

# Challenges of ICT Integration among Distance Learners at the Open University of Tanzania: A case of Tanga Regional Centre

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## **Abstract**

*The study focused on the challenges of ICT integration among distance learners at the Open University of Tanzania: a case of Tanga regional centre. Two objectives guided the study: to determine barriers facing distance learners as they integrate ICT in their learning and establish effects of weak ICT integration in students' learning at OUT. The study was guided by qualitative research design. The study used 37 respondents. The findings reflected that lack of and inadequate skills and knowledge on using ICT, problem of power in rural places, high cost of internet services, negative belief that ICT device are luxurious items and the weak financial position to purchase the ICT devices like I Pad were identified as barriers in ICT integrations among the OUT students at OUT. The findings further showed that poor grades in examinations, shortage of the relevant study sources and the isolation were the effects of low ICT integration among these students at OUT. Recommendations to improve the ICT integration at OUT are attached.*

**Key word:** ICT integration, Open University of Tanzania, Barriers, I pad, CD ROM.

## **Introduction**

The Open University of Tanzania (OUT) was allowed to operate under the Parliament Act of 1992. The university uses distance-learning mode to deliver its education to more than 29 regional

centres and to coordination centres located in Egerton-Kenya, Kigali-Rwanda, and Windhoek- Namibia. Other centers are in Malawi, Zambia and Uganda. In 2008, the Open University of Tanzania adopted an ICT policy in many of its operations. This made OUT to reduce reliance on prints. For example, in the opening of the academic year, the university would distribute disks, CD roms contained - course outlines, lecture series and any relevant material for the students' studies. This meant students to learn and use ICT in their learning. Other faculties introduced moodle learning management system, which would allow the students to see lecturers' postings, discuss and submit queries about their learning. However, in a course of adoption of these learning management systems (moodle, internet and CDs) some of the students were highly challenged. Others had to drop and join conventional system where they could assemble and listen to lecturers. Other students had to take time to learn on this new innovation( Singano, 2015).This study, thus, investigated on challenges facing learners in integrating ICT in their learning at (OUT), case of Tanga regional centre.

### **Statement of the Problem**

The purpose of establishing OUT was to allow mass population to access education (Muhehe, 2002 and Rwejuna 2008). As OUT adopts ICT policy (integrate) (ICT) in delivery of education, it seems adult learners are challenged with this innovation. This has resulted to some of the distance learners to opt to join other universities, and the continuing students to take too long to complete studies (Rwejuna, 2013). Others have dropped from studies. This scenario cannot allow OUT achieve its mission and vision of allowing more people to study / access education at OUT using distance learning mode.

### **Objectives of the Study**

The purpose of this study is to investigate the major challenges OUT students face in integrating adopting ICT in their learning.

The specific objectives are to analyze:

- i. Identifying barriers facing distance learners at (OUT) as they integrate ICT in their learning
- ii. Establishing effects of weak ICT integration in students' learning at OUT.

### **Research questions**

- i. What are barriers facing distance learners as OUT students integrates ICT in their learning at OUT?
- ii. What are the effects of weak ICT integration in students' learning at OUT?

### **Significance of the study**

The University expected to get feedback on the barriers facing ODL learners as OUT students integrate ICT in their learning, thus be able to see what improvement is needed to improve students' learning using ICT. The study provides feedback, which will guide toward resources improvement in students learning such as ICT infrastructure (internet and computer facilities). The study is likely to reveal the needed level of training needed to both students and lecturers so that ICT integration can be effective in delivery of education at OUT.

### **Literature Review**

#### *Concepts of ICT*

Information and communication technology (ICT) is the technology used for communicating, transmitting, storing, creating, sharing and exchanging information (URT, 2007). It involves the use of such devices like radio, telephone (mobile and fixed lines), computer, iPad, computer, internet, hardware and software. It also includes equipment associated with these technologies, such as electronic mails, text messages, radio and television broadcasts (URT, 2007). In many settings today, distance education utilizes modern ICT (UNESCO, Institute for Information and Communication Technology

in Education, 2002). The use of ICT in teaching and learning enhances learners' motivation, skills, concentration, cognitive processing, independent learning and critical thinking abilities. It ensures positive learning attitudes among students of all ages (UNESCO, Institute for Information and Communication Technologies in Education, 2002).

### ***Overview of information and communication technology***

ICT includes varieties of technologies for manipulation and communication of information, that is; totality of technologies used for collecting, processing, communicating, storing, transmitting, sharing, retrieving and analyzing information (Maro *et al.* 2008). ICT includes devices, which process information, like computers, and other devices, which disseminate information, such as telecommunication systems (Gunton, 1993). In this century, ICT enables people to access education, including university education, smoothly, efficiently and effectively. At OUT, ICT is now one of the means of delivery of distance education. Other means include telecasting, correspondence, enhanced face to face, seminars and combination of two or more of these means.

Recently (in 2016) OUT has adopted teleconference facilities. ICT tools which are widely used are computers, internet, mobile phones, LCD, audio/visual cassettes, CDs, DVDs, blogs, wikis, podcasts and social networks and televisions, radios, one way video conferences, emails and discussion forums, (Chen and Bonk, 2008; Usluel and Mazman, 2009 and Maro, 2008). The use of ICT in open and distance learning system satisfies distance learners with their continuing educational needs since it bridges the barriers of time and space, simplifies accessing the learning materials and enables a kind of interaction among distance learners and between the learners and their tutors (UNESCO, Institute for Information and Communication Technologies in Education, 2005, Mushi, 2006). ICT enhances the

quality of education; as the world is moving rapidly into digital media and information. The role of ICTs in education is becoming more important in the 21st century (Toro and Joshi, 2012). ICT enables availability of relevant and best course materials and help to share those (Joshi *et al.*, 2012). The OUP formulated a policy in 2009 to govern and guide the integration of ICT in the delivery of distance education (Nyandara, 2012). ICT has become a commonplace entity in all aspects of life. Across the past twenty years, the use of ICT has fundamentally changed the practices and procedures of nearly all forms of human activities and responsibilities. Education is a socially oriented activity. Quality education has traditionally been associated with strong teachers having high degrees of personal contact with learners. Nowadays the use of ICT in education lends itself to more student-centred learning settings and as the world moves rapidly into digital media and information, the role of ICT in education is becoming more and more important.

### ***The Role of information and communication technology in distance education***

ICT increases the flexibility of delivery of education so that learners can access knowledge anytime and anywhere. ICT can influence the way distance learners are taught and how they learn, as now the teaching-learning processes are learner-centred and not teacher-centred. This in turn would better prepare the learners for lifelong learning as well as to improve the quality of learning (Moore and Kearsley, 1996). ICT has the potential to innovate, accelerate, enrich, and deepen skills, to motivate and engage students, to help relate school experience to work practices, create economic viability for tomorrow's workers, as well as strengthening teaching and helping schools change. ICT improves educational content and teaching that is more effective and learning methods. ICT improves the learning process through the provision of more interactive educational materials that increase learner motivation and facilitate easy acquisition of basic skills (Price water house coopers, 2010). The use

of various multimedia devices such as television, videos, and computer applications offers more challenging and engaging learning environment for students of all ages (Pricewaterhousecoopers, 2010). Active and collaborative learning environments facilitated by ICT contribute to the creation of a knowledge-based student population. Education leadership, management, and governance can also be improved through ICT by enhancing educational content development and supporting administrative processes in schools and other educational establishments. ICT also enables distance learners and tutors to be creative and able to develop relevant course materials through electronic courseware development (Moore and Tait, 2002).

Since distance learners are geographically separated from their tutors, they need a close follow-up to get solutions to various problems related to their studies. They also need encouragement, advice and personalized assessment of their academic tasks. ICT provides solutions to all of these matters (Kagugu, 2011). ICT tools enable distance learners interact with a great number of learning resources, including universities' learning management systems. With those resources, they can upload and download anything, as a need arises, including their progressive results and examination timetables. Learners can also chat among themselves and their tutors to share their experiences and knowledge and send queries to their tutors, which need immediate solutions (Kagugu, 2011). Mushi (2006; cited by Kagugu, 2011) holds that ICT tools like e-mails, chat rooms, and bulletin boards are useful to tutors to keep them in touch with their distance learners. In this way, they can monitor distance learners' participation, evaluate learning, pedagogy and the effectiveness of teaching-learning. Effective integration of ICT in distance education eliminates the problem of learner-tutor isolation.

### ***Challenges of information and communication technology integration in distance education***

Reviewed literature revealed several setbacks, which hinder the integration of ICT in open and distance learning. Guo and Cai (2006; cited by Kagugu, 2011) maintain that ICT has not effectively integrated into everyday distance teaching and learning delivery; it still relies on traditional methods. Connection to the internet is very expensive in developing countries and the hidden cost of end-user in accessing internet is also very high (Guo and Cai, 2006; cited by Kagugu, 2011). On the part of the distance learners and their tutors, studies show that many of them lack technical and pedagogical skills relevant for using ICT tools, like computers, internet and tablets in the teaching-learning process at a distance. (Chapman *et al.* 2004; cited by Kagugu, 2011). Sife *et al.* (2007) found challenges of lack of awareness and negative attitudes towards ICT, inadequate funds for ICT infrastructure and staff development, insufficient qualified ICT staff and lack of systematic approach to ICT implementation.

In their study, Swarts and Wachira (2010) found that the use of digital and e-learning environments has not been widely adopted in most of the universities in Tanzania with the exception of OUT and the University of Dar es Salaam. Swarts and Wachira (2010) depicted the following challenges in deploying and using ICT effectively in education: inadequate ICT and electricity infrastructure, especially in the rural areas. In the rural areas, telecommunication was limited to the commercial and business centres, internet access was unavailable or less available and costs of accessing internet were high. Rural areas were still underserved owing to internet access, electric supply and their costs (Swarts and Wachira, 2010). Only 10% of the total population of Tanzania was connected to the national power grid in 2006. With 1% of these being in the rural areas; the cost of connectivity was very high in Tanzania which created barriers to the spread and use of internet, which is a major vehicle for data transfer

and access to information. This resulted into low level of internet penetration and patterns of using ICT (Swarts and Wachira, 2010). Those challenges create barriers for effective use of ICT in open and distance learning, particularly to distance learners (Swarts and Wachira, 2010). In turn, the challenges contributed to open and distance learners' negative perceptions to integration of ICTs in open and distance learning (Swarts and Wachira, 2010).

### **Research Methodology**

Qualitative research design was used in this study. Patton (2009) holds that qualitative design is flexible. It is suitable to accommodate studies searching for experiences of phenomenon. This study sought to find barriers of ICT integration among ODL distance learners. To capture how, and what is exactly the experience of challenges of ICT integration in ODL, qualitative design was an appropriate design, as it allows flexible questions that generate in-depth information about the phenomenon. An advantage seems to be difficult for quantitative design with survey method.

The sample of the study composed dropout students and continuing students at ODL in Tanga. Their total was 37 informants. Qualitative design was guided by purposeful sampling techniques (Patton, 2009). Therefore, the same technique was employed to get potential respondents to respond to the interview questions. Patton (2009) insists of the few sample size, what matters is the sample, which gives maximum information for the study. Two methods were used to collect data. These were interview and focus group discussion. Interview was conducted by the research assistance who wrote the responses in the transcript and latter reported the information to the principal researcher. Focus group discussion was done to a group of continuing students who were available at Korogwe TTC at the time of attending the examination session in 2015. The analysis of data was done thematically as Bogdan and Bicklen (1998) propose it.



Information were read, used picture, synthesised, put into categories and themes to inform audience on the barriers of ICT integration in the students' learning at OUT.

## **Findings**

### ***Barriers Inhibiting (OUT) learners in integrating ICT in their Learning***

#### ***Lack of and inadequate skills and knowledge on using ICT***

It was revealed through interviews and focused group discussion methods that there were a good number of distance learners of the OUT who did not have skills and knowledge on using and working with ICT devices. Others have inadequate knowledge and skills for working with those devices. Inadequate and lack of skills and knowledge on using ICT devices were found to impede distance learners of the OUT in using ICT devices and develop negative perceptions on ICT integration in ODL. The following are views of one of the respondents during focused group discussion:

I have no ABC of using a computer. As such, I am not willing to use with a computer. However, because some of my work should be typed, I sometimes use my daughter who types for me. In her absence, I take my work to nearby stationery and hire a servant there to type my work.

During interview another respondent had the following to say on lack of skills and knowledge of using ICT devices:

We were taught ICT theoretically, mainly on how to use a computer. The lessons discouraged me much and made me hate the use of ICT devices because we were learning things, which we did not see.

The following are explanations of another respondent during an interview at Magoma, Korogwe:

I have no interest on computers and tablets or ipads mainly because I do not know how to use them. I tried to undergo private training but, with family and work obligations, I failed to cope.

### ***High costs of internet connection and of buying ICT Devices***

Interview and focused group discussion revealed that high costs of internet connection and of buying computers, laptops and other ICT devices is another barrier to ICT use and a reason for the distance learners of the OUT to have negative perceptions on ICT integration in ODL. The following are words of a respondent who dropped from studies she gave during an interview:

With my low salary I cannot manage to own a new laptop. In the beginning of my studies I thought I could manage the cost of internet connection at the internet café. However, in reality this was not the case. T.Shs.1000/= for every 30 minutes of internet connection at an internet café is so high that I could not manage to pay frequently.

During a focused group discussion session, another continuing OUT student explained about high costs of ICT devices, she said:

If you want a new and good computer you must have not less than T.shs. 650,000/=, yet you must possess an external hard disc which is about Tshs.150,000/=, a modern about T.shs. 30,000/=, a printer of at least T.shs. 150,000/= and frequent internet bundles to access internet. Total cost of all those items is high to many common civil servants and me. Even if one decides to turn to a smart phone which you can use for distance learning it will cost one not less than T.shs. 200,000/=.

### ***A Belief about ICT Devices as Luxurious***

In the villages of Korogwe, Handeni and Lushoto respondents during focused group discussion and interviews revealed that some students

of the OUT believe that computers, smart phones, tablets and similar devices are items of the well-off people. One of those respondents said:

We civil servants in the villages live and work according to how situations in villages allow us to. I do not think of using such luxurious things of the well-off people, like a computer and tablet in my work or studies while the environment is not conducive for using such items.

### *Lack of internet network and weak internet network in the rural areas*

During the interviews and focused group discussion respondents explained that there are areas in the rural areas with no internet connection while others have weak internet connectivity which hinder distance learners from smoothly using ICT and stimulating negative perceptions on ICT integration in their learning. One respondent who dropped from studies had the following to say:

Look at your mobile phone. Is there mobile network? No connection! You can't even make a call. That means no internet connection in this area. If you need internet network, you should follow that road going to Dindira Tea Factory. How can one convince me to develop interest in owning and using a laptop or Smartphone in a study area where there is no connectivity?

During an interview at Manka village in Korogwe district another respondent claimed:

Internet network is unavailable at some places here at Manka village. In other places it is weakly available. Sometimes I buy a 24-hour bundle or bundle of a week but I fail to get internet connection during the whole duration

of a week or 24 hours. My android tablet shows that I am connected but I do not access internet services.

During an interview, another respondent of Songe - Kilindi had the following views:

I naturally loose interest in the new technology. To be able to use the technology effectively I have to update myself in many things - training, buying devices and practicing. Busy as I am now, I do not think I can get enough time to undergo ICT training. When thinking that I cannot get time for learning how to use a computer or tablet, I naturally feel reluctant to adopt the technology.

### ***Lack of Electricity in the Rural Areas and Frequent Electric Cut-off***

The interviews and focused group discussion revealed that there are rural areas, which do not have electric power supply. The views of some respondents justify this reality, including the following views of a respondent who lives at Kwematuku village in Handeni District:

Lack of electricity is a big problem at our village. Even if you have a computer or smart phone, you cannot work with them here because those items need reliable electric power supply to use them effectively. Kwemsala had not been supplied with electricity. This limits the use of smart phones and computers, demoralizing me to own and learn how to use a computer.

Another rural dweller respondent Zege village in Korogwe district said:

Great emphasis is placed on using computers, mobile phones and other ICT devices but lack of electricity in our village and other villages is a challenge to implementation of this innovation.

Another interviewed respondent at Mghambo village, Korogwe district said:

You can see yourself how the situation is at Mghambo; there is no electricity and mobile networks. This means internet network is inaccessible here.

Another respondent of Kwagunda village, Korogwe said during a focused group discussion:

Due to my low economic level, I own a second hand desktop. When I use it and electricity runs off unexpectedly, all my work disappears. If I was downloading an important thing at that moment, I cannot go on. One day my friend came to register herself using my computer. As soon as she connected to internet network, there was power cut-off. That was around 9:00 a.m., we waited until around 11:30 p.m. but power could not turn back. Just imagine, this was the last day to register for the examinations.

### ***Distance Learners' Financial Constraints***

The interviews and focused group discussion showed that many distance learners are of low economic status and so they cannot easily purchase quality ICT devices they are supposed to own. The following are views of one of the respondents during an interview:

Many of my fellow distance, learners and I are of so low economic status that, with many family obligations, we fail to manage the costs of good laptops, modern, desktops and external hard discs.

### ***Effects of Weak ICT Integration in Students' Learning at OUT***

The barriers presented above have various effects to the distance learners of the OUT, as revealed during the focused group discussion and interviews.

### ***Difficulties to get information and study materials***

Difficulties to access enough and relevant materials, which are relevant to the courses of study of distance learners is one of the effects revealed by the respondents during focused group discussion and interviews. A continuing OUT student of Songe, Kilindi had the following to say in a focused group discussion:

*As I cannot access internet at this village, I face a problem of shortage of study materials relevant to my course. Sometimes the books I use do not have the content I need and mobile phone internet is inaccessible.*

### **Lack of intrinsic motivation to pursue studies**

The barriers described above contribute to distance learners' lack of intrinsic motivation to pursue studies through a distance mode, as revealed by interviews when an interviewed primary school teacher at Mahenge, Korogwe:

*In the beginning, I thought it is easier to study at a distance while working than joining a conventional university. Now I have realized that it is not such easy due to lack of internet connection, electricity and inability to use a computer.*

### **Increased loneliness**

The interviews and focused group discussion revealed that loneliness of the distance learners is deepened by low use of ICT devices, as one interviewed respondent at Muheza said:

*Inability to use and own a laptop makes me very lonely as a distance learner as I cannot communicate with my fellow students, OUT administration and my lecturers.*

Another interviewed respondent living at the Korogwe-Kwameta town said:

*At my residential area at Kwameta I cannot receive a call as there is no mobile network. Mobile internet is also a problem*

*here. This makes me feel lonely. If I want to call somebody, I must go to a place about seven to ten metres from my home place.*

### **High cost for travelling**

The interviews and focused group discussion showed high costs, which distance learners of the OUT, incur in travelling to distant places with internet cafés and stationeries. The following are words of a primary school teacher of Dindira during a focused group discussion:

*Internet connection here at Dindira-Kwefingo is very weak and in some places, it is inaccessible. Moreover, I am not competent in working with a computer. I have to travel to Korogwe town to access internet at the internet café or to have my work printed at stationery whenever a need arises. A go-and-return bus fare is T.shs. 6,000/=, I have to breakfast and get lunch there for at least T.sh. 12,000/=. Stationery (typing, photocopying editing and binding) and internet services (downloading, communicating with fellow students and tutors and accessing important information) cost about T.shs. 15,000/=, making a total cost of T.shs. 33,000/=.*

Another continuing undergraduate student of the OUT commented the following during an interview:

*There are no internet and stationery services here at Tewe village and frequent visits to internet cafés and stationeries at Korogwe town is very expensive in terms of money and time.*

### **High costs of internet**

The interviews and focused group discussion found high costs which distance learners incur in accessing internet and having their work typed, printed, photocopied, and other necessary internet and stationery services. One of the interviewed respondents with such views said:

*Imagine you have 135 pages to type, print, photocopy and bind. At Korogwe typing a normal black and white page on Microsoft word costs T.Shs. 500/= a page, on Microsoft excel and tabulated Microsoft word the cost is T.Shs. 1,000/= printing costs T.Shs.500/= a page and T. shs. 1,000/= for a tabulated page. Photocopy costs T.Shs.100/= a page. For 135 pages, the total cost is not less than T.Shs.150,000/=. To get internet connection at an internet café it is necessary to pay about T.shs. 1,000/= per hour.*

Another respondent said during a focused group discussion:

*Even if you have your own device for accessing internet, the cost of internet bundles is high - 1GB for about T.Sh. 1,000/= or T.Shs.1,500/= per day; 1GB for about T.Shs. 3,000/= or 4,000/= per week. Yet there is a cost of printing the downloaded materials, which is necessary for my fellows and me, as we do not have storage devices, like flash discs, memory cards and external hard discs.*

### **Low pass grades**

Focused group discussion found low pass grades to be another impact of the challenges of using ICT in distance learning. One of the interviewed respondents with such views said:

*In the first year of my course of study overall academic performance was very low. The reason is that I could not get enough and relevant study materials, as there is no electricity in our village, no internet and mobile networks and no internet cafés. Even if you have your smart phone, it is useless in this village. In my second year I failed 'OEG 223: Remote Sensing and Quantitative Methods in Geography' and I was required to sit for a supplementary examination for that course.*



## **Prolonged course completion**

Focused group discussion revealed that there are distance learners of the OUT who do not complete their courses of study on time due to barriers to integrating ICT in ODL. One of the respondents had the following to say:

I postponed sitting for the examinations when I found myself unprepared for the examination. I do not own a computer or smart phone, and several times, I failed to manage high costs of stationery and internet café. The state of having fewer and shallow study materials reduced my study speed and morale...

## **Discussion of Findings**

### ***Barriers Inhibiting OUT learners to Use ICT in their Learning***

#### *Lack of and Inadequate Skills and Knowledge on using ICT Devices*

Research findings revealed lack of skills and knowledge on using and working with ICT devices among distance learners of OUT to be one of the barriers of using ICT among distance learners. This contributes to their negative perceptions about learning through ICT devices. The findings showed that some of distance learners were taught how to use computers theoretically, which made those lessons difficult to them and not interesting, hence they almost acquired nothing. The findings also showed that OUT students who could not use computers, ipads and tablets take their work to commercial stationeries where they would have stationery attendants type and organize their work. Others use their relatives, like daughters to help them do their work. The study findings also noted that there were individuals who underwent private ICT lessons but failed to complete their courses due to lack of enough time and financial resources owing to family obligations. These findings concur with the findings by Nihuka (2011; cited by Nihuka and Ngimi, 2013) who revealed that many of the OUT students have low competences on

basic and internet applications. This finding established under this section extends the finding established by Galusha (1998) that the majority of adult distance learners are not conversant with use of ICT equipment and have thus negative attitudes towards ICT.

### **High Costs of Internet Connection and Buying ICT Devices**

Research findings revealed that high prices of desktops, laptops, smart phones, external hard discs, modems and other digital devices contribute to distance learners' negative perceptions about ICT integration in their learning. Research findings revealed that most of the distance learners of the OUT have low salaries, which cannot finance family basic needs (like food stuffs, clothing, transport costs, children's school fees, etc.) and remain with a sufficient amount of money with which to meet ICT cost. An example cited by a respondent in the findings shows that a new and good computer costs not less than T.shs.650,000/=, an external hard disc around T.shs.150,000/=, a modem about T.shs.30,000/=, a smart phone about T.shs.200,000/=, a printer at least T.shs. 100,000/= and frequent internet bundles to access internet. The total cost is so high that many distance learners of the OUT fail to manage, contributing to negative perceptions about ICT integration in their learning.

Regarding the costs of internet connectivity, the majority of the OUT students cannot manage the costs of the bigger and most efficient digital bandwidth, like those of Uhuru one and TTCL. As such, the majority of them depend on the internet provided by the mobile phone companies, like Vodacom, Airtel and Tigo. As such, in areas where there is no or there is unreliable mobile network, there is also no internet network or there is unreliable internet network. It was noted in the research findings that many students of the OUT incur cost of internet connection at the internet cafés for about T.shs.1000/= per hour. When one buys one GB-bundle of 24 hours one incurs the cost of between T.shs.1000/= and T.shs.1500/= or between

T.shs.25000/= and T.shs. 35000/= for an internet bundle of one month. It is clear that with frequent use of the mobile internet, many students of the OUT fail to incur cost for internet connection. This inhibits them to use ICT in their learning effectively. These findings concur with the study done by Nyandara (2013). who noted that the access to internet is very expensive in case of connection and hidden cost to end-users in accessing the internet. Rwejuna (2013) who established that ODL learners are not able to meet the costs of ICT such as purchasing the laptop computer supports this finding and paying for the internet café, browsing materials charges; as a result they drop and join other system of learning confined to prints.

### **A belief that ICT devices are luxurious**

Research findings revealed that the OUT students particularly those who live in the rural areas regard smart phones, tablets, laptops and similar ICT devices as luxurious items to be owned by the well-off people. Individuals with such a belief include the civil servants working in the villages, who claim that due to their low economic status, they cannot buy ICT devices and so they do not think of purchasing them. The findings also reflected views of civil servants working in the villages that the villages are not conducive for ICT devices to operate, as their socio-economic and physical environments are less developed. This contributed to the negative perceptions among the distance learners of the OUT. These findings concur with those of Swarts and Wachira (2010) who found the widespread view that many people consider owning and using ICT tools as a status symbol rather than important working tools.

### **Lack of internet network and weak internet network**

Research findings identified that internet network in the country does not cover all areas in Tanzania. The rural areas are more affected by this problem. It was noted that because of lack of internet connection, distance learners of the OUT at the villages do not find the

importance of owning ICT devices, like tablets and laptops. There are other places of the villages with mobile network but with weak and unreliable internet network. When distance learners connect themselves to internet network they get messages that they are connected, but actually, when they attempt to access specific websites or download various materials internet fails and they cannot do anything. This has for long discouraged distance learners in owning and using ICT devices, consequently it has contributed to low integration in using ICT devices in their studies. The above findings concur with those of Swarts and Wachira (2010) who noted that internet connectivity and other supporting infrastructures are inadequate, unreliable and do not covered wide areas of the country. They found insufficient ICT infrastructure particularly in the rural areas (Swarts and Wachira, 2010, Agyemang et al., 2010, Mushi, 2006).

#### **Lack of electricity in the rural areas and frequent electric cut-off**

Research findings disclosed lack of electricity in the rural areas and frequent electric cut-off in almost all parts of Tanzania as a barrier, which limit distance learners of the OUT unable to use ICT devices effectively. The findings revealed that many Tanzanian villages have not been connected with electricity of TANESCO, limiting the rural distance learners in using such ICT devices, like laptops, tablets and desktops. Lack of electricity is a big challenge in many villages, like Mghambo and Zege in Korogwe such that, a computer, tablet or smart phones in those villages is almost useless because they need reliable electric power supply to effectively use them. This demoralizes distance learners in rural areas to own and learn how to use computers. The findings show further that while great emphasis is placed on using computers, mobile phones and other ICT devices, little has relatively been done to ensure that the villages are electrified. Regarding frequent cut-off of electricity, findings of this study reveal the tendency of the frequent power cut in various places in the country. The findings identified that for distance learners with second hand laptops with batteries, which do not save power for

long, abrupt cut-off of electricity causes a loss of their unsaved academic works. When electricity runs out, a student cannot work anymore with a computer and all that he/she had planned to do cannot be done as planned. Many of their activities, like printing, typing, downloading and charting cannot be done. These findings concur with the findings by Swarts and Wachira (2010). who found that inadequate electricity infrastructure, such as that which happened in 2006; only 10% of the total population of Tanzania was connected to the national power grid with only 1% of that figure being in the rural areas.

### **Financial constraints**

The findings of this study showed that many distance learners have low financial abilities thus; they cannot easily purchase quality ICT devices. bearing in mind that they have other family and personal obligations to meet. An example is a primary school teacher, whose take home salary is about T.shs.540,000/=. With such a low salary, the teacher fails to meet family prerequisites and remain with enough cash for purchasing ICT devices. Such findings are similar to the findings by Rwejuna (2013) who found that, due to their low incomes; distance learners of the OUT face the problem of paying tuition and examination fees as they have other family obligations.

### **Effects of weak ICT integration to the students' learning at OUT**

#### **Study materials and information**

The findings by this study have shown that there are distance learners at OUT who face the shortage of relevant study materials. The findings indicated that while those learners find it difficult to buy and use computers they could use for downloading study materials relevant for their courses of study, they find it more difficult to collect varieties of relevant study materials, which are necessary for their studies without using ICT devices and internet. The findings revealed the difference in understanding lessons between students who did not

have ICT devices and those who owned and used them.. Study findings revealed also that distance learners fail to get necessary information related to their studies, like information on examination timetable, dates of examination registration and information on academic progress. These findings relate with the findings of Mshangi (2013) who found that ICT facilitates self-assessment and improves students' learning as they can have access to online web. This finding also extends the findings established by Rwejuna (2013) who holds that some of the OUT law students scored low grades in their courses and had to write supplementary examinations. That was caused by their inability to use and integrate ICT in their learning.

### **Lack of intrinsic motivation**

The findings also showed that distance learners did well at the beginning of their studies but, later performed poorly as they faced challenges related to ICT. Such challenges included; lack of internet network, inability to own and use ICT devices, like laptops, desktops and tablets, lack of electricity in many rural areas and unreliable electricity in many parts of the country, high costs of internet connection, willingness and intrinsic motivations of those distance learners to pursue studies through a distance mode weakens. In turn, this caused low academic performance and drop-out among distance learners of the OUT. This finding relates with the finding of Noor-Ul-Amin (undated) who identified that ICT provides motivation to learn. It enhances the quality of education by increasing learner motivation and prolonged engagement.

### **Loneliness**

Findings of the study showed that distance learners who do not use ICT devices and internet do not communicate with their fellow students and tutors. The study revealed that distance learners also fail to sort and download study materials from the internet, which could keep them, busy most of the time leading to mastery of course

contents. This increases their loneliness. The study found that inability to call or e-mail a fellow student, or tutor or accessing internet students feel very isolated and helpless in some areas. This is supported by Noor-Ul-Amin's findings (undated) who found that ICT promotes student engagement, in a learner-centred environment. Noor-Ul-Amin also found that with the use of ICT a student can have easy access to resource persons, mentors, experts, researchers, professionals and peers all-over the world.

### **High transport costs**

Findings of this study revealed that distance learners' inability to use and own ICT devices together with challenges of electricity in the rural and urban areas force them to seek stationeries and internet cafés, in places where they are located, particularly in urban areas like Korogwe, Lushoto, Songe and Tanga. The study findings revealed that distance learners living in towns and its outskirts, who have limited access to ICT devices are supposed to incur some costs for movement by "*bodaboda*" or town buses to access stationery and internet cafés centers in town for downloading important information and study materials.

The fare may be about T.shs. 4,000/= while stationery and internet café cost may be around T.shs. 15,000/= making a total cost of T.shs. 19,000/= for a single visit to internet café and stationery. This cost is so high for most of distance learners to afford. So far, distance learners living in rural areas have to incur costs fare and meals (breakfast and lunch) apart from stationery and internet café costs. The findings found that distance learners have to travel from their home villages to nearby towns. The minimum bus fare may be around T.shs. 6,000/=, breakfast and lunch may cost for about T.sh. 12,000/= and stationery (typing, editing and binding) and internet services (downloading, communicating with fellow students and tutors and accessing important information) may cost T.shs. 15,000/=, making a total cost of Tshs. 33,000/= just for a single journey. Research findings indicated

that distance learners would want to visit stationery and internet cafés frequently but they fail to do so because the cost is high. Moreover, learners have to incur cost of time, as they have to put off other activities in search for ICT services. The above findings are supported by Niwagila (2014) who holds that rural students do not have ICT facilities thus, for one to access them, needs more additional costs.

### **Conclusion**

As OUT moves towards digitalization, there are some barriers that make students fail to adapt to this ICT integration in their learning. This is reflected in the low ICT integration among students. This is not a healthy scenario, as the university cannot achieve its objective of mass education to attain the EFA philosophy. It needs to be noted also that, no one was born with the computer skills, all learnt it. Therefore, even the OUT students should be given the chance to learn and master computer skills, if the university intends to improve ICT integration, the following are recommendations to be noted. There should be computer training should be offered frequently and continuously. The ICT personnel in regional centers can do this. Students should be given freedom to use regional ICT facilities free of charge. This will motivate even rigid students to develop the interest toward the use of ICT in their learning. Regional centers may start to organize seminars and trainings on the use of ICT in education. OUT may start projects to boost ICT growth and stability, for example by selling tablets to students.



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