



## **E-LEARNING AS A TOOL TO ERADICATE FUNCTIONAL ILLITERACY IN OLDER ADULTS IN BONNY LOCAL GOVERNMENT AREA OF RIVERS STATE.**

**Ibienebo Edith Pepple<sup>1\*</sup> and Emeh Elizabeth Golden (Ph.D.)<sup>2</sup>**

<sup>1&2</sup>Department of Public Administration, Federal Polytechnic of Oil and Gas, Bonny.

Corresponding Author's Email: [ibienepepple9@gmail.com](mailto:ibienepepple9@gmail.com); Tel.: 07033685203.

### **Cite this article:**

Ibienebo E. P., Emeh E. G. (2024), E-Learning as a Tool to Eradicate Functional Illiteracy in Older Adults in Bonny Local Government Area of Rivers State. African Journal of Law, Political Research and Administration 7(2), 10-21. DOI: 10.52589/AJLPRA-JKERIR7F

### **Manuscript History**

Received: 13 Apr 2024

Accepted: 18 Jun 2024

Published: 12 Jul 2024

### **Copyright** © 2024 The Author(s).

This is an Open Access article distributed under the terms of Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0), which permits anyone to share, use, reproduce and redistribute in any medium, provided the original author and source are credited.

**ABSTRACT:** *This study presents e-learning as a tool to eradicate functional illiteracy in older adults in Bonny Local Government Area of Rivers State. The study adopted a descriptive survey research design; the population of the study comprised adults in Bonny LGA, Rivers State. A total of two hundred (200) respondents were selected for this study using the simple random sampling technique. This technique was adopted in order to give every respondent based in that locality equal chances of being selected for the study. The primary data was used as a source of data collection; the respondents were rated using a 4-point Likert scale. The reliability of the instrument was obtained using a test-retest procedure and Cronbach's Alpha instrument. A simple percentage tool was employed in both table and chart format to describe the characteristics of the respondents. Descriptive statistics was used to analyse the copies of the questionnaire. The analysis revealed that lack of resources and little knowledge of computerised devices are challenges associated with implementing e-learning initiatives for older adults. This study concludes that e-learning is a panacea for eradicating functional illiteracy among older adults in Bonny LGA, Rivers State. The study recommends that the government should provide more resources that will aid e-learning for improvement and address literacy challenges among older adults in Bonny LGA. They should also make e-learning programs to be extremely effective by providing resource materials for trainers and trainees.*

**KEYWORDS:** E-learning, Functional Illiteracy, Older Adults, Digital Literacy.



## INTRODUCTION

Functional illiteracy remains a significant challenge in many parts of the world, including Nigeria. Functional illiteracy refers to the inability of individuals to use reading, writing, and numeracy skills effectively in daily life and work (OECD, 2013). This form of illiteracy severely restricts individuals' capacity to participate in society, access services, and improve their socio-economic status. In Nigeria, the problem is particularly acute among older adults, who may have had limited educational opportunities during their youth and now face additional barriers to learning due to age-related factors (UNESCO, 2015).

The Bonny Local Government Area in Rivers State is no exception. Despite the region's economic importance due to its oil and gas industries, many older adults in Bonny remain functionally illiterate. This has profound implications not only for their wellbeing but also for the broader community, as functional illiteracy is linked to poorer health outcomes, lower levels of civic engagement, and reduced economic productivity (World Bank, 2018).

Traditional adult education programs have often struggled to address the needs of older adults effectively. Factors such as accessibility, mobility issues, and the stigma associated with adult illiteracy can deter participation in conventional literacy classes (Bynner & Hammond, 2004). Furthermore, these programs may not be flexible enough to accommodate the diverse learning paces and styles of older adults, who might benefit more from personalized and self-paced learning environments (Knowles, Holton, & Swanson, 2011).

E-learning, defined as the use of electronic media and information and communication technologies (ICT) in education, offers a promising alternative. E-learning can provide flexible, accessible, and engaging learning opportunities tailored to the needs of older adults. Studies have shown that well-designed e-learning programs can enhance learning outcomes by providing interactive and multimedia content, which can be particularly effective for older learners who may struggle with traditional text-based materials (Anderson, 2008; Clark & Mayer, 2016).

In addition to improving literacy skills, e-learning can help older adults develop digital literacy, which is increasingly important in today's technology-driven world. Digital literacy involves the ability to use digital tools and resources effectively and responsibly, and it can empower individuals to access information, communicate, and perform various tasks online (Ng, 2012). For older adults, acquiring digital literacy can open up new opportunities for social engagement, lifelong learning, and economic participation (Helsper & Eynon, 2010).

Despite the potential benefits, the implementation of e-learning programs for older adults in Bonny faces several challenges. These include issues related to digital infrastructure, such as access to reliable internet and suitable devices, as well as the need for training and support to help older adults become comfortable with using technology (Kearsley & Blomeyer, 2004). Moreover, there is limited research on the specific needs and preferences of older adults in e-learning environments, particularly in the Nigerian context (Afolabi, 2017). This study aims to address these gaps by exploring the effectiveness of e-learning as a tool to eradicate functional illiteracy among older adults in Bonny Local Government Area.



---

### **Objectives of the Study**

- i. To assess the level of functional illiteracy among older adults in Bonny Local Government Area.
- ii. To evaluate the effectiveness of e-learning programs in improving literacy skills among older learners.
- iii. To identify the challenges associated with implementing e-learning initiatives for older adults.

### **Research Questions**

- i. What is the level of functional illiteracy among older adults in Bonny Local Government Area?
- ii. What is the effectiveness of e-learning programs in improving literacy skills among older learners?
- iii. What are the challenges associated with implementing e-learning initiatives for older adults?

## **REVIEW OF RELATED LITERATURE**

### **Concept of E-learning**

E-learning is learning conducted through electronic media, typically on the Internet. McDowell (2002) asserted that e-learning applications and processes include web-based learning, computer-based learning, virtual education opportunities and digital collaboration. Successful e-learning depends on the self-motivation of the adult learner to study effectively. E-learning is learning using electronic technology to access educational curricula outside of traditional classroom learning. Donna (2009) shared that in most cases, e-learning refers to course programs or degrees delivered completely online. It is interactive in that you can also communicate with your facilitator or other adult learners in your class. Sometimes, it is delivered live, where the learner can electronically raise his/her hand and interact in real-time, and sometimes, it is a lecture that has been pre-recorded. There is always a facilitator interacting or communicating with the learner and grading his/her participation. E-learning has been seen as a successful technique for training and educating adult learners (Donna, 2019). It is becoming a way of life for many citizens in the world. E-learning can be self-paced or instructor-led; it involves media in the form of text, images, animation and streaming. Gray (2011) stated that e-learning has now become a part and parcel of the 21st-century world; everyone is getting online, everything is seen online, and those who are not getting online are missing out on the immense power of this modern-age wonder.



## **E-Learning in Adult Education**

E-learning is a much-talked-about issue in this era of Information and Communication Technologies (ICTs). Education is one of the sectors that have benefited greatly from this new technology. Learners can now have access to the information they need. This immensely created the urge to design online educational packages that gave rise to e-learning. E-learning, as defined by Salawudee (2006), is learning that occurs at the computer or online knowledge acquisition through the internet or offline, through the CD ROM and other ICTs. With these, education can be brought to the doorsteps of rural and deprived cities in Africa. In his definition, Kay (2017) regarded e-learning as a type of learning which is done solely online and the most popular way for adult learners to gain new knowledge and skills. Edemoh and Ogedebe (2014) defined e-learning as the online delivery of information; they added that it is instruction delivered through purely digital technology such as CD ROM, the internet and private networks. According to them, e-learning is web-based/online technology for education.

### **Importance of E-Learning to Adult Learners**

E-learning is excellent in the sense that it is learner-centred, it accommodates learners' preferences and needs, and it empowers learners of various backgrounds to have equal access to the best resources and referral materials, lecture sessions, tutoring and so on (Hilai, 2013). E-learning is cost-effective as compared to traditional forms of learning; the online method of learning is best suited for everyone; lectures can be taken any number of times; it offers the opportunity to update content and fast delivery of lessons; and it is reliable (James, 2019). He further shared that e-learning is an expedient tool for potentially all adult learners; it provides financial aid such as scholarships, grants and federal loans.

E-learning forms a sense of connectivity among adult learners from different countries because there are interactive sessions held twice a week where adult learners from different countries talk on a particular topic in their respective academic areas of endeavour. According to Dokubo (2013), e-learning gives access for potential adult learners to learn at their own time and pace that they would not otherwise have. For adults with a physical disability, it gives them flexible learning opportunities as they are motivated to obtain lessons from the comfort of their homes without constrain and limitations. It is obvious that, most of the time, adults have to study and since work and family commitments vary from time to time, attendance at daily or weekly classes can be a problem for adults. E-learning therefore does not have fixed timetable activities, thus bringing the adult learners into the picture for better and increased participation in educational careers. It is a truism that, from all indications, learning through the process of e-learning is more result-oriented.

### **Functional Illiteracy**

The concepts of functional literacy and functional illiteracy (FI) were developed in the second half of the 20th century, spurred by the growing need to advance industrial progress and in recognition of the inadequacy of compulsory basic education to provide a sufficient level of literacy skills needed for future socio-economic development. Functional illiteracy is defined as having insufficient reading and writing skills to manage day-to-day activities. Those who fall into this category struggle with basic reading and writing tasks, and if they come from low-income households, their only option is to apply for low-paying jobs that do



not require these skills. Adults who are functionally illiterate face discrimination in relationships, marriage, and society at large (UNESCO, 2006).

Illiteracy is not the same as functional illiteracy; an illiterate person has never been taught how to read or write, in contrast, to functionally illiterate adults, and possesses some reading and writing skills. In comparison to previous ages, the number of illiterate persons has decreased due to government legislation mandating school attendance. But functional illiteracy is more prevalent than we realize (Sichula, 2018).

A literate person has the ability to understand written words and sentences as well as write simple and written words and sentences. In addition, functional literacy lays emphasis on an individual's ability to change their economic lives due to his or her acquired literacy skills (UNESCO, 2006). Many developing countries have therefore embraced the approach of training their citizens on knowledge and skills related to development. Therefore, Hasaba (2012) and Okech and Carr-Hill (2001) agreed that access to adult literacy skills is a panacea to economic development.

### **Theoretical Review**

**This study was underpinned by the sociocultural theory of human learning.**

The study looked at the theory of Lev Vygotsky of the sociocultural theory of human learning as the main guide of the study. According to Vygotsky (1978), learning is a social process and the origin of human intelligence in society or culture; interaction plays a fundamental role in the development of cognition; learning takes place in the zone of proximal development. This zone is the difference between what a child can do alone and what he/she can do with others' assistance. Thus, the child does not learn in isolation; therefore, the teacher should create room for cooperation amongst students for effective cross-fertilisation of ideas and knowledge. E-learning is based on the principle that knowledge is co-constructed through interactions with others. According to Vygotsky (1978), everything is learnt through interaction with others and then integrates into the individual's mental structure. The theory of Vygotsky (1978) supports the use of e-learning. According to Davidson and Major (2014), adopting e-learning would enable adults to learn from each other; this enables them to immensely gain interpersonal skills through group participation. Furthermore, e-learning enables adults to have a broader understanding of the course since they are able to collaborate in the learning process (Davidson & Major, 2014).

### **Empirical Review**

Banda et al. (2021) determined the effects and challenges of e-learning on students at Mukuba University. The study employed a quasi-experimental design. The sample for the study consisted of 60 third-year students of mathematics studying statistics. Self-made questionnaires and statistics performance tests were used to collect data for the study. Students in the experimental group learnt Gamma and Beta Functions, and Probability Distributions of Function Random Variable using the E-Learning approach, while students in the control group learnt Gamma and Beta Functions, and Probability Distributions of Function of Random Variable using the conventional learning approach. Data for the study was analysed using independent sample t-test statistics. The null hypothesis ( $H_0$ ) was tested at a 5 per cent significance level. The findings of the study revealed that the e-learning approach improved students' academic performance.





Osuji and Ugorji (2019) investigated e-learning as a strategy for human capacity development and its implications for educational management in Rivers State. This study adopted a descriptive research survey design. Three research questions corresponding with three hypotheses were postulated. The population of the study consisted of 1,243 e-learners at the National Open University of Nigeria, Rivers State Chapter. The sample size consisted of 336 students (27 % of the population size)—117 male and 219 female e-learners—drawn using a simple random sampling technique since it is homogenous. The instrument is titled: “E-Learning Strategy Questionnaire (E-LSQ)” consisting of 12 questionnaire items validated and modified with a 4-point scale with responses from the respondents and Cronbach alpha ( $r$ ) used to test the reliability coefficient index of 0.79. Research questions were answered using the mean ( ) and standard deviation (Std) while the z-test statistics were used to test the null hypothesis at a 0.05 level of significance. Findings showed that e-learning strategies, such as instructional design for capacity building, production capacity building and community capacity building, promote human capacity development in Rivers State.

Odhiambo and Edward (2019) studied the impact of e-learning on academic performance. The study relates to a level one undergraduate module delivered using traditional lectures and e-learning-based methods. E-learning has been revealed in this study to not have a positive impact on academic achievement contrary to the expectations of this study. The paper also examines the data for the presence of interaction effects between e-learning study hours and socio-demographic characteristics. This is undertaken to identify whether or not personal-characteristic-related learning style differences influence the extent to which students benefit from e-learning. It is found that, after controlling for other factors, female students benefited less from e-learning material than their male counterparts.

## METHODOLOGY

The study adopted a descriptive survey research design; the population of the study comprised adults in Bonny LGA, Rivers State. A sample was selected to generalise the findings from the sample to the target population. A total of two hundred (200) respondents were selected for this study using the simple random sampling technique. This technique was adopted to give every respondent based in that locality equal chances of being selected for the study. The primary data was used as a source of data collection; the respondents were rated using a 4-point Likert scale. The reliability of the instrument was obtained using a test retest procedure and Cronbach's Alpha at 0.05 level of significance to get the result at 0.97, and this confirmed the reliability of the instrument. A simple percentage tool was employed in both table and chart format to describe the characteristics of the respondents. Descriptive statistics was used to analyse the copies of the questionnaire.

## DATA ANALYSIS AND RESULTS

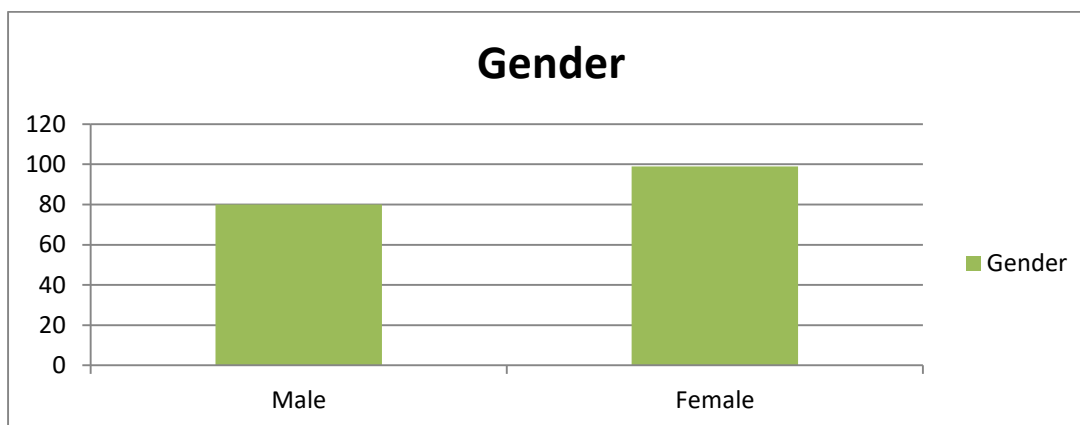
**Table 1: Questionnaire Distribution and Retrieval**

Questionnaire Distributed	Retrieval	Useful	%
200	184	179	89

**Survey Data, 2024.**

Table 1 above shows the Distribution and Retrieval of the Questionnaires. The researcher issued 200 copies of the questionnaire and from consistent visits, she retrieved 184 aggregately. From the cleaning exercise, 179 were useful with an 89% collection rate.

### Demographic Characteristics of Respondents



**Figure 1.1: Demographic Characteristics of Respondents**

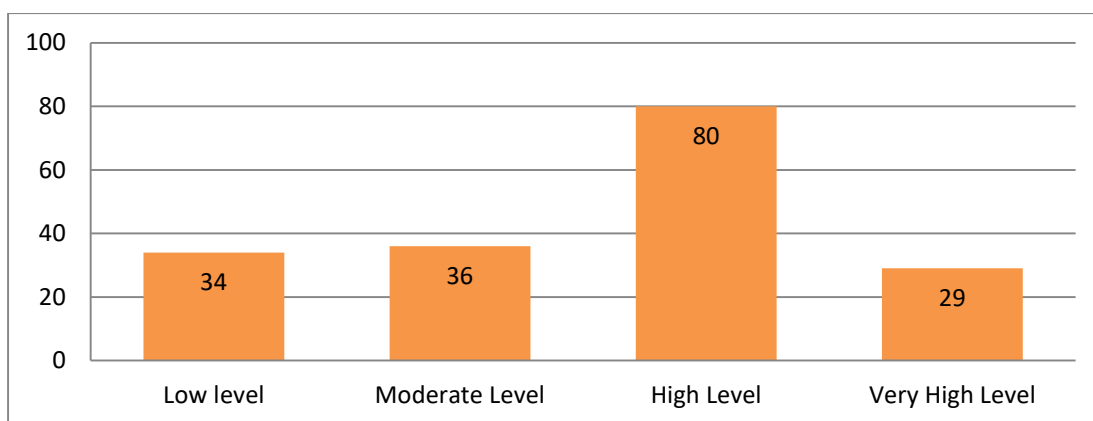
**Source:** *Field Data, 2024.*

The figure above shows the gender of the respondents as a means of ensuring that both males and females were represented in the study—80 (45%) of the respondents were males and 90 (55%) were females. This shows that the majority of the respondents were females.

### Data Analysis

#### Research Question One

What is the level of functional illiteracy among older adults in Bonny Local Government Area?



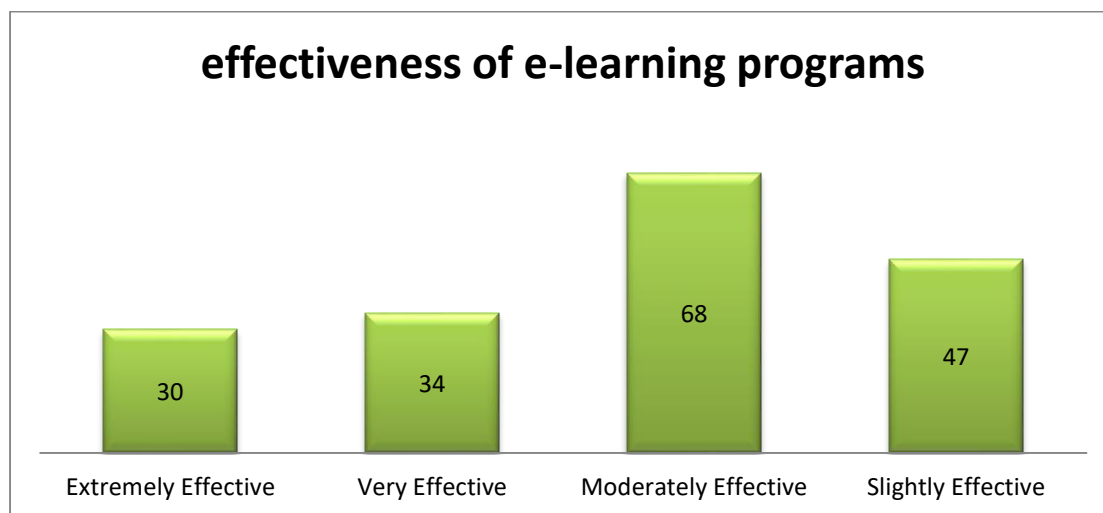
**Figure 1.2:** Level of Functional Illiteracy

**Source:** Field Data, 2024.

The chart above shows the level of functional illiteracy among older adults in Bonny. It was discovered that out of the 179 respondents, 34 respondents agreed to the option of low level, 36 respondents favoured moderate level, 80 favoured high level and 29 favoured very high level of functional illiteracy. This simply means that functional illiteracy among older adults in Bonny is at a high level.

**Research Question Two (2)**

What is the effectiveness of e-learning programs in improving literacy skills among older learners?



**Figure 1.3:** Effectiveness of E-Learning Programs

**Source:** Field Data, 2024.

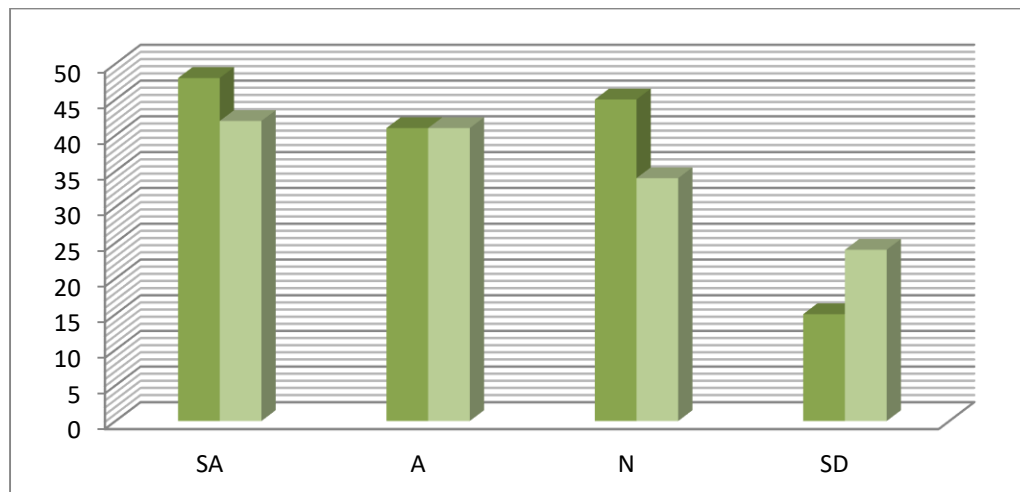
The chart above shows the effectiveness of e-learning programs in improving literacy skills among older learners. It was discovered that out of the 179 respondents, 30 respondents agreed to the option of extremely effective, 34 respondents favoured very effective, 68 favoured moderately effective and 47 favoured slightly effective. This simply means the



effectiveness of e-learning programs in improving literacy skills among older learners is moderately effective.

### Research Question Three (3)

What are the challenges associated with implementing e-learning initiatives for older adults?



**Figure 1.4:** challenges associated with implementing e-learning initiatives

**Source:** *Field Data, 2024.*

On the lack of resources for the acquisition of e-learning materials, the chart above reveals that 30.9% (48) and 26.4% (41) strongly agreed and agreed respectively to the question, 29.0% were (45) neutral while 9.6% (15) disagreed and 3.8% (6) strongly disagreed. On little knowledge of computerised devices, 27.0% (42) and 26.4% (41) strongly agreed that poor implementation had impeded the success of poverty alleviation programmes, 21.9% (34) were neutral, while 15.4% (24) disagreed and 9.0% (14) strongly disagreed. This means that a lack of resources with 30% and little knowledge of computerised devices with 27% are challenges associated with implementing e-learning initiatives for older adults.

## DISCUSSION OF FINDINGS

The analysis revealed that the level of functional illiteracy among older adults in Bonny Local Government Area is at a high level. According to Dokubo (2013), e-learning gives access for potential adult learners to learn at their own time and pace, an opportunity that they would not otherwise have. For adults with a physical disability, it gives them flexible learning opportunities as they are motivated to obtain lessons from the comfort of their homes without constraints and limitations.

The analysis also revealed that the effectiveness of e-learning programs in improving literacy skills among older learners is moderately effective. Adesina (2015) reaffirmed that the economy is not only competitive but also turbulent, so e-learners need to be efficient in their discipline and community capacity-building skills to be relevant in society.



Again, the analysis also revealed that lack of resources and little knowledge of computerised devices are challenges associated with implementing e-learning initiatives for older adults. Khan (2016) in a rural setting in India found that e-learning interventions significantly improved literacy levels among adult learners. Similarly, a meta-analysis by Means et al. (2013) highlighted the effectiveness of technology-enhanced learning in improving educational outcomes across various age groups.

## CONCLUSION

E-learning for adult education has become necessary in order to close the gap that exists between the upper basic education level and the senior secondary education. E-learning is a very important means of engaging adults in meaningful preparations for the current trends. The analysis revealed that lack of resources and little knowledge of computerised devices are challenges associated with implementing e-learning initiatives for older adults. This study concludes that e-learning is a panacea for eradicating functional illiteracy among older adults in Bonny LGA, Rivers State.

## RECOMMENDATIONS

This study recommended that:

- i. The government should provide more resources that will aid e-learning for improvement and address literacy challenges among older adults in Bonny LGA.
- ii. The government should make e-learning programs extremely effective by providing resource materials for trainers and trainees.
- iii. The government should eradicate functional illiteracy by creating e-learning centres in Bonny LGA, Rivers State.

## REFERENCES

- Adesina, A. (2015). *Inaugural Speech as President of the African Development Bank Group. Ibadan*. Abidjan Press.
- Afolabi, F. (2017). The role of e-learning in adult education: Case studies from Nigeria. *Journal of Education and Practice*, 8(10), 137-142.
- Ally, M. (2008). *Foundations of educational theory for online learning*. In T. Anderson (Ed.), *The theory and practice of online learning* (2nd ed., pp. 15-44). Athabasca University Press.
- Anderson, T. (2008). *The theory and practice of online learning*. Athabasca University Press.
- Banda, G., Tailoka, F. P., & Muma, E. (2021). Effect of e-learning on the academic performance of third-year students in statistics at Mukuba University. *Journal of Mathematics and Science Teacher*, 1(2), em004. <https://doi.org/10.29333/mathsciteacher/11277>



- Bynner, J., & Hammond, C. (2004). The impact of adult education on health and well-being. *The Wider Benefits of Learning Papers*, 8, 1-19.
- Clark, R. C., & Mayer, R. E. (2016). *E-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning*. John Wiley & Sons.
- Davidson, N., & Major, C. H. (2014). Boundary crossing: Cooperative learning, collaborative learning, and problem-based learning. *Journal on Excellence in College Teaching*, 25(3&4), 7-55.
- Donna, J.A. (2019). *Online learning is not the big thing, it is now big thing*. <https://e-student.org> (Retrieved: 5/4/2020).
- Federal Ministry of Education Nigeria. (2015). National policy on education. <https://www.education.gov.ng/wp-content/uploads/2020/10/NPE-Revised-Final-2013.pdf>
- Gray, A. (2011). *Constructivist teaching and learning*. Available (online) also at [http://www.sakschodboards.ca/old/Research and development /Research Reports/institution/97-07.htm](http://www.sakschodboards.ca/old/Research%20and%20development/Research%20Reports/institution/97-07.htm) (Accessed 19-7-2020).
- Hasaba, S. (2012). Education for all: Reflecting on adult literacy learning for socio-economic development in Uganda. *Academic Research International*, 2(2), 205.
- Helsper, E. J., & Eynon, R. (2010). Digital natives: Where is the evidence? *British Educational Research Journal*, 36(3), 503-520.
- Hilal, A.W. (2013). *The Relevance of E-learning in Higher Education*. *Journal Kajian Pendidikan* 3(2), 181- 192.
- Kabeer, N. (2005). Gender equality and women's empowerment: A critical analysis of the third millennium development goal 1. *Gender & Development*, 13(1), 13-24. Available at: <https://doi.org/10.1080/13552070512331332273>.
- Kearsley, G., & Blomeyer, R. L. (2004). Preparing K-12 teachers to teach online. *Educational Technology*, 44(1), 23-28.
- Khan, A. (2016). Impact of e-learning on adult literacy in rural areas of India. *International Journal of Advanced Research in Education & Technology*, 3(2), 112-120.
- Khan, S. (2001). *Adult Learning materials development at community level*. A Handbook: UNESCO Asia-Pacific Programme of Education for All (APPEAL): ACCU.
- Knowles, M. S., Holton, E. F., & Swanson, R. A. (2011). *The adult learner: The definitive classic in adult education and human resource development*. Elsevier.
- Levy, F., & Murnane, R. J. (2003). *The new division of labor: How computers are creating the next job market*. Princeton University Press.
- McDowell, L. (2002). Electronic information resources in undergraduate education: An exploratory study of opportunities for student learning and independence. *Journal of Educational Technology* 33 (3), 255-266.
- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2013). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies. U.S. Department of Education, Office of Planning, Evaluation, and Policy Development.
- Ng, W. (2012). Can we teach digital natives digital literacy? *Computers & Education*, 59(3), 1065-1078.
- Odhiambo, S., O., & Edward, K. M., (2019). The impact of e-learning on academic performance: A case study of group learning sets. *Scholarly Journal of Arts & Humanities*, 4, (6), 01-05.
- OECD. (2013). *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*. OECD Publishing.



- Okech, A., & Carr-Hill, R. A. (2001). *Adult Literacy Programs in Uganda*. United States of America: World Bank Publications.
- Osuji, C., U. & Ugorji, S., C., (2019). E-Learning as a strategy for human capacity development: Implications for educational management in Rivers State. *International Journal of Innovative Information Systems & Technology Research* 7(3), 34-44.
- Salawudee, O. S (2006). *E-Learning the Nigerian Experience in shape the Change XXIII* FIG Congress Munich Germany 8-13 Oct
- Shelley, M., Reinders, H., & Brunfaut, T. (2020). *Teaching second language reading*. Routledge.
- UNESCO. (2006). Education for all global monitoring report 2006, literacy for life. Retrieved from: <https://reliefweb.int/sites/reliefweb.int/files/resources/141639e.pdf>.
- UNESCO. (2015). *Global Monitoring Report: Education for All 2000-2015: Achievements and Challenges*. UNESCO Publishing.
- United Nations Educational, Scientific and Cultural Organization (UNESCO). (2006). *Adult literacy and non-formal education: Towards a brighter future*. UNESCO Institute for Lifelong Learning.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- World Bank. (2018). *World Development Report 2018: Learning to Realize Education's Promise*. World Bank Group.