# ERADICATING FUNCTIONAL ILLITERACY IN OLDER ADULTS THROUGH THE E-LEARNING APPROACH: A CASE STUDY OF BONNY LOCAL GOVERNMENT AREA

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**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 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. Simple percentage tool was employed in both table and chart format to describe the characteristics of the respondents. Descriptive statistics was used to analyze the copies of the questionnaire. The analysis revealed that lack of resources and little knowledge of computerized 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 and Adult Education.

## INTRODUCTION

Functional illiteracy, defined as the inability to read, write, or perform basic arithmetic tasks well enough to function effectively in daily life, remains a significant issue globally, particularly among older adults (UNESCO, 2006). This demographic often faces barriers to accessing traditional literacy programs due to various reasons such as time constraints, mobility limitations, or prior negative educational experiences (Levy & Murname, 2003).

In Nigeria, like in many developing countries, functional illiteracy among older adults persists despite efforts to improve literacy rates (Federal Ministry of Education Nigeria, 2015). According to UNESCO (2019), Nigeria has one of the highest rates of adult illiteracy globally, with approximately 38% of adults lacking basic literacy skills. Bonny Local Government Area, situated in Rivers State, Nigeria, reflects this national trend, with a notable proportion of older residents lacking adequate literacy skills.

The digital revolution has brought forth innovative approaches to education, including e-learning, which holds promise for addressing literacy challenges among older adults. E-learning encompasses the use of electronic technologies to access educational curriculum outside of a traditional classroom setting (Ally, 2008). This approach offers flexibility, self-paced learning, and personalized instruction, which are particularly beneficial for adult learners (Shelley et al., 2020).

Studies on adult education and e-learning have demonstrated positive outcomes. For example, a study by 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.

Despite these advancements, there is a gap in research focusing specifically on e-learning interventions tailored to older adults in Nigeria, particularly in regions with high rates of functional illiteracy, such as Bonny Local Government Area. Therefore, this study seeks to explore the feasibility and effectiveness of e-learning as a means of eradicating functional illiteracy among older adults in this specific context.

**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 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 of advancing 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 a low-income household, 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; a person who is illiterate has never been taught how to read or write, in contrast to adults who are functionally illiterate, who possess 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 person who is literate 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.

### 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 curriculum outside of traditional classroom learning. Donna (2009) shared that in most cases, e-learning refers to course programmes 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 of 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, image, 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 door steps of rural and deprived cities in Africa. In his own 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 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 the purpose of education.

## Importance of E-Learning to Adult Learners

E-learning is supremely good in the sense that it is learner centered, 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 time; it offers 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 aids 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 endeavor. 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 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 time table 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.

**Theoretical Review**

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

The study looked at the theory of Lev Vygotsky of 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-fertilization 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 effect and challenges of e-learning on students at Mukuba University. The study employed 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 Function, and Probability Distributions of Function of Random Variable using E-Learning approach, while students in the control group learnt Gamma and Beta Function, and Probability Distributions of Function of Random Variable using conventional learning approach. Data for the study was analyzed using independent sample t-test statistics. The null hypothesis ($HH0$) was tested at 5 percent 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 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 was used to test the null hypothesis at 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 descriptive survey research design; the population of the study comprised adults in Bonny LGA, Rivers State. A sample was selected for the purpose of generalizing 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 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 at 0.05 level of significance to get the result at 0.97, and this confirmed the reliability of the instrument. Simple percentage tool was employed in both table and chart format to describe the characteristics of the respondents. Descriptive statistics was used to analyze the copies of the questionnaire.

## DATA ANALYSIS AND RESULTS

### Questionnaire Distribution and Retrieval

| Questionnaire Distributed | Retrieval | Useful | % |
|---|---|---|---|
| 200 | 184 | 179 | 89 |

**Survey Data,** 2024.

Table 1 above shows the Distribution and Retrieval of Questionnaire. 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**
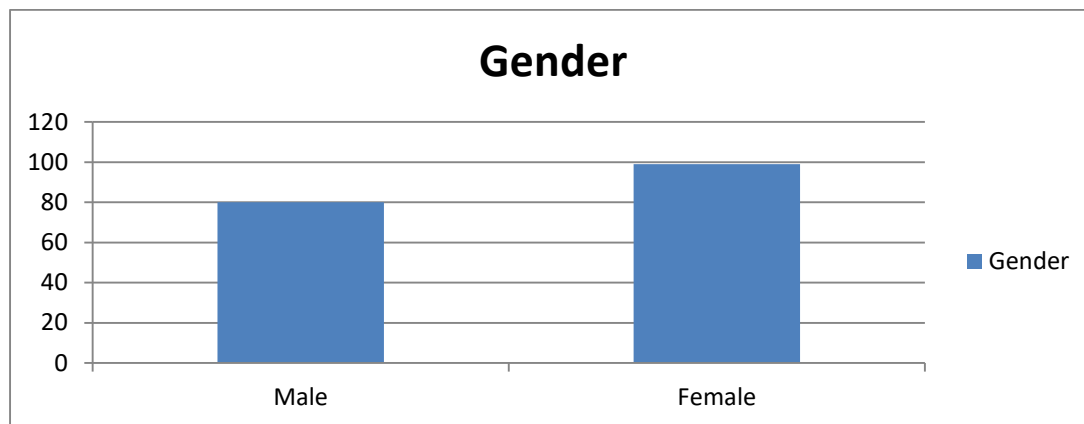


The figure above shows the gender of the respondents as a means of ensuring that both males and females were represented in the study—80 (45%) of the respondents were males and 90 (55%) were females. This shows that the majority of the respondents were females.

**Data Analysis**

**Research Question One**

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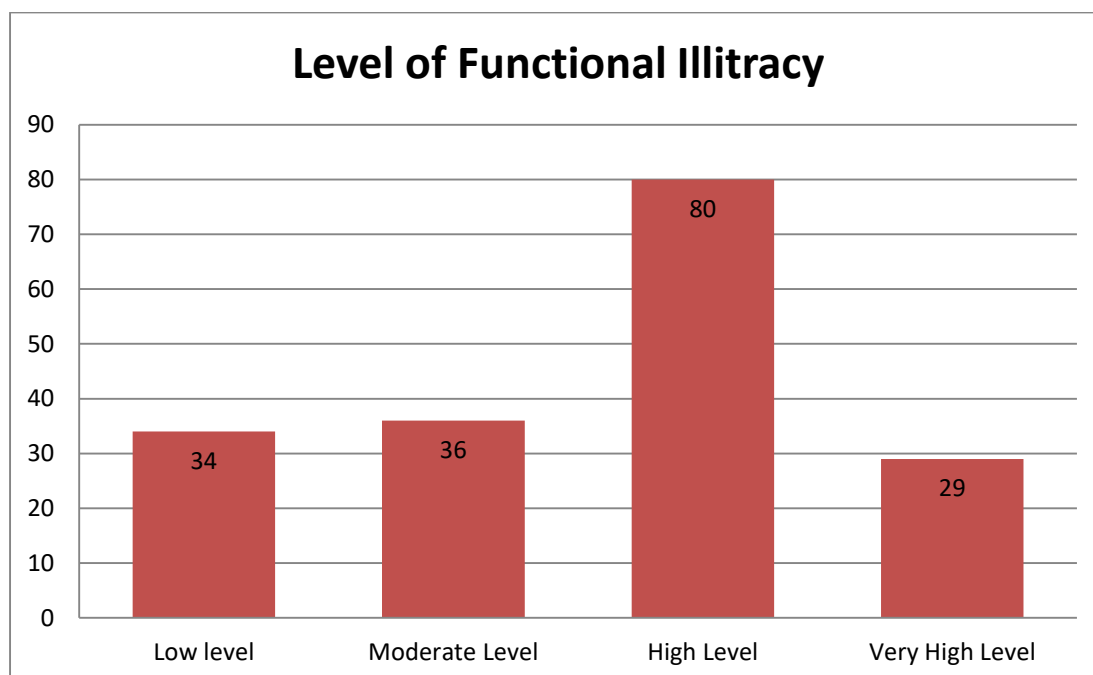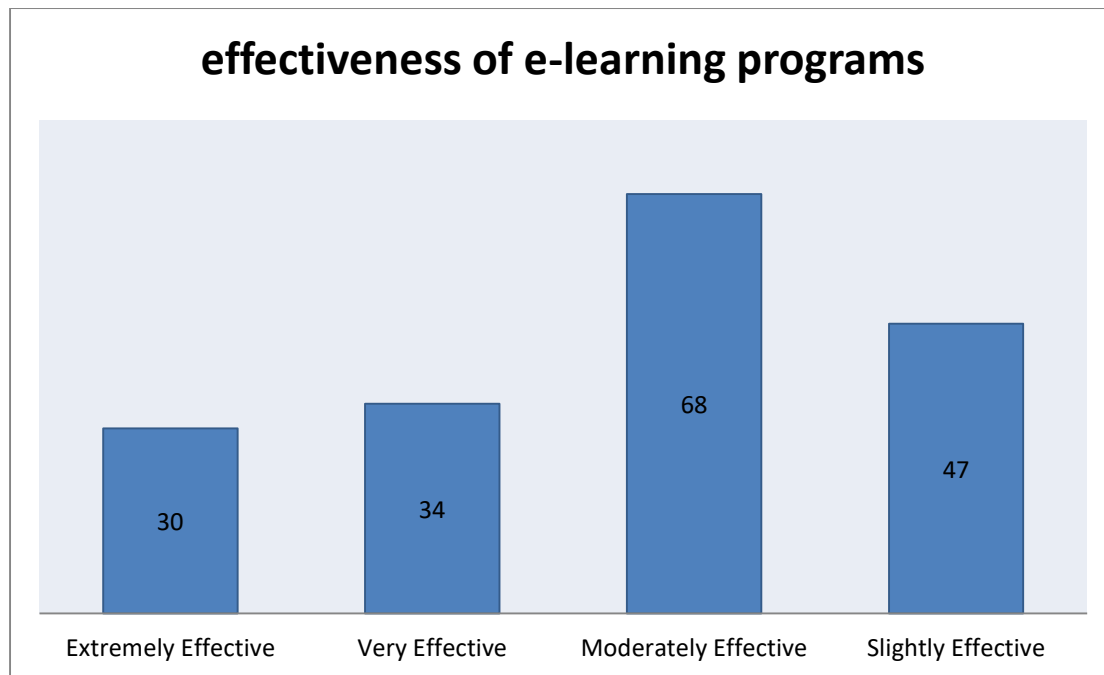


The chart above shows the level of functional illiteracy among older adults in Bonny. It was discovered that out of the 179 respondents, 34 respondents agreed to the option of low level,

36 respondents favoured moderate level, 80 favoured high level while 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?



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 while 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?
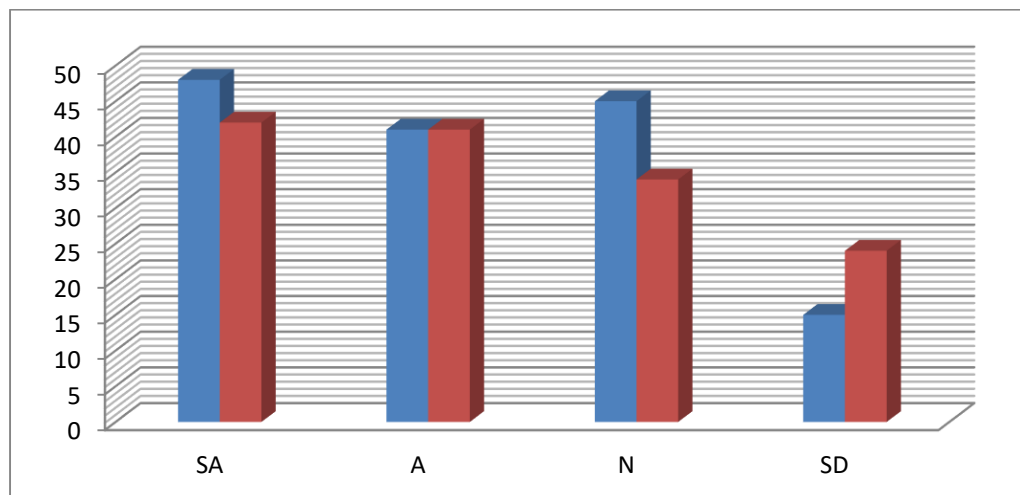


On lack of resources for acquisition of e-learning materials, the chart above reveals that 30.9% (48) and 26.4% (41) strongly agreed and agreed respectively to the question, 29.0% were (45) neutral, while 9.6% (15) disagreed and 3.8% (6) strongly disagreed. On little knowledge of computerized devices, 27.0% (42) and 26.4% (41) strongly agreed that poor implementation has 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 lack of resources with 30% and little knowledge of computerized 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 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 that e-learners need to be efficient in their discipline and community capacity building skills to be relevant in society.

Again, analysis also revealed that lack of resources and little knowledge of computerized 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 computerized 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.  Government should provide more resources that will aid e-learning for improvement and address literacy challenges among older adults in Bonny LGA.

ii.  Government should make e-learning programs to be extremely effective by providing resource materials for trainers and trainees.

**iii.**  Government should eradicate functional illiteracy by creating e-learning centers in Bonny LGA, Rivers State**.**

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**RESEARCH QUESTIONNAIRE**

1. **Gender**

Male

Female

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

Low level

Moderate level

High level

Very high level

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

Extremely effective

Very effective

Moderately effective

Slightly effective

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

| S/N | Question Items | SA | A | N | SD |
|-----|----------------|----|----|----|-----|
| | Challenges associated with implementing e-learning. | | | | |
| 1 | Lack of resources for acquisition of e-learning materials hinders the implementing e-learning for older adults. | | | | |
| 2 | Little knowledge of computerized devices hinders the implementing e-learning for older adults. | | | | |