THE IMPACTS OF E-LEARNING IN FACILITATING ACADEMIC PERFORMANCE AMONG PRIVATE SECONDARY SCHOOLS AND TERTIARY INSTITUTIONS IN OTA, OGUN STATE , NIGERIA

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ABSTRACT

The introduction of multimedia technologies and the internet in learning has been observed as a means of improving accessibility and quality of delivery and learning among the students and teachers in private Secondary Schools and tertiary institutions in Nigeria. Thus, e-learning is a new paradigm shift in educational sector for the purpose of advancing the knowledge base. The beginning of 21st Century has heralded the educational technology that has facilitated e-learning among secondary and tertiary institutions in the developing countries. The empirical study will focus on some selected private Secondary Schools and Higher Institutions in Ota. Both primary and secondary data shall be utilized in the study. Structured and unstructured interviews with some staff and students of the selected Secondary and tertiary institutions will be conducted. This is necessary so as to obtain qualitative data on their e-learning experiences as well as the understanding of the usage. The Secondary Schools and Tertiary institutions websites will be assessed so as to elicit information on their learning management system which is crucial for this study. Questionnaires will be administered to the students in order to elicit information on their experiences on e-learning. This study in its purpose employs descriptive design in its procedural approach. The method of data collection entails a survey study conducted by the researchers using the questionnaire as the research instrument. This provides opportunity of the researchers having a direct contact with the target population in a bid to obtain vital information necessary for a thorough study of this kind. The survey method also provides the researchers with the privilege of obtain "first hand' information and having a personal interview with the key players in the field or area of focus by the researcher. The descriptive design is utilized to analyze the characteristic of the respondents and the number of participants that responded to a particular issue of concerned being addressed the current study. The impacts of e-learning in facilitating academic performance were examined using regression analysis based on the testable hypothesis based on the study objectives. Analysis of the result from the study provides evidence of significant impact of e-learning in facilitating academic studies and self-development resulting to improved learning process and high academic performance. The therefore recommends that more effort should be made by the management of secondary schools and tertiary institutions in providing a e-learning facilities in their institutions and students should be encouraged to make a proper use of these facilities by given them e-learning related assignment and projects.

Keywords: e-learning, Multimedia, Regression Analysis

1.1 INTRODUCTION

In the Nigerian Secondary schools and tertiary institutions, private secondary and university education in Nigeria are the responsibility of entrepreneurs, agencies or groups such as religious bodies, communities, universities and corporate bodies. There are also schools which are managed by foreign communities. The majority of private secondary schools offer the junior and senior secondary programme. Decree No. 16 of 1985 prescribes minimum conditions for the establishment of institutions at primary and secondary levels. The provisions were expanded in Decree No. 9 of 1993 (National Minimum Standards and Establishment of Institutions Amendment Decree) to allow the establishment of

private universities under certain guidelines determined by the government. The monitoring and supervision of private primary and secondary schools is secured by the federal and state ministries of education, while parastatal bodies with appropriate mandates supervise the various categories of tertiary institutions.(Federal Ministry of Education, 2014)

The structure and content of private secondary education comply with the requirements of the National Policy on Education. Private schools use curricula which are designed by the federal government for the national system, with modifications to meet special needs and interests.(International Bureau of Education in UNESCO 2014)

Secondly, in the Nigerian University system, which includes private and public tertiary institutions, course unit system is currently being practiced. In recognition of the need to encourage private participation in the provision of university education, the Federal Government established a law 1993, allowing private sectors to establish universities following guidelines prescribed by the Government. Under the course unit system, students are required to take specific number of units of courses per week or per semester. There is flexibility of choosing a preferred elective course under this course unity system and compulsory courses in their various disciplines. The course unit system is particularly interesting in the sense that students have the flexibility of choosing a course of their choice for a particular semester. The courses are designed in a stepwise manner so as to allow graduation from lower level to higher level. The science related courses are designed to allow for laboratory works. Consequently all departments are assumed to consist of academic professionals in deferent areas of interest. Each university in Nigeria is autonomous in areas of teaching and research. Research articles, field notes, lecture material, monographs, tutorial and other training materials are deposited in their repositories.

This study is informed by the deplorable state of educational system in Nigeria due to the inadequate teaching –learning facilities and infrastructures. Most libraries in Nigerian higher institutions and secondary schools have audio-visual learning materials that are hardly utilised as a result of incessant power outages and sometimes lack of awareness on the part of the students. Hence, traditionally the main learning approach focuses on teachers rather than the students. A teacher determines what to teach, how to teach and thus, less concern about the students that is are at the receiving end. . There are various learning approaches being put in place to compensate for the problems occasioned by this traditional learning paradigm. For example online instruction has the potential to provide opportunities for reflective and integrating learning outcomes. This approach provides the students adaptive personalised e-learning because it is a general term used to refer to computer-enhanced learning. It may involves the use of mobile technologies such as personal digital assistants and MP3/MP4 player and includes the use of web-based teaching materials and hypermedia in general, as rooms or web-sites, discussion boards, collaborative software, e-mail, blogs, wikis, text chart, computer aided assistant, educational animation, simulation, games, learning management software et cetera.

Therefore, the survival of tertiary educational institutions in the 21st century will increasingly rely on various forms of electronic delivery system and communication facilities that are available in markets as requirements for educational flexibility.

2.1 LITERATURE REVIEW

E-learning has become a new epitome and new underlying principles in library services as well as educational sector with a mission to serve as a development platform for present-day society based on knowledge. What then is e-learning? According to Olaniyi (2006), e-learning is all about learning that occurs at the computer. In our contemporary world, the learning through the aid of a computer simply means online knowledge acquisition through the internet or offline through CD-ROM etc. In other words, it is the use of network technologies to create, foster, deliver, and facilitate learning, anytime and anywhere. Horton (2005) defined e-learning as the use of internet and digital technologies to create

experiences that educate our fellow human beings. E-learning has the potential to revolutionise the way we teach and how we learn (DfES, 2003).

According to Abimbade (2002) educational technology vis-à-vis instructional technology whether as a field of education or new terminology to what has been there before like teaching aids or apparatus, as it was earlier called but recent achievements in the field of computer and communication technologies have offered tremendous opportunities for learning by electronic means (Rozina, 2002). Therefore, the world of technology continued to grow and today the whole world has become a global village. By the beginning of the 21st millennium educational technology has stretched educational boundaries and created new ones on a daily basis. One of these new and rapidly expanding boundaries is e-learning which is offering tremendous advantage to education sector.(Abimbade, 2002)

The introduction of new multimedia technologies and the Internet in teaching-learning relationship has been seen as a means to improve accessibility, efficiency and quality of learning by facilitating access to information resources and services as well as remote exchanges and collaboration. Nonetheless, by the middle of the 20th century the growth in technology and applications even in the field of education has been unavoidable to be overlooked.
 It has been found that students in higher educational institutions that engaged in E-Learning, generally performed better than those in face-to-face courses. (Holley, 2002) found that students who participate in online/ E-Learning achieve better grades than students who studied traditional approach.
As result of this finding E- learning is growing very fast and become popular and that is why many higher educational institutions are adopting to virtual learning system. E-Learning is widely used in many universities in the world today and Covenant University inclusive. In some universities, their E-learning does not add any value to the teaching and learning activities of the University and perhaps they do not investigate the impact of E-learning on student academic performance. Much research has not been done on the relationship of E learning use and student academic performance. .

The use of new multimedia technologies and the Internet in learning is seen as a means to improve accessibility, efficiency and quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration. E-learning has become a new paradigm and philosophy in education with a mission to serve as a development platform for present-day society based on knowledge. It is evident that the concept of e-learning is considered to be very attractive as a new learning model whose effect will be a positive one to the development of education in developing countries especially Nigeria, with all its potentialities. Although, not much effort is taken for its implementation, present-day research of e-learning in Nigeria shows that having e-learning on the educational agenda in Nigeria still face a lot of challenges.

3.1 RESEARCH METHODS

This research in its approach is a pure research based on descriptive design. The survey method was utilized for data collection from the field study. The rationale behind this approach derived from fact that one of the characteristics of good quality research depends on its ability to produce evidence that could be generalized from the empirical result of the sample study. The variables considered in this study were academic performance and learning process as the endogenous variables. The exogenously determined factors includes; facilitation of academic studies and self-development outcome. The study population includes private secondary schools and private tertiary institutions in Ota, Ogun State Nigeria. A clustered random sampling technique was used and estimated 214 sample sizes. A total of 250 questionnaires were distributed and 214 estimated with a total of 27 variables that were retrieved from the survey with a response rate of 86 percent. The structured questionnaire was subjected to face and content validity with assistance research experts in this field. The research instrument was structured into two main parts which consists of the personal characteristics of the respondents and the content questions that address the e-learning process, facilitation for academic studies, self-development outcome and its effects on academic performance. The personal characteristics of the respondents were

analyzed with descriptive statistics involving frequency distribution and percentages. This in addition provides the researchers with total number of target audience in a particular outcome. The impact of e-learning and academic performance in private owned secondary and tertiary institution was established using relational analysis. Table5 below shows the estimated co efficient for the study

3.2 Research Hypothesis

H_0: E-learning facilitation for studies does not significantly enhance academic performance

H_1: E-learning facilitation for studies does significantly enhance academic performance

H_0: There is no significant effect of e-learning facilitation for studies on improved learning process

H_1: There is significant effect of e-learning facilitation for studies on improved learning process

H_0: There is no significant influence of e-learning motivation for studies on self development outcome

H_1: There is a significant influence of e-learning facilitation for studies on self development outcome

3.3 Summary Statistics Of The Personal Characteristics Of The Respondents

Table 1 Age

	Frequency	Percent	Valid Percent	Cumulative Percent
15-25 years	154	72.0	72.0	72.0
26-35 years	25	11.7	11.7	83.6
36-45 years	20	9.3	9.3	93.0
45 years and above	15	7.0	7.0	100.0
Total	214	100.0	100.0	

The analysis of table 1 shows the age statistics of the respondents who participated in the survey study. It further reveals that of the total respondents 154 which represents 72% were between the age bracket of 15-25 years, 25(11.7%) were between 26-35 years, 20(9.3%) were within the range of 36-45years and 15(7%) were within the age of 45 years and above.

Table 2 Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	97	45.3	45.3	45.3
Female	117	54.7	54.7	100.0
Total	214	100.0	100.0	

The result of the distribution the gender statistics in table 2 indicates that the female 117 (54.7%) constitute majority percentage of respondent compared with their male counterpart 97 representing 45.3%.

Table 3 Education

	Frequency	Percent	Valid Percent	Cumulative Percent
Undergraduate	149	69.6	69.6	69.6
secondary school	65	30.4	30.4	100.0
Total	214	100.0	100.0	

The result from table 3 shows the percentage distribution of the respondents by educational status. A further analysis shows that majority 149(69.6%) of the respondents were undergraduates and secondary school respondents were 65 (30.4%)

Table 4 Marital status

	Frequency	Percent	Valid Percent	Cumulative Percent
Single	164	76.6	76.6	76.6
Married	50	23.4	23.4	100.0
Total	214	100.0	100.0	

The result of table 4 above reveal that 164(76.6%) of the total respondents were singles while the remaining 50(23.4%) were married. This further implies that majority of the respondents are among the single group.

Table 7: Mean, Standard Dev., Reliability and Correlation Matrix

Variable	Cronbach Alpha	1	2	3	4	Mean	SD	Min	Max
ACDP	0.582	1				17.00	1.940	12	20
IMLP	0.682	0.051	1			19.70	2.390	15	24
ELMS	0.624	0.441**	0.360**	1		17.00	1.912	13	20
SEDO	0.615	0.276**	0.093	0.091**	1	17.00	1.923	12	20

*** Correlation is significant at 0.01 levels; * Correlation is significant at 0.05 levels*

***Note;** ACDP- Academic performance; IMLP-Improved learning process; ELFS; E-learning facilitation of studies; SEDO- Self—Development Outcome.*

The table above involve alpha reliability test, correlation matrix suggest used to examine the degree of reliability for the scale variables. The reliability test suggests that the variables are relevant for meaningful result deduced from the study empirical evidences.

4.1 RESULTS AND DISCUSSIONS

It was hypothesized that there is a significant relationship between academic performance, e-learning facilitation for academic study and its self development outcome. The relational analysis indicated that e-learning motivated studies and its self development effect are significant predictor of academic performance, (β_1= 0.273, β_2 = 0.265, P<0.001). The findings from this study suggest that e-learning facilitation academic studies and self-development outcome of e-learning have substantial effect on academic performance in secondary schools and tertiary institutions. This suggests that there exists a significant relationship between e-learning motivated studies, self-development and academic

performance in secondary schools and tertiary institutions in Nigeria. We therefore accept the preposition that e-learning facilitation for studies does significantly enhance academic performance.

Table 5 Results

		Coefficients[a]				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.680	1.290		5.952	.000
	ELFS	.277	.068	.273	4.099	.000
	SEDO	.267	.067	.265	3.983	.000
a. Dependent Variable: ACDP						
		B	Std. Error	Beta		
1	(Constant)	12.564	1.596		7.871	.000
	ELFS	.591	.084	.473	7.076	.000
	SEDO	-.180	.083	-.145	-2.164	.032
a. Dependent Variable: IMLP						
		B	Std. Error	Beta		
1	(Constant)	10.424	1.109		9.402	.000
	ELMS	.382	.064	.379	5.968	.000
a. Dependent Variable: SEDO						

Source; Authors' Computation, 2015

The evidence from the result shows a significant relationship between improved learning process, e-earning studies and self- development effect outcome of e-learning, (β_1= 7.076, P<0.05, β_2 = -2.164, P<0.001). This indicated that there exists a significant effect of e-learning process on improved learning while self-development outcome was inversely related to improve learning process. This indicates that most secondary school and tertiary institution students have not fully utilized self-development opportunity obtainable from e-learning to significantly improve their learning process. Hence the study accepts the hypothesis that e-learning facilitation studies has significant effect on improved learning process while rejecting the null hypothesis that e-learning facilitated studies has no effect on improved learning process.

The estimated result shows that e-learning facilitated studies have significant effect on self-development, , (β_1= 0.379, P<0.001) Following the result from estimated co-efficient provided significant evidence in support of the fact that e-learning facilitated studies facilitate self-development outcome. Therefore the hypothesis that there is no significant influence of e-learning facilitation on self development outcome cannot be accepted by the present study leading to the acceptance of the hypothesis that there is a significant influence of e-learning process in self-development outcome.

5.1 CONCLUSION AND RECOMMENDATIONS

The current study was carried out to show the impacts of e-learning in facilitating academic performance through improved learning process, motivation for academic studies, self- development outcome and its effects on academic performance. From the result of the study it is clear that e-learning facilitated studies significantly improve academic performance, learning process and self- development. It is also observed that there is more likelihood that majority of the students in secondary schools and tertiary institutions have not fully utilized the self-development aspect of e-learning to significantly improve their learning process. Instead, most of the students would rather prefer to be engrossed in e-entertainment and social network activities that have negative influence on their learning process and outcomes. E-learning is an effective means of self-development and it also facilitates academic performance in tertiary institutions and secondary schools. It will also help students to develop potentials for rigorous academic studies and research purposes which are basically needed skills for successful academic pursuits.

5.2 Recommendations

This current study would therefore, recommends that secondary schools and tertiary institution management should make a consorted effort to provide e-learning environments that would enhance student performances in schools and also facilitate their self- development efforts.

Assignment and research works that are meant to encourage students to the most effective use of the e-learning facilities provided by the school should frequently be given to the students as this will help to significantly improve their self –independence and development in their respective academic endeavours.

5.3 Suggestions for further studies

Based on the limitation of the study that is attributed to time constraint, the researchers opted for cross-sectional data; therefore it is recommended that future studies could be done with time series longitudinal observations.

The sample size for the current study consists of two secondary schools and one tertiary institution as a case study; hence the researchers recommend that future researches could be also be tested in comparison with other institutions of learning in Nigeria.

Although, the researchers utilised random sampling technique, it is recommended that future studies should use larger sample size for the data observation.

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Appendix

ANOVA^a

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	160.065	2	80.033	26.306	.000^b
	Residual	641.935	211	3.042		
	Total	802.000	213			

a. Dependent Variable: ACDP

. Predictors: (Constant), SEDO, ELMS

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	234.586	2	117.293	25.195	.000^b
	Residual	982.274	211	4.655		
	Total	1216.860	213			

a. Dependent Variable: IMLP

b. Predictors: (Constant), SEDO, ELMS

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	113.333	1	113.333	35.612	.000^b
	Residual	674.667	212	3.182		
	Total	788.000	213			

a. Dependent Variable: SEDO

b. Predictors: (Constant), ELMS