



# **Challenges of Using Information Technology in Teaching Adult Education in Colleges of Education in North-West Zone States, Nigeria: A Case Study Of The Isa Kaita College Of Education Dutsinma, Katsina State**

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## **ABSTRACT**

Innovation comes from changes, and changes always pose challenges to people. The changes in technological advancement have brought a lot of changes in educational sphere, thereby posing challenges to teacher of Adult Education. Teaching in Adult Education has something in common with other related fields of study because of certain manipulation. This study therefore will examine the changes in teaching adult education in relation to the curriculum and course contents. Changes in telecommunication such as the use of on line and internet services were also outlined and discussed. Areas that demand teacher's academic development and up-grading in order to fit into teaching in this generation were also discussed which include teacher's proficiency and competence in using computer and other computer related facilities. The study on the above explanation reveals that it is mandatory for any teacher /lecturer in the department of Adult and Non-formal education to acquire a practical- oriented computer experience among other. Technological advancement brought about lots of innovations and changes in education, and technical and practical oriented subject in particular.

**Keywords:** online distance education, adult learners, challenges

## **INTRODUCTION**

Information Technology (IT) also known as information and communication technology (ICT) is defined as a set of tools that help provide people with information at the right time. Information and communication technology is computer based tool people use to work with information and support information process need of an organization. Adamu (2004) defines information and communication technology (ICT) as a diverse set of technological tools and resources used to communicate, and to create, disseminate, store and manage information. He further stresses that ICT is at the very heart of educational process. Consequently, ICT use in education has a long history and impacts.

The general aim of Information and communication technology is to provide graduates with the intellectual tool and practical experience to enable them to act as a "bridge" between the user and technical computer experts. (Eze, 2000). The focus of ICT is therefore on the application of computer, which will help people carry out their work effectively. Computer which is the central means of information and communication technology is defined as a machine or electronic device that is capable of accept data, processing data and producing information as output at a very high speed and accuracy (Ani, 2006).

Avidly, in order to achieve the use of Information Technology (IT), the human, mental and organization must be put into productive use. In colleges of education, Adult and Non-Formal education, instructional

supervision by Heads of Departments is one of the greatest tools that provide teachers/lecturers with the enabling ability to perform their tasks successfully.

Adult Learning Adult learners have distinct characteristics in comparison to traditional students. Firstly, they are aware of why and what they need to learn (Knowles, 1996). It is also known that the adult learners, who have diverse educational background and goals, want to reflect their experiences on their educational process (Lindeman, 2015). They are different from other learners in terms of their responsibilities in their daily lives, which influence their educational experience (Cercone, 2008). For this reason, there is a need for an educational environment where adult learners are allowed to determine their own educational processes; to share their ideas comfortably; and to sustain their educational process alongside their private lives. Thus, online distance education environment offers appropriate opportunities through the flexibility it provides for adult learners, who are aware of their own learning responsibilities and are required to manage their own learning processes. In spite of the increase in the number of adult learners and consequently in the diversity of the students in online distance education, the number of the studies related to them are fewer in the literature than those studies about traditional learners (Chu & Tsai, 2009; Ke, 2010; Remedios & Richardson, 2013). Adult learners can be classified as young and older adults depending on their ages. However, adult learner can be defined as the ones who continue their education by balancing their family and work and are generally older than 22 (Kahu, Stephens, Leach & Zepke, 2013) and these characteristics makes them quite different from traditional learners. Although these differences might provide adult learners with some advantages in educational processes, they might lead to various challenges as well. As a consequence, these point out the need to plan educational environments and processes in accordance with these learners' characteristics. Adult Learners in Online Distance Education Considering the learner-centered nature of all instructional design models, it is a necessity to design and implement online distance education programs that meet the needs of diverse learners including adults. This requires a sound understanding of the link between adult learners' characteristics and the appropriateness of the online environments for their online experiences. Learners can manage learning processes wherever and whenever they desire through the online learning environments. Additionally, adult learners have an opportunity to engage in more interaction via the tools (e.g. discussion and chat) offered by online learning environments (Kim, Liu & Bonk, 2005). By this way, they can develop virtual teaming skills and control their own learning processes (Kim, Liu, & Bonk, 2005). Interaction is also considered as a key factor in online distance education and it is a good predictor of learning (Picciano, 2002). Online distance education also provides an opportunity for learners to engage in individualized instruction and thus learning processes can be planned in harmony with their characteristics (Means, Toyama, Murphy, Bakia & Jones, 2009). Furthermore, one of the most fundamental and crucial benefits of online distance education for adults is the opportunity for life-long learning.

### **Problem Statement**

It is obvious that the lecture method has been used in the training of adult education students in colleges of education in North-west state and in particular Isa Kaita college of Education. This situation may have led to the poor training of adult education students and as such, most of the student teachers training in Isa Kaita College of education Dutsin-ma may not fit in properly into the labour market which is now driven by information and communication technology (ICT). It has also eroded the individualization of learning and has made adult trainees passive listeners rather than active ones. There seems to be unavailability of ICT material for training of adult education students do not have the needed skills for integration of ICT into the training process. It seems there are some challenges hindering the integration of ICT into the training of adult education students in Isa Kaita College of Education Dutsinma.

Today, ICT have been found very relevant in the training of adult education students who will fit into the present world of work. This is because of its obvious advantages in the training processes. This include: learning opportunities that is characterized by the regular interaction of lecturer and adult education students in respective of time or place, or both time and place, the use of variety of media, including print and electronic, two-way communications that allow adult education student and lecturers to interact with one another.

Consequently, the study will provide more opportunities for both teachers and learners to acquire the improvised machines for easy access to information. The world is now a global village, all information, views, business and government activities are now done in digitalized machines.

## **LITERATURE REVIEW**

ICT is an accepted acronym of the word information and Communication technology it is a diverse set of technological tools and resources used to communicate, create, disseminate store and manage information (Galbreeth, 2000). This means that ICT helps in the storage and management of information. Omosa (2001) also defined ICT as the use of computers systems and telecommunications equipment in information processing. ICT as described by NTI (2010) encompasses a range of applications, communications and technologies which aid information retrieval and research communication and administration these include: Internet access, electronic mail, CD- ROMS, Telephone, online databases, library services and fax machines. It has become a global phenomenon of great importance and concern in all aspect of human endeavor spanning across education governance, business shares, productivity, trade, agriculture, commerce and others.

James (2008) indicated that ICT is a potentially powerful tool for extending educational opportunities, both formal and non-formal, to previously underserved constituencies scattered, and rural populations, groups traditionally excluded from education due to cultural or social reason such as ethnic minorities, girls and women, persons with the disabilities, and the elderly, as well as all others who for reasons of cost maintenance.

Access to remote learning resources, in which the teachers and learners have no longer rely solely on printed books and other materials in physical media.

Improving the quality of education and training is a critical issue, particularly at a time of educational expansion on ICT can enhance the quality of education in several ways, by increasing learner motivation and engagement, by facilitating the acquisition of basic skills, and by enhancing teacher training ( Haddad and Jurich, 2002). ICTs are also transformational tools which, when used appropriately can promote the shift to a learner centered environment.

The review of related literature focused on the conceptual framework, and empirical review of the early works of some researchers. Reviewed under the conceptual framework were, concept of integration.

Integration can be said to be a way of applying introducing a concept or method added to it.

Improve a system or an organizational activity. However, the literature reviewed for the study is related to the present study, but none of them is exact to the topic of this present research study.

## **METHODOLOGY**

The methodology adopted in carrying out the study was descriptive method. According to Nworgu (2006) ‘‘ a survey research is one in which a group of people or items is studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group. This design is considered appropriate because it will offer the research the opportunity of sampling the opinions of significant number of people from the population of the study without any manipulation of the variable of the study.

The research selected department of Adult and non- formal education using random sampling technique.

The population of the study will cover all the adult and non-formal education departments in the North West zone colleges of education:

- Isa Kaita College of Education Dutsin-ma
- Sa’adatu Rimi College of Education Kumbotso
- College of Education Maru Gusau
- Shehu Shagari COE Sokoto
- COE Gumel (Jigawa)
- FCE Kano
- FCE Katsina

The sampled colleges will be selected from the state colleges of education in the North West zone state. The present study used systematic literature review procedures. The research studies in the literature reporting the challenges faced by adults were systematically reviewed and analyzed. The followed procedure was presented in the following sections. Inclusion and Exclusion Criteria Several criteria were determined for the inclusion of the studies. The main inclusion criterion was that the reviewed studies had to be conducted in the contexts of online distance education programs offering academic degrees. Therefore, the studies about corporate trainings and Massive Open Online Courses (MOOCs) were excluded from the study because only the studies reporting the findings from the online distance education programs offering academic degrees were aimed to be included. Based on this main criterion, other inclusion and exclusion criteria were identified to review. Considering the developments in online distance education, the studies published since 2000 were included in this study. As another basic inclusion criterion, only the empirical journal articles were included; that is, the book reviews, literature reviews, meta-analysis studies, editorials, and conference proceedings were excluded in the current study. Furthermore, merely the articles published in peer reviewed journals were included. In accordance with the aim of this study, the journal articles aiming to investigate the challenges of adult learners in online distance education were included. As another criterion, the participants of the studies needed to be adult learners in that the studies either stated the ages of the participants explicitly or the participants were adult learners at a distance. The participants of the studies were accepted as adults only if they met the adult learner definition by Kahu et al. (2013). Since the focus of the current study is on reviewing the studies exploring adult learners' challenges, only the qualitative, mixed methods, or descriptive studies were included. Additionally, it is obvious in the literature that some challenges faced by adult learners cause dropouts in online distance education programs. For this reason, the journal articles aiming to investigate the reasons for dropout behavior of adult learners were also included in the present study.

**Data Collection and Analysis** The data collection started with a comprehensive search on the electronic databases and the tables of contents of the key journals publishing distance education and adult learning articles. The e-databases on which the search was conducted are Web of Science, SAGE Journals Online, Educational Resources Information Center (ERIC), Wiley Online Library, ScienceDirect, SpringerLink, and Taylor & Francis Online Journals. The search was conducted by using the keywords: distance education, adult learning/learners, challenges, obstacles, dropout, persistence, and retention. The tables of the contents of the 36 key journals in distance education, instructional technology, adult and lifelong education were specifically reviewed. The journal articles were reviewed in terms of their aims, methods, contexts, and results. Finally, 36 journal articles included in this study were identified. The list of the journal articles reviewed in the current study are presented in Table 1. The demographics of the participants in the reviewed articles are also presented in Table 2. The data analysis was conducted in three phases: organization of the articles, reduction of the findings in the articles through coding, and illustration of the findings via tables and a figure. The articles were firstly organized in an article database created by the researchers and were analyzed by using Constant Comparative Analysis method as suggested by Glaser (1965). Constant comparative analysis was used to compare and contrast the challenges that are encountered by adult learners at a distance reported in the studies. The challenges reported in the articles were coded and then categorized based on their similarities and differences. The analysis results were reported by comparing and contrasting the concepts and integrating the studies. The themes were created by adapting Willging and Johnson's (2009) category of dropout reasons. They were grouped as the internal challenges directly related to the adult learners' characteristics, the external challenges affected by the study conditions, and institutional challenges stemming from the educational organization responsible for the delivery of the instruction.

## **RESULTS/DISCUSSION**

The challenges experienced by adults were organized as themes depending on the properties of the challenges. The identified themes were internal, external, and program-related challenges. Internal Challenges The internal challenges include adult learners' individual challenges related to their own

characteristics. The internal challenges experienced by adult learners are classified as Management Challenges, Learning Challenges, and Technical Challenges as demonstrated in Table.

The first sub-theme found in the literature is management challenges. In the literature there is a consensus on the fact that adult learners are different from traditional students since they have family and work responsibilities. For this reason, they need to manage their family and work while continuing their education. This requisite is reported in many of the studies in the literature as the source of a major challenge for adults; creating balance between work and family or other social responsibilities (Doherty, 2006; Selwyn, 2011; Yasmin, 2013). Particularly, female learners are reported as the ones who are mostly challenged by such family responsibilities as childcare and domestic works as well as their work if they are employed (Selwyn, 2011). Correspondingly, adult learners are required to have time management skills or appropriately structure or schedule their studies to create this balance (Calvin & Freeburg, 2010; Zhang & Krug, 2012). If they have insufficient or lack of time management skills, then this causes another challenge for them to continue their education or to successfully complete distance education program. The review regarding the internal challenges indicated that middle-aged adults (between the ages of 36 and 55) are unable to create a balance between their education and work, family, and social life. Additionally, female learners who were married and had children generally have challenge to establish balance between their family and education and they could not give adequate importance to their education, accordingly (Selwyn, 2011).

**Table 3: Internal challenges faced by Adult Learners in Distance Education**

Sub-Themes	Concepts	Frequency
Management Challenges	Inability to create balance between education and work	14
	Inability to create balance between education and family or social life	14
	Difficulty in time management	6
Learning Challenges	Less commitment to education	6
	Lack of interest in program or materials	2
	Inability to understand course materials	1
	Lack of prerequisite knowledge	3
	Low concentration on study	1
	Low self-confidence	1
Technical Challenges	Difficulty in communication through the internet	3
	Insufficient computing skills	9
	Difficulty in accessing reliable information	1

The second sub-theme is learning challenges. The aforementioned management challenges influence adults' commitment to their education and less commitment to education poses one of the learning challenges for them as reported by Dumais et al. (2013). Yasmin (2013) found out that the adult learners who start to study after a long period of time have a difficulty focusing on studying. In addition to these personal challenges, some factors pertaining to distance education programs also pose learning challenges for adults when an inconsistency between the program and learners occurs. In their study, Willging and Johnson (2009) reported that lack of interest in a program or learning materials is a source of challenge for adults. Pierrakeas et al. (2004), on the other hand, indicated that learners' inability to understand course materials and their lack of prerequisite knowledge or skills for a course might be also challenges for traditional learners. The review showed that middle-aged adults have challenges to concentrate on studying and course materials owing to their busy work life.

The final sub-theme is technical challenges especially experienced by older adults. The studies conducted with older adults reported that technology usage poses a challenge for them. For example, in his study

with undergraduate students who are 50 and older, Nor (2011) reported that communication on the Internet is a challenge for adult learners. In another study with graduate adult learners who are between 50 and 65 by Erickson and Noonan (2010), it was reported that the lack of technical skills makes the instructional process challenging for learners. The same finding was also reported in the study with the students who are between 41 and 51, by Dzakiria (2012).

He additionally revealed that accessing reliable information via the Internet is another challenge for adults. The review findings demonstrated that the older adults who are 50 and above unlike the young and middle-aged adults have difficulty to participate in the collaborative activities satisfactorily due to the insufficient technical skills and insufficient interaction on the internet (Nor, 2011; Dzakiria, 2012; Chang & Kang, 2016).

### External Challenges

The external challenges include the challenges stemming from work and domestic environments or from responsibilities of adult learners as independent from their personal characteristics. The external challenges are categorized into two sub-themes as Job-related and Domestic challenges as shown in Table 4. Employed adults have challenges concerning their jobs. Even if they have the ability to create the balance between work and education, they could not find the needed time to meet the course or program requirements when they were overloaded with their works as reported by Dumais et al. (2013). Likewise, Willging and Johnson (2009) revealed that varying job responsibilities are also a challenge for adult learners. They also reported that when the adults had jobs that did not have a pre-determined work schedule or had financial problems, there were high rates of dropout in the distance education programs. It was observed that this challenge was faced by the employed middle-aged adults who lived in the countries with high population (e.g. USA, China, India, and Canada), and thereby who had busy work schedule. In this regard, they needed support from the organizations where they worked to meet the educational requirements. Lack of organizational support was reported as either the main source of the challenges or as a factor that made it difficult for adults to deal with these challenges in several studies (Joo, 2014; Park & Choi, 2009; Willging & Johnson, 2009). Due to heavy workload, lack of organizational support, schedule conflicts or, sometimes, family responsibilities –especially for female learners–, adults tend to have limited time to allocate for their education (Erickson & Noonan, 2010; Kahu et al., 2014; Rao & Giuli, 2010; Venter, 2003; Willging & Johnson, 2009; Zembylas, 2008).

**Table 4: External challenges faced by Adult Learners in Distance Education**

Sub-Themes	Concepts	Frequency
Job-Related Challenges	Work overload	1
	Lack of employing organization's support	2
	Schedule conflicts	1
	Financial problems	1
	Limited time to study	6
Domestic Challenges	Technical problems	6
	Limited environment to study	5
	Lack of family support	4

One of the domestic challenges is concerned with technical problems such as disconnection problems and lack of broadband Internet speed experienced by adults in their study locations (Dzakiria, 2012; Kahu et al., 2014; Ostlund, 2005; Rao & Giuli, 2010). For example, in their study with mature age learners, Kahu et al. (2014) reported that some of the learners had technical problems in participating in the educational activities at their home and they could not study in their workplaces. This challenge is partially a source of another challenge, which is limited physical environment to study (Kahu et al., 2014; Selwyn, 2011;



Zembylas, 2008; Zhang & Krug, 2012). In his study with undergraduate and graduate adults, Selwyn (2011) indicated that the lack of suitable physical environment to study is particularly a challenge for females since they have multiple responsibilities aside from their education such as childcare, household works, and their job-related works if they are employed. In this respect, adults need to have family support for their education as well as organizational support. Otherwise, lack of family support becomes another domestic challenge (Willging & Johnson, 2009; Zembylas, 2008). In his study with graduate students, Zembylas (2008) reported that family support served to help adult learners to deal with many of the problems they encountered and to create a balance between their family responsibilities and education.

### Program-Related Challenges

In online distance education, the context of each program might be also a source of challenge itself for learners, which is called in this study as program-related challenges. These sorts of challenges include the ones pertained to the distance education program in which adults participate in educational activities. Within this theme, there were two sub-themes called ‘tutor-related’ and ‘institutional challenges’ as demonstrated in Table 5. The literature indicates that adults suffer from insufficient interaction with both tutors and other students. Tutors clearly influence learners’ satisfaction and success in both distance education and traditional education settings. Tutors’ ineffective interaction with learners brings about several learning challenges (Dumais et al., 2013; Dzakiria, 2012; Joo, 2014; Ostlund, 2005; Venter, 2003). Tutors’ interaction problems with learners might arise when the tutors have limited communication with learners (Joo, 2014), or fail to provide them with any response (Dumais et al., 2013), or with timely response (Dzakiria, 2012). The lack of sufficient feedback (Östlund, 2005), the needed tutor assistance (Pierrakeas et al., 2004), and the lack of synchronous communication with tutors (Joo, 2014) are also among other interaction problems between the tutor and the learners.

Sub-themes	Concepts	Frequency
Tutor-related Challenges	Low interaction with tutors	7
	Low interaction with learners	8
	Feeling of isolation	5
	Unsuitable course requirements	6
Institutional Challenges	Unsuitable learning materials	4
	Too difficult or demanding program	3
	Lack of institutional support	9

Interaction among learners emerges as another interaction challenge. Studies show that interaction among adults or their engagement in the social learning groups is quite low (Furnborough, 2012; Östlund, 2005; Venter, 2003; Zhang & Krug, 2012). The reason for the insufficient interaction among the learners varied in different studies. For example, in Furnborough’s (2012) study, the adults stated that they could not interact with their peers because of their work and family responsibilities. The participants in Zhang and Krug’s (2012) study, on the other hand, showed that the reason for their lack of interaction was related to their belief that establishing a social relationship was difficult at a distance.

### CONCLUSION

The results of the study revealed three main categories, which comprise internal, external, and program-related challenges. These challenges are found to be generally interrelated. Additionally, the review yielded a classification of the challenges faced by adult learners in online distance education. It was also demonstrated that the challenges perceived by adults depend on individual characteristics such as age, gender, knowledge, skills, and the context. The theme of internal challenges presents those challenges that are caused by the learners’ individual characteristics or by their lack of some required skills to cope with these challenges. They are classified as management, learning, and technical challenges. It arises from the

review that the internal challenges are closely related with the external challenges, which stem from their job and domestic conditions. The job-related challenges include work overload, lack of organizational support, schedule conflicts, financial problems, and limited time to study. Domestic challenges, on the other hand, consist of technical problems, limited environment to study, and lack of family support. In addition, program-related challenges are categorized as tutor-related and institutional challenges. Tutor-related challenges comprise low interaction with tutors, low interaction among learners, feeling of isolation, and unsuitable course requirements. Institutional challenges are shown to be constituted by unsuitable learning materials, too difficult or demanding program, and lack of institutional support. These challenges tend to be strongly related with each other and one challenge might become the source of another as independent from their classifications in this study. The study has several practical implications for distance education administrators, practitioners, and policy makers as well as theoretical implications for the researchers. First of all, each challenge faced by the adults might be individual and contextual. For this reason, the distance education administrators are required to get student feedback in terms of the effectiveness of their Information Technology Learning experience in addition to learning about students' entry characteristics.

The purpose of conducting a research in any field of study is to put across new knowledge. Many people will agree with us that the majority of the students involved in study were very kind to us. The paper will examine the changes in curriculum of adult and non-formal education and the resultant challenges posed to the adult education teachers. The changes of communication facilities from telecommunication equipment to telecommunication technology were discussed.

The paper observed that any adult education Lecturer in this computer information and technology era that does not possess practical oriented certified computer experience may not fit into the teaching programme. The results have shown that the challenges being poised in using ICT in the teaching of adult learners have been shared by both the teachers and the students. By proper application of the knowledge there is a better hope for the learning courses of adult education in the department of adult and non-formal education in Isa Kaita College of Education Dutsinma.

The study also observed that there is the need to give the teachers/learners, students, administrative officers the zeal to use ICT. As the management of Isa Kaita College of Education is doing everything possible to promote the use and utilization of ICT facilities.

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