

ANDRAGOGICAL EDUCATION IN THE DIGITAL ERA: ISSUES AND PROSPECTS

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Abstract

In recent decades, the use of Information and Communication Technology (ICT) in teaching and learning has increased significantly. Digital technologies have aided education and contributed to better learning and teacher-student and student-student collaborations both within and outside of the formal classroom. This however is not without challenges. This paper therefore, examines the issues and prospects in the use of ICT in andragogical education (adult education). The paper is based on library research rather than on field research. However author's experience as a teacher herself came to bear in the analysis of the information she found, and in developing and expressing her ideas. The paper began with conceptual clarification of two key concepts; pedagogy and andragogy. The role of ICT in education generally and in andragogy in particular was then explained. The issues relating to ICT integration in andragogy were identified and, being the focus of the paper, discussed critically vis-à-vis the prospects they present for ICT-based andragogy. The issues identified and discussed are broadly three – access, attitude and confidence. The findings are that there is very little access to ICT in andragogical centres both in terms of availability and affordability. This situation was compounded by negative attitude to ICT use in andragogy both by teachers and learners. Closely related to the negative attitude to ICT is absence of confidence in the use of ICT even by the teachers, whereas willingness for the use of ICT by young and adult students is determined by the teachers' confidence towards its use. Within each of the three broad issues discussed, prospects for ICT-based andragogical education were identified and recommendations to harness the prospects were offered.

Keywords: Andragogy, education, ICT, Integration, Pedagogy.

INTRODUCTION

In our present age, ICT has integrated into almost all aspects of our lives, most especially in education (Leask, 2001). ICT is regarded as a valuable teaching aid (Pachler, 2001). Thus, the delivery and understanding of ICT by teachers and students (young and the adult) cannot be underestimated. Teachers are tasked with the ability to learn how to effectively and efficiently use ICT in their teaching process by designing information-rich classrooms enabling students, regardless of age to develop sufficient thinking skills that could further develop meaning to their studies (Dillemans et al., 1998). Therefore, Teachers should be supportive and competent while the students should be well informed to understand the advantages of use of ICT in education (Baylor and Ritchie 2002). In other words, the outcome of ICT use relies strongly on the determination, skill and perspective of all those involved in the educational process.

Having established the relevance and importance of ICT in education thus far, the aim of this paper therefore, is to identify and discuss the issues/problems and prospects involved in the use of ICT in education generally and in

andragogical education in particular. To achieve this aim, the paper set itself the following objectives:

1. To introduce the key concepts of the paper which is andragogy in relation to pedagogy.
2. To explain the role of ICT in education generally and in andragogy in particular.
3. To examine the issues and prospects relating to ICT integration in andragogy.
4. To offer well-informed recommendations that will enhance effective ICT integration into andragogical education.

This paper is library-based research paper rather than field-based. However author's experience as a teacher herself came to bear in the analysis of the information she found, and in developing and expressing her ideas.

CONCEPT OF ANDRAGOGY AND PEDAGOGY

Andragogy is a term referring to the principles and meth-

ods used in teaching adults, which puts emphasis more on the adults learning processes than the content of what's being taught (Reischmann, 2004). Knowles (1990) stated the need to create a learning theory that is specific to adults and also emphasized that most adults prefer to be accountable for their decisions. There is a need for most adults to understand the reason behind why they need to return to acquire education. Scanlon (2008) highlighted four reasons why Adults return to acquire education which are:

- To acquire qualifications
- To gain better working prospect
- To accomplish lifelong dreams
- To enable them curb the fear in learning experienced previously.

Pedagogy is defined by Ozuah (2005) as "art and science of teaching children". The author observed further that pedagogical educational system has been stagnant since the eighteenth century giving teachers the ability of making all learning decisions. Pedagogy was known during ancient times as a process of transferring skills and knowledge from parents to the young children (Swanson & Holton, 2001), and it has become more organized during the Greek and the Roman periods. Organized pedagogy was first realized in the seventh century (Ozuah, 2005). It's a teacher-oriented approach which places more significance on the teacher in education (Bedi, 2004) than on the parents.

ICT INTO ANDRAGOGY

There are various institutions and researchers that have found the need of integrating ICT into their pedagogical educational classrooms. However most adult (andragogical) classrooms are yet to be fully explored with the use of ICT for educational purposes. Adults believe that ICT can cause distraction, or hinder their ability of gaining knowledge (Ginsburg et al 2000). Most of these researchers also believe that a good ICT implementation has a vital role towards learning as that of other basic educational skills.

In this digital age, the need to employ ICT in educational systems is no longer debatable. Irrespective of the age of the learner ICT should be readily available and accessible to all learners (youth and adults) to prepare them for the modern digital era, where ICT is necessary for most careers (Sutherland et al, 2000). Alexander (2000) believed that without the proper integration of ICT in the educational system, the economy of a country may fall way behind of other countries' economies due to the influence it would have on employment.

Most adults encounter ICT for the first time when resum-

ing to a structured educational system (Keogh and Downes, 1998), and therefore not all adult learners efficiently and effectively learn with the use of ICT (Healy, 1998). Therefore the need to consider the differences in their ability of learning should be of relevance (Ross and Schulz, 1999). The significance of ICT's ability to integrate different mediums such as sound, video and text could be of great assistance to learning. Nonetheless use of such mediums should also be regulated. In fact resources with little or no value to education should be avoided by teachers (Aldrich et al, 1998).

Computer Aided Instructions (CAI) is a mechanism that could be used to aid and motivate individual adult learners with the ability to conquer fear and, arguably, based on the users wants and needs (Kuittinen, 1998). Kuittinen (1998) suggested that Interactivity was the key component indicated when arguing that the effectiveness of ICT use is most productive when both teaching and learning process are interactive.

The use and effectiveness of ICT depends mostly on the learners' preferences, hence the centrality of the learners' needs to successful learning. Therefore taking time to understand each learner's needs vis-à-vis his or her ICT experience could give teachers the ability to give appropriate ICT activities and learning options (Cook and Finlayson 1999). ICT use in education could encourage adult students; it could also give adult students confidence by enhancing their ICT skills while acquiring both their learning goals and empowerment (Kambouri et al, 2016).

Teachers are significantly aware of the influence that ICT has on learning approaches. Using ICT in the classroom motivates and assists a constructivist approach to learning which is well suited to adult learners. According to Lai, constructivism perceives learning as a procedure in which students construct new concepts that could be based on their present or previous knowledge (Lai, 1993). Knowles (1990) regards constructivism as an appropriate teaching approach that meets the adult student's needs as it centres on the student. Gardner further opined that learning approach should center on the student in order for the students to acquire and improve on their learning skills and thinking (Gardner, 1993).

As rightly observed by Eisenberg and Johnson, behaviorist approach as opposed to constructivist, would limit the student capability to understanding and refine problem-solving skills (Eisenberg and Johnson, 2012). The major problem of a behaviorist approach of teaching is that the students are not active towards their learning (Russell, 2002) because the teacher decides and assists the students in reaching their goals. Even though such teaching approach could be adapted to integrate ICT, this could only be

possible if ICT is used to achieve the desired class goals. In other words, irrespective of whether it is constructivist or behaviorist approach that is adopted, ICT can help to make learning a student-centered. The next section of the paper therefore focuses on the issues and prospects of integrating ICT in andragogy (adult education) in an underdeveloped country such as Nigeria.

ISSUES AND PROSPECTS RELATING TO ICT INTEGRATION IN ANDRAGOGY

The issues/problems regarding ICT integration in Andragogy are several but they revolve around three major issues: **access**, **attitude** and confidence. The problems and prospect within these three broad issues are discussed as clearly as possible in the paragraphs that follow.

ACCESS TO ICT RESOURCES

This has to do with availability and affordability of the ICT resources. ICT in several schools are made part of the teaching curricula enabling students to fully understand the basic skills needed (Vanderlinde et al, 2008). Worldwide several governments understand the need for ICT in education and have increased funding for its implementation (Pelgrum, 2001). Notwithstanding that, vast funding is directed most to pedagogy and little or no funding is directed to andragogical education centers. This is truer in most underdeveloped countries such as Nigeria. Consequently, access to ICT resources in Nigerian schools are neither adequately available nor affordable for teachers and learners especially in adult learners' centres. Whereas research has shown that ICT has reduced barriers to a traditional classroom and encouraged the adult learners that are privileged with access to classrooms with ICT resources to return to education (Gorard et al, 2000).

The prospect of ICT resources attracting and retaining adult learners underscores the need for making ICT resources available and accessible to all teachers and learners. In other words, the number should be adequate and should not be placed where a group (both teachers and learners) might not have access to such resources (Toulouse, 1997). Therefore a consideration of this should be taken when designing the ICT plan, so that the allocation gives adequate and equal access to both teachers and learners. To increase accessibility to teachers each teacher should have a personal computer if possible, otherwise a computer should be assigned to a teachers/staff room giving the staff access at all time thereby cultivating more confidence and competence towards ICT (Cunningham et al, 2003). If the institution cannot provide an ICT resource to each staff and students, it should be made affordable for each to be able to acquire one in addition to what is available in the school.

Access defined as Availability and affordability is not the

only element in successful ICT integration in education. Attitude toward ICT resources is also a very fundamental issue, which is our next subject of discussion.

ATTITUDE OF TEACHERS AND STUDENTS TOWARDS ICT RESOURCES

Teachers and students (especially adults) are not willing to change from the traditional teaching methods and norms (Becta, 2014). Moreover there are teachers that regard any kind of technology an alien to the traditional method of teaching and therefore find it difficult to adapt to its use (Goodson and Mangan, 1995). These are some of the reasons there is a slow ICT integration in education. It has been found however that positive perspective by teachers towards ICT instills positive attitude to ICT in the classroom. When teachers act negatively towards ICT it influences the students to feel uncomfortable with ICT also, as teachers are role models to the students (Rosen and Weil, 1995), and this could be of great disservice.

It is found out that negativity towards ICT by most teachers is due to their skepticism about its productiveness towards teaching (Akbaba and Kurubacak, 1999). Most teachers have just been presented with ICT equipment within the classrooms and normally are not involved in its integration process (Fisher and Dove, 1999). They therefore feel less motivated and unwilling to experiment with such equipment within the classroom. The prospect here is the involvement of teachers in the process of ICT integration in andragogical centres/schools.

On the part of the adult learners, it has been found that they have fear towards the use of ICT equipment and lack understanding of ICT language. The Perception of an adult mind on returning to education may not involve any form of ICT due to the fact that prior educational systems were not ICT integrated, therefore they had nothing to do with ICT. This gives the adult learners insecurity and anxiety on returning to this digital age educational systems (Fidishun, 2000). As the case may be, teachers ought to take note of the andragogical methods used, because this may lead to isolation of the adult learner when used inappropriately which may lead the adult learner to dropout (Galbraith, 1994). The prospect for integration of ICT in adult learners' class lies in the gradual implementation of ICT to those learners to allow those inexperienced in ICT familiarize themselves to its use so that they are not isolated nor disinterested in learning.

CONFIDENCE IN ICT USE

Closely related to the negative attitude to ICT is absence of confidence in the use of ICT even by the teachers. Factors such as confidence give both the teacher and student (especially the adult student) the ability to use ICT (Cuban et al, 2001). It is found that the willingness for the use of

ICT by young and adult students is determined by the teachers' confidence towards its use (Jamieson et al, 2006). Therefore there is a need for teachers to have great confidence in the use of ICT before adult learners can participate in its use. Jamieson et al (2006) discovered in a study carried out at Queensland state schools that the percentage of female teachers confident towards the integration of ICT in teaching was 73% against the male teachers of 40%. In another study by Russell et al (2000) in several Australian schools led to a conclusion that the level of confidence were only high in basic ICT skills, and low when it came to advanced level ICT skills.

The prospect here lies in owning an ICT Resource such as the computer. As stated before by Cunningham et al (2003), owning a Computer is one way a teacher could gain more confidence as it provides them access at a convenient time of boosting their knowledge towards ICT. Having more experience in ICT gives confidence, which on the other hand fosters better skills in the classroom (Mueller et al, 2008). Therefore when the teacher is confident the student also gains confidence.

RECOMMENDATIONS

- ICT use for educational purposes should be fully explored within classrooms and should also be considered as a vital part of the educational system irrespective of the learner's age.
- Better orientation on the significance of ICT in the educational system should be consistently pursued, giving the teachers and adult learners a clear understanding of its importance in the educational system.
- Availability and accessibility of ICT equipment should be boosted by adequate funding as it is a significant aspect in integration of ICT into the andragogical educational system, and also encouraging and boosting confidence in both the teacher and the adult learner towards its use.
- Positive attitude towards the use of ICT by teachers should be encouraged because it gives the adult learner more confidence towards accepting its use.
- With the importance of ICT in every aspect of the economy, there is need for better funding for its integration within the educational sector.
- The use of ICT in an adult educational learning process should be regarded significantly as a student-centered approach rather than teacher-centered.

CONCLUSION

This paper has stressed the importance of ICT in andragogy in the digital era. However there are constraints in the use of ICT in Andragogical method due to the not so encouraging attitude of both the teachers and the adult learners. Closely related to the negative attitude to ICT is absence of confidence in the use of ICT even by the teachers. The main factor responsible for both negative attitude and absence of confidence in the use of ICT is the lobe-sided funding of pedagogy at the expense of andragogy, which limits accessibility to the ICT facilities to both teachers and students in andragogical centers. These have to change if adult learning is to be effective in the 21st Century.

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