

# AN ASSESSEMENT OF AWARENESS AND USE OF E-LEARNING RESOURCES BY SECONDARY SCHOOL TEACHERS IN THE NORTH EASTERN STATE OF YOBE, NIGERIA

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**Abstract** The research was carried out to assess the level of awareness and use of e-learning resources by secondary school teachers in Yobe state. The study adopted a survey method. A total of two hundred and forty (240) respondents were selected from two secondary schools in each of the three geo-political zones in the state. A self-developed questionnaire was used to obtain response from the respondents. Three research assistants domiciled in each of the zones were used in the issuance and collection of the questionnaires. The result of the study showed that a number of the teachers are not computer literate and are not aware of e-learning resources. The few who are aware and could access e-learning resources are confronted with problems such as lack of internet facilities, poor network, and high cost of e-learning facilities. The study recommended the installation of internet facilities in secondary schools, provision of e-libraries, creation of awareness about e-learning resources and compulsory training of teachers in computer literacy.

**Index Terms**— Internet, E-learning resources, Teacher, Curriculum delivery, ICT, Nigeria

## I. INTRODUCTION

Present day teachers as curriculum implementers are faced with several challenges ranging from lack of motivation, training, poor infrastructure, and access to resource materials. Of all these, the worst is the lack of access to learning resources because it has direct impact on the teacher and the learner. An ill-informed teacher is bound to produce ill-informed learner. The result of situations like this is the fallen standard of education being experienced in Nigeria today. In recent times, the dismal performance of students in public examinations in Nigeria generally and Yobe state in particular generated huge public outcry. Several research findings attributed the mass failure to several factors: Bui (1987) blamed the mass failure on lack of qualified teachers. Adaralegbe(1983) also believed that teachers lack in-depth knowledge in the subject that they teach. Ladi Dlakwa and Hadiza Isa Bazza(2010) observed that for teachers to be able to motivate learners, they must themselves be well equipped; otherwise they will produce poor quality students. Ugwu D.A., and Ohimekpen B.E. (2010) opined that it is through quality

education that Nigeria can overcome her multi-dimensional problems which invariably include poor academic performance of students. What all these point to is that teachers must be resourceful to produce academically sound students. The big questions are: are teachers in Yobe state resourceful? Are they keyed to technological advancement taking place world-wide? Are they computer literate? Are they aware of ICT and the richness of its e-learning contents?

E-learning as part of ICT has been defined by several authors and researchers all over the world. Nwana(2012) described e-learning as ... the wholesome integration of modern telecommunication equipment and ICT resources, particularly the internet, into the educational system. In other words, the concept of e-learning is interwoven with the concept of ICT: both been inseparable entity. According to Leonard(2013), e-learning simply means electronic learning. This means that e-learning is done through the use of electronic devices. He went on to say that e-learning comprised of all forms of electronically supported learning and teaching. Hedge and Hayward (2004) defined e-learning as an innovative, approach for delivering electronically mediated, well organized, learner centered and interactive learning environment to anyone, anytime, anywhere. This definition is interesting in two ways: First, e-learning is learner centered; and secondly, irrespective of whom, when, and where, learning can take place. E-learning is the use of electronic technology to deliver education and training applications, monitor learners performance and report learners' progress. The above definition underscored the relevance of monitoring and evaluation of learners' performance and progress. It also demonstrated that e-learning is learner centered. Learning, according to Rosenberg (2001), is the process by which people acquire new skills or knowledge for the purpose of enhancing their performance. E-learning is also described as intentional use of networked information and communication technology in teaching and learning which include terms such as: online learning, virtual learning, distributed learning, network and web based learning (Pushpanathan 2012). Olaniyi (2006) defined e-learning as the convergence of the internet and

learning or internet- enabled learning. Anowor (2002) synchronized the various definitions of e-learning into four:

- The use of all forms of electronically supported learning and teaching,
- The use of technology to enable people to learn anytime, anywhere,
- The use of ICT in developing skills as well as concept based knowledge, and
- The use of instructional media in form of texts, images, animations, video and audio devices.

The relevance of e-learning resources to the teacher as a curriculum implementer in the present digital age cannot be over stated. The basic mission of e-learning is to transform the old methods and approaches to curriculum implementation (Nwana 2012). With the advent of ICT and its related components, the face to face method teaching and learning in a classroom where the entire process of curriculum delivery is centered on the teacher is no more in vogue. Education (teaching and learning) is simplified through the use of e-learning resources. The use of ICT involves effective teaching and learning with the assistance of computer and other information technology acting as aids which performs the complementary functions in the teaching and learning environment. This is in agreement with Salawudeen(2010) who is of the view that the advances in the communication and computer technology have culminated in the supplementation and near phase out of the traditional educational delivery system. The new technologies allow for more flexibility in and a wider reach for education in many countries. Not only has it widen the scope and extent of learning, it has also simplified the content. In concrete terms, ICT instructional aids media has enhanced teaching and learning through its dynamic, interactive and engaging contents. It has provided real opportunities for individualized instruction (Japheth, et al.,2013)

The relevance of ICT- driven instructional aids in teaching and learning, also referred to as e-learning resources include all but not limited to

- Stimulation of students' interest,
- Concretize abstract issues or topics,
- Creating effective communication,
- Used for mass education and taking care of large audience,
- Providing meaningful and useful sources of to teachers and learners,
- Helps in developing a continuity of reasoning and coherence of thought,
- It saves time and reduces verbalism or repetition of words,
- It is used to improve teaching methods, and
- It is used to promote closer relation between the community and the school (Japhet,etal.,2013)

Philip Achimugu, et al(2010)also gave the following as ways in which ICT enhances education:

- Motivating to learn,
- Facilitating the acquisition of basic skills, and
- Enhancing teacher training.

Effectiveness of instruction, in the words of Duckett and Tatarkowski (2012) lies in the use of tangible teaching aids where young people learn most readily about things that are directly accessible to their senses via visual, auditory tactile and kinesthetic. The relevance of e-learning resources to the teacher as the curriculum implementer is much. Nwokike(2011) articulated the following as some of the usefulness of e-learning resources to the teacher:

- Facilitating the task of the teacher by promoting performance,
- Teachers and students can study at their own pace,
- E-learning reduces the stress inherent in the conventional classroom work for both teachers and students, and
- Saves the learners and the teachers huge amount of energy and time.

Osuala (2009) observed that technology has the capacity to change the role of the teacher. Teachers now act more as resource persons or facilitators, meeting such learners as continued contacts with peers, increased guidance, feedback and opportunities to apply acquired skills. Nwana (2009) is also of the view that e-learning provides the relevant platform for teachers to develop capacities for high quality research and teaching which increase their ability to innovate

E-learning resources are of great importance to the learners. The introduction of e-learning facilities into the education system is aimed at improving educational delivery and preparing students for a role in an information age (Amedu, 2014). As a future leader, the student needs a sound educational foundation in order to cope with the ever changing world. In the words of Kirsh, (2002), e-learning can improve retention, provide immediate feedback and allows learners to customize learning materials to meet individual needs. In addition to the above, access to online journals is made possible through e-learning. Students and teachers get a better chance of reaching out to books, journals made available on the internet. A broader interaction is gotten from the outside world through interaction on the internet (Edna, 2013).

However, there seemed to be a general consensus on the problems associated with e-learning resource usage in Nigeria generally and in the North-eastern state of Yobe. Bibiana, et al,(2012); Leonard,C.U.,(2013); Edna N. O. and Francis J.O.(2013); Philip, A. et al,(2010) Olaniyi (2006);Japheth, T.T. and Cyprain, C.A.(2013) and Ajadi, T.O. et al(2008) all agreed

that the following constitute strong barriers to the effective utilization of e-learning resources in Nigeria:

- High cost of hardware in Nigeria,
- Incessant interruption in power supply,
- Technophobia,
- Cost of computers very high,
- Lack of internet facilities,
- Slow connectivity
- High import tariffs,
- High level of computer illiteracy,
- Inadequate funding,
- High transmission cost, and
- Lack of government commitment to the development of the educational sector.

## II. STATEMENT OF THE PROBLEM

In recent times, greater attention has been given to e-learning and the richness of its content and resources, especially in the area of teaching and learning. Curriculum implementation central to secondary education and the primary purpose of teaching is to achieve the objectives of instruction (Nwana, 2012). The relationship between curriculum and ICT cannot be overemphasized. According to Tella, A.A. et al. (2012), the use of ICT by teachers to impart knowledge to students highly advantageous. It is against this background that this study is carried out to assess the level of teachers' awareness of e-learning resources, their application of the resources in curriculum delivery and the problems encountered with the use of e-learning resources in Yobe state, Nigeria.

## III. OBJECTIVES OF THE STUDY

The study assesses

1. teachers' computer literacy
2. teachers' awareness of e-learning resources
3. teachers' use of e-learning resources curriculum delivery
4. problems teachers face in the use of e-learning resources

## IV. RESEARCH QUESTIONS

1. Are you computer literate?
2. Are you aware of e-learning resources?
3. Do you use e-learning in curriculum delivery?
4. Do you encounter problems with the use of e-learning resources

## V. METHODOLOGY

The study utilized the survey research design. A random sampling was employed in selecting 240 respondents from the three educational zones in the state; namely, Damaturu,

Gashua, and Potiskum zones which constituted the sample for the study.

The instrument used for the collection of data was a self-designed questionnaire titled Teachers Awareness and Use of E-Learning Resources (TAUELR). It was designed based on the four research questions. The questionnaire had two options of 'YES' and 'NO'. Two experts from the department of Maths/statistics, MIA polytechnic Geidam reviewed the questionnaire for its content validity. Simple percentages as used in previous related study (Anene, J.N., et al 2014) were adopted in analyzing the results obtained from the study.

## VI. DATA ANALYSIS

The data collected were presented, analyzed, and interpreted in line with the research questions.

### RESEARCH QUESTION 1: Are you computer literate?

S/N	DESCRIPTION	YES	%	NO	%	TOTAL
1	Are you computer literate?	72	30	168	70	240

Table 1 shows teachers' computer literacy. Seventy-two respondents indicated 'yes' which represents 30% while 168 respondents indicated 'NO' which represents 70%. This is a clear indication that many teachers in Yobe state secondary schools are not computer literate.

### RESEARCH QUESTION 2: Are you aware of the following e-learning resources?

S/N	DESCRIPTION	YES	%	NO	%	TOTAL
1	Internet	240	100	-	-	240
2	Computer	240	100	-	-	240
3	Laptop	240	100	-	-	240
4	Smart phones	240	100	-	-	240
5	Video tutorials	96	40	144	60	240
6	E-books	144	60	96	40	240
7	E-journals	72	30	168	70	240
8	Email facilities	60	25	180	75	240
9	Digital library	48	20	192	80	240
10	Electronic device for marking multiple choice questions	36	15	204	85	240
11	Video conferencing	48	20	192	80	240
12	Close circuit television	48	20	192	80	240

Table 2 shows teachers' awareness of e-learning resources. 100% (240) of the respondents agreed that they are aware of internet, computer, laptop, and smart phones. 40% (96) of the respondents are aware of video tutorials while 60% (144) are not. 60% (144) of the respondents agreed that they are aware of e-books while 40% (96) are not. 30% (72) of the respondents

said that they are aware of e-journals as against the 70% (168) who said no. 25% (60) of the respondents are aware of e-mail facilities while 75% (180) are not. 15% (36) of the respondents agreed that they are aware of electronic device for marking multiple choice questions while 85% (204) are not. 20% (48) of the respondents said 'yes' to digital library, video conferencing, and close circuit television, while 80% (192) of them are not. The table above shows that the general awareness about e-learning resources is very low in Yobe state.

RESEARCH QUESTION 3: Do you use any of the following e-learning resources in for curriculum delivery?

S/N	DESCRIPTION	YES	%	NO	%	TOTAL
1	Internet	48	20	192	80	240
2	Computer	48	20	192	80	240
3	Laptop	48	20	192	80	240
4	Smart phones	96	40	144	60	240
5	Video tutorials	-	-	240	100	240
6	E-books	24	10	216	90	240
7	E-journals	48	20	192	80	240
8	Email facilities	24	10	216	90	240
9	Digital library	-	-	240	100	240
10	Electronic device for marking multiple choice questions	-	-	240	100	240
11	Video conferencing	-	-	240	100	240
12	Close circuit television	24	10	216	90	240

Table 3 shows teachers' use of e-learning resources for curriculum delivery. 20% of the respondents answered 'yes' to using internet, computer, and laptop for curriculum delivery, while 80% answered 'no' to the use of the above resources. 40% agreed that they use smart phones for curriculum implementation while 60% said they do not. All the respondents answered no to using video tutorials, electronic device for marking multiple choices question, digital library and video conferencing. Only 10% of all the respondents answered 'yes' to using e-books, email facilities, and close circuit television while 90% of them said they do not. 20% of the respondents said 'yes' to using e-journals for curriculum delivery while 80% said 'no'. The table shows that the level of application of e-learning resources by secondary school teachers in Yobe state is below expectation.

RESEARCH QUESTION 4: Do you face the following problems in the utilization of e-learning resources for curriculum delivery?

S/N	DESCRIPTION	YES	%	NO	%	TOTAL
1	Lack of internet facilities	192	80	48	20	240
2	Lack of fund	192	80	48	20	240
3	Inadequate e-learning resources	192	80	48	20	240

	in secondary schools					
4	High cost of computers, laptops, smart phones, etc	168	70	72	30	240
5	Poor electricity supply	240	100	-	-	240
6	Low level of computer literacy	144	60	96	40	240

Table 4 shows the problems teachers face in the application of e-learning resources in curriculum delivery. 80% of the respondents said 'yes' to lack of internet facilities, lack of fund, inadequate e-learning resources in secondary schools, and low level of computer literacy while 20% said 'no'. 70% said 'yes' to high cost of computer, laptop, smart phones while 30% said 'no'. All the respondents agreed that poor electricity supply is a problem.

## VII. DISCUSSION

On the issue of computer literacy, the outcome of the study showed that the level of computer literacy of teachers at the secondary schools is very low in Yobe state. This finding is in consonance with those of Nwana,(2012); Christopher O.O.(2011); and Leonard, C.I.(2013), all of whom suggested that computer training or training ICT resources be carried out by employers of teachers.

With regards to teachers' awareness of e-learning resources, the study revealed that teachers are aware of e-learning resources such as internet, computer, laptop, and smart phones. However, their level of awareness of other resources such as e-books, e-journal, and especially digital library, email facilities close circuit television, video conferencing and electronic device for marking multiple choice questions are still very low. This finding is in line with the recommendation of Oladunjoye,I.M. and Audu,J.S.(2014) that intensive seminars, conferences and workshops be organized by relevant bodies to educate and upgrade the technical skills ...in the area of ICT.

In relation to the use of e-learning resources for curriculum delivery, the result revealed that most of the teachers do not use e-learning resources for teaching. The implication of this is that teachers in Yobe state are still stocked with the traditional methods of teaching which do not yield good results. This finding agreed with the finding of Olatomide W.O. (2012) that most teachers do not use the internet because they do not have computers and they do not have the time to learn about internet. The finding also corroborated the findings of Nwana,(2012), Effiong,(2005) and Jegede and Owolabi(2008)

With regards to the problems that teachers face in the use of e-learning resources for curriculum delivery, the study showed that poor electricity supply topped the list while others such as

lack of internet facilities, lack of fund, inadequate e-learning resources in secondary school, high cost of computers, and low level of computer literacy formed the other problems. This is in agreement with earlier studies by Leonard, C.I.(2013), Asogwa,(2011), and Ilechukwu,(2013). The finding also agreed with the findings and recommendations made Nkasiobi,S.O. and Helen,E.A.(2011) that government should ,among others, tackle the problems of power failure in Nigeria. The study also tallied with that of Philip, A. et al,(2010) that inadequate infrastructure, inadequate skilled man power and funding among others are factors affecting effective usage of e-learning resources

### VIII. CONCLUSION

The educational sector, since the inception of e-learning, is undergoing tremendous transformation on daily basis. E-learning itself is a simplified approach to teaching and learning and there is the need for teachers to take advantage of the numerous benefit and opportunities it offers. One way to do this is to become computer literate. Secondly, teachers should seek knowledge of the various e-learning resources available to them. Most importantly, teachers and learners should endeavor to apply the e-learning resources in curriculum implementation. Being computer literate, being able to recognize e-learning resources and being able to apply them in teaching are the key factors in the effective utilization of electronic resources in the present computer age. Yobe state is grappling with problems of students' poor performance in public examinations and there is the need therefore for teachers to embrace e-learning as a better alternative to the traditional mode of teaching.

### IX. RECOMMENDATION

Based on the findings, the study recommends the following:

1. that Yobe state government should, as a matter of urgency, make computer literacy compulsory for all the teachers in her employment,
2. that teachers be provided soft loans to enable own laptops or desktops computers,
3. that the education resource centre in the state should collaborate with state ministry of education to create awareness about e-learning resources and their usefulness to teachers,
4. that government should, in collaboration with the education resource centre, organize workshops and seminars on the application of e-learning resources in curriculum delivery, and
5. that the state government should provide internet facilities in all the secondary schools, provide, alternative source of power supply ,for example, solar energy in all secondary schools and take care of the internet access subscription.

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