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ICT AS A TOOL FOR ENHANCING LITERACY FOR LIVELIHOOD IN THE COMMUNITIES OF IMO STATE, NIGERIA

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Abstract

The study examined ICT as a tool for enhancing literacy for livelihood in the communities of Imo State, Nigeria. Four (4) research questions guided the study. Survey research method was adopted. Sample size was 60 respondents. An instrument with $r=0.71$ tagged 'Questionnaire on ICT for Enhancing Literacy for Livelihood in the Communities' (ICTELLC) was used for data collection. Completed and retrieved 57 copies of questionnaire were analysed using mean statistics. Results show that smart phones, computers, radio and television are ICT facilities available in the study area's literacy centres; basic literacy, functional literacy, civic and political education and remedial education are literacy education programmes that have been enhanced by the use of ICT facilities in the study area; literacy education improves livelihood; and challenges encountered in the use of ICT for literacy education promotion include: poor internet connections, inadequate computers, unstable power supply and insufficient ICT knowledge and skills.

Keywords: Information and Communication Technology, Literacy, Livelihood, Communities

Introduction

In 2002, the United Nations declared the decade between 2003 and 2012 the "United Nations Literacy Decade". The aim of the Decade is to bring literacy to all. The use of Information and Communication Technologies (ICT) continues to expand exponentially, bringing unprecedented opportunities for achieving greater educational access and success. Given this potential, United Nations Educational Scientific and Cultural Organisation (UNESCO) recognises that attention should be paid to how ICT can contribute to increasing access to literacy and improving livelihood in the communities.

The widespread use of radio as an important means of information and education has been extensively documented (Buckley as cited in Adeya, 2002). Be that as it may, there is a proliferation of Frequency Modulation (FM) radios in several parts of the country both by Government and private organisations. These locations are used for commercial purposes but also serve educational purposes. The United Nations Development Programme (UNDP, 2001) presents a model that illustrates the relationship between technology, skill development, and economic development. According to this model, a country's ICT investments can directly improve the proficiencies of its citizens. Increased skill capacity can, in turn, support the further development and increase the productive use of the technological infrastructure. The growing intricacy of the skill base coupled with the high-tech infrastructure can bring about innovation and the creation of new knowledge and new industries. New knowledge and innovation support the advancement of

the economy, which in turn provides resources needed to further develop the human, economic, and technological infrastructure and the welfare of society. Individual participation in this technology–knowledge–economic development cycle starts with literacy.

ICT can be used as an instrument for attainment of literacy skills. For instance, radio, when used in combination with printed course material, can make literacy lessons more true-to-life and interesting. Also, this combination of audio and visual stimuli is more effective than visual stimuli alone in improving vocabulary and sentence construction skills and can aid information processing and memory. Using computer programmes, the learner’s needs and interests can be met. Learners can work independently, flexibly, and at their own pace, developing both oral and aural skills at the same time as learning to read. In addition, computers can be fun to use, especially for people who have never used them before, can encourage learners to participate in literacy education, and can motivate them to continue to learn - thereby increasing rates of retention of literacy students. Since computers are able to provide users with instant feedback, learners of literacy can proceed faster and successfully than otherwise. In this sense, computers and multimedia computer programmes provide an advantage over radio and television in that they enable interactive learning, trial and error, and manipulation of text (Wagner & Kozma, 2015).

Furthermore, well-designed educational computer programmes are exciting to use, which motivates learners, especially when literacy teachers are well-trained in integrating computer technology into lessons. For example, colours and animation in computer programmes engage learners and encourage them to participate. Similarly, by presenting reading lessons in a game form, computer programmes encourage learners to compete against themselves and therefore, learners willingly engage in repetition and practice without losing interest. Such computer programmes, by tirelessly repeating words and correcting errors for large numbers of students at the same time, also take the pressure off overworked teachers (UNESCO, 2006).

Increasingly, the use of new (and old) ICTs has become a topic of great interest to adult literacy educators (Askov, Johnston, Petty, & Young, 2016). Technology can be used in two primary ways to support the acquisition of literacy skills. First, the capabilities of technology can be used to support development of the cognitive processes and basic skills involved in literacy. Second, technology can be used effectively to support the development of literacy skills for learning at a distance when instruction and other resources might not otherwise be available. The link between literacy and livelihood is necessary in terms of the need to integrate education and

work, create opportunities to apply the skills acquired in literacy and numeracy and to contribute to poverty alleviation process. There exists an enabling environment which is characterised by a favourable policy context.

However, it is pertinent to develop the capacities of literacy providers on the value of ICT especially on the possible benefits of radio. Radio and tape recorders may be desirable because they are relatively low in cost and easily reached. To maximise the use of radio, learners should be mobilised and organised into learning groups such as radio learning and listening groups. The original cost for the use of television and video might be high but in the long run the usefulness and benefits that would be derived outweigh cost. There have been a large number of non-formal education programmes using elements of distance learning over the years, and this seems set to continue as new technologies become increasingly available. These include mobile phones (particularly text messaging); small-scale and local production and distribution of sound and images by smaller, more powerful and cheaper cameras and cheaper and more convenient computer software and hardware; portable FM radio broadcasting equipment and satellite; and digital changes in printing technology, making local production of materials (both learner generated and trainer provided) more accessible and affordable.

The first application of ICT draws on the interactive abilities of the computer. The computer has, compared with other (older) technologies, the nearly unique capability to accept ‘input’ and use this to determine its subsequent presentation of information or ‘output’. This input–processing–output capability can be used to develop computer-based tutorials that support the cognitive processes involved in reading, primarily those related to decoding. Innovations in hardware and software are increasing the computer’s ability to provide such support; and, it should be known that there are new tools based on computer chips that are known as “talking books” which do not require a computer but offer some of the same enhanced interactive capabilities (Wagner & Kozma, 2015). Word processors were among the earliest applications developed for personal computers, and teachers of writing were among the earliest adopters of technology to support education. The technical skills involved in using word processors have now become an important part of ‘computer literacy’.

The growing availability of personal computers and word processors in the 1980s coincided with the emergence of the cognitive theories of writing mentioned earlier. These theories found their application at the college level in a ‘process approach’ to the teaching of writing. With

this method to the teaching of writing, the focus moved from the qualities of a well-written text, as represented by the classic works of literature, to the cognitive processes of planning and creating a written text – setting a purpose and audience for the text, organising information, transforming ideas into text, reviewing it relative to the purpose, and revising (Hayes & Flower cited in Chhabra, 2017). Teachers saw the word processor as a way to support this process. The use of word processors during the writing class allowed the teacher to focus on and observe writing while it was in progress and to encourage students to plan and revise as well as generate text (Popoola, 2014). Another major application of ICT to support adult education is distance learning, which is often used where there are insufficient numbers of qualified and trained teachers. As a result, distance learning is playing an increasingly important role in developing countries (UNESCO, 2002).

The roots of distance learning goes back to correspondence programmes, primarily in higher education, with the earliest programmes in developing countries being in the Philippines in 1940 and Indonesia in 1955. With the development and dissemination of radio and television, developing countries used these technologies to address the educational needs of remote populations. Beyond these traditional technologies, ICTs are now playing a role in creating ‘virtual classrooms’ that support distance learning. E-learning is at present focused mainly within higher education, and is growing rapidly in adult education in the USA (Singh & Raja, 2014). Each technology may permit adult learners to access otherwise unavailable resources and use their growing literacy skills to further their education. Since the primary use of technology in poor countries remains in radio and television, where there has been some evaluation research, it is useful to provide a summary before moving on to new ICTs where less solid research exists. ICT is used as an effective instrument for enhancing peoples’ livelihood through increased access to information that is important to their economy, healthcare, transport, distance learning etc. Today, ICT is used at almost every level of decision making process like in the planning, implementation and monitoring. Several social welfare projects and developmental programmes have been successfully implemented using ICT under strictly specified timeline.

However, with the mentioned above, it is expected that adult learners especially at the continuing education centres, in lieu of the provision of ICT facilities by governments and non-governmental agencies; maximize these electronic resources to improve their learning ability. It is

against this backdrop that this study examined information and communication technology as a tool for enhancing literacy for livelihood in the communities of Imo State, Nigeria.

Statement of the Problem

The problem ICT faces as a tool for enhancing literacy is that some of the adults do not know how to handle gadgets like phones, laptops etc. and these poses as a problem to the adult learners, therefore reducing the use of ICT in enhancing literacy in the communities of Imo State. Some of the literacy centers are not equipped with facilities that will facilitate teaching and learning in adult learners. Some of the adult facilitators do not know how to use ICT facilities to teach the adult learners, thus they result to the use of traditional method. That is, literacy centers use nearly obsolete systems of teaching and this serves as a barrier for effective literacy education and thereby, making the knowledge imparted on the adult learners inadequate. Therefore, based on the aforementioned, the present study would examine how ICT can be used as a tool for enhancing literacy for livelihood in the communities of Imo State, Nigeria.

Research Questions

1. What are the ICT facilities available in the communities of Imo State literacy centres?
2. What are the literacy education programmes that have been enhanced by ICT in the communities of Imo State, Nigeria?
3. What are the various ways in which literacy education improve livelihood in the communities of Imo State, Nigeria?
4. What are the challenges faced in the use of ICT for literacy education promotion in the communities of Imo State, Nigeria?

Methodology

Research Design

The research design used in this study is the survey research method.

Population

The population of the study comprised Global Varsity Institute of Continuing Education which is located at Okpala with 20 adult learners, Seeking Makers Youth Foundation located at Ikenegbu, with 15 adult learners, and Functional Adult School located at Amakohia, with 25 adult learners. Therefore, the entire population of this study was 60 adult learners.

Sample and Sampling Technique

The study adopted total enumeration sampling technique for sample size since the population is not too large. Therefore, 60 respondents served as the sample size.

Instrument and Data Collection Method

A 16-item self-developed research instrument tagged ‘Questionnaire on Information Communication Technology for Enhancing Literacy for Livelihood in the Communities’ (ICTELLC) was used for data collection. It is appropriate to use questionnaire for this study because it is considered relevant when factual information is desired and is usually used to obtain facts about the past, present, and anticipated events; and also about the prevailing conditions and practices in any human organisation. The research instrument elicited information on variables that were captured in the research questions to guide the study. The instrument was designed on modified four point Likert rating scale. The numerical rating of responses in the questionnaire was scored thus: Strongly Agree (SA)=4, Agree(A)=3, Disagree (D)=2 and Strongly Disagree(SD)=1. The instrument was subjected to content and face validation which was done by two experts in the area of Adult and Non-formal Education to ensure that it measures what it is supposed to measure. The instrument has reliability index of 0.71.

Data Analysis Method

The completed and retrieved 57 copies of questionnaire were analysed using mean statistics. Criterion mean for taking decision was 2.5 (4+3+2+1 divided by 4=2.5). Decisions for items whose values are below 2.5 were disagreed while those above 2.5 were agreed.

Results

Research Question One: What are the ICT facilities available in the communities of Imo State literacy centres?

Table 1: Mean analysis of respondents’ responses on ICT facilities available in the communities of Imo State literacy centres

S/N	ICT facilities available in the communities of Imo State literacy centres	SA	A	D	SD	\bar{x}	Decision
1	Smartphone is one of the ICT facilities used in teaching adult learners	10	29	13	5	2.77	Agree
2	Computers are one of the facilities used in teaching adult learners	19	32	6	-	3.23	Agree
3	Radio is another facility used in teaching adult learners	29	26	-	2	3.44	Agree
4	Television is another facility used in teaching adult learners	23	32	-	2	3.33	Agree
Grand Mean						3.19	

The above table shows that smart phones, computers, radio and television are ICT facilities available in the communities of Imo State literacy centres. This is in line with the mean score of the respondents' responses to the questionnaire items, which shows that all the items were accepted by the respondents.

Research Question Two: What are the literacy education programmes that have been enhanced by ICT in the communities of Imo State, Nigeria?

Table 2: Mean analysis of respondents' responses on literacy education programmes that have been enhanced by ICT in the communities of Imo State, Nigeria

S/N	Literacy education programmes that have been enhanced by ICT in the communities of Imo State	SA	A	D	SD	\bar{x}	Decision
5	Basic literacy education has been enhanced by the use of ICT facilities	21	31	3	2	3.25	Agree
6	Functional literacy has been enhanced by the use of ICT facilities	21	30	5	1	3.25	Agree
7	Civic and political education has been enhanced by the use of ICT facilities	15	29	5	8	2.89	Agree
8	Remedial education has been enhanced by the use of ICT facilities	19	30	5	3	3.14	Agree
Grand Mean						3.13	

The table above shows that basic literacy, functional literacy, civic and political education and remedial education are literacy education programmes that have been enhanced by the use of ICT facilities in the communities of Imo State. This is seen in the mean score of the respondents' responses which shows a general acceptance of all the questionnaire items.

Research Question Three: What are the various ways in which literacy education improve livelihood in the communities of Imo State, Nigeria?

Table 3: Mean analysis of respondents' responses on various ways in which literacy education improve livelihood in the communities of Imo State, Nigeria

S/N	Various ways in which literacy education improve livelihood in the communities of Imo State	SA	A	D	SD	\bar{x}	Decision
9	Being able to read and write has help my source of livelihood	28	26	3	-	3.44	Agree
10	New ideas has been developed in running my business	26	28	1	2	3.37	Agree
11	Being empowered with the acquisition of essential skills to function in groups and in the community	25	28	2	2	3.33	Agree
12	I have become more productive in my family and community	26	25	5	1	3.33	Agree
Grand Mean						3.36	

It is obvious from the table above that literacy education improves livelihood. This is seen in the mean score of the respondents' responses which shows a total acceptance of the questionnaire items.

Research Question Four: What are the challenges faced in the use of ICT for literacy education promotion in the communities of Imo State, Nigeria?

Table 4: Mean analysis of respondents' responses on the challenges faced in the use of ICT for literacy education promotion in the communities of Imo State, Nigeria

S/N	Challenges faced in the use of ICT for literacy education promotion in the communities of Imo State	SA	A	D	SD	\bar{x}	Decision
13	There is poor internet connection in the literacy center	22	26	6	3	3.18	Agree
14	There is no enough computer for everyone in the center	26	26	3	2	3.33	Agree
15	Unstable power supply in the center	26	23	6	2	3.28	Agree
16	Inadequate knowledge of using ICT facilities	13	22	8	14	3.61	Agree
Grand Mean						3.35	

The challenges encountered in the use of ICT for literacy education promotion include: poor internet connections, inadequate computers, unstable power supply and insufficient ICT knowledge and skills. These challenges are seen from the table above showing the mean score of the respondents' responses to the questionnaire items. The mean score shows that the items were accepted by the respondents.

Discussion of Findings

It was revealed from the findings that smart phones, computers, radio and television are ICT facilities available in the communities of Imo State literacy centres. These ICT facilities are used for academic purposes to enhance the literacy education programme. This finding corroborates Omekwu, Eke and Odoh (2014) and Popoola (2014) who claimed that people use social media for academic purposes in literacy centres. Also, McQuail cited in Asemah (2017) stated that individuals use certain media to inspect what is happening within and outside their domain, to which Whiting and Williams (2018) revealed that individuals use social media to spy and monitor what other people are doing to achieve literacy. It therefore implies that ICT facilities can be used in various ways to attain literacy, and as such should be made available and also utilized for such purpose.

The finding also revealed that basic literacy, functional literacy, civic and political education, and remedial education are literacy education programmes that have been enhanced by the use of ICT facilities in the communities of Imo State, Nigeria. This finding confirms the fact that ICT plays enormous role in enhancing literacy education. In line with this, Wagner (2008), as cited in Dighe (2016), affirmed that ICT can be used to support literacy acquisition in two different ways i.e. enhancing the development of the cognitive and basic skills involved in literacy as well as supporting the development of literacy skills at a distance especially in places where instruction and other vital resources for the uptake and effective administration of literacy programmes might not be available or not enough. As such the impact of ICT in literacy education can never be over emphasized. The implication therefore is that ICT should continually be used as a tool for enhancing literacy for livelihood.

It is also discovered from the study that literacy education improves livelihood in the communities of Imo State, Nigeria. It was revealed that it does this through enhancing and promoting reading and writing, critical thinking, skill acquisition and creativity (functionalism). This is why UNESCO (2002) made it clear that literacy is intimately involved with the individual's own life and with his place in his community. The implication is that literacy education programmes should be encouraged and sponsored to improve and enhance individual livelihood.

Lastly revealed in this study is the challenges encountered in the use of ICT for literacy education promotion. These challenges are poor internet connectivity, inadequate computer, unstable power supply and insufficient ICT knowledge and skills. Luambano and Nawe (2014) in their investigation on the use of internet by students of the University of Dare es Salaam found that majority of the students do not use internet because of the shortage of computers with internet facilities, lack of skills in internet use and slow speed of computers. Crawford (2003) also revealed from her study that inadequate numbers of PCs for students, problems with password notification and inadequate technical support are problems encountered by the students. These challenges made it impossible to have proper promotion of literacy education through the use of ICT.

Conclusion

Conclusively, the results of this study show that ICT is making some positive contributions to livelihoods in the communities of Imo State through literacy. Its impact extends to economic issues such as better earnings and saving money from their businesses, social issues such as community interaction and knowledge sharing, and better acquisition of basic skills. The impact

also extends to human issue such as making the people to become more productive in their family roles. Be that as it may, improved access to ICT, will facilitate the adoption of literacy to make livelihoods in the communities more sustainable.

Recommendations

Based on the findings and conclusion of this study, it is therefore recommended that:

1. The affordances of smart phones, computers, radio and television, as well as more ICT facilities, should be adequately utilized in various literacy programmes.
2. Stakeholders in education should endeavor to make available adequate ICT facilities for teaching and learning since it is deduced from the study that it enhanced the available literacy education programmes in the communities of Imo State, Nigeria.
3. Literacy education should be made available to all and sundry in order to improve livelihood in the communities.
4. Stakeholders in education should see to provision of functional internet connections, enough computers, and stable power supply at the learning centres, and equally train learners in the skills of ICT usage as ways of remedying the challenges encountered in the use of ICT for literacy education promotion.

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