiary Institutions in Sokoto state.

DISCUSSION OF THE RESULTS

From the analysis of the data generated in this study, it was confirmed that Adult Learners in tertiary Institutions in Sokoto state have positive Ideas in utilisations of e-learning Application on their day to day academic activities. This positive Idea helps in Selecting and Concentrating on e-learning Courses that will match to their suitable academic discipline and performance. The finding is in line with that of Linder Man (2015) there is a need for an educational environment where adult learners are allowed to determine their own educational processes; to share their ideas comfortably. The result of item number (6) I learn alots through the use of WhatsApp this findings is in contrast with the findings of Johns, (2018). The learners who have low perception of competency in these issues or the older adult learners might have challenges in this process and this might cause learner dropout. finding on item no-15 shows, I used face book to Interacted with Foreign Students the finding was in line with the statement made by Jones Mean (2009) Online distance education also provides an opportunity for learners to engage in individualized instruction local and International, thus learning processes can be planned in harmony with their characteristics.

Findings

- **a.** Zoom Application and Adult learners' performance were statistically and significantly related
- **b.** WhatsApp Application resulted into improved Adult learners' performance in Tertiary Institution as it positively and effectively enhance teaching and learning process
- c. Facebook Application and Adult learners' performance were statistically and significantly related. This finding implied that Face book Application improved Adult learners' performance in Tertiary Institutions in Sokoto state.

CONCLUSION

Although, quite number of research was conducted all over the world by educational researchers and other educational Institutions in viewed to brings out the useful result or information that would assisted in improving the used of e-learning programs in our Educational systems. This research also comes up with different recommendations therefore, given the results as obtained, analyzed and interpreted, the researchers concludes that: Adult Learners in tertiary Institutions in Sokoto state have key Interest on using e-learning Program which would Leads to faster learning, Convenient and attractive for enhancing Adult learners Performance academically.

RECOMMENDATION

1. E-learning education should be encouraged to enable Adult learners identify more functional aspect of their curricular and have more positive attitudes on learning via Zoom, WhatsAppp or Facebook.
2. Government should encourage E-learning Programs in Sokoto state Tertiary Institutions in oder to sustained learning even if the students are at home.
3. Educational policy Makers should advocated for the use of e-learning in various level of learning.
4. Our tertiary Institutions should be equipped with available E-learning gadgets for sustainable development of Education in Sokoto state.
5. There is need for the government to ensured that, our tertiary Institutions are equipped with Internets service for smooth running of e-learning programs.
6. More funds should be Invest in the Field of (ICT) Information communication technology to enhance Training and retraining of Staff to enable them improve teaching and learning process through the use of different e-learning applications.

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