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**| RESEARCH ARTICLE**

## **Perceived Influence of E-learning as a Determinant for Effective Academic Performance of Public Secondary Schools in Aguata Local Government Area of Anambra State**

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**| ABSTRACT**

The paper examines the perceived influence of e-learning as a determinant for the effective academic performance of public secondary schools in Aguata local government area of Anambra state. The population of the study is made up of 2,841 students and teachers from 12 public secondary schools in Aguata Education zone. The simple random sampling technique was used to select 426 respondents (376 students and 50 teachers), which is about 15% of the entire population of the study. The instrument used for data collection is a well-structured questionnaire of 5 point Likert Scale. The questionnaire was used to collect data from respondents in relation to the objective of this study. The questionnaire was divided into two sections, namely, section A and Section B. while section A comprised personal details of the respondents such as age, gender, and status of Academics, section b comprised questions relating to the questionnaire, and the response was structured to 5 rating levels. The Pearson Correlation Coefficient was used to determine the reliability of the instrument. A co-efficient value of 0.68 indicated that the research instrument was relatively reliable. According to (Taber, 2017), the range of reasonable reliability is between 0.67 and 0.87. The paper recommends that government at all levels; non-governmental organizations, and private sectors should assist in equipping secondary schools' e-learning centers with model equipment for effective teaching and learning to students with e-learning technologies.

**| KEYWORDS**

E-learning; Academic Performance; Public Secondary Schools; Anambra State

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### **1. Introduction**

Education is an indispensable tool for national development and a process for human transformation through the acquisition of knowledge and necessary skills for human development Iwuanyanwu and Uwadiogwu (2019). The nations of the world pay greater attention to the education sector. The world is moving at a jet speed as a result of advances in technology, using e-learning and ICT. The significance of education, particularly in a developing country like Nigeria, has increased because of the need to catch up with the developed world in several areas, particularly in global competitiveness and best practices (Nnorom and Nwankwo, 2020). As the world grows more towards being a global village, there is a need for innovation in teaching and learning in reference to e-learning and information communication technology (ICT). E-learning in learning and education refers to the use of modern technologies such as computers, digital technology, networked digital devices (e.g., the internet), and associated software and course ware (Wikipedia, 2014). E-learning, as opposed to distance learning, is a term that is used to refer to all ICTs, networks, the internet, and other forms of electronic media that can be used to enhance teaching and learning so as to transfer knowledge and skills (Kassa & Balunywa, 2013). E-learning is an inclusive term that describes educational technology that electronically or technologically supports learning and teaching (Wikipedia, 2014). Parks (2013) suggested that "e-" should refer to "everything, everyone, engaging and easy" in addition to 'electronic'. Developments in internet and multimedia technologies are the basic enablers of e-learning, with consulting, content, technologies, services, and support being identified as the five key sectors of

the e-learning industry (European Commission, 2000). Regardless of the educational level or stage, e-learning can be adopted, used, or applied in education for effective teaching and learning. E-learning is a learner-controlled, self-paced education environment where the learner has authority over the learning environment, thereby allowing learners to work at their pace and convenience (Eke, 2011). The changes in education have led to a paradigm shift from teacher-centeredness to learner-centeredness (Kassa & Balunywa, 2013). The extent to which e-learning assists or replaces other learning and teaching approaches are varied, ranging on a continuum from none to fully online distance learning (Bates and Poole, 2013). Daniel (2009) observed that e-learning plays an important role in the development of secondary school students in their academic objectives. As the world strives to meet development goals, there is increasing recognition of the potential of e-learning to meet growing educational challenges.

On the other hand, Information Communication Technology (ICT) refers to the totality of methods and tools that are used in gathering, storing, processing, and communicating information Agoagbua and Nnorom (2021). ICT has found application in virtually all the available professions in the world. Professionals in different fields called it by different names. When ICT is used in education or to foster learning, it is called E-learning Technology or Educational Technology. In the broadcasting profession, where ICT is used as a communication tool, it is commonly referred to as Electronics Information Technology or just Communication Technology. Careful consideration of the meaning and scope of ICT makes it easy to think that hardly any profession can survive or continue to be relevant without the integration of ICT.

ICT encompasses all the technologies used to transmit or disseminate information to an audience. One of the most urgent areas of highly needed infrastructure development in Nigeria Secondary schools is the area of Information Communication Technology (ICT). Kozma (2005) observed that ICT is now perceived as a principal driver of economic development and social change worldwide. It offers the potential to restructure organizations, promote collaboration, increase the democratic participation of citizens, and improve the transparency and responsiveness of governmental agencies. It also makes education and health care more widely available, fosters cultural creativity, and enhances the social integration of individuals with people of different abilities and cultural backgrounds.

Farrel and Shafika (2007) also noted that there are widespread beliefs that ICT can be an important tool to introduce and sustain education reform efforts in Africa. Jamieson-Proctor (2013) noted that in most schools, technical difficulties seek to become a major problem and a source of frustration for both teachers and students; because of interruptions in the teaching and learning process and lack of technical assistance to repair it, teachers are not able to use the computer temporarily, the effect is that teachers will be discouraged from using computers because of fear of equipment failure since they are not given any assistance on the issue.

Schools in Aguata Local Government Area of Anambra State are not left out in the failure to properly adopt e-learning in the learning process of secondary school students. While adapting to the new changes, staff and student readiness need to be gauged and supported accordingly, as apparently, e-learning is the only promising option for effective dissemination and collection of information that can successfully accommodate the ever-growing need for access to knowledge, equity, and quality of education in Nigeria.

### ***1.1 Purpose of the Study***

The main purpose of the study is on the Perceived influence of e-learning as a determinant for effective academic performance in public secondary schools in Aguata LGA Anambra State. Specifically, the study ascertained the following:

1. Examine the extent e-learning has assisted in enabling student learning in Aguata LGA Anambra State.
2. Determine the influence of e-learning on students' academic performance in Aguata LGA Anambra State.
3. Determine the challenges encountered in the adoption of e-learning in Aguata LGA Anambra State.

### ***1.2 Research Questions***

The following research questions guided the study:

1. To what extent has e-learning helped in enabling student learning in Aguata LGA Anambra State?
3. What are the effects of e-learning on students' academic performance in Aguata LGA Anambra State?
4. What are the challenges encountered in the adoption of e-learning in Aguata LGA Anambra State?

## 2. Method

The study is a survey design. The population of the study is made up of 2,841 students and teachers from 12 public secondary schools in the Aguata Education zone. The simple random sampling technique was used to select 426 respondents (376 students and 50 teachers), which are about 15% of the entire population of the study. The instrument used for data collection is a well-structured questionnaire of 5 point Likert Scale. The questionnaire was used to collect data from respondents in relation to the objective of this study. The questionnaire was divided into two sections, namely, section A and Section B. while section A comprised personal details of the respondents such as age, gender, and status of Academics, section b comprised questions relating to the questionnaire, and the response was structured to 5 rating levels. Which is Very great extent = 5 points, Great extent = 4 points, little extent=3 points, Very little extent =2 point, No extent = 1 point. The Pearson Correlation Coefficient was used to determine the reliability of the instrument. A co-efficient value of 0.68 indicated that the research instrument was relatively reliable. According to (Taber, 2017), the range of reasonable reliability is between 0.67 and 0.87. The instrument was subjected to face validation by three experts, and in view of the large population of the respondents for the study, the researcher employed the aid of an assistant. The research assistant was recruited from among secondary school teachers in the study area. Data collected were analyzed using the arithmetic mean.

### 2.1 Research Question 1

To what extent has e-learning helped in enabling student learning in Aguata LGA

S/N	To what extent do you	VGE	GE	LE	VLE	NE	N	Mean Score X	Remark
1	Surf the internet to source for better up to date information.	180	80	50	35	15	360	4.04	Positive
2	Use a computer simulation to enhance learning.	160	95	45	38	22	360	3.92	Positive
3	Download images to enhance teaching/learning in the classroom.	185	90	70	10	5	360	4.22	Positive
4	Source the internet for extended knowledge	165	85	55	40	15	360	3.95	Positive
5	Make use of search engines, e.g., Google, and Yahoo, to obtain teaching/learning information.	200	70	60	25	5	360	4.20	Positive
	Grand Mean							4.06	Positive

From Table 4.1 above, questionnaire items 1,2,3,4 and 5 were positive because they achieved the mean Score of 4.04, 3.92, 4.22, 3.95, and 4.20, respectively, which were above the cut-off point of 3.00 .this means that the respondent accepted that e-learning has helped in enabling student learning in Aguata LGA Anambra State.

### 2.2 Research Question 2: What are the effects of e-learning on students' academic performance in Aguata LGA Anambra State?

S/N	Please react to these questions below on how they affect you.	VGE	GE	LE	VLE	NE	N	Mean Score X	Remark
6	Offers flexibility with students learning at their own pace	210	105	30	10	5	360	4.40	Positive
7	Engages student at deeper level	180	90	65	19	6	360	4.16	Positive
8	Provides multiple ways to learn via games, guided projects, etc	105	175	45	15	20	360	3.91	Positive
9	Improves career prospect for student	215	75	55	10	5	360	4.34	Positive
10	Improves digital literacy	195	110	35	17	3	360	4.33	Positive
	Grand Mean							3.35	Positive

From table 4.2 above, questionnaire items 6,7,8,9 and 10 were positive on the ground that they reached the mean Score of 4.40, 4.16, 3.91, 4.34, and 4.33, which were above the cut-off point of 3.00; this means that the respondents accepted that e-learning has effects on students' academic performance in Aguata LGA Anambra State.

**2.3 Research Question 3: What are the challenges encountered in the adoption of e-learning in Aguata LGA Anambra State**

S/N	To what extent do these factors affect you in adopting e-learning	VGE	GE	LE	VLE	NE	N	Mean Score X	Remark
11	Low proficiency in the use of the Computer system.	210	100	30	15	5	360	4.38	Positive
12	Non availability of internet connection.	195	90	50	20	5	360	4.25	Positive
13	Inadequate government support funding, trainings and provisions of Computers.	185	95	20	35	25	360	4.05	Positive
14	Unavailability of software for e-learning in schools.	205	80	40	20	15	360	4.22	Positive
15	Non ownership of a Computer.	225	75	42	15	3	360	4.4	Positive
	Grand Mean							4.26	Positive

Table 4.3 above, on challenges encountered in the adoption of e-learning in Aguata LGA Anambra State. It could be seen that questions 11,12,13,14 and 15 were accepted as their mean scores of 4.38, 4.25, 4.05, 4.22, and 4.4, respectively, were above the cut-off point of 3.00.

**3. Summary of the Findings**

Based on the data collected and analyzed, the following findings were made:

1. The extent e-learning helped in enabling student learning in Aguata LGA Anambra State includes students browsing the internet to source better up to date information, using computer simulation to enhance learning, downloading images to enhance teaching/learning in the classroom, sourcing the internet for extended knowledge, make use of search engines, e.g., Google, Yahoo to obtain teaching/learning information.
2. The effects of e-learning on students' academic performance in Aguata LGA Anambra State include offering flexibility to students learning at their own pace, engaging students at a deeper level, providing multiple ways to learn via games and guided projects, etc., improving career prospect for student, Improves digital literacy.
3. It was observed that challenges encountered in the adoption of e-learning in Aguata LGA Anambra State include: Low proficiency in the use of the computer system, non-availability of internet connection, Inadequate government support funding, training and provisions of computers, unavailability of software for e-learning in schools, non-ownership of a Computer.

**4. Discussion of Findings**

Research question one sought to find out the extent e-learning has helped in enabling student learning in Aguata LGA Anambra State. The result of the study reveals that the extent e-learning has helped in enabling students to learn includes; students browsing the internet to source better up to date information, using computer simulation to enhance learning, downloading images to enhance teaching/learning in the classroom, sourcing the internet for extended knowledge, make use of search engines, e.g., Google, Yahoo to obtain teaching/learning information.

Research question two sought to find out the effects of e-learning on students' academic performance in Aguata LGA Anambra State. Results of the study in line with Agoagbua and Nnorom (2021) reveals that e-learning offers flexibility with student learning at their own pace, engages student at a deeper level, provides multiple ways to learn via games and guided projects, etc., improves career prospect for student, Improves digital literacy, enhancing students' academic performance, because it encourages students' class participation, ensure that students learn independently which boost students' confidence and provide learning opportunities that enhance academic performance. Therefore, the study concludes that students' use of e-learning tools has a significant effect on their academic performance. Thus, it is affirmed that e-learning tools would significantly promote students' interest in the

learning content, make learning easy for students, allow students to apply skills and knowledge gained practically, and motivate students towards better academic performance. Moreover, effective usage of e-learning tools would equally help in improving students' study skills.

Research question three was designed to find out the challenges encountered in the adoption of e-learning in Aguata LGA Anambra State. The result of the study reveals the followings; Low proficiency in the use of the computer system, non-availability of internet connection, Inadequate government support funding, training and provisions of computers, unavailability of software for e-learning in schools, non-ownership of a Computer, were the challenges encountered.

## 5. Conclusion

The findings of this study indicated that e-learning had contributed positively to the effective academic performance of public secondary school students in Aguata LGA Anambra State. The study revealed that most students agreed that e-learning help students have access to an unlimited source of information. It reveals the connection between subjects. It promotes critical thinking and encourages students' way of learning. E-learning is a new trend for delivering learning at all levels. Therefore, if our educational system must be 21st century compliant, we must queue into this new trend to take advantage of the numerous benefits from the development and be abreast with other nations educationally.

## 6. Recommendation

The study, amidst the finding, submits the following recommendation:

Curriculum Planners and Educational Boards should ensure that they incorporate e-learning Courses at all levels of education as this is the terrain of advanced countries.

- i. Teachers should be trained in appropriate skills in e-learning,
- ii. Power supply should be adequate or improved upon so as to enhance the use of e-learning in our universities,
- iii. Government should provide e-learning technologies to Nigeria universities to equip their e-learning centers,
- iv. Government should release the fund to the public secondary schools for adequate funding of e-learning centres,
- iv. Secondary schools should employ capable computer experts to train secondary school teachers on how to use e-learning technologies to impact knowledge.
- v. Private sectors, non-governmental and voluntary organizations should assist in equipping Public secondary schools with e-learning centres,
- vii. Computer engineers should be employed to help in the maintenance of the e-learning facilities in the public secondary schools.

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