Management of 21st Century Digital Classroom as Predictor of Lecturers' Job Performance in Tertiary Institutions in Rivers State, Nigeria

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Abstract

The study investigated management of 21st century digital classroom as predictor of lecturers' job performance in the tertiary institutions in Rivers State, Nigeria. Six research questions were answered while corresponding null hypotheses were tested at 0.05 alpha level. The study adopted a correlation research design. The population of the study was 2330 lecturers from Uniport, RSU and IAUE. A sample size of 466 lecturers was used. Digital Classroom Scale" (DCS) and "Lecturer' Job Performance Scale" (LJPS) were used for data collection. Face and content validities were ensured. The reliability coefficients of 0.78 and 0.82 were calculated for DCS and LJPS. Simple and multiple regression were used to answer the research questions while t-test and ANOVA associated to simple and multiple regression were used to test the hypotheses at 0.05 alpha level. It was found among others that computer and multimedia usage management significantly predicted lecturers' job performance in tertiary institutions in Rivers State. It was recommended among others that non-governmental organizations like Tetfund, Unicelf and community heads should intensify efforts in the provision of computers in the tertiary institutions in Rivers State. Again, Digital microphones should not be loud enough to produce noise instead of sound during instructional delivery.

Index Terms: Digital Classroom, Lecturers' Job Performance

I. INTRODUCTION

Higher education is the education acquired after the secondary education. Specialization and mastery are highly practiced in high education in this 21st century. The 21st century education administration is saddled with the application of digitalization away from the conventional method of administration of instruction. The noble goals and objectives of self-reliance and globalization may not be achieved is digitalization is not given a pride place in the pursuance of instructional objectives. The achievement of instructional and institutional objectives are directly related and linked to job performance. Job performance could be seen as an act of actualizing or executing a given statutory responsibility.

It could also be seen as the ability to combine skillfully the right behavior, attitude and methods towards the accomplishment of assigned tasks. Job performance is determined in the duties performed by a teacher/lecture at a particular period in the school system in achieving organizational goals. This why Motiwidlo, Borman and Schmidt in Bullock (2013) defined job performance as the overall expected value from employees behaviours carried out over the course of a set period of time. The same Motowidlo Borman and Schmidt in Bullock (2013) saw job performance as that entire worth of an employees' conduct which he perform over a certain period of time. A lecturer as an employee is expected to perform some duties in his workplace, in which over a particular period may be assessed if he is really doing well or not. Campbell (1990) described job performance as something done by an employee or a person.

Teachers'/lecturers' job performance could be measured through teachers' satisfaction and job attitudes such as job commitment, feelings of job challenge, job meaningfulness and job responsibility (Cheng in Selamat, 2013). A teacher/lecturer is a person who instructs to provide the teaching/ learning process and who, in his capacity to do this function at various capacities as an educator, instructor, tutor, counselor, professor, among others (Afe, 2002). A lecturer is more or less an input resource and operator in the education system, whose responsibility is to convert raw materials (students) into finished products (graduates). For instance, selling of computers, assembling engine parts, teaching students, registering courses, compilation and computing result of students and

performing surgery operation are behaviours that are relevant to goal achievement and can be scaled or measured to constitute performance (Campbell et al, 1990). Organizations who seek for distinctive work performance and its advantage must give adequate opportunities for employees' freedom of use of multiple skills, significant contributions, sense of responsibility and feedback on performance (Davoudi 2013). There is no doubt that effectiveness of lecturers in this 21st century is all encompassing when it comes to digital teaching in the classroom. No lecturer will be able to be a content master and functional teachers with the efficient usage of digitalization.

Digitalization is the process of translating and conveying information with the help of digital appliances as a result of digital technological know-how. The conversion of information in the classroom into digital format during instruction is an exemplified digital classroom. Digital classroom is seen as a formal classroom setting where teaching and learning activities are solely managed by teachers and enhanced by technology. Digital classroom may be described as a classroom where connectivism as against constructivism is triumphant. Digitalization behooves the use of science and technology in the dissemination of information between the teacher and the learner. Scientific application of knowledge, factual synthesis and synergy amongst the teachers and students are through technology which may have been assuming an overriding position in a good digital classroom set-up.

Typical examples of basic technological requirement in a digital classroom are; computers, multimedia projector, class website, digital microphones, and online study tools. Most of the basic digital classroom appliances and platform are Information and Communication Technology based. Information and Communication Technology has become an integral component of instructional aids in school system. Federal Republic of Nigeria (2014) has advocated the integration of Information and Communication Technology (ICT) into the education in Nigeria. Ekwe, Enaohwo, Amaechi and Amadi (2016) opined that ICT can also support classroom instruction by creating opportunities for more advanced learning among broad topics and for students to complete assignments in computer rather than the normal pencil and paper. Still on the basic necessities on ICT for functional classroom are the provision of electricity, internet service providers, routers, modems, and personnel to maintain the network, beyond the initial cost of the hardware and software (Grinter & Edward, 2005).

Scholars have encouraged the equipment of 21st century classrooms with modern, basic and functional Information and Communication Technologies. Scholar like Iwuamadi (2013) has advocated the stacking of classrooms with computers, printers, instructional software, electronic references, video players, overhead projectors, TV programmes and the internet. Among others are CD-ROM, a high-speed modem, scanner, speech synthesizer, digital camera, telecommunication interface/link to on-line services and a computer. Ekwe, Enaohwo, Amaechi and Amadi (2016) stressed that multimedia is a computer with a combination of media or integrated use and display of video or visual images, motion, sound/speakers, data, graphics and charts, text and animation sequences that enable students and teachers to interact actively with the display.

Multimedia sources of information include print materials, scanned images, photographs, and digital camera slides on topics which enable students to construct knowledge (Ekwe, Enaohwo, Amaechi & Amadi, 2016). The most frequently used multimedia in the school systems has always been the multimedia projector. These projectors are able to display words and pictures at a required rate and focus for effective teaching and learning. Becker and Harper in Amie-Ogan and Osuji (2016) submitted that the United States of America had increased her pace in gaining access to digitalization and the procurement of computers for school e-teaching and learning.

Federal Republic of Nigeria (2014) has ordered that the government shall provide adequate infrastructure and develop capacity for effective utilization of Information and Communication Technology (ICT) to enhance the delivery of basic education in Nigeria. In contrast to the directive of the FRN, Jegede and Owolabi (2008) reported that computer instructional materials such as computers, computer laboratories, printers, scanners, e-books, and digital textbooks were either in short supply or not available in Nigeria. Still in line with the inadequate supply of digital materials was the finding by Akuegwu, Ntukidem and Jaga in Amie-Ogan and Osuji (2016) who reported that some digital instructional materials lacking in the schools include computers, laptops, video players, multimedia projectors, power point projectors, digital cameras, internet facilities, computer network, telephone (GSM and land phones), e-library, television programmes and database among others. The short availability of some of these materials has behooved judicious, effective and efficient management of them for the actualization of the 21st century teaching outline. Proper management of these materials is bedeviled with lack of teachers' competence.

That is why Yusuf in Amie-Ogan and Osuji (2016) stressing the importance of teachers competence reported that the regular use of digital instructional materials is important to teachers because it supports and facilities teachers' professional competence and helps them to be more efficient and effective thereby increasing their interest in teaching. Lack of proper management of the 21st century instructional aid makes the instruction boring. In furtherance on the handicaps of the use of digital materials was the assertion by Egomo, Enyi and Tah (2012) who reported that inspite of the benefits of using instructional materials, it's use among teachers has been low, due to incompetence on the part of the teachers and other debilitating factors such as irregular power supply, internet connectivity, telephones, dysfunctional nature, and no specific policy for ICT in education. Despite the lackadaisical attitude of some lecturers to effectively use and manage the usage of digital appliance, there are still some overwhelming benefits accruable from their proper usage. This is the simple reason Bell and Avis in Amie-Ogan and Osuji (2016, 131) outlined the benefits of digital instructional materials to include:

- Global access to knowledge

- Instant sharing of experiences and best practices

- Self paced and self based learning

- Stimulations and experimental learning

- Learning becomes interactive and joyful through multimedia tools

- Opening windows for new thinking, an atmosphere of innovation

- Bringing excitement and motivation; proud of owing technology, feeling of in-a-way being ahead of time.

Multimedia as an integral of digitalization is a platform that enables the user to access words and pictures almost at the same time. Multimedia is used in the teaching and learning in the classroom. Multimedia is defined as a learning from words and pictures, which could be printed text whereas the pictures could be in dynamic forms such as animation or video (Mayer, 2008). The effective management of search engines by the lecturers will help them develop their knowledge on a specific area and as such provide solutions to unanswered educational problems. Proper regulation and management of the usage of Google search engine, ask.com, We-charts, bing, yahoo, AOL.com, Baidu, Wolframalpha, DuckDuckGo, internet Archive and Yandex.ru will no doubt tantamount into educational exploits.

II.   STATEMENT OF THE PROBLEM

Researchers and personal experience have shown that the quality of instruction in the tertiary institutions is constantly on the decrease mostly in Rivers State. Most of the lecturers have not been able to embrace training and development that can enhance their manpower capacity in the usage of 21st century appliances in the school. The paradigm and pragmatic shift from analogue to digital teaching methodology may have contributed to lecturers' low level of quality instructional delivery. Lack of effective and efficient digital classroom management may be a woe to the person and credibility of the lecturer which may tantamount to low self-efficacy, low self-esteem and low self-concept but improves increased aggressive behaviour in the face of instructional delivery. When this unsatisfactory state of affaire is established, it may lead to poor quality and quantity of instructional delivery which may negate the achievement of goals and objectives of the instruction in particular and the school in general. The researchers are bothered on the extent digital classroom management can jointly and independently predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

III.   AIM AND OBJECTIVES OF THE STUDY

The study aimed at investigating the management of 21st century digital classroom as a predictor of lecturers' job performance in the tertiary institutions in Rivers State, Nigeria. Specifically, the study sought to:

1. Find out the extent computer usage management predicts lecturers' job performance in tertiary institutions in Rivers State, Nigeria.
2. Ascertain the extent multimedia projector usage management predicts lecturers' job performance in tertiary institutions in Rivers State, Nigeria.
3. Determine the extent class website usage management predicts lecturers' job performance in tertiary institutions in Rivers State, Nigeria.
4. Examine the extent digital microphones usage management predicts lecturers' job performance in tertiary institutions in Rivers State, Nigeria.
5. Examine the extent online study tools usage management predicts lecturers' job performance in tertiary institutions in Rivers State, Nigeria.
6. Determine the extent digital classroom jointly predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

IV.   RESEARCH QUESTIONS

The research questions were answered in this study.

1. To what extent does computer usage management predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria?
2. To what extent does multimedia projector usage management predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria?
3. To what extent does class website usage management predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria?
4. To what extent does digital microphones usage management predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria?
5. To what extent does online study tools usage management predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria?
6. To what extent does digital classroom jointly predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria?

V.   HYPOTHESES

The following null hypotheses were tested at 0.05 alpha level of significance:

1. Computer usage management does not significantly predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria.
2. Multimedia projector usage management does not significantly predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria.
3. Class website usage management does not significantly predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria.
4. Digital microphones usage management does not significantly predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria.
5. Online study tools usage management does not significantly predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria.
6. Digital classroom does not significantly jointly predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

VI.   METHODOLOGY

The study adopted correlation research design. The population of the study consists of all the 2330 lecturers in the 3 public universities in Rivers State. As at the time of this study, there are three (3) public universities in River State Nigeria. They are: university of Port Harcourt (UNIPORT), Rivers State University (RSU) and Ignatius Ajuru University of Education (IAUE). Uniport 1,500, RSU 274, IAUE 556 making a total of 2330 lecturers from the three universities in Rivers State. (Source: Registry Department of the various institutions, 2017). A sample size of 466 lecturers was used. The proportionate stratified sampling technique was used in three universities in Rivers State. In the RSU, 20% of 274 gave 55. In UPH, 20% of 1500 gave 300 lectures. Finally, in IGUOE, 20% of 556 gave 111 lecturers. Two instruments were used for data collection. The instruments are titled "Digital Classroom Scale" (DCS) and "Lecturer' Job Performance Scale" (LJPS). The DCS contained 50 items with 20 negatively skewed and 30 items positively skewed respectively. Lecturers Job Performance scale contained 20 items with 5 negatively skewed and 15 positively skewed. The instruments are structured after the modified Likert four point rating options of Strongly Agree (4), Agree (3), Disagree (2) and Strongly Disagree (1). Face and content validities were ensured by expert in the relevant areas. The internal consistency method using Cronbach alpha gave the reliability coefficients of 0.78 and 0.82 for DCS and LJPS respectively. Simple regression was used to answer research questions 1-5 while multiple regression was used to answer research question 6. T-test associated with simple regression was used to test hypotheses 1-5 while ANOVA associated with multiple regression was used to test null hypothesis 6.

VII.   RESULTS

Research Question One
To what extent does computer usage management predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria?

Table 1a: simple regression on the extent computer usage management predicts lecturers' job performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.093[a]	.009	.005	1.45394

a. Predictors: (Constant), computer usage

Table 1a showed that computer usage management has regression coefficient (R) of 0.093 and regression square (R^2) coefficient of 0.009. The coefficient of determinism shows that the extent of prediction was 0.9% (100 X 0.009). This shows that computer usage management predicts lecturers' job performance in tertiary institutions in Rivers State, Nigeria by 0.9%.

Hypothesis One
Computer usage management does not significantly predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

Table 1b: t-test associated with simple regression on the extent computer usage management predicts lecturers' job performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	36.336	.396		91.728	.000
	Computer usage	.019	.012	.093	1.583	.015

a. Dependent Variable: job performance

Table 1b revealed that the t-test value associated with simple regression was 1.583 which is not significant at 0.015 when subjected to an alpha level of 0.05. Therefore, the null hypothesis was rejected. By implication, computer usage management significantly predicted lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

Research Question Two
To what extent does multimedia projector usage management predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria?

Table 2a: simple regression on the extent multimedia projector usage management predicts lecturers' job performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.232[a]	.054	.051	1.42039

a. Predictors: (Constant), multimedia projector

Table 2a showed that multimedia projector usage management has regression coefficient (R) of 0.232 and regression square (R^2) coefficient of 0.054. The coefficient of determinism shows that the extent of prediction was 5.4% (100 X 0.054). This shows that multimedia projector usage management predicts lecturers' job performance in tertiary institutions in Rivers State, Nigeria by 5.4%.

Hypothesis Two
Multimedia projector usage management does not significantly predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

Table 2b: t-test associated with simple regression on the extent multimedia projector usage management predicts lecturers' job performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	28.520	2.080		13.709	.000
	Multimedia projector	.227	.056	.232	4.055	.000

a. Dependent Variable: job performance

Table 2b revealed that the t-test value associated with simple regression was 4.055 which is significant at 0.000 when subjected to an alpha level of 0.05. Therefore, the null hypothesis was rejected. By implication, multimedia projector usage management significantly predicted lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

Research Question Three
To what extent does class website usage management predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria?

Table 3a: simple regression on the extent class website usage management predicts lecturers' job performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.105[a]	.011	.008	1.45214

a. Predictors: (Constant), class website

Table 3a showed that class website usage management has regression coefficient (R) of 0.105 and regression square (R^2) coefficient of 0.011. The coefficient of determinism shows that the extent of prediction was 1.1% (100 X 0.011). This shows that class website usage management predicts lecturers' job performance in tertiary institutions in Rivers State, Nigeria by 1.1%.

Hypothesis Three
Class website usage management does not significantly predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

Table 3b: t-test associated with simple regression on the extent class website usage management predicts lecturers' job performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	33.720	1.798		18.749	.000
	Class website	.088	.049	.105	1.797	.073

a. Dependent Variable: job performance

Table 3b revealed that the t-test value associated with simple regression was 1.797 which is not significant at 0.073 when subjected to an alpha level of 0.05. Therefore, the null hypothesis was accepted. By implication, class website usage management significantly predicted lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

Research Four
To what extent does digital microphones usage management predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria?

Table 4a: simple regression on the extent digital microphones usage management predicts lecturers' job performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.207[a]	.043	.040	1.42850

a. Predictors: (Constant), digital microphones

Table 4a showed that digital microphones usage management has regression coefficient (R) of 0.207 and regression square (R^2) coefficient of 0.043. The coefficient of determinism shows that the extent of prediction was 4.3% (100 X 0.043). This shows that digital microphones usage management predicts lecturers' job performance in tertiary institutions in Rivers State, Nigeria by 4.3%.

Hypothesis Four
Digital microphones usage management does not significantly predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

Table 4b: t-test associated with simple regression on the extent digital microphones usage management predicts lecturers' job performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	42.450	1.529		27.756	.000
	Digital microphones	-.151	.042	-.207	-3.603	.000

a. Dependent Variable: job performance

Table 4b revealed that the t-test value associated with simple regression was -3.603 which is significant at 0.000 when subjected to an alpha level of 0.05. Therefore, the null hypothesis was rejected. By implication, digital microphones usage management significantly predicted lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

Research Question Five
To what extent does online study tools usage management predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria?

Table 5a: simple regression on the extent study tools usage management predicts lecturers' job performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.523[a]	.273	.271	1.24479

a. Predictors: (Constant), online study tools

Table 5a showed that online study tools usage management has regression coefficient (R) of 0.523 and regression square (R^2) coefficient of 0.273. The coefficient of determinism shows that the extent of prediction was 27.3% (100 X 0.273). This shows that study tools usage management predicts lecturers' job performance in tertiary institutions in Rivers State, Nigeria by 27.3%.

Hypothesis Five
Online study tools usage management does not significantly predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

Table 5b: t-test associated with simple regression on the extent study tools usage management predicts lecturers' job performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.583	1.859		9.458	.000
	Online study tools	.524	.050	.523	10.426	.000

a. Dependent Variable: job performance

Table 5b revealed that the t-test value associated with simple regression was 10.426 which is significant at 0.000 when subjected to an alpha level of 0.05. Therefore, the null hypothesis was rejected. By implication, online study tools usage management significantly predicted lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

Research Question Six
To what extent does digital classroom jointly predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria?

Table 6a: multiple regression on the extent digital classroom jointly predicts lecturers' job performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.549[a]	.301	.289	1.22941

a. Predictors: (Constant), online study tools, computer usage, class website, digital microphones, multimedia

projector

Table 6a showed that digital classroom has regression coefficient (R) of 0.549 and regression square (R^2) coefficient of 0.301. The coefficient of determinism shows that the extent of prediction was 30.1% (100 X 0.301). This shows that digital classroom jointly predicted lecturers' job performance in tertiary institutions in Rivers State, Nigeria by 30.1%.

Hypothesis
Digital classroom does not significantly jointly predict lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

Table 6b: ANOVA associated with multiple regression on the extent digital classroom jointly predicts lecturers' job performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	185.461	5	37.092	24.541	.000[a]
	Residual	430.765	460	1.511		
	Total	616.227	465			

a. Predictors: (Constant), online study tools, computer usage, class website, digital microphones, multimedia
projector

Table 6b revealed that sum and mean squares are 185.461 and 430.765. With degree of freedom of 5 and 460, the F value of 24.541 is statistically significant when subjected to an alpha level of 0.05 this showed that the null hypothesis was rejected. This is because the calculated probability value of 0.000 was less than the critical probability value of 0.05 which implies statistical significance. By implication, digital classroom jointly predicted lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

VIII.   DISCUSSION OF FINDINGS

Computer Usage Management and Job Performance
Computer usage management predicts lecturers' job performance in tertiary institutions in Rivers State, Nigeria by 0.9%. Computer usage management significantly predicted lecturers' job performance in tertiary institutions in Rivers State, Nigeria. The findig of the study is surprising to the researchers because they had expected computer usage management to predict lecturers' job performance to a very large extent. The finding of the study is in line with Udochukwu (2018) who found that improper management of computers during instructions are debilitating to effective teaching and learning.

Multimedia Projector Usage Management and Job Performance
Multimedia projector usage management predicts lecturers' job performance in tertiary institutions in Rivers State, Nigeria by 5.4%. Multimedia projector usage management significantly predicted lecturers' job performance in tertiary institutions in Rivers State, Nigeria. Multimedia predicted lecturers' job performance to a very low extent. The possible reason why multimedia did not predict lecturers' job performance to a high extent could be because of the require competence by the lecturers to handle some of this appliances. This is why Akachukwu (2014) found that lack of teachers' competence in handling instructional materials is highly related to inefficiency in the classroom.

Class Website Usage Management and Job Performance
Class website usage management predicts lecturers' job performance in tertiary institutions in Rivers State, Nigeria by 1.1%. Class website usage management significantly predicted lecturers' job performance in tertiary institutions in Rivers State, Nigeria. The result showed that class website usage management has no strong predictive power on lecturers' job performance. The finding is

corroborated by Uzonna (2002) who found that can be abused by the students hence distorting the original plans of achieving academic excellence.

Digital Microphones Usage Management and Job Performance

Digital microphones usage management predicts lecturers' job performance in tertiary institutions in Rivers State, Nigeria by 4.3%. Digital microphones usage management significantly predicted lecturers' job performance in tertiary institutions in Rivers State, Nigeria. The prediction level of digital microphone is acceptable because it has a lot to do when it comes to effective classroom interaction. The finding of the study is in tandem with Abiakwe (2005) who showed a significant positive relationship between public address systems and academic achievement.

Online Study Tools Usage Management and Job Performance

Online study tools usage management predicts lecturers' job performance in tertiary institutions in Rivers State, Nigeria by 27.3%. Online study tools usage management significantly predicted lecturers' job performance in tertiary institutions in Rivers State, Nigeria. Researchers have shown that online study tools are beneficial to the achievement and completion of subject content. In the study of Ola (2016), he found that search engines are keys to effective teaching and learning in the school.

IX.   CONCLUSION

It was concluded that digital classroom is a significant predictor of lecturers' job performance in tertiary institutions in Rivers State, Nigeria.

X.   RECOMMENDATIONS

Based on the findings, the following recommendations were made:

1. Non-governmental organizations like Tetfund, Unicelf and community heads should intensify efforts in the provision of computers in the tertiary institutions in Rivers State.
2. Lecturers should cultivate the attitude of power point presentation during instructional delivery.
3. Relevant information about the class should always be placed on the class website as fast as possible for immediate consumption.
4. Digital microphones should not be loud enough to produce noise instead of sound during instructional delivery.
5. Lecturers should give and retrieve assignments through on-line from the students.

REFERENCES

Abiakwe, O.J. (2005). Public address system and academic achievement of high school students in Abia State. *Journal of Intellectual Enhancement, 1(2), 50-63.*

Afe, J.O. (2002). Reflections on becoming a teacher and the challenges of teacher education: In Nigerian Universities. *Inaugural Lecture Series.*Abuja: National University Commission.

Akachukwu, M.O. (2014). Management of teachers' competence for improved teacher effectiveness. *Journal of Education Review, 3(2), 15-23.*

Amie-Ogan, O.T. & Osuji, U.C. (2016). Availability and utilization of digital instructional materials in public senior secondary schools in Port Harcourt Metropolis, Rivers State, Nigeria. *International Journal of Academia, 2(1),129-139*

Bullock, R. (2013).*Job performance defined-Personal development.* Retrieved from www.scontrino-powell.com

Campbell, J.P. (1990). *Modelling the performance prediction problem in industrial and   organizational psychology.* In M.D. Dunnette & L.M. Hough (Eds.). *Handbook of   industrial and organizational psychology1*, 687-732.Palo Alto: Consulting Psychologist   Press.

Davoudi, M. & Mehdi, S. (2013). Impact of job enrichment in organizational citizenship behaviour. *SCMS Journal of Indian Management,* 10 (2)106-112.

Egomo, M.E., Enyi, B.I., & Tah, M.M. (2012). Availability and utilization of ICT tools for effective instructional delivery in tertiary institutions in Cross Rivers State, Nigeria. *Global Advanced Research Journal of Educational Research and Review, 1(8), 190-195.*

Ekwe, A.I., Enaohwo, A.K., Amaechi, L.N. & Amadi, N.N. (2016). Application of ICT in teaching and learning of social studies in secondary schools: The way forward. *International Journal of Academia, 2(1), 69-81.*

Federal Republic of Nigeria (2014). *National policy on education.* Lagos: NERD Press.

Grinter, R., & Edwards, W.K. (2005). Tue work to make a home network. *Proceedings of the Nirth European Conference in Computer-Supported Cooperative Work (Paris, France): 469-488.*

Iwuandi, F.N. (2013). *Effective teaching of social studies (A contemporary approach).* Owerri: Clear Images Publishers.

Jegede, P.O. & Owalabi, A.J. (2002). Computer education in Nigerian secondary schools: Gaps between policy and practice. *A Middle School Technology Journal, 6(2), 1-11.*

Selamat, N., Samsu, N.J. & Kamalu, N.S.M. (2013).The impact of organizational climate on teachers' job performance.*Educational Research eJournal 2*(1), 71-82.

Udochukwu, A.E. (2018). Computerization of the school systems. *Journal of Scientific Studies, 2(2), 13-20.*

Uzonna, C.I. (2002). Strategies for effective website application in teaching and learning. *Journal of Educational Studies, 3(1), 34-41.*