

INFORMATION COMMUNICATION TECHNOLOGY IN UTILIZATION OF TEACHING ADULT LITERACY PROGRAMMES IN SKILL ACQUISITION CENTERS IN ENUGU STATE.

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Abstract

Literacy is a dynamic concept that extends beyond the basic acquisition of reading and writing skills. Nowadays, in this globalised world, Literacy in Information and Communication Technologies (ICT) is fundamental to life in our modern technological society. To equip adult to be literate life-long learners and global citizens of the 21st century we must successfully integrate ICT into both the teaching and learning development of the adult literacy programs and its pedagogical practice. This study examined Information Communication Technology connection to teaching of adult literacy programme in Enugu State. Two research questions and two hypotheses guided the study. The design of this study was a descriptive survey. The population which also served as a sample comprised 225 facilitators and Fifty (50) center administrators in Skill Acquisition Centers in Enugu State South Eastern geopolitical zone of Nigeria. The instrument for data collection was questionnaire. The instrument was validated by experts in Education. The internal consistency of the instrument was determined using cronbach alpha, which has a reliability coefficient of 0.85. The data collected from completely filled questionnaire by two hundred and five (205) facilitators and fifty (50) administrators were analysed using mean and standard deviation. The findings showed that incorporating digital tools in learning basic literacy and digital literacy makes it easier for adult learners to understand reading and writing skills and apply the knowledge acquired in these training centers in their daily lives and occupations. The study concludes that deploying ICT tools in teaching adult literacy programs ensured continued use of the ICT tools by these adult learners as there is improved perceptions of their own capacity to handle ICTs and their interest in ICTs in general. The study recommends that facilitators should increase their utilization of ICT tools in their lesson delivery and government should create financial incentives for low-literate adult students to learn new technology.

Keyword: Basic literacy, Digital literacy, functional literacy, information and communication technology, numeracy

INTRODUCTION

Background

More than an estimated forty (40) million adults in the Nigeria lack the literacy skills needed for fully productive and secure lives and the effects of this shortfall are many adults with low literacy have lower rates of participation in the labour force and lower earnings when they do have jobs, for example. They are less able to understand and use health information, media information and they are less likely to read to their children, which may slow their children's own literacy development.

Furthermore, globalization and rapid changes in technology have created a need for adults to update their skill sets for career sustainability and to process a myriad of information for decision-making as world citizens. Unfortunately, the most educational challenges of modern age, on which advancement of humanity depends, is learners' awareness of, and ability to cope with new methods of teaching, new learning materials, new learning interaction and most especially financing education, which is electronic-based (Akinsanya & Oludeyi, 2015). The popularity of e-teaching and training, which has become a new philosophical paradigm in the history of the world education today, has made it more and more important for adult learners to adjust to learning with the use of computers in coping with the changing nature of their job and also for personal aggrandisement and enjoyment. Of course, the essence of learning to adults is to learn those things which will help them to deal with real-life situations (Knowles, 2011), and the importance of past experience to learning new things cannot be ignored (Johnson, 2011; Warschauer & Liaw 2010). Most adult learners of today, borne about forty years ago, grew up when computer was not as popular and determining life enjoyment as today.

There was no smartphones, tablets, or this crazy thing called the "internet". Hence, meeting up with, or at

least, learning to use computers may bring about anxiety, resistance, slow or poor attitude to learning in adults. This, of course, may cripple the process of achieving instructional objectives of even most well developed computer-based instruction (Johnson, 2011). Since global functioning is increasingly depending on technological devices and their applications in social world, and each household, subscription for data bundles has become one essential utility bill to settle on periodic bases. Internet connections has become inseparable part of human lives and the use of mobile *Wifi* and *hotspot* as means of connecting to the internet is more than double the use of modem. Less and less number of people now enters the banking halls to make transactions since mobile banking and sophisticated wireless transfer have been more than easy. Cities, and virtually every hotel, restaurant as well as some bars now have free wireless zones enabling customers' access to internet. The gap of the so-called "digital divide" between those who had access to advance technology and those who did not, which became an important topic of discussion among scholars in the late 1990s, is rapidly becoming faint.

Technologies have become cheap and available to, not only the rich but to everyone, including the poor (Johnson, 2011; Day, Janus & Davis, 2005). Over the past decade, digital technologies have gone from being an optional tool for the few to a required tool for the majority (Warschauer & Liaw 2010). It is therefore, *fait accompli*, the advent and pervasiveness of technology and digital modes of living in the current knowledge-based society. The revolutionary manner in which technological advancement is changing ways of living and doing is evident in the way in which it is transforming conventional teaching and learning activities and as it provides new tools for access to information, knowledge management and sharing (Akande, 2011). (Warschauer & Liaw 2010).

As far back as 1976, in its report titled *"Learning to be: The World of Education Today and Tomorrow"*, UNESCO had predicted these changes and as their impacts would be inevitable making continuing education into adulthood a necessity for everyone (UNESCO, 2018).

There seems to be dearth of research on the extent of application of ICT in adult literacy programs in Enugu State, Nigeria. More so, researches on the extent of the utilization of ICT are done outside adult literacy, and are not particularly done in teaching adult literacy. These are some of the gaps that the present study intends to fill. The study seeks to identify the level of awareness on the use of ICT in adult literacy programs; the extent of utilization of ICT in basic literacy and digital literacy programs. The study sought to reveal the level of awareness on the use of ICT in adult literacy programs.

Statement of the problem

As the key role of technology in education and human empowerment continues to re-emphasize itself in a more intensified manner. The internet and other digital devices are more important, than ever before, in domains ranging from employment to education to civil affairs. But, many adult learning centers are not utilizing the modern technologies in teaching literacy programs. Additionally, the researcher observed that there has been low level integration of ICT in teaching/learning by facilitators in educational sector. Most skill acquisition training centers are fully or partially equipped with technological devices but at times the facilitators in these centers do not apply these technologies in their classroom teaching. Since there seems to be dearth of research on the extent of application of ICT in adult literacy programs in Enugu State, Nigeria as more researches on the extent of the utilization of ICT are done outside adult literacy, and are not particularly done in teaching adult literacy. This study sought to identify the extent of utilization of ICT in adult literacy program in skill acquisition centers in Enugu East Senatorial Zone of Enugu state.

Purpose of the Study

The general purpose of this study was to investigate the extent of utilization of Information Communication Technology in adult literacy programmes in skill acquisition centers in Enugu East Senatorial Zone of Enugu State. Specifically, the study:

1. ascertained the extent of use of Information Technology in teaching basic literacy in skill acquisition centers in Enugu East Senatorial Zone of Enugu State.
2. determined the extent of utilization of communication technology in teaching digital literacy in skill acquisition centers in Enugu East Senatorial Zone of Enugu State

Significance and scope of the study, The Outcome of this study shall prompt the instructors to make a better use of the ICT thus improving their performance. This shall be so as findings of the study shall raise their consciousness to the efficacy of using ICT, and also highlighting the barriers and strategies for overcoming the barriers of effective application of ICT by the instructors.

Research Questions

The following research questions were formulated to guide the study

1. To what extent are information technology used in teaching basic literacy in skill acquisition centers in Enugu East Senatorial Zone of Enugu State?
2. To what extent are communication technology applied in teaching digital literacy in skill acquisition centers in Enugu East Senatorial Zone of Enugu State?

Research Hypotheses

These two-tailed tests of significance were formulated to guide this study. These hypotheses have been derived from the research questions, and shall be tested at alpha level of 0.05. They include the proposition that:

1. **H0₁:** There is no significant difference in the mean rating of male and female facilitators on the extent of use of Information Technology in teaching basic literacy to adult learners in skill acquisition centers in Enugu East Senatorial Zone of Enugu State.

2. **H0₂:** There is no significant difference in the mean response ratings of male and female facilitators as regard the extent of application of communication technology in teaching digital literacy to adult learners in skill acquisition centers in Enugu East Senatorial Zone of Enugu State.

Conceptual Framework

Concept of Literacy

Literacy is the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society (UNESCO, 2004; 2017). European Literacy Policy Network in her European Declaration of the Right to Literacy state that Literacy refers to the ability to read and write at a level whereby individuals can effectively understand and use written communication in all media (print or electronic), including digital literacy. Adult literacy programme is an integral part of adult education which offers stack illiterate adults access to the three basic literacy skills of reading, writing and arithmetic (3Rs). Literacy programme is geared towards developing the ability of the recipient to have access to the printed word. This type of literacy programme is often referred to as traditional literacy (Asiedu and Oyedeji, 2015). The present computer age, demands literacy programme that goes beyond the teaching of the 3Rs. This age requires functional literacy. Functional literacy is work-oriented, career-oriented or occupation-oriented literacy. According to Asiedu and Oyedeji (2015), functional literacy is tailor-made to the needs of a group or individuals, in content and method, and combines the skills of

reading, writing and arithmetic with social, technical and occupational training.

Functional literacy is the type of education directed to one's occupation or one's way of life and that is of immediate use to the recipient in his work (Alao, 2010). A cursory look into most literacy programmes in adult education centres indicates absence of functionality in those programmes. Functional literacy should be all-embracing, covering the educational, economic, political, social, psychological and cultural life of the adult learners. Information and Communication Technology (ICT) has made the world of a global village. ICT has altered the process and products of various enterprises including education, thereby providing efficiency and effectiveness in various organizations. The traditional literacy which focuses mainly on the teaching of reading, writing and arithmetics is insufficient for enabling the adult learners adapt in this computer age. Literacy programme of the adult learner need to be made functional in order to produce functional adult populace who could contribute meaningfully in nation building. One of the Universal Basic Education (UBE) Goals and Millennium Development Goals (MDGs) is to provide literacy for all. There is a correlation between literacy and human capital development. This correlation according to Ugwoegbu (2003) gave rise to the idea of functional literacy as an educational, social and economic activity in areas regarded as priorities for development. ICT possesses the potential of providing functional literacy for adult learners if well integrated in the programme. The integration of ICT into adult literacy programme will go a long way to adequately develop the adult populace who form the human capital resources of the nation.

Being literate demands proficiency with current tools and practices that require reading and writing including digital and online media used to communicate with others and to gather, evaluate, and synthesize information. It is important, therefore, to

offer reading and writing instruction that incorporates the use of both print and digital methods of communication. This type of instruction prepares learners to accomplish important reading and writing tasks that are indispensable in today's world, (Patel 2010).

Digital Literacy

Digital literacy is defined as making use of technologies to find, use and disseminate information. It is observed from different perspectives, depending upon the disciplines. However fundamentally, it focuses upon more on literacies than media and involves finding, using and disseminating the information in the digital world. With the utilization of digital media sources, one is able to implement the daily activities in personal and professional life.

However, without more data on low-literate adults and their exposure to emerging communication technologies, we are unable to decipher how pervasive the lack of literacy skills may be, or how we may address and ameliorate the problem, particularly through use of the technologies themselves. This study makes one contribution toward building a theoretical bridge between two previously unconnected disciplinary areas, adult literacy and information communication technology. But the results of this study extend the body of knowledge in both fields, and potentially lead to new understandings of how facilitators deploy ICT in teaching low-literate persons and also how these individuals use new technologies to communicate.

Research Method

This study adopted the descriptive survey design. Enugu East Senatorial Zone was specifically chosen for the study. Enugu state has Agency for Mass

Literacy that oversees adult non formal education and skill acquisition programs in the state. At the time of this research work, there were at fifty-one adult learning centers in the zone, with each local government having at least ten (10) learning centers. However, the study concentrated in the adult learning and skill acquisition centers in the urban areas. The population of the study was three hundred and fifteen (315) made up of all the male and female facilitators in Enugu North and Enugu South adult learning centers comprising of One Hundred and Thirty-Four (134) male staff population and One Hundred and Eighty-One (181) female staff population. However, The census sampling method was adopted in selecting the sample size of the study that comprised of One Hundred and Thirty-Four (134) male staff population and One Hundred and Eighty-One (181) female staff population. The instrument used for data collection was a 32 –item structured questionnaire titled “Information and Communication Technology and Teaching Adult Literacy Questionnaire (IACCTALQ). The instrument was validated by experts in Enugu State University of Science and Technology and the internal consistency reliability was 0.82. Data from the respondents were collated and analyzed using percentages for designation data, mean rating and standard deviation to answer the research questions. ANOVA was used to test the hypotheses at 0.05 level of significance

Presentation of Research Findings

Research Question 1: To what extent do adult facilitators utilize information technology in teaching basic literacy in skill acquisition centers in Enugu State?

Table 2: Mean scores and standard deviation ratings of male and female facilitators on the extent of

Items		Male Facilitators (N = 103)			Female Facilitators (N = 152)		
Information Technology and Basic Literacy Skills		Mean	SD	Remark	Mean	SD	Remark
1	Audio listening media channels helps the students' in understanding text structures,	2.67	0.63	Great Extent	2.54	0.53	Great Extent
2	Using of phonetic audio application in classroom enhance the students' concentration	3.17	0.71	Great Extent	2.62	0.60	Great Extent
3	Incorporating online web language sites in classroom teaching increases students' knowledge of vocabulary	2.56	0.55	Great Extent	2.75	0.73	Great Extent
4	Use of interface tablets in classroom help the students in spelling patterns	2.81	0.70	Great Extent	3.20	0.82	Great Extent
5	Online class activities that integrate reading and writing skills contribute to development of these skills in students	2.60	0.60	Great Extent	2.51	0.50	Great Extent
6.	Using information technology in classroom teaching increase durable transferable learning for students	2.73	0.70	Great Extent	2.90	0.77	Great Extent
7.	Using the digital and online media tools in classroom enhance students' usage of these technologies.	2.80	0.75	Great Extent	3.03	0.80	Great Extent
8.	Digital tools helps students' to perform practical literacy tasks	2.17	0.42	Low Extent	2.44	0.41	Low Extent
Means of Means'		2.68	0.63	Great Extent	2.75	0.65	Great Extent

utilization of information technology in teaching basic literacy in skill acquisition centers in Enugu East Senatorial Zone of Enugu State.

Generally, the mean of means value of 2.68 for facilitators and 2.75 for administrators respectively fall above 2.50 revealing that the respondents agreed to great extent that incorporating digital tools in learning digital literacy makes it easier for adult learners to understand and apply the knowledge acquired in these training centers in their daily lives and occupations.

Research Question 2: To what extent do adult facilitators utilize digital technology in teaching digital literacy in skill acquisition centers in Enugu Senatorial Zone of Enugu State?

Items		Male Facilitators (N = 103)			Female Facilitators (N = 152)		
	Digital technology use	Mean	SD	Remark	Mean	SD	Remark
9	projectors as teaching aids to discuss technological concepts and issues make these easier to understand by adult learners.	2.67	0.56	Great Extent	2.53	0.51	Great Extent
10	As recorded classroom presentation sent through WhatsApp to adult learners enhance their learning outcome	2.71	0.65	Great Extent	2.57	0.55	Great Extent
11	By requesting for learners feedback via interactive online learning platforms such as google classroom makes it easier for them to use these technologies.	2.81	0.75	Great Extent	3.03	0.80	Great Extent
12	As real-time moving images combined with audio conferencing helps in teaching computer applications to adult learners.	2.68	0.60	Great Extent	3.06	0.82	Great Extent
13.	As slides to show adult learners still images of computer hardware and their uses increases the adult learners concept of computer	3.01	0.81	Great Extent	2.51	0.50	Great Extent
14	As pre-produced moving images such as film, videotape can depict various real time application of computer software application to adult learners.	2.54	0.52	Great Extent	3.15	0.84	Great Extent
15.	Sending course notes or curricula instructions to adult learners via email encourages adult learners to use it.	2.81	0.67	Great Extent	2.70	0.65	Great Extent
16.	as computer-assisted instruction (CAI) which is self-contained teaching machine to present individual computer appreciation lessons do improve the concentration of adult learners	3.13	0.84	Great Extent	2.63	0.53	Great Extent
17.	Deploying Computer manage instructions (CMI) which entails using computer to organise instruction and track student records and progress make teaching computer skills to adult learners easier.	2.70	0.63	Great Extent	2.68	0.62	Great Extent
Means of Means'		2.78	0.67	Great Extent	2.76	0.65	Great Extent

Table 3: Mean scores and standard deviation ratings of male and female facilitators on the extent of use of digital technology in teaching digital literacy in skill acquisition centers in Enugu Senatorial Zone of Enug

Generally, the mean of means value of 2.78 for male facilitators and 2.76 for female facilitators indicate that almost all the respondents agreed to great extent that use of technologies such as projector, slide

presentation aid teaching process combination of audio conference and recorded classroom presentation do enhance adult digital learning process.

Testing of Null Hypotheses

H0₁: There is no significant difference in the mean rating of male and female facilitators on the extent of

use of Information Technology in teaching basic literacy to adult learners in skill acquisition centers in Enugu East Senatorial Zone of Enugu State.

Table 6: ANOVA table for mean rating of male and female facilitators on the extent of use of Information Technology in teaching basic literacy to adult learners in skill acquisition centers in Enugu East Senatorial Zone of Enugu State

	SUM SQUARES	OF DF	MEAN SQUARE	F	SIG.
Between Groups	1.081	1	1.081	4.368	.056
Within Groups	54.668	255	.247		
Total	55.749	256			

The above table is an ANOVA table for testing the hypothesis which stated that there is no significance difference in mean response ratings of male facilitators and female facilitators on the extent of utilization of Information Technology in teaching basic literacy in Skill Acquisition Centers in Enugu Senatorial Zone of Enugu State. The hypothesis was tested with F table statistics. A calculated F table value of 4.368 was obtained in the study at probability level of 0.5. Assumption significant level of .056 observed from the study is greater than .05, indicating that the result is not significant. The null hypothesis

which states that there is no significance difference in mean ratings of male facilitators and female facilitators on extent of use of Information Technology in teaching basic literacy in Skill Acquisition Centers in Enugu Senatorial Zone of Enugu State on the was accepted.

H0₂: There is no significant difference in the mean response ratings of male and female facilitators as regard the extent of application of communication technology in teaching digital literacy to adult learners in skill acquisition centers in Enugu East Senatorial Zone of Enugu State.

Table 7: ANOVA table for Mean response ratings of male and female facilitators as regard the extent of application of communication technology in teaching digital literacy to adult learners in skill acquisition centers in Enugu East Senatorial Zone of Enugu State.

	SUM SQUARES	OF DF	MEAN SQUARE	F	SIG.
Between Groups	.001	1	.001	.004	.950
Within Groups	55.694	225	.252		
Total	55.695	226			

The above table is an ANOVA table for testing the hypothesis which stated that there is no significance difference in mean in mean response ratings of male

and female facilitators on the extent of utilization of digital technology in teaching digital literacy in Skill Acquisition Centers in Enugu State. The hypothesis

was tested with F table statistics. A calculated F table value of .004 was obtained in the study at probability level of 0.5. Assumption significant level of .950 observed from the study is greater than .05, indicating that the result is not significant. The null hypothesis which states that there is no significance difference in mean response ratings of male and female facilitators on the extent of utilization of Communication Technology in teaching digital literacy in Skill Acquisition Centers in Enugu Senatorial Zone of Enugu State was not rejected.

Discussion of Research Findings

Extent to which information technology was used in teaching basic literacy in skill acquisition centers in Enugu East Senatorial Zone of Enugu State

Information technology were used in teaching basic literacy to great extent in skill acquisition centers in Enugu East Senatorial Zone of Enugu State. Again, there is no significant difference in the mean rating of male and female facilitators on the extent of use of

Extent to which communication technology was applied in teaching digital literacy in skill acquisition centers in Enugu East Senatorial Zone of Enugu State

Communication technology were applied in teaching digital literacy to great extent in skill acquisition centers in Enugu East Senatorial Zone of Enugu State. Moreso, there is no significant difference in the mean response ratings of male and female facilitators as regard the extent of application of communication technology in teaching digital literacy to adult learners in skill acquisition centers in Enugu East Senatorial Zone of Enugu State. The result findings implies that the use of communication technologies such as projector, slide presentation aid digital literacy teaching process, also combination of audio conference and recorded classroom presentation do enhance student learning process. This finding was supported by Castilla et al (2018) study on use of social network linear navigation, which is a form of

Information Technology in teaching basic literacy to adult learners in skill acquisition centers in Enugu East Senatorial Zone of Enugu State. The result findings indicate that incorporating digital tools in learning basic literacy makes it easier for adult learners to understand reading and writing skills and apply the knowledge acquired in these training centers in their daily lives and occupations. This finding was supported by Igwe, Kadiri and Ekwueme (2020) study which showed that ICT plays a vital role in enabling adults who skipped being taught the skills of reading and writing formally in a conventional classroom and those with reading and writing difficulties acquire and develop these skills. This finding was corroborated by Khanon (2018), study that revealed that ICT enabled students to have access to knowledge during English classes. Teachers affirmed that they deployed ICT tools in teaching which most of the times, yielded positive results, implying that ICT supports language learning.

ICT deployment to teach digital literacy to elderly in rural areas showed continued use of the system improved the users' perceptions of their own capacity to handle ICTs and their interest in ICTs in general.

Conclusion

Adult educators may once have been able to ignore the educational applications of technology, but that is no longer the case. The tools that can support and advance the goals of adult learning are a part of everyday life and are used by millions of adults on a daily basis. Unless adult educators become proactive in developing opportunities that will provide advantages for adult learners, they may end up watching the exploitation of technologies from the sidelines. The study revealed that incorporating digital tools in learning basic literacy makes it easier for adult learners to understand reading and writing skill and apply the knowledge acquired in these training centers in their daily lives and occupations. Moreso the study showed that the use of financial

technologies such as projector, slide presentation aid financial literacy teaching process, also combination of audio conference and recorded classroom presentation do enhance student learning process. Furthermore, the study revealed the interrelatedness of ICT in teaching basic literacy and digital literacy to adult learners in skill acquisition centers in Enugu State. The study found that deployment of ICT facilities in adult literacy programs in these centers makes it easier for facilitators to achieve their learning objectives and these ICT tools help adult learners to understand literacy and apply the knowledge acquired in these training centers in their daily lives and occupations.

Recommendation

Based on the findings of the study there are a number of recommendations that could be put into place to begin to ameliorate the lack of information and communication technology use by low-literate adult students and these include;

From the findings, it showed that tutoring low literate adult learners with ICT tools will improve their condition and give them life changing experiences. Therefore, this study advocates that the government introduce a 21st century, multi-literacies-based curriculum which utilizes communication technology as part of the pedagogy and such curriculum can be are either student-initiated, or are programmatic in nature.

The Ministry of Education through the National Commission for Mass literacy Adult and Non-Formal Education should initiate activities students could accomplish in this multiliteracies-oriented curriculum in class and continued as homework or extended class sessions, such as using writing software for dictating coursework or reading audio books with accompanying printed versions.

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