

## Availability and utilization of e-learning facilities in the teaching of Senior School Physics in Ilorin, Nigeria

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### Article Info

#### Article history:

Received Apr 13, 2020

Revised Jun 6, 2020

Accepted Jul 27, 2020

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#### Keywords:

Availability

E-learning facilities

Physics teacher

Senior school physics

Utilization

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### ABSTRACT

The study was intended to examine the utilization as well as the availability of E-learning facilities in the teaching of senior school physics in Ilorin, Nigeria. The study was a survey type and all physics teachers constitute the population. A total of 60 teachers was sampled for the study. Multi-stage sampling technique was adopted in the selection of respondents. Simple random sampling technique was used to select 20 out of 35 secondary schools. Two structured checklists were used to collect data. Percentage and mean were used to answer the research questions while ANOVA was used to test hypotheses at 0.05 level of significance. The finding revealed that printers, photocopying machine, desktop computers, laptop computers, Android phones, electronic typewriters and scanners were available, E-learning facilities were not utilized, there is no significant difference in the utilization of E-learning facilities for teaching physics based on teachers' qualifications and experience. It was then recommended that physics teachers should be given proper training on how to use as well as maintain E-learning facilities in their various schools in order to equip them with the necessary skills, knowledge and values that will enable them optimize teaching in a fast changing world.

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## 1. INTRODUCTION

The application of Information and Communication Technology (ICT) to education has given rise to a new set of vocabularies used to describe new approaches to learning and curriculum delivery. Such terms include E – teaching, E – learning, E-tag, E- cards, white board and web classrooms which are facilitated via the internet. The use of ICT offers a powerful learning environments and can transform the learning and teaching process so that students can deal with knowledge in an active, self-directed and constructive way [1, 2]. As stated by Ushie, *et al* [3], identified the information communication technology applied in instructional communication to include computers, internet, electronic mail (email), teleconferencing, worldwide web (www), electronic white boards and satellites. The availability of the internet provided the channel for the use of the electronic approach in education known as electronic learning or E – learning. E-Learning is the process of teaching and learning with the use of the computer via the internet. It involves passing structured instructional materials from a repository to a learner. E-learning is a unifying term used to describe the fields of online learning, web-based training and technology delivered instructions [4].

E-learning has become an increasingly popular learning approach in higher educational institutions due to the vast growing internet technology. E-learning has competitive advantages and many secondary

schools have implemented it and this has impacted positively on students' performances. Today technology is a tool used to remove geographical barriers and to facilitate learning for everyone to learn anytime and anywhere without the presence of the teacher. E-learning has increased accessibility to qualitative education reduced cost and time as well as improve students' academic performances.

Nowadays, technology has become one of the best means for teaching and learning with or without school premises. This technology allowed the use of instructional methods to improve the quality of education and students academic performances. Different researches conducted have reiterated the fact that students that engaged in E-learning, generally perform better than those in face-to-face courses. The researches also affirmed that students who participated in Electronic learning programmes achieve better grades than the students who studied by way of the traditional approach [5]. E-learning is widely used in many secondary schools in the world today and this, no doubt adds more value to the teaching and learning activities such schools. Some secondary schools in Nigeria have electronic learning sites designed for teaching and learning with the use of module software packages but these are not fully utilized by both students and teachers [5]. According to Nwana [6], E-learning meant to transform the old methods and approaches of curriculum implementation in order to bring about certain changes in the behaviour of the learners as well as the extent in which the changes take place. Studies have been conducted by different researchers on the utilization of E-learning facilities in secondary schools and such research studies have discovered either the non-availability of Electronic learning facilities, their inadequacy or their ineffective utilization in most of the secondary schools [7, 8]. Available literature also shows that many studies have been carried out on the availability and use of e-learning facilities in teaching and learning. Most of these studies however, were carried out mainly at secondary and primary school levels. Examples include [9, 10, 6, 11]. Results from these studies indicated inadequate facilities in schools as well as low utilization of those available materials.

In a study conducted by Penny [12], it has also been observed that gender does not significantly influence the utilizations of E-learning facilities in schools. Shraim and Khlaif [13] found that the utilization of E-learning facilities has a significant difference among the secondary school teachers based on their gender, age and qualification but not on their years of experiences. Another study conducted by Olaniran [14] focused on the effect of the utilization level of E-learning facilities among secondary school teachers on their teaching experiences. Teachers with 16 to 20 years of experience were found to have a higher utilization level of E-learning facilities than those between 11 and 15 years while teachers having teaching experience between 6 and 10 years were found to have a higher utilization level of E-learning facilities than those between 1 and 5 years. Eze, et al [15] opined that teachers with less experience in teaching utilizes E-learning facilities in their teaching more than teachers with more experience in teaching.

The availability and utilization of E-learning facilities in the teaching-learning process has been an issue that needs to be assessed in order to determine the extent in which E-learning facilities have impacted on knowledge delivery and how much of these facilities are available in the teaching and learning of physics in secondary schools in Nigeria. Physics being the bed rock of science and technology that is destined to play a more significant role in spurring technological development [16]. The researcher is therefore interested in knowing the extent of the availability or otherwise as well as the effective utilization of E-learning facilities in the teaching of senior schools physics. Answers were thus provided for the following research questions and hypotheses postulated consequently.

- a. What are the available E-learning facilities in the teaching of senior school physics in Ilorin, Nigeria?
- b. What are the E-learning facilities utilized in the teaching of senior school physics in Ilorin, Nigeria?
- c. Is there any difference in the utilization of E-learning facilities in the teaching of senior school physics in Ilorin, Nigeria by teachers based on their qualification?
- d. Is there any difference in the utilization of E-learning facilities in the teaching of senior school physics in Ilorin, Nigeria by teachers based on their years of teaching experience?

## 2. RESEARCH METHOD

The study was a descriptive survey type. The population for the study comprised all secondary school students and teachers in Ilorin, Nigeria. The multi-stage sampling technique was used in selecting the respondents for the study. For the first stage, the simple random sampling technique was used to select twenty (20) out of 35 secondary schools in Ilorin South. For the second stage, the stratified sampling technique was used to select three physics teachers from each school selected in the first stage. A total sample of 60 teachers was selected for the study. Simple random was also used because it was believed to be free from bias as it gives each respondent an equal chance of being selected and included for participation in the sample [17].

Two well-structured checklists prepared by the researcher titled Checklist on the Availability and Utilization of E-learning Facilities in the teaching of Senior School Physics were used in collecting data for

this research [18]; each checklist was structured on a two point Likert scales of Available (A) and Not Available (NA) for part 1. Part 2 was structured on a four point Likert scales of Very Much Utilized (VMU), Utilized (U), Less Utilized (LU), and Not Utilized (NU). The researcher also assigned weight of 2 and 1 respectively to the two point Likert scales and weight of 4,3,2,1 respectively to the four point Likert scales. The content validity of the instrument was carried out by three (3) experts in the Department of Science Education, Faculty of Education in the University of Ilorin for clarity of instruction, vocabulary and for sentence structures that might be too difficult, poorly constructed or improperly arranged. Sch anomalies in addition to ambiguous test items may also be inappropriate for good outcomes. Internal consistency reliability was done and the reliability coefficient of 0.67 and 0.72 were obtained respectively.

The researcher distributed the checklists to the respondents and waited till they had filled and returned the checklists. This allowed the researcher to give the respondents necessary assistance in responding to the checklists and to also avoid loss in order to ensure that more than 90% of the checklists were dutifully filled and returned. After this, the filled checklists were collected from the respondents in the selected secondary schools. The consent of teachers was taken into consideration by approaching them.

Percentage was used to describe the demographic data. Rank ordered mean was used to answer the research questions while the hypotheses postulated were tested using the ANOVA at 0.05 level of significance.

### 3. RESULTS AND DISCUSSION

Table 1 shows the demographic data of the physics teachers on the basis of their gender, qualifications and teaching experience. Out of 60 (100.0%) physics teachers sampled for this study, 36 (60.0%) of the teachers were males and 24 (40.0%) were females. More so, 5 (8.3%) of the teachers had NCE; 12 (20.0%) had HND; 19 (31.7%) had B.Sc.; 13 (21.7%) had B.Sc. (Ed.); 9 (15.0%) had M.Sc. and 2 (3.3%) had Ph.D. In addition, 33 (55.0%) of the teachers had less than 5 years of teaching experience; 20 (33.3%) had 5 – 10 years of teaching experience and 7 (11.7%) of the teachers had 11 years and above teaching experience.

Table 1. Demographic data of the physics teachers

Gender	Frequency	Percentage
Male	36	60.0%
Female	24	40.0%
Total	60	100.0%
Qualifications	Frequency	Percentage
NCE	5	8.3%
HND	12	20.0%
B.Sc.	19	31.7%
B.Sc. (Ed.)	13	21.7%
M.Sc.	9	15.0%
Ph.D.	2	3.3%
Total	60	100.0%
Experience	Frequency	Percentage
Less than 5 years	33	55.0%
5 – 10 years	20	33.3%
11 years and above	7	11.7%
Total	60	100.0%

#### 3.1. Research Question One: What are the available E-learning facilities in the teaching of senior school physics in Ilorin, Nigeria?

Table 2 shows that the ranked 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, up to 8<sup>th</sup> were E-learning facilities affirmed by the majority of the respondents as available for the teaching of senior school physics [19]. This implies that printers, photocopying machines, desktop computers, laptop computers, phones, electronic typewriters and scanners were E-learning facilities affirmed by the majority of the respondents as available for the teaching of senior school physics in Ilorin, Nigeria.

However, ranked 9<sup>th</sup>, 10<sup>th</sup> 11<sup>th</sup> up to 20<sup>th</sup> were E-learning facilities that were affirmed by the majority of the respondents as not available for the teaching of senior school physics [20]. This shows that power points, software projection, screen projectors, internet facilities, radio television, smart boards, video recorders, cd writers, i-pads, audio tapes and digital cameras, are E-learning facilities that are not available for the teaching of senior school physics in Ilorin, Nigeria

Table 2. Availability of e-learning facilities for the teaching of senior school physics

S/N	Available E-learning Facilities	Available (%)	Not Available (%)	Total (%)	Rank	Remark
1.	Desktop Computers	194 (75%)	66 (25%)	260 (100%)	2 <sup>nd</sup>	A
2.	Laptop Computers	170 (65%)	90 (35%)	260 (100%)	5 <sup>th</sup>	A
3	Internet Facilities	99 (38%)	161 (62%)	260 (100%)	11 <sup>th</sup>	NA
4	Digital Cameras	7 (3%)	253 (97%)	260 (100%)	20 <sup>th</sup>	NA
5	Phone	168 (65%)	92 (35%)	260 (100%)	6 <sup>th</sup>	A
6	Video Recorder	57 (22%)	203 (78%)	260 (100%)	16 <sup>th</sup>	NA
7	Projector	99 (38%)	161 (62%)	260 (100%)	11 <sup>th</sup>	NA
8	I-pad	49 (19%)	211 (81%)	260 (100%)	18 <sup>th</sup>	NA
9	Audio Tapes	42 (16%)	218 (84%)	260 (100%)	19 <sup>th</sup>	NA
10	Smart Board	59 (23%)	201 (77%)	260 (100%)	15 <sup>th</sup>	NA
11	Scanners	148 (57%)	112 (43%)	260 (100%)	8 <sup>th</sup>	A
12	Electronic Typewriters	150 (58%)	110 (42%)	260 (100%)	7 <sup>th</sup>	A
13	Flash Drives	180 (69%)	80 (31%)	260 (100%)	4 <sup>th</sup>	A
14	Printers	220 (85%)	40 (15%)	260 (100%)	1 <sup>st</sup>	A
15	Television	73 (28%)	187 (72%)	260 (100%)	14 <sup>th</sup>	NA
16	Power Point Software	104 (40%)	156 (60%)	260 (100%)	9 <sup>th</sup>	NA
17	Photocopying Machine	185 (71%)	75 (29%)	260 (100%)	3 <sup>rd</sup>	A
18	CD Writers	57 (22%)	203 (78%)	260 (100%)	16 <sup>th</sup>	NA
19	Radio	93 (36%)	167 (64%)	260 (100%)	13 <sup>th</sup>	NA
20	Projection Screen	101 (39%)	159 (61%)	260 (100%)	10 <sup>th</sup>	NA

**Research Questions Two:** What are the E-learning facilities utilized in the teaching of senior school physics in Ilorin, Nigeria?

A cut-off score of 2.50 was used as the baseline for determining participants' responses since the questionnaire items were structured in a four-response-type. Therefore, items found with mean scores equal or above 2.50 were remarked as 'Utilized' E-learning facilities for the teaching of physics while items with mean scores below 2.50 were 'Not Utilized'.

From Table 3, the mean score of the items is below 2.50. This implies that all E-learning facilities such as printers, photocopying machines, desktop computers, laptop computers, phones, electronic typewriters, scanners, power points, software projection, screen projectors, internet facilities, radio, television, smart boards, video recorders, CD writers, I-pads, audio tapes and digital Cameras among others are not utilized for the teaching of senior school physics in Ilorin, Nigeria [21].

Table 3. Utilization of e-learning facilities for the teaching of senior school physics

S/N	Utilization of E-learning Facilities	Mean	Remark
1.	Desktop Computers	2.023	Not Utilized
2.	Laptop Computers	1.773	Not Utilized
3	Internet Facilities	1.334	Not Utilized
4	Digital Cameras	1.088	Not Utilized
5	Phone	2.253	Not Utilized
6	Video Recorder	1.100	Not Utilized
7	Projector	1.584	Not Utilized
8	I-pad	1.207	Not Utilized
9	Audio Tapes	1.173	Not Utilized
10	Smart Board	1.219	Not Utilized
11	Scanners	1.592	Not Utilized
12	Electronic Typewriters	1.669	Not Utilized
13	Flash Drives	2.019	Not Utilized
14	Printers	2.423	Not Utilized
15	Television	1.376	Not Utilized
16	Power Point Software	1.807	Not Utilized
17	Photocopying Machine	2.223	Not Utilized
18	CD Writers	1.323	Not Utilized
19	Radio	1.403	Not Utilized
20	Projection Screen	1.446	Not Utilized

### 3.2. Hypotheses testing

The following hypotheses were postulated for this study.

**Research Hypothesis One:** There is no significant difference in the utilization of E-learning facilities for teaching physics based on teachers' qualifications.

Table 4 shows the *F-value* of 0.617 obtained with a p-value of 0.72 computed at 0.05 alpha level. Since the p-value of 0.72 is greater than 0.05 level of significance, the null hypothesis one is retained. This implies that there is no significant difference in the utilization of E-learning facilities for teaching physics based on teachers' qualifications ( $F_{(5, 54)} = 0.617; p > 0.05$ ).

Table 4. ANOVA Summary of the Difference in the Utilization of E-learning Facilities for Teaching Physics based on Teachers' Qualifications

Groups	Sum of Squares	df	Mean Square	F	Sig.	Remark
Between Groups	616.064	5	123.213	.617	.722	
Within Groups	10784.793	54	199.718			NS
Total	11400.857	59				

\*Insignificance at  $p > 0.05$

**Hypothesis Two:** There is no significant difference in the levels of utilization of E-learning facilities for teaching senior school physics based on teaching experience

Table 5 shows the *F-value* of 1.985 obtained with a p-value of 0.147 computed at 0.05 alpha level. Since the p-value of 0.147 is greater than 0.05 level of significance, the null hypothesis two is retained. This implies that there is no significant difference in the utilization of E-learning facilities for teaching physics based on teachers' experience ( $F_{(2, 57)} = 1.985; p > 0.05$ ).

Table 5. ANOVA Summary of the difference in the utilization of e-learning facilities for teaching physics based on teachers' experience

Groups	Sum of Squares	df	Mean Square	F	Sig.	Remark
Between Groups	373.048	2	186.524	1.985	.147	
Within Groups	5356.885	57	93.980			NS
Total	5729.933	59				

\*Insignificance at  $p > 0.05$

Findings from this study revealed that the available E-learning facilities for the teaching of senior school physics in Ilorin in Nigeria are printers, photocopying machines, desktop computers, laptop computers, phones, electronic typewriters and scanners. This finding agrees thus with [7, 19] who found that most E-learning facilities were available to a Low or Moderate Extent in secondary schools. However, facilities such as power points, software projection, screen projectors, internet facilities, radio television, smart boards, video recorder, cd writers, i-pads, audio tapes and digital cameras, are E-learning facilities that were not available for the teaching and learning of senior school physics in Ilorin in Nigeria. This was also supported by Idowu *et al*, and Okolocha *et al* [20, 22] who affirmed that most E-learning facilities required for teaching and learning are not there at the school. These may be due to the high cost or poor funding of schools for the purchase of those E-learning facilities.

The finding also revealed that E-learning facilities such as printers, photocopying machines, desktop computers, laptop computers, phones, electronic typewriters, scanners, power points, and software among others are not utilized for the teaching and learning of senior school physics. This finding agrees thus with Atsumbe, et al and Owulu, et al [21, 8] that E-learning facilities were not utilized in most of the secondary schools. The under utilization of these facilities might be due to the non availability of the competent teachers or inadequate power supply. These findings disagreed with Suryani, Gulbahar *et al*, and Jamieson-proctor, *et al* [7, 23, 24] whose findings revealed that available facilities were effectively utilized to a Low or Moderate Extent for the classroom instructions.

The finding in Table 4 shows that no significant difference exists in the utilization of E-learning facilities for teaching physics based on teachers' qualifications. This finding agrees with Godwin-Maduke *et al* [25] who found no significant difference between the utilization levels of teachers and their qualifications. This means that teachers' qualification status does not matter in the use of E-learning facilities to support their classroom instructions. This disagreed with Fayomi, *et al*, Shraim *et al* and Apagu *et al* [26, 13, 27] who found a significant difference among the secondary schools teachers based on their gender, age and qualification.

Another finding revealed that there was no significant difference in the utilization of E-learning facilities for teaching physics based on teachers' teaching experience. This was in contrary to the finding of Eze, *et al* [15] who found out that teachers with less experience utilize E-learning facilities in their teaching more than teachers with more experience. This might be that teachers with less experience spend more of their time in utilizing E-learning facilities.

#### 4. CONCLUSION

Based on the findings from this study, it can be concluded that most E-learning facilities were inadequate in senior schools in Ilorin and those that are available were not utilized effectively by teachers in the teaching environment. In addition, teachers' qualification and years of teaching experience do not influence the level of utilization of senior school physics instructions. Based on the findings of this study, the following suggestions were proffered; every school authority should seek for assistance from companies, non-governmental organizations and private individuals for the provision of E-learning facilities. School authorities should also provide enabling environments such as competent teachers, regular supply of electricity and internet facilities for the utilization of E-learning in order to improve students' achievement. Physics teachers should be given proper training on how to use as well as maintain E-learning facilities in their various schools in order to equip students with the necessary skills and knowledge that will enable them optimize learning in a fast changing world. Workshops should be organized for the physics teachers irrespective of their teaching experience so to acquaint them with the use of electronic learning facilities for enhanced teaching performances.

#### REFERENCES

- [1] M. Volman and E. Van Eck, "Gender Equity and Information Technology in Education: The Second Decade," *Review of Educational Research*, vol. 71, no. 4, pp. 613-634, 2001.
- [2] E. De corte, *et al.*, *Powerful learning environments: Unraveling basic components and dimensions*, Elsevier: Oxford, 2003.
- [3] B. C. Ushie, *et al.*, "Instructional Communication Technology (ICT) Divide and teacher education in Nigeria," *Nigeria Journal of Teacher Education and Teaching*, vol. 7, no. 3, pp. 97-109, 2009.
- [4] A. T. Alabi, *et al.*, "The use of computer-based testing method for the conduct of examinations at the University of Ilorin," *International Journal of Learning & Development*, vol. 2, no. 3, pp. 68-80, 2012.
- [5] S. Holley, "Evan's thoughts of E-learning technology," [Online] Available: from <http://act.uwstout.edu/~sveume/portfolio/elearningportfolio/6-tech-for-elearning.html>, 2002.
- [6] S. Nwana, "Challenges in the application of E-learning by secondary school teachers in Anambra state, Nigeria," *African Journal of Teacher Education (AJOTE)*, vol. 2, no. 2, pp. 1-9, 2012.
- [7] A. Suryani, "ICT in education: its benefits, difficulties, and organizational development issues," *Jurnal Sosial Humaniora*, vol. 3, no. 1, pp. 106-123, 2010.
- [8] E. E. Owulu, *et al.*, "ICT utilization and student's academic performance in Christian religious studies in Calabar municipality, Nigeria," *The International Journal of Social Sciences and Humanities Invention*, vol. 3, no. 11, pp. 2925-2932, 2016.
- [9] U. Akpan, "ICT application in UBE and pupils' performance in social studies," *Journal of Childhood and Primary Education*, vol. 7, no. 2, pp. 210-223, 2010.
- [10] D. N. Okorieocha, and U. C. Eronini, "Effect of Information and Communication Technology (ICT) on students' interest in basic electricity," *Issues in Scientific Research*, vol. 1, no. 4 pp. 45- 51, 2016.
- [11] J. N. Okoli and A. M. Osuafor, "Availability, accessibility and level of use of new technologies for science, technology and mathematics (STM) curriculum delivery," *International Journal of Development Studies*, vol. 25, no. 1, pp. 7-17, 2013.
- [12] K. I. Penny, "Factors that influence student E-learning participation in a UK higher education institution," *Interdisciplinary Journal of E-learning and Learning Objects*, vol. 7, no. 1, pp. 81-95, 2011.
- [13] K. Shraim and Z. Khlaif, "An e-learning approach to secondary education in Palestine: opportunities and challenges," *Information Technology for Development*, vol. 16, no. 3, pp. 159-173, 2010.
- [14] S. O. Olaniran, *et al.*, "Assessing the utilization level of E-learning resources among ODL based pre-service teacher trainees," *The Electronic Journal of E-learning*, vol. 15, no. 5, pp. 384-394, 2017. [Online] Available: <http://www.ejel.org>
- [15] S. C. Eze, *et al.*, "The utilization of E-learning facilities in the educational delivery system of Nigeria: a study of M-university," *International Journal of Educational Technology in Higher Education*, vol. 15, no. 1, pp. 34-39, 2018.
- [16] Y. Wang, *Education and Educational Technology*, Springer books, Chenghu, China, 2011.
- [17] J. M. Gerard, *et al.*, "Validation of Global Rating Scale and Checklist Instruments for the Infant Lumbar Puncture Procedure," *The Journal of the Society for Simulation in Healthcare*, vol. 8, no. 3, pp. 148-154, 2013.
- [18] D. Krathwohl, "A revision of Bloom's taxonomy: An overview," *TIP*, vol. 41, no.4, pp. 212-218, 2002.
- [19] A. M. Osuafor and E. O. Emeji, "Utilization of E-Learning Facilities by Science Teacher Educators for Teaching Pre-Service Teachers in Nigerian Colleges of Education," *Asian Journal of Education and e-Learning*, vol. 3, no. 2, pp. 160-167, 2015.
- [20] A. O. Idowu and I. Mabawonku, "Information technology facilities and applications in some Nigerian research and university libraries," *International African Journal of Library Archives and Information Science*, vol. 9, no. 1, pp. 27-36, 1999.
- [21] B. N. Atsumbe, *et al.*, "Availability and utilization of E-learning infrastructures in federal university of technology, Minna," *Journal of Education and Practice*, vol. 3, no. 13, pp. 56-64, 2012.

- [22] C. C. Okolocha, and C. O. Nwadiani, "Assessment of Utilization of ICT Resources in Teaching among Tertiary Institution Business Educators in South Nigeria," *Journal of Education and Learning*, vol. 4, no. 1, pp. 1-10, 2015
- [23] Y. Gulbahar and I. Guven, "A survey on ICT usage and the perceptions of social studies teachers in Turkey," *Journal of Educational Technology and Society*, vol. 11, no. 3, pp 37-51, 2008.
- [24] R. M. Jamieson-proctor, *et al.*, "ICT integration and teachers' confidence in using ICT for teaching and learning in queensland state schools," *Australasian Journal of Education Technology*, vol. 22, no. 4, pp. 511-530, 2006.
- [25] C. C. Godwin-Maduke, and J. C. Nwazor, "Extent of availability and utilization of E-learning technologies by teachers of business subjects in secondary schools in Anambra state," *International Journal of Innovative Research and Advanced Studies (IJIRAS)*, vol. 4, no. 8, pp. 66-73, 2017
- [26] O. Fayomi, *et al.*, "The impacts of e-learning in facilitating academic performance among private secondary schools and tertiary institutions in ota, Ogun state, Nigeria," *Conference: International Technology, Education and Development Conference at Madrid, Spain*, vol. 9, 2015.
- [27] V. V. Apagu and B. A. Wakili, "Availability and utilization of ICT facilities for teaching and learning of vocational and technical education in Yobe state technical colleges," *American Journal of Engineering Research (AJER)*, vol. 4, no. 2, pp. 113-118, 2015.

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