

**READINESS OF FACILITATORS TO ADOPT ICT IN TEACHING LITERACY  
PROGRAMMES IN IBADAN NORTH LOCAL GOVERNMENT**

**Oke Kikelomo Ayokitan**

Adult Education, University of Ibadan

**Olawuyi Olakunle Shakur**

Centre for Sustainable Development, University of Ibadan, Nigeria

---

**ABSTRACT**

Literacy programmes are programmes organized to enlighten people who have not achieved a certain level of formal education. Information Communication Technology (ICT) entails all technologies that facilitate communication and easy spread of information. The rich and the poor make use of ICT on a daily basis in this twenty first (21th) century. Although, ICT have various uses but this research work examined knowledge impartation aspect of the benefit of ICT. This study was aimed at measuring the readiness of facilitators to adopt ICT in teaching literacy programmes in Ibadan. The coded primary data were analyzed using simple frequency and correlation. The analysis revealed factors that may hinder some facilitators from adopting ICT. Some facilitators are ready to adopt ICT for teaching while others are not, perhaps because of their belief system, remuneration, personal prejudice among others. The analysis conclusively reveals that facilitators within the case study are ready to adopt ICT for teaching literacy programmes.

**Keywords:** literacy programmes, facilitators, ICT and knowledge impartation

**Introduction**

Information Communication Technology (ICT) as the name implies entails all technologies that facilitate communication and easy spread of information. Information technology (IT) and

Information communication technology (ICT) are synonymously referred to in this research work (ICT) usage is taking over the world, because it makes tasks less cumbersome, fast and easy to execute.

Nigeria is not an exception in the usage of ICT, although most facilitators had not included it in their teaching skill. However, while there is a great deal of knowledge about how ICTs are being used in developed countries, there is not much information on how ICTs are being introduced into schools in developing countries (Beukes-Amiss and Chiware, 2006). Although, some of these facilitators are willing to imbibe ICT usage but some factors such as inadequate knowledge, time and unavailable cash are inhibiting factors. A facilitator or teacher is the major stakeholder and determinant in the adoption of ICT in knowledge impartation on students. Askar and Umay (2001) buttressed this fact by stating that if teachers believed computers not to be fulfilling their own or their students needs, they are likely to resist any attempts to introduce computer technology into their teaching and learning.

According to Kristin (2015), there are two types of facilitators and they are active facilitators and developmental facilitators. Kristin (2015) further argued that active facilitators are used for short term needs while developmental facilitators use a longer-term strategy. Active facilitators are used for short programs presentation, for example presentation of a new product of a company to prospective customers. Since, a product cannot be new all the time, so it can only be presented for a short while by an active facilitator. Meanwhile, developmental facilitators are those that pass on knowledge to others on a continual basis. Usually, it does not involve the introduction of new knowledge or product but rather it involves a continuous learning phase based on previous knowledge of the students. Therefore in literacy education, we make use of developmental facilitators who help adult learners in developing themselves.

However, there are a whole lot of factors that could inhibit a facilitator from adopting ICT in teaching in literacy programmes. One major factor is “access”. There are a lot of facilitators that do not have access to ICT facilities as a result of economic situation, unrest in the policy of the nation, and terrorism among others which are

- Government approval
- environmental factors,
- economic influence,
- poverty

Facilitator's ability to adopt ICT for educational purpose is dependent on government approval because most of these literacy programs are run by the government and so if the government does not provide or deploy ICT in literacy programs it would stand as an hindrance for both the facilitator and the adult learners. Also the environmental factor which includes electrical power supply, good road network and conducive learning environment are hindrances to adopt ICT. Economic influence is a big issue particularly vis-à-vis finances. It is practically difficult and impossible for a facilitator or learner who cannot afford ICT gadgets to adopt ICT for learning and academic purposes. Poverty is a global concern particularly in the developing nation which Nigeria is one of them. An individual that can barely eat three (3) square meal usually would not be academic inclined, talk less of adopting ICT for educational reason.

All these inhibiting factors are prominent in Oyo state and Nigeria as a whole because Nigeria is a developing nation. Hence, the resultant impact of all these inhibiting factors depicts that the state of ICT facilities usage in adult literacy program in Oyo state and Nigeria is quite low. Meanwhile, the importance of ICT on several aspect of human life can never be overemphasized.

### **Statement of the problem**

Information communication technology (ICT) is used on daily, weekly or monthly basis by a lot of people who live in cities or developed areas. This assertion is based on the fact that virtually all adults that resides in cities posses a cell phone or do things on/via the computer at a particular point in time. It was observed that almost all adult learners in this case study area use facilities of ICT for several purposes but not all of them use ICT facilities for literacy or educational purposes. Meanwhile, all the aforementioned factors that inhibit the use of ICT facilities have negative impacts on the readiness of facilitators to adopt ICT for literacy programmes in Oyo state and Nigeria.

## **Objectives**

The main objective of this research work is basically to measure the readiness of facilitators in adopting ICT in teaching literacy programs (Ibadan North local government area as case study).

- Examine facilitators readiness to ICT use in literacy delivery in Ibadan
- Identify factors inhibiting facilitators from adopting ICT in teaching
- Facilitators' perception on ICT use for literacy delivery
- Examine the areas where ICT can be useful in literacy

## **Brief Literature Review**

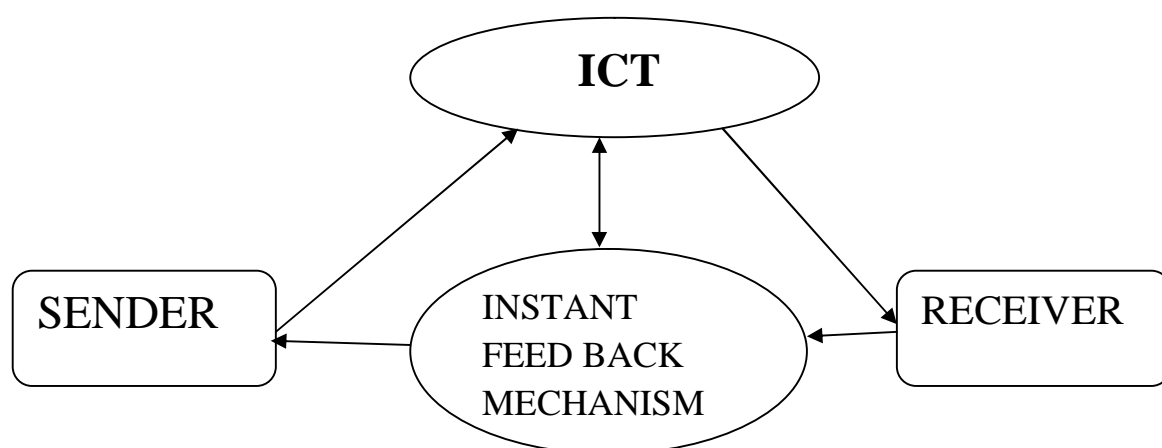
### **Definitions of ICT**

Hamelink (1997) asserted that ICTs encompass technologies that can process different kinds of information (voice, video, audio, text and data) and facilitate different forms of communications among human agents, and among information systems. A succinct definition of ICTs is that it is an electronic means of capturing, processing, storing and disseminating information (Duncombe and Heeks, 1999). Michiels and Van Crowder (2001) have also defined ICTs as a range of electronic technologies which when converged in new configurations are flexible, adaptable, enabling and capable of transforming organizations and redefining social relations.

Meanwhile some scholars replace Information technology with ICT while others use the term synonymously. For instance, Anyakoha (1991) defined information technology as the use of manmade tools for the collection, generation, communication, recording, re-management and exploitation of information. Also, Drew and Foster (1994) defined ICT as the group of technologies that is revolutionizing the handling of information and embodies a convergence of interest between electronics, computing and communication. It is however, notable that technology and information handling are the two important variables for the definition of ICT and IT.

### **Paraphernalia of ICT**

There are some tools that enable the dissemination of information without hassle. These tools are technological innovations in the twenty first century. In time past, it took information a lot of time to be delivered from the sender to the receiver, particularly when the sender and receiver are at long distances from each other. It is notable that in recent times information can easily be communicated between a sender and receiver in different parts of the world within few seconds or minutes with technological innovations and developments. Likewise, ICT provide instant feedback mechanism where as the sender of the information can have instantaneous response from the receiver of the information. Figure 1.1 shows the pattern for transfer of information between a sender and a receiver particularly in the presence of instant feedback mechanism. The arrow depicts that information is being taken from the sender and delivered to the receiver through ICT, while message is taken from the receiver and delivered back to the sender through the aid of instant feedback mechanism. This kind of transfer of information is only possible in the twenty first century particularly via the usage of phone calls, short message services (sms), emails and social media platforms.



**FIGURE 1.1: DIAGRAMMATIC ILLUSTRATION OF THE TRANSFER OF INFORMATION BETWEEN SENDER AND RECEIVER USING ICT**

There are two phases to the elements of ICT and they are the hardware and software phases respectively. Dunmill and Arslanagic (2006) argued that ICT as a term encompasses a range of

human-devised hardware, software and telecommunications technologies that facilitate communication and sharing of information across boundaries and which may be used to generate arts experiences and objects. The hardware phase comprises of materials or objects that are tangible or physical, example of this include computer hardware, telephones, radio tape, camera recorder and so on. While the software phase of ICT elements are the materials that cannot be held by hand or even seeable. The components of software are usually kept in the hardware materials. It is pertinent to note that software and hardware are interdependent. This implies that for a logical ICT production, the production must have been well coded in the software and then the hardware helps to display or emit the content of the software.

Television, radio, computer, handset, electronic bill boards, automated teller machines, fax and so on are paraphernalia of ICT. A lot of the materials or information stored and transferred for learning is usually done with the aid flash drive or Compact Drive- Random Only Memory (CD-ROM) devices.

### **The concept of facilitator and facilitation.**

Facilitators are basically educational instructors. They pass down academic knowledge to adult learners. Wang and Sarbo (2004) described adult learners as learners who actively seek what a teacher has to offer, provided it is readily applicable to their vocations or life situations. Wang and Sarbo (2004) further stated that in the context of a humanistic perspective, adult learners assume responsibility for learning and self-development. Basically, adults engage in learning exercises when they find themselves in dire need of it, usually for promotion sake or for political or social pursuits. In any case, adult learners are usually responsible for the financial consequence or implication of the knowledge acquisition procedures and period.

Ani (2003) defined adult education instructors as those who help an adult or adults to learn anything useful to them. Ugwoegbu (2003) opined that adult education instructor is anyone who has some responsibilities to perform in order to help adults learn. It is important to note that a facilitator is quite different from a teacher in terms of the modalities of passing knowledge to learners particularly because their learners are adults. Hence, Currie (2000) opined that facilitators of adult learning need to be proficient in the instructional planning components of

needs assessment, context analysis, objective setting, organizing learning activities and evaluation if they are to be effective in helping adults learn. Currie (2000) further asserted that the transition from teacher to facilitator of learning requires a shift in role from content transmitter to process manager and involves performing a different set of functions requiring a different set of skills that include relationship building, needs assessment, involvement of learners in planning, linking learners to learning resources and encouraging learner initiative.

The keywords in having a logical and precise definition of adult education are stated below;

- Adult education instructor (facilitator)
- Adults
- Learning (skill or knowledge acquisition)

There can be no adult education without a facilitator or adult education instructor.

### **ICT and literacy programs**

Liu & Zhang (2006) posited that technology integration in education is a rather recent phenomenon. Hence, this trend should be followed by parts of the world that are technologically inclined because the world is a global village. Chowdhury (2000) presents the position taken by realists that in an increasingly global village, ICTs have the potential of helping the poor to acquire literacy, marketable skills and so on. ICT makes impartation of knowledge by a facilitator to be quite easy and less cumbersome. The evidence shows that when teachers use their pedagogical knowledge both of the subject and also of how students understand and learn the subject, they can then maximize the effects of using ICT in terms of increasing students' attainment (Cox et al., 2003).

Literacy education is an international phenomenon and it is not only limited to developing nations only. As part of the creation of UNESCO after the Second World War, literacy was chosen as a key part of its mandate, and one that has been adopted by nearly all the international and bilateral agencies over the decades that followed (Daniel and Robert, 2005). The significance and importance of adult education vis-à-vis knowledge acquisition, skill acquisition, societal peace and tranquility and poverty alleviation cannot be overemphasized. Daniel and

Robert (2005) further buttressed this point by asserting that for several centuries it has been variously claimed that literacy – a key (if not the key) product of schooling would lead to economic growth, social stability, a democratic way of life, and other social good thing.

Since different ICT facilities are used for different purposes, so it is pertinent to select the best ICT facilities that would fulfill the first and third objectives, vis-à-vis engaging in literacy education.

It is very important that a facilitator must have adopted the usage of ICT before using it to impart knowledge on the students. Literacy program in respect to information acquiring through ICT has been broken down into seven dimensions by Shapiro and Hughes (1996) as cited in Currie (2000), these seven dimensions of literacy enable individuals not only to use information and information technology effectively and adapt to their constant changes but also to think critically about the entire information enterprise and information society. Those dimensions include:

- ❖ tool literacy – the ability to understand and use the practical and conceptual tools of current information technology;
- ❖ resource literacy – the ability to understand the form, format, location and access methods of information resources;
- ❖ social structural literacy – knowing how information is socially situated and produced;
- ❖ research literacy – the ability to understand and use the IT-based tools relevant to the work of today's researcher and scholar;
- ❖ publishing literacy – the ability to format and publish research and ideas electronically in textual and multimedia forms;
- ❖ emerging technology literacy - the ability to adapt to, understand and make use of the continually emerging innovations in information technology; and
- ❖ critical literacy – the ability to evaluate critically the intellectual, human and social strengths, weaknesses, potentials and limits, benefits and costs of information technology (Shapiro and Hughes (1996) cited in Currie (2000))



### **Methodology**

The administered questionnaires were collected back immediately to avoid mix up and loss of questionnaires. The filled questionnaires that were collected are termed primary data. These data were coded in statistical package for social science (SPSS). The data was analyzed descriptively and inferentially. Each of the descriptive and inferential statistics table was adequately interpreted. The study population comprises of facilitators in adult education literacy centers in Ibadan. Purposive sampling technique was used for this particular research project.

- **General knowledge about ICT**

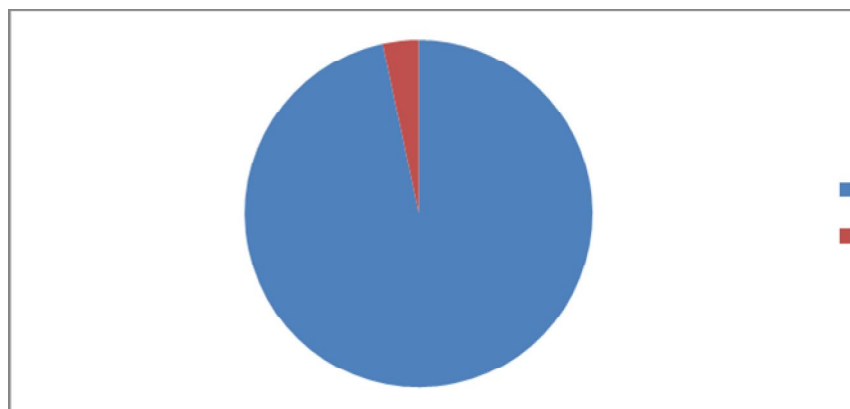
**Table 1 :I understand what literacy education is**

Valid	Frequency	Percentage
Yes	58	96.7
No	2	3.3

Source: Author's field survey (2015)

Table 1 shows that ninety six point seven (96.7%) of the respondents understands what literacy education is while just three point three percent (3.3%) of the respondents does not understand what literacy education is.

**Figure 1 : Am knowledgeable in the use of computer and internet**



Source: Author's field survey (2015)

Figure 4.2.1 reveals that ninety six point seven (96.7%) of the respondents are knowledgeable in the use of computer and the internet while just three point three percent (3.3%) of the respondents stated that they are not knowledgeable in the usage of the computer and the internet.

- **Facilitators readiness to adopt ICT**

**Table 4.3: I am willing to use ICT facilities for teaching literacy programs**

Valid	Frequency	Percentage
strongly agreed	30	50.0
Agreed	28	46.7
Disagreed	2	3.3
Total	60	100

Source: Author's field survey (2015)

The table above shows that fifty percent (50%) of the respondents stated that they strongly agreed that they are willing to use ICT facilities for teaching literacy programs, forty six point

seven percent (46.7%) also agreed while, just two percent (2%) stated that they are not willing to use ICT facilities for teaching literacy programs.

**Table 4.4: I am prepared to know more about ICT facilities and their usages**

Valid	Frequency	Percentage
strongly agreed	28	46.7
Agreed	28	46.7
Disagreed	2	3.3
strongly disagreed	2	3.3
Total	60	100.0

Source: Author's field survey (2015)

The table above shows that forty six point seven percent (46.7%) of the respondents strongly agreed that they are willing to know more about ICT facilities and their usages, forty six point seven percent (46.7%) also agreed on it while, three point three percent (3.3%) of the respondents stated that they disagreed and three point three percent (3.3%) strongly disagreed on the question “I am prepared to know more about ICT facilities and their usages?”.

**Table 4.5: There is no significant correlation between the respondent's normal usage of ICT facilities and the readiness to adopt ICT facilities for teaching literacy programs**

Variable	N	Mean	S.D	R	R Square	p-value
Usage	60	6.0500	1.24090	.030*	.090	.411
Readiness	60	20.9500	2.36804			

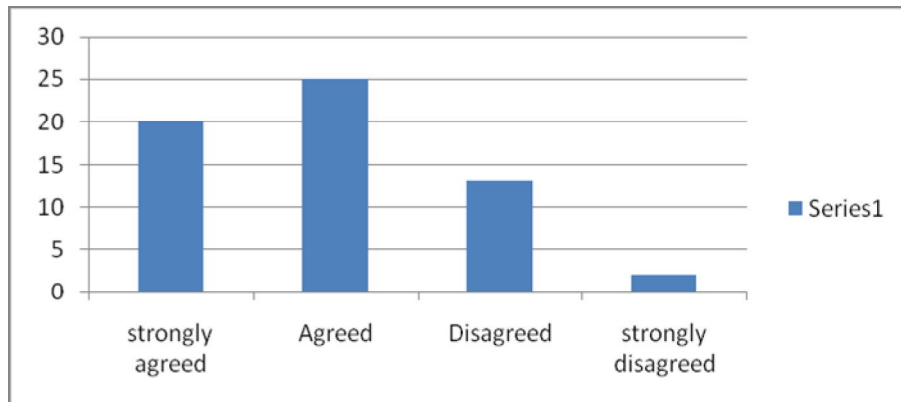
\*Significance at 0.05 level.

Source: Author's field survey (2015)

Table 4.3.4 reveals the result of correlation analysis between the usage and readiness of facilitators in respect to ICT adoption for literacy teaching (number of respondents=60). The table has a correlation coefficient (r) of 0.30<sup>\*</sup> which is above the 95% confidence level of 0.05 level of significance. The p-value is 0.411 which is higher than the standard significance level of 0.05. Therefore from table above, it is obvious that there is no significant correlation between the respondent's normal usage of ICT facilities and the readiness to adopt ICT facilities for teaching literacy programs. However, the value of the coefficient of determination ( $R^2$ ) is 0.090 which is higher than the standard value of  $P > 0.05$ . The  $R^2$  value depicts that there are still other stronger variables that could have impact(s) on readiness to adopt ICT facilities for teaching literacy programs. Meanwhile, the mean score for usage and readiness are 6.0500 and 20.9500; while their standard deviation values are 1.24090 and 2.36804 respectively.

- **Factors inhibiting the adoption of ICT**

**Figure 4.2: My remuneration is not sufficient enough**



Source: Author's field survey (2015)

The figure above shows the respondents perception to one of the inhibiting factors to a facilitators adoption of ICT for teaching. It thus depicts that thirty three point three percent (33.3%) of the respondents strongly agreed and forty one point seven percent (41.7%) agreed that their remuneration is no sufficient enough for them to adopt ICT for teaching.

**Table 4.6: I dont have access to sufficient ICT facilities or support**

Valid	Frequency	Percentage
strongly agreed	13	21.7
Agreed	39	65.0
Disagreed	7	11.7
strongly disagreed	1	1.7
Total	60	100.0

Source: Author's field survey (2015)

Table 4.5.1 also shows the respondents perception to one of the inhibiting factors to a facilitators adoption of ICT for teaching. It thus depicts that twenty one point seven percent (21.7%) of the respondents strongly agreed and sixty five seven percent (65%) agreed that the fact they don't have access to sufficient ICT facilities or support would inhibit them from adopting ICT for teaching. While, eleven point seven percent (11.7%) disagreed and one point seven percent (1.7%) strongly disagreed that that the fact they don't have access to sufficient ICT facilities or support would inhibit them from adopting ICT for teaching.

- **Perception of facilitators on ICT for literacy**

**Table 4.8: I believe ICT would improve my teaching efficiency**

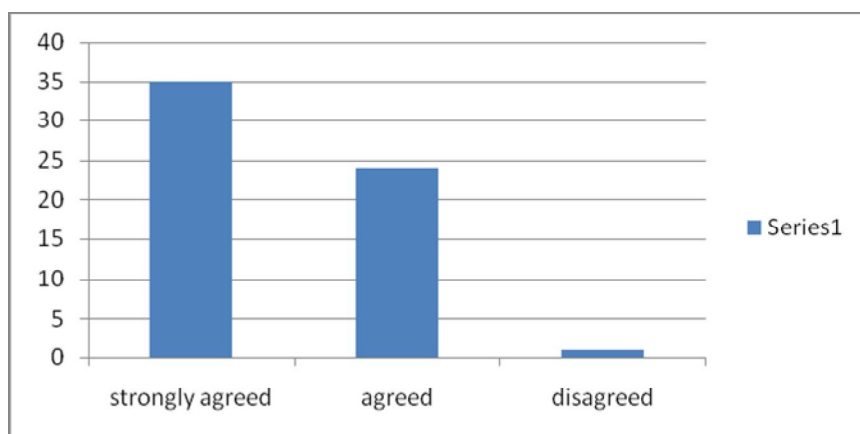
Valid	Frequency	Percentage
strongly agreed	35	58.3
Agreed	23	38.3
Disagreed	2	3.3
Total	60	100.0

Source: Author's field survey (2015)

The table above shows that fifty eight point three percent (58.3%) of the respondents strongly agreed and thirty eight point three percent (38.3%) agreed that they believe ICT would improve

their teaching efficiency. While, just three point three (3.3%) disagreed that ICT would improve their teaching efficiency.

**Figure 3: I believe that ICT would help me to understand and learn new skills of literacy education teaching**



Source: Author's field survey (2015)

The figure above reveals that fifty eight point three percent (58.3%) of the respondents strongly agreed and forty percent (40%) agreed that they believe that ict would help them to understand and learn new skills of literacy education teaching. While, one point seven percent (1.7%) disagreed that ICT would help them to understand and learn new skills of literacy education teaching.

**Table 4.10 There is no significant correlation between the respondent's normal usage of ICT facilities and the readiness to adopt ICT facilities for teaching literacy programs**

Variable	N	Mean	S.D	R	R Square	p-value
Usage	60	6.0500	1.24090	.011*	.012	.466
Perception	60	28.3833	37.28502			

\*Significance at 0.05 level.

Source: Author's field survey (2015)

Table 4.6.5 reveals the result of correlation analysis between the usage and readiness of facilitators in respect to ICT adoption for literacy teaching (number of respondents=60). The table has a correlation coefficient (r) of 0.11<sup>\*</sup> which is above the 95% confidence level of 0.05 level of significance. The p-value is 0.466 which is higher than the standard significance level of 0.05. Therefore from table above, it is obvious that there is no significant correlation between the respondent's perception and the usage of ICT facilities for teaching literacy programs. However, the value of the coefficient of determination ( $R^2$ ) is 0.12. Meanwhile, the mean score for usage and perception are 6.05000 and 28.3833; while their standard deviation values are 1.24090 and 37.28502 respectively.

## **DISCUSSION**

The demographic distribution of the respondents for this research work reveals that sixty three point three percent (63.3%) of the respondents are between age bracket 20 to 35 years old, this means the larger percentage of the respondents are youths and youths of nowadays generally have one thing or the other to do with ICT facilities. The result of this research reveals that fifty one point seven percent (51.7%) of the respondents stated that they have at one time or the other used ICT for teaching while forty eight point three percent (48.3%) of the respondents stated that they have never used ICT for teaching. The respondents' assessment about the usage and understanding of ICT cannot be used as a benchmark to judge or for assertion because some of the respondents may not be factual enough. Ballantine, McCourt, & Cyelere (2007), opined that the self-assessment by respondents as to their level of competency may be somewhat subjective, as perception of knowledge and ability in computer skills do not always correspond to the reality. Which means that almost half of the facilitators have been using ICT facilities for other purposes aside teaching which is contrary to Fakeye (2010) that stated that the knowledge of English language teachers in ICT is very poor. Meanwhile, fifty one point seven percent (51.7%) of the respondents stated that they have used other ICT facilities for teaching literacy education. Almost half of the respondents have never used ICT facilities to particularly teach literacy education.

The research also reveals that thirty percent (30%) of the respondents opined that increased salary is a factor that would propel them to adopt ICT for teaching literacy education. while, fifty

six point seven (56.7%) stated that when access to internet facilities are cheap, then they would be propelled to adopt ICT for teaching literacy education. It implies that if there had been increasing access to the internet at a cheaper rate, then some of these facilitators would have adopted ICT for teaching. This could foster solution to Danner and Pessu (2013) worries that the lack of access to computers and Internet connectivity for literacy delivery is worrisome.

The result also shows that there is no significant correlation between the respondent's perception and the usage of ICT facilities for teaching literacy programs because the p-value is 0.466 which is higher than the standard significance level of 0.05.

### **Conclusion**

This research work thus shows that the facilitators are ready to adopt ICT facilities for teaching literacy programs despite the inhibiting factors such as low remuneration, learners not being able to afford ICT facilities, no government policies that enhance affordability of ICT facilities, among others.

### **Recommendations**

The result of this research work has led to the following recommendations:

- Agency for Adult and Non Formal Education should mandate the knowledge and usage of ICT for facilitators
- Remuneration package of facilitators should be reviewed to enable them to easily adopt ICT for literacy teaching
- Government should provide ICT facilities to facilitators for usage
- There should be establishment of cooperative or union in Agency for Adult and Non Formal Education that would make ICT facilities and other fringe benefits available at a concessional and installment amount
- Agency for Adult and Non Formal Education should create opportunities for their facilitators to embark on continuous education that would improve their knowledge and skills of ICT usage.



## **REFERENCES**

- Ani, R.O. (2003). An introductory approach to the study of adult education. DonSinbad Communications. Enugu: Nigeria.
- Anyakoha, M.W. (1991). Basic librarianship: Modern technologies in information work. Owerri: Totan publisher, Pp. 106-108.
- Askar P. and Umay A. (2001), Pre-service elementary mathematics teachers computer self-efficacy, attitudes towards computers, and their perceptions of computer enriched learning environments. In *Proceedings of Society for Information Technology and Teacher Education International Conference 2001* (eds C. Crawford, D.A. Willis, R. Carlsen, I. Gibson, K. McFerrin, J. Price & R. Weber), pp. 2262–2263.
- Ballantine, J., McCourt Larres, P., & Cyelere, P. (2007). Computer usage and the validity of self-assessed computer competence among first year business students. *Computers and Education*, 49, pg 979
- Beukes-Amiss, C.M. & Chiware, E.R.T. (2006). The impact of diffusion of ICTs into educational practices, how good or how bad? A review of the Namibia situation. Available at: <http://www.dspace.unam.na:8443/dspace/bitstream/1995/244/impact+diffusionICTedupd>
- Chowdhury N. (2000) Poverty Alleviation and Information/Communications Technologies. *Towards a Motif for the United Nations ICT Task Force*.
- Cox, M., Webb, W., Abbot, C., Blakeley, B., Beauchamp, T., & Rhodes, V. (2003). *ICT and Pedagogy: A Review of the Research Literature*. London: Department for Education and Skills.
- Currie L. C. (2000) Facilitating adult learning: the role of the academic librarian. *Reference Librarian* v. 33 nos. 69/70.
- Daniel A. and Robert K (2005) New Technologies for Literacy and Adult Education: A Global Perspective. International Literacy Institute. UNESCO publishing. Pg 22
- Danner R.B., and Pessu C.O.A, (2013) A Survey of ICT Competencies among Students in Teacher Preparation Programmes at the University of Benin, Benin City, Nigeria. *Journal of Information Technology Education: Research* Volume 12.pg 46
- Drew, E. and F. G. Foster (eds.) (1994) Information Technology in Selected Countries. Tokyo: United Nations University Press.

<http://www.unu.edu/unupress/unupbooks/uu19ie/uu19ie00.htm>

- Duncombe R. and Heeks R. (1999) 'Information, ICTs and Small Enterprise: Findings from Botswana', *IDPM Manchester Working Paper* No. 7, November 1999
- Dunmill M. and Arslanagic A. (2006) ICT in Arts Education literature review. Te Puna Puoru National Centre for Research in Music Education and Sound Arts, University of Canterbury, New Zealand. Pg 7
- Fakeye D. O., (2010) Assessment of English Language Teachers' Knowledge and Use of Information and Communication Technology (ICT) in Ibadan Southwest Local Government of Oyo State. *American-Eurasian Journal of Scientific Research* 5 (4): 270-276. Pg 274
- Hamelink, C. J. 1997. New information and communication technologies: Social development and cultural change. *Discussion Paper* No. 86. New York, UNRISD.
- Kristin A. (2015) There are two types of facilitators: active facilitators and developmental facilitators. Retrieved from <http://www.extraordinaryteam.com/faqs/are-there-different-types-of-facilitators/> on 20/07/15
- Michiels, S.I. and Van Crowder, L. (2001) 'Discovering the 'Magic Box': Local Appropriation of Information and Communication Technologies (ICTs).' SDRE, FAO, Rome.
- Shapiro, Jeremy J. and Hughes, Shelley K. (1996). Information technology as a liberal art: enlightenment proposals for a new curriculum. *Educom review* 31, 2, March/April, 31-35.
- Ugwogebu I.T. (2012) Motivating The Adult Education Instructors In Nigeria. *Research Journal in Organizational Psychology & Educational Studies* Vol 1(2) Pg 100-104.
- Wang and Sarbo (2004) Philosophy, Role of Adult Educators, and Learning. How Contextually Adapted Philosophies and the Situational Role of Adult Educators Affect Learners' Transformation and Emancipation. Vol. 2 No. 3, July 2004 204-214