

**CHALLENGES FACING IN-SERVICE TEACHERS ACCESSING
EDUCATION THROUGH OPEN AND DISTANCE LEARNING BY USING
INFORMATION COMMUNICATION TECHNOLOGY (ICT): A CASE OF
MOROGORO MUNICIPAL**

TELISE SEBASTIAN MSONGOLE

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION IN
OPEN AND DISTANCE LEARNING OF THE OPEN UNIVERSITY OF
TANZANIA**

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CERTIFICATION

The undersigned certifies that she has read and hereby recommends for acceptance by the Open University of Tanzania, a dissertation entitled: *“Challenges Facing in-Service Teachers in Accessing Education through Open and Distance Learning by using ICT. A Case of Morogoro Municipal”* in partial fulfillment of the requirements for the degree of Masters of Education in Open and Distance Learning of the Open University of Tanzania.

.....

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Date

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DECLARATION

I **Msongole, Telise Sebastian**, do hereby declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

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Signature

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Date

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ABSTRACT

This study examines the challenges facing in-service teachers accessing education through open and distance learning using by ICT. The focus was on examining the experiences in -service teachers in using ICT to learn at Open University of Tanzania; to assess the challenges that in-service teachers learning students face as they access education through ICT; and to explore the views of in service teachers on the strategies to mediate the challenges that teachers face in using ICT to learn. The sample comprised of 24 respondents who included 2 administrators of Open University at Morogoro centre and 22 in-service teachers accessing education through open and distance learning at Morogoro municipal. A descriptive research design was used and the data were collected through questionnaires, interviews and documentary review. The findings revealed that the majority of in-service teachers had experience in using ICT to learn at Open University of Tanzania. Further, the study revealed that the major challenges facing in-service teachers as they access education through ICT include electricity cut, internet network and lack of resources to buy ICTs gadgets like computers. Moreover, the study revealed that the strategies to mediate the challenges that teachers face in using ICT to learn include the use of mobile phones to learn. The study recommended that the OUT should ensure that all the Regional centres are equipped with adequate computers and internet services to allow students to access materials on line. Further, the study recommended that OUT should integrate computer training in the course content pursued by the learners at all the levels to equip them with the necessary ICT skills that will enable them to use different ICT facilities. Lastly, OUT should find a way to provide students with relevant materials through Mobile learning. The study concluded that there were several challenges faced in-service teachers. The challenges include individual, instructional and institutional related challenges. This concurs with several others both lack of experience in the application of technology and absence of these technologies less. Furthermore, there were other challenges like electricity problem, it consume time, Network problem which may consume more time during the process of searching materials.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction and Background of the Problem

In many countries, the role and functions of in-service teachers are changing and so it was important to re-train in order to get the most recent information on the teaching occupation through Open and Distance Learning. This new perspective, which was commonly termed as student centered forces teachers undergo re-training to assume this new role of facilitation. Likewise, technologies were changing every day and these were required teacher to be in the position to use them for teaching (Keegan 1988).

In-service training is a term used to describe employee professional development that is intended to improve the performance in the assigned positions in organization (Sapp, 1996). Dictionary of education (2002) described the in-service training as: Job related instruction and Educational experiences available to employees. These were the academic activities designed to improve the knowledge and skills of employees and quality of services especially the instructional practices.

In-service training basically means learning and working, which sometimes it is termed as lifelong learning. Lifelong learning is an ODL concept (Jarvis et al.1998, pg. 2-3) that has gained new value in terms of both professional development and personal achievement and fulfillment (Bentley, 1998; Jarvis et al.1998). Lifelong learning should be interpreted as a term wide enough to include all learning, formal within or outside institutions. While in-service teachers learning students through

ODL has been established to be a better option for teachers, there were a lot of challenges that in-service teachers face.

Lifelong learning for employees such as teachers was particularly intense and noticeable at a period of major changes in teaching profession (for example when there is a new technology, new teaching methodologies, and different ideas about issues due to development in science), in occasions of changing teachers roles for example when teachers were no more the possessors of knowledge. In-service training was not confined to teachers only: doctors need to keep their medical knowledge up to date, need to update their skills in laying brick layers or one might desire to use better technology in laying bricks.

However, since there were a lot of changes happened in education sector, it was not possible for all teachers to leave their workplace to undertake in-service training. Most in-service teachers undergo training through open and distance learning by using ICT while working; recently teachers were undergoing in-service training through distance education, leaving the ODL tradition that in-service teachers training must be conducted in classroom. Many in-service teachers were taking advantages of technology in general and ODL in particular to undergo in-service teachers learning students through open and distance learning (Perraton, H.2010).

In ODL mode, in-service teachers used a variety of media and technologies such as personal computers, mobile phones, MOODLE learning environment, tools and aids. Learning through ODL, Distance education was not a new education intervention because it started in the late 1800s at the University of Chicago. Distance education

defined as an educational process in which undertook important amount of their learning under a teacher. Teaching is conducted by someone removed in space and or time from the learner (SAIDE, 2003). In this mode, distance education was a process whereby an individual or institution parcels information in a learnable way which helped them with the view to support another individual or group of individuals to learn at a distance.

Honeyman and miller, (1993) defined ODL using distance education concept. For them, ODL is a mechanism tools as a process to create and provide access to learning when the source of information and the learners are separated by time and distance or both. According to Eastmond (1995 as cited by Kerka, 1996) some define distance education as the use of print or electronic communication media to deliver instructions when teachers and learners are separated in place and or time.

Distance education is defined as distributed education, open and distance education, cross border or borderless education (Swai, 2006). Distance education is used in relation to courses or services received away from campus (Haynes, 2002). In Tanzania, distance learning education started in the 1940's as education by correspondence by a British Tutorial College. The Cooperative Education in Moshi was the first to introduce distance.

For the past two decades, learning through distance with the use of ICTs has been seen as a transformative move towards the ways teachers teach and students learn. This movement in education has been largely viewed as instrumental in the provision of education in a richer and more exciting learning environment. Learning through

distance with technology as a learning tool is considered as authentic, interactive, flexible and lifelong learning (Duffy and Cunningham, 1996). The technology-supported teaching strategies also help to solve the problem of limited human memory.

Distance learning is a system and process that connects learners with contributed resources (Filipezak, 1995). Also is a process of education which emphasizes learning, it is an educational activity during which a catalyst of learning who is usually separated from the learners by spatial or intellectual distance gathers, collates and presents information in a learnable form to one or a group of learners who have accepted the responsibility to learn while in distance education.

The aim of education and the objective of distance education and distance learning leave the room for the learner to attribute to the information and material presented his own understanding that may be different from the understanding, the facilitator had intended. Additionally the learner was at freedom to use his understanding and the information presented in any constructive.

Literature suggests that there are two basic formats for distance education courses: that which has frequently scheduled class times and the all students participate at the same time, and that which allows each student to access course materials at any time they like. The first one is known as synchronizes distance learning and the second asynchronies. Many students would like the convenience of unscheduled courses but some students find it hard to stay on track without a formal schedule.

Open and distance learning (ODL) was certainly a standard distance education and ODL were therefore not synonyms. On the contrary ODL is regarded as a coin of two side (Babyegeya, 2007). On the one hand as distance learning /education it is a means of educational delivery. On other hand as open learning ODL was an educational philosophy with a vision of basifying access, involvement and completion rates in educational opportunities in line with the criteria of openness one of which was flexibility in time and space.

The major profit of ODL was associated to its flexibility, accessibility, affordability and life based education opportunities. It enables development of tertiary enrollments at less cost per student than under the conventional residential campus system (Pityana, 2004). Better flexibility enables ODL courses to adapt to specific student needs or work requirements, thereby enabling greater relevance (Saint, 1999). ODL also accommodates the rising demand for lifelong learning more easily than do residential programs. Moreover, ODL could successfully achieve those learners who had denied access to upper education, for example, women who were unable to attend traditional educational programs because of household responsibilities or cultural constraints, economically, marginalized groups and the imprisoned (Rumble, 2000).

Apart from advancing teacher education and education basification in general, open and distance learning similarly has been used in promoting technical vocational education and community development also the cost of providing education got reduced considerably wherever ODL was employed since distance education is

characteristically more cost-effective than conventional education (Bates, 2007; Rumajogee, Jeeroburkhan Mohadeb and Mooneeany 2003).

Holmberg (1989), Peter (1988) and Keegan (1990) insist on individualization learner freedom and cost effectiveness of learner-paced designs in the practice and even the definitions of ODL. Moore (1993) states that enlarged peer interaction can increase participation and completion rates and result in learning outcome gains in ODL courses. Interpersonal learning activities also result in enhanced social integration of learners and course and programmers completion rates and hence improve quality of learning.

Mathew (1999) reveals that, the foundations of distance education could be traced back to the late 1800s; one of the first forms of distance education was correspondence course study. Sir Isaac Pittman founded correspondence colleges in England in the mid-1840s correspondence courses took advantage of the new rural free deliverance of mail to distribute course material to students. Students worked separately on course material and interaction between faculty and students was restricted to one-way. Correspondence courses were developed in Germany, Canada, and Australia the Soviet Union, Japan and the United States.

William Rainey Harper (1856-1906) was an early pioneer in both education and distance education in the United States. He was known for help to establish the first college level for correspondence courses by mail while serving as the first president of the University of Chicago. He implemented an extension program at the university distance education program. Rainey was an honest advocate of correspondence study

and predicated that someday correspondence students would fall out number classroom students (Simonson n.d).

Distance learning requirements not be open at all (Rowntree, 1992) this suggests that there exists a difference between open learning and distance learning has been used to describe planned learning, dispensed and acquired from a distance. The prefix “open” became attached to distance learning towards the end of the 20th century as a result of three significant developments namely criticisms against the formal school system GATT (General Agreement on Tariffs and Trade) and globalization.

A number of criticisms have been labeled against the formal school system, first it is remarked that apart from being expensive to raise and maintain the formal school system was not elastic and flexible sufficient to accommodate as many as needed education as well it records a lot of wastage through a high percentage of failure of its products at private and public examination (Garg&lepotho, 2009, Biao, 1992; Combs, 1985). Second although the GATT was established in 1947 to regulate international interaction as it concerns specific issues and items. It was in 1994 that it was decided that education should become an international saleable commodity this agreement had profound positive effect on the development of ODL (Preece& Biao 2011). Third the phenomenon of globalization which quickly turned the world into a global village did much to encourage education partnership as a result of the great geographical distance separating them. The conventional adult educational programs the basic motive of the distance education programs was to develop middle levels readers for colonial administration (Bugeke, 1997).

The pre-independence era refers to the colonial period and it was situated between 1884 when Europe began its meeting that finally culminated in the partitioning and sharing of Africa (Robiquet, 1897; Halsall, 1998). As a cake would have been shared and 1960 the beginning of massive decolonization of Africa during the colonial period a few Africans enrolled as learners with abroad correspondence colleges through most of the colonial period. These learners received their course parcels and returned assignments as well as correspondence colleges began to create clearing houses in Africa countries with the view to both reducing the cost of postal correspondence to learners and accessing a larger market of correspondence education clients at independence.

After the independence of Tanganyika in 1961 the government set up indigenous ODL Programmers mostly to encourage professional education and training among the adults. Like other developing countries Tanzania embraces open and distance learning endorsed establishment of the Open University of Tanzania (OUT) which opened the door to higher education through distance education in 1992. The OUT became operational in 1994 with the first 766 students and by 2008, OUT had already admitted 40146 students in different programmers (OUT, 2009).

Normally in-service teachers was not easily noticeable within the ODL institutions and most literature focus on the mainstream systems of education, with the presence of a teacher, trainer or mentor to control the process, with a pre-established body of knowledge to be learned. (Chen 2008). However, in-service teachers was are normally in control of the processes and the knowledge to be learned and are more situational than pre-service teachers and may be referred as self-directed, inclined to

more informal learning and the like. Tough (1971) reported that adults perform an average of eight informal learning projects per year, and used an average of 500 hours per year on informal learning. Similarly, Livingstone (2000) reported to facilitate the, normal adult spends 15 hours a week on informal learning activities.

The second national correspondence institution came into existence in 1970. The Open University of Tanzania was established in 1992 and it came into effect in 1993 (Kilato, 1997). Distance education enables many people to access education. It provides opportunities for people who could not access mainstream educational institutions. In Tanzania, the Open University enables more people to access University Education on a part time basis and depending on their financial ability. There were many potential candidates who would like to access university education but were yet to get time off from their jobs and other responsibilities.

In this 21st century, Information Communication Technologies (ICT) provides Opportunities for more people to access university education through distance education. In this context, students utilized ICT that included online resources such as web 2, blogs, Internet for e-mails, chat rooms, bulletin boards and wikis, intranet and electronic media such as mobile phones. The uses of ICT tools, on the other hand, helped the instructors to keep in touched with learners as the instructor monitors participation, evaluate learning, Pedagogy and the teaching-learning effectiveness (Mushi, 2006).

ODL is surely a generic term from open and distance learning / education. Distance education and ODL are therefore not synonyms on the contrary. ODL is regarded as

a coin of two sides (Babyegeya, 2007). Open and Distance Learning (ODL) had developed into an important global strategy in resolving problems of admission to education (UNESCO, 2004). Nonetheless, ODL programs had their own unique problems. Some of the main problems were the high rate of in-service teachers drop-out and late completion rate of programs. High drop-out and late completion of programs are symptoms of fundamental challenges facing in-service teachers. Such challenges had been originated to be situational, attitudinal, psychological, pedagogical, institutional and socio-cultural associated challenges (Zirnkle, 2001; Berge et al., 2002).

The challenges are originated at three levels: individual student, instructional and institutional. Many studies conducted in this area were correlated to individual, institutional, dispositional, instructional challenges and successful access to contemporary to operate the hardware and software of ICT (Bhalalusesa, 1998, 1999; Cosmas and Mbwette, 2009; Mbukusa, 2009; Mushi, 2001; Cross 1981; Casey, 2000; Berge et al; 2002; Zirnkle, 2001; Garland, 2007; Kamau; 2007; Mossberger et al; 2003; Warschauner, 2003). Most of the studies observed were based on challenges facing ODL students in general, the current study proposed to investigate challenges facing in-service teachers in acquiring education through open and distance learning in Morogoro municipal.

1.2 Statement of the Problem

The experiences of in service teachers are a neglected area in much of ODL literature (Lentell and O'Rourke, 2004). Most literature is concerned with how to develop course materials and what media to use in delivery for students learning through

ODL. It is taken for granted that students, especially adult students such as in service training teachers will get their way through and manage on their own (Ng'umbi, 2013). Zirnkle, (2001) argued that the experiences of in service teachers, the challenges they face, and the strategies they use to mediate those challenges have escaped the attention of researchers, educational planners and decision makers. Most of the in-service teachers tend to use internet cafes for small work even if they own laptop and other ICT devices. This study set to fill this gap on the challenges facing in- service teachers access education through ODL using ICT.

1.3 General Objectives

The study investigates the challenges facing in-service teachers learning through open and distance learning (ODL) by using ICT in Morogoro municipal.

1.4 Specific Objectives

This study was guided by three specific objectives namely;

- (i) To examine the experiences that the in service teachers face while using ICT to learn at Open University of Tanzania.
- (ii) To assess the challenges that in-service teachers face as they access education through ICT as a media of instruction.
- (iii) To explore the views of in service teachers on the strategies to mediate the challenges that teachers face in using ICT to learn.

1.5 Research Questions

The following questions were guided the enquiry process of this study.

- (i) What are the experiences of the in-service teachers in using ICT to learn at Open University of Tanzania?

- (ii) What are the challenges that in-service teachers face as they access education through ICT as a media of instructions?
- (iii) What are the views of in-service teachers on the strategies to mediate the challenges that teachers face in using ICT to learn?

1.6 Significance of the Study

Findings of the study were useful to ODL programmers in improving ODL programmer for production of high quality of education to ODL students. Furthermore, it is expected that the study will inform the ministry of education, science and technology to allocate more funds to ODL programmers for more effective teaching and learning to produce students who are more competent in their career profession. It would an important source of reference for researchers intending to conduct studies on topics similar to this of current study. The researcher hopes that the suggestion and recommendations from the research helped to solve various challenges facing in service teachers. Findings of the study expected to pave the way on how to minimize challenges facing in-service teachers in acquiring education through ODL using ICT.

1.7 Limitations of the Study

This study lacked stable the financial support because the collection of data from the field required facilitation. Interviewing respondents needed money and patience as they were not readily available at one place. Power interruption and load shading was a big obstacle that delayed the analysis of data. This affected the completion of the dissertation on the schedule.

1.8 Delimitation of the Study

The study was focused on challenges facing in -service teachers in using ICT at Morogoro municipal. Participants involved in this study were selected from some of in-service teachers at Morogoro municipal with 24 participants. The study was focused in getting in depth information about the challenges facing in -service teachers in acquiring education through ODL mode using ICT. It was conducted by questionnaires, interview and documentary review.

1.9 Operational Definitions

This section aimed to define the key concepts used in this research. These concepts includes,

Acquiring education is a process of gaining knowledge, skill and attitude by your own effort.

Distance education is a process to generate and give access to learning when the source of information and the learners are separated by time and distance or both (Honeyman& Miller, 1993).In this study distance education is the process of acquiring knowledge and skills where by students are separated from interaction with their teachers and are costly effective.

1.10 Distance Learning

In the current study open and distance learning (ODL) is a process planned to educate students who are not physically are on location at an institution. Additionally, distance learning is often synonymously used with distance education

to mean learning which takes place with the instructor and learners in a physically separate location (Nariker, 2009).

1.11 Information Communication Technologies

Is defined for the purposes of this primer as a diverse set of technological tools and resources used to communicate and create, disseminate, store and manage information (Romiszowski 1988).

1.12 Open and Distance Learning

In this study ODL is an educational philosophy with a vision of basifying access, participation and completion rates with the criteria of openness to students be flexible in time and space (Holmberg 1989).

1.13 Organization of the Dissertation

This study was organized into five chapters. Chapter one presented the introduction and background of the problem. Chapter two provided the literature review; chapter three was focused on the research methodology, chapter four presents the data analysis, presentation and discussion of the findings and chapter five focused on the summary, conclusion and recommendations of the study. Therefore this study intended to investigate challenges facing in-service teachers in acquiring education through Open and Distance Learning (ODL) Using ICT in Morogoro Municipal.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature related to this study. The first part presents the theoretical literature that was framed within theories: Learning with technology; Technology as a cognitive tool; and learning as a social activity

The second part presents a critical review of empirical literature that revolves around the three objectives developed in chapter 1.

2.2 Theoretical Framework

Learning with technology in search of a theory that can effectively put this research into perspective, the researcher opted for cognitive psychology that explains learning as a mindful, constructive activity involving deliberate cognitive efforts. This theory also explains technologies as cognitive learning tools rather than as instructional media. A case they made for learning in distance education through ICT as not an individual but a social activity (Vygotsky, 1978). This implies that learning in distance exposes the learner to access information via synchronous and asynchronous networks through online seminars, blogs, wikis, podcasts, etc to communicate, interact and collaborate in ways that were not possible before” (The Node, 2001). This paradigm shift from conventional to distance facilitates a condition where teachers are able to help learners to construct knowledge and collaborate with each other by being supported by technological advancements such as simulations, and virtual reality.

Learning with technology is an idea that learning is a mindful and constructive activity involving deliberate cognitive efforts. In this process, learners in distance education make use of technology as cognitive learning tools rather than as instructional tools. This way of thinking is a departure from traditional conceptions of technologies as tools for instructions rather than tools for thinking. Thus, the primary distinction between traditional and modern understanding of ICTs in education is the notion that ICTs are not solely the tools for teachers to deliver information to the learners and learners as passive recipients of information, but the tools for learners to think and to active construct knowledge. ICTs as cognitive tools are considered as the tools to help learners to engage in and facilitate cognitive processing leading to knowledge construction. ICTs as cognitive tool are not physical in nature, but rather of a cognitive in nature and are used as engagers, facilitators of thinking and of knowledge creation (Jonassen, Peck and Wilson, 2000). As Jonassen and Reeves, (1996) suggested, ICTs improve the cognitive powers to think, to solve problems and to learn. This implies that ICTs have the capabilities to expand the learner's cognitive functioning during the learning process, and to facilitate critical thinking and higher-order learning.

Kim and Reeves, (2007) suggested that ICTs as cognitive tools can be used to facilitate interaction, thinking and knowledge construction in a joint learning system. According to Jonassen, Peck, and Wilson (2000), learners do not learn directly from technology; but they actively engage with technology as they think and manipulate information which in turn facilitates the learning process. ICTs become the 'cognitive tools' only when learners actively engage themselves in complex learning

environments that foster higher order thinking and problem solving skills. According to Vygotsky, ICTs can be used as tools to mediate and expand human ability to interact with each other by making it possible to externalize their thinking into forms that they can share with others and can act up on.

In his triad framework, Vygotsky (1978) proposed that learning requires two mediational means first, the use of tangible tools (technical tools) and second, the use of intangible tools or signs (semiotic tools). ICTs as cognitive tools in learning are of particular importance when considering the idea of tools mediating human cognition and action. Here the role of technology as a cognitive tool is not meant to do the thinking for learners, but only to facilitate the thinking and learning processes. As (Wegerif, 2007) points, computers do not directly teach content or thinking skills, but are used to make sense of the content and stretch imagination by modeling complex environments to solve problem.

2.2 Distance Learning as a Social Activity

Learning through distance is a social activity (Vygotsky, 1978). Facilitated by technology, learning through distance plays a fundamental role in social interaction and the development of cognition (Kearsley, 1994; Buchberger, 2000). Within socio-cultural theory of learning, human interaction is arguably the most powerful context for learning and cognitive development (Hall and LeCavalier, 2000); as a result, it enables learners to new ways of co-constructing ideas. It is in social interaction that information can become knowledge. Learning as a social activity requires learners to work in groups and it enables them understands the way knowledge develops and changes today. In relation to learning and its social nature, Salomon (1993) argues

that people appear to think in conjunction or partnership with others and with the help of culturally provided tools and implements such as technology.

In- service teachers learn best when they are actively engaged in collaborative activities with others and their knowledge is enhanced when they engage in the co-construction of knowledge with peers and with their tutors. The more opportunities the in service teachers have, and the more actively engaged they are, the richer their understanding (SEDL, 1999; Wilson, 1997). Engaged in service teachers are intrinsically motivated to perform tasks and activities. In any learning environment, truly engaged in service teachers are behaviorally, intellectually, and emotionally in their learning tasks (Bangert-Drowns and Pyke, 2001).

2.3 Theoretical Literature

2.3.1 The Experiences of the In-service Teachers which they Face in using ICT to Learn at Open University of Tanzania

This was the first objectives of the study which would help to identify the experience of the in- service teachers acquiring education through Open and Distance Learning by using ICT.

ICTs were now set to become instrumental to help expansion of the access of education, strengthen the relevance of education to the increasingly digital workplace and lift up educational quality by among others, helping to create teaching and learning into an engaging activity (Shah and Shafiul, 2010). These further indicate that the request and exposure to and consumption of ICT basically change the way education is conceived and delivered to students. Due to its easy accessibility, this

means of education has become very popular all over the world. Thus, distance education had got a thrust after the development of ICT-based education system. ICT now plays a major role in Distance learning students especially in-service teachers and research in general (Ajayi, 2003).

The Open University of UK shows that its community already was in a high possession and use of ICT facilities. In emphasizing the role and importance of ICTs in education GAID (2009) states that a study conducted by the International Institute for Communication and Development (IICD) indicated that 80% of its participants felt more aware and empowered by their exposure to ICT in education. Likewise, 60% stated that the processes of teaching as well as learning were directly and positively affected by the use of ICTs.

Distance or e-learner's were usually geographically isolated from their tutors. Once they start completing assignments, they need personalized assessment of their works; probably a library through ICTs to support these students in their learning process. Under e-library, distance learners are provided with different electronic resources that complement their print sources. Students are trained on information literacy skills. These enabled them to interact with resources databases, which contain electronic materials as well as the learning management systems which are used by the university as part of e-learning mode. These skills enable students to download and upload their progressive results and other learning resources. In using computer technology, students could also send and receive e-mails from their tutors. They can also chat and send queries to both tutors and librarians, which need immediate solutions. Therefore, there was a link between e-learning and library services in the

learning process (Maro, 2008). Mushi (2006) argues that use of ICT tools such as e-mails, chat rooms and bulletin boards help the instructor to keep in touch with learners as the instructor monitors participation, evaluate learning, pedagogy and effectiveness of teaching-learning. If the in-service teachers appropriately engaged ICTs would help them to achieve their learning goals easily and on time.

Mwakilama and Nawe (2005) reflect on the transformation programmes of the two Colleges of the University of Dar es salaam. They put it clear that the application of ICT for teaching, research and learning in institutions of higher learning and the increased availability of information resources in electronic formats, largely determined how institutions of higher learning were changing their traditional ways of doing things. Quoting different scholars, they argue that ICT applications in higher learning institutions offer a number of opportunities such as enabling distance education especially to in-service teachers. Already, there has emerged a need for educational institutions to ensure that graduates were able to display appropriate levels of information literacy. The capacity to identify and issue and then to identify, locate and evaluate relevant information in order to engage with it or to solve a problem arising from it (McCausland *et al.*, 1999).

According to Tinio (2002) ICT is potentially a powerful tool for extending educational opportunities both formal and non-formal. ICTs were potential tools previously underserved constituencies scattered and rural populations. These were the groups, which traditionally were excluded from education due to cultural or social reasons such as ethnic minorities, girls and women, persons with disabilities and the elderly as well as all others who for reasons of cost or because of time

constraints were unable to enroll on campus. The role and value of using ICT in sustaining and continuing literacy learning had various dimensions (Rogers *et al.*, 1999). Benefits which had identified in-service teachers include the motivational effect of writing on the internet, the opportunity for inexpensive distribution of large amounts of material, the spontaneous formation of worldwide study circles, connecting to a constructivist approach to sharing and valuing alternative wisdoms, and economies of recent printing technologies

2.3.2 The Challenges that in-service Teachers Face as they Access Education through ICT as Mediated Instruction

Cross (1981) identified three distinct categories of challenges facing ODL students: Situational, institutional and dispositional. According to cross, situational challenges include job and home responsibilities that reduce time for study. Institutional related challenges include poor logistics system or a lack of suitable advising (Kruger and Casey, 2000). Dispositional challenges were associated to learners' own attitudes and feelings. Berge et al (2002) classified challenges to distance learners as situational, epistemological, philosophical, psychological, pedagogical, technical, social, and/or cultural related challenges. Zirnkle (2001) acknowledged specific challenges facing distance learners as program costs, lack of equipment and infrastructure, instructional concerns and poor technical assistance. Other challenges recognized by Zirnkle were insufficient feedback and poor teacher contact, alienation and isolation, and poor student support services.

Garland (2007) recognized some situational challenges for students persistence in distance learning. These include poor learning environment and lack of time. For

example, students felt that the course took more time than expected because they failed to judge the demands of work, home and school. Kember (1989) argued that poor time organization leads to challenges such as learners' incapability to mix the demands of off campus study with family, work and social commitments.

Ukpo (2005) found that in-service teachers' learning who enrolled in the ODL face challenges associated to disappointment of trainees to obtain training materials on time, students' commitment in other economic activities to enhancement their family incomes, and poor learners' support services especially where study centres were under resourced and overloaded. Kamau (2007) found that, without successful learners' support services system that provides onsite face to face, timely feedback on student performance and access to library services, student success were damaged and dropout rates and postponement were increased. ODL also presents new challenges in information, distribution, especially in developing countries.

Mossberger et al (2003) observes that technical ability needed in order to have useful access to recent ICT was a challenge to in- service teachers. Technical capability refers to the skills required to operate the hardware and software of ICT, including the skills of using network systems to access and share information (Warschauner, 2003). Lack of these skills was a critical challenge as learner unsuccessful to use the various physical, digital and human resources involved ICT.

These challenges prompt many problems to in- service teachers through ODL by using ICT. Among these problems were high rate of students' drop-out and late programs completion. According to Carr (2000), in the US drop-out rates range from

20% to 50%. The OECD (2000) reported that drop-out rates range from 20% in the United Kingdom to

45% or more in Austria, France, and Portugal. In Australia, drop-out rates range from 35% to over 55% (Fozdar et al., 2006). In African countries the drop-out rate was predictable would be over 50% (Daniel, 2005). ODL played an important role in education programmers firstly ODL was a cost effective method of teaching large groups of people at a time.

Robinson (1991) categorizes the problems as follows: Those relating to study techniques and learning difficulties which would increase in involvement with the range of media being used. Those arising from an individual attempting to interact with a distance and sometimes impersonal institution. Personal problems which affect the students work (these challenges/problems affected most of the in-service teachers through ODL using ICT). In-service teachers learning through ODL using ICT at some time experienced problems in running they possess learning efficiently for example in expressing their thought in written work and in developing satisfactory reading and comprehension skills to enable them to make use of what they read and to cope with the volume of reading required. Nonetheless, ICT is the major component in the effectiveness of in-service teachers in acquiring education through ODL using ICT.

Also, the commonly identified challenges of accessing and using ICT in facilitating teaching and learning faced by developing countries were rooted in unstable power supply, poor infrastructure, unskilled people, network problems, cost of acquiring

hardware and software. Others were low level of computer literacy, limited legal provision, and inadequate policies (Marrett, 2009). Furthermore, according to the Balancing Act (2005), the potential for ICT to address major challenges facing distance learning, the issue of access to ICT remains a huge obstacle.

2.3.3 The Strategies to Mediate the Challenges that Teachers Face in using ICT to Learn

An effective learners' support services system that provides onsite face to face, timely feedback on student performance and access to library services, student achievement will be undermined and dropout rates and postponement will increase. ODL also presents new challenges in information, dissemination, especially in developing countries. Mossberger et al (2003) observes that technical competence desired in order to have successful access to contemporary ICT. Technical ability refers to the skills needed to operate the hardware and software of ICT, including the skills of using networked systems to access and share information (Warschauner, 2003), provide adequate technical support (Liu and Szabo 2009; Tezci 2011a; Yildirim 2007).

Maintain partnerships that assist in-service teachers share effective technology practices and experiences (Ertmer and Otterbreit-Leftwich 2010); Provide workshops that in service teachers learning students allow to reflect upon effective strategies for using technology (Almekhlafi and Almeqdadi 2010). Offer opportunities to virtually observe in service teachers learning students who use technology (Frederick, Schweizer and Lowe 2006). Augment curriculum with technology-enhanced materials (Goktas, Yildirim and Yildirim2009). Provide

enough freedom for teachers in selecting and covering curriculum materials (Honan 2008). Provide effective, timely, and permanent training to in service teachers learning students in order to develop ICT skills and to manage a technology-rich classroom (Hutchison and Reinking 2011). According to Tezci (2011a), teachers should learn not only how to use technology to improve traditional teaching or increase productivity, but also should learn from a student centered. This means that teachers need to use ICT in more creative and productive ways.

In order to create more attractive and rewarding activities and more effective lessons, it is important to keep an open mind about ICT integration in classroom (Birch and Irvine 2009; Honan 2008). However, Yildirim (2007) found that in service teachers learning students use ICT more regularly for the preparation of handouts and tests than to promote critical thinking. Similarly, Palak and Walls (2009) create that teachers mostly use technology to support their accessible teaching approaches and not often to promote student-centered learning. More training must be provided in-service teachers on how to use ICT to search materials and ICT skills should useful in the classroom in order to integrate effective Technology strategies (Supon and Ruffini 2009). Help teachers cope with these difficulties, Chen (2008) suggested that rather than only providing education theories, ICT researchers should also document examples of how teachers achieve meaningful and effective technology combination to meet their pedagogical goals and requirements.

The results showed that the accessibility of procedures ICT tools, the establishment of disciplinary and educational principles and, as well as the division of labor among teachers, teaching assistants and students were critical elements to establishing a

well-managed ICT-integrated class. By emphasizing these elements, a learning development that was more likely to connect, in-service teachers learning students in acquiring education through ODL by using ICT would be facilitated.

Ertmer and Otterbreit-Leftwich (2010) reviewed the accessible literature on the essential elements to facilitate pre-service and in-service teachers' learning- students to apply ICT as a meaningful pedagogical tool. They recommended that schools provide teachers with solid confirmation supporting the positive impact of technology-based. Thus, Staples, Pugach and Himes (2005) stated that good arrangement for use of technology requires a special understanding of specific hardware and software associated to the Curriculum.

2.4 Empirical Literature Review

2.4.1 Empirical studies in Developing countries

According Mclean (2001) debate in distance education focuses on issues of equity, quality and use of ICT to support ODL. It was in this line that OUP approved the quality assurance and control policy and the ICT Policy and Master-plan to guide implementation of educational programmes at OUP.

ICTs were now set to become instrumental to help expansion of the access of education, strengthen the relevance of education to the increasingly digital workplace and lift up educational quality by among others, helping to create teaching and learning into an engaging activity (Shah and Shafiul, 2010). Similarly, a study by Light (2009) on the role of ICT in enhancing education in developing countries the findings from an evaluation of the Intel reach essentials course in India, Turkey, and

Chile found that through ICT student can learn by exploring contents, conducting research, and applying knowledge to real problems These further indicate that the request and exposure to and consumption of ICT basically change the way education was conceived and delivered to students.

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an evaluation of the Intel reach essentials course in India, Turkey, and Chile found that through ICT student can learn by exploring contents, conducting research, and applying knowledge to real problems.

Giving example in History subject, Light delineates that by following a question students acquired a lot of content through research to learn more deeply and they were more motivated by the new ways of learning. Likewise, Chandra and Lloyd, (2009) in their research on the methodological nettle, ICT and student achievement through an e-learning intervention found that ICT improve student performance in terms of test scores although the improvement was not global.

2.4.3 Empirical studies in Tanzania

Mwakilama and Nawe (2005) reflect on the transformation programmes of the two Colleges of the University of Dar es salaam. They put it clear that the application of ICT for teaching, research and learning in institutions of higher learning and the increased availability of information resources in electronic formats, largely determined how institutions of higher learning were changing their traditional ways of doing things

Therefore, there was a link between e-learning and library services in the learning process (Maro, 2008). Mushi (2006) argues that use of ICT tools such as e mails, chat rooms and bulletin boards help the instructor to keep in touch with learners as the instructor monitors participation, evaluate learning, pedagogy and effectiveness of teaching-learning. If the in-service teachers appropriately engaged ICTs would help them to achieve their learning goals easily and on time. . In the modern digital

world application of ICT in ODL was not a matter of choice, but a must (Cosmas and Mbwete, 2009).

2.5 Conceptual Framework of the Study

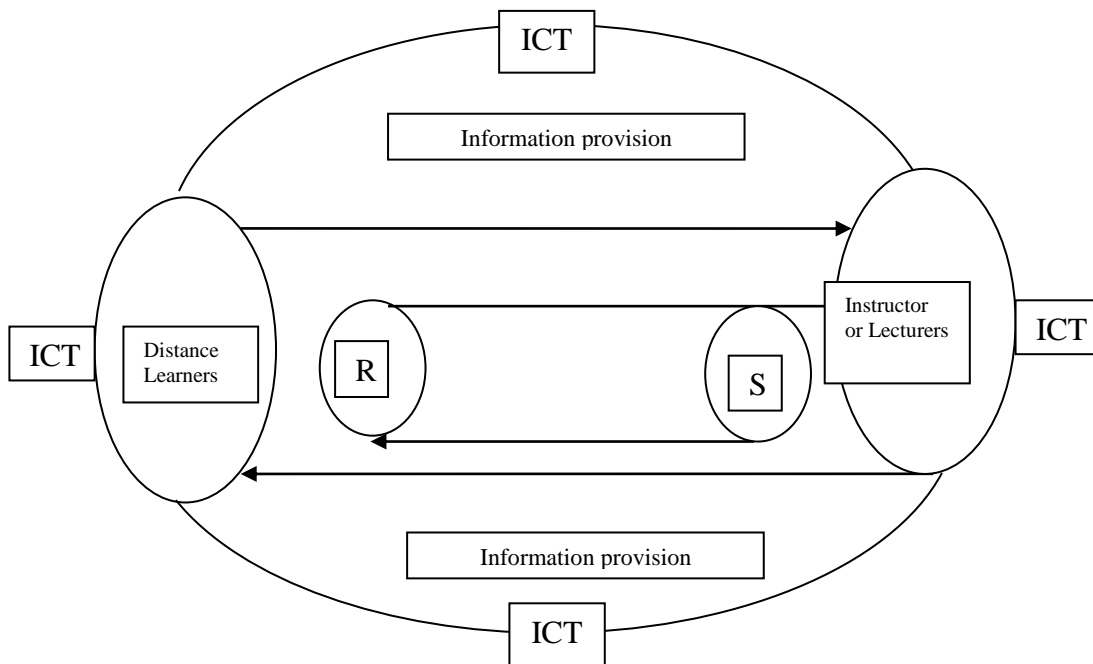


Figure 2.1: Two Way Traffic

In relation to this study, this model above was adopted for its importance in pointing out the sociological view in communication. ICT environment forms a larger universe within which many information elements are at play. In our case, there are communicators and receivers of information. The information system was a two way flow from either side. The lecturers or tutors as communicators form a sub-universe and the distance learners in the students' sub-universe as receivers of information. This conceptual framework was based on the specific objectives that were to examine the availability, use of ICTs and factors influencing the general application of ICTs at OUT. This displays the relationship and interplay in the utilization of ICT

facilities for information provision between students and lecturers at the Open University of Tanzania.

2.6 Research Gap

So far there are few studies which have been conducted in academic institutions in Tanzania on the role of ICTs in facilitating distance learning. In their studies, Mwakilama and Nawe (2005) concluded that information services provision, ICT facilities provision, information retrieval tools and the changing role of librarians have raised new demands and challenges. In addition, networked computers have been used for internet access and word processing. Mushi (2006) observed that ICTs should highly be adopted as the ideal technologies for contemporary ODL world of practice. Mcharazo (2004) suggested that distance education does not depend solely on the information by distance education institution therefore, some research and evaluation areas should be considered. Delivering instruction through the distance mode presents a significant

Challenge to educators but in this era of ICT the gap is filled by use of the ICT. However, through this literature review it was found that little research has been done so far on the use of ICTs in facilitating distance learning at OUT. This is the gap the study intended to fill by examining the role of ICT in facilitating distance learning.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents research approach, research design, study area, population of the study, sampling procedure, sample size, data collection methods, data analysis, reliability and validity lastly was ethical considerations.

3.2 Research Approach

This study employed a qualitative research approach with some aspects of quantitative approach so as to help illustration of the qualitative information. Qualitative rather than quantitative inquiry more appropriate for this study, according to Cresswell (2009) there were three mixed procedures in which the researcher seeks to elaborate or enlarge on the findings of one method with another method. This approach involved examining data thus giving a large sample so that the researcher generalized results to a population. The uniqueness of case studies is that it utilizes both qualitative and quantitative data to allow through description of a case under study.

3.3 Research Design

Research design provides a framework for how the study would be conducted. The study was conducted by using the case study design, which falls under qualitative research method. Thus, it was a generation of confirmation that is suited both to a certain set of criteria and to the research questions in which the investigation has to

answer (Bryman, 2001). According to Kombo & Tromp (2006) a research design is attached and holds together all the elements in a research project and it is used to structure on research. It show how all major parts of the research project work together to address the central research questions. A good research design is the one, which is flexible, suitable and economical, minimizes bias, maximizes validity and reliability of data collected and analyzed, yield maximal information and provides an opportunity for considering many aspects of a problem (Ezzy, 2002).

The study was conducted by using the case study design, which falls under qualitative research method. The case study was dealt with describing the challenges facing in service teachers in acquiring education through open and distance learning (ODL) by using ICT, ICT as mediated instruction and strategies to mediate the challenges of distance education to study through ODL in Morogoro municipal.

3.4 Study Area

The study was conducted at Morogoro municipal to ODL in-service teachers at Morogoro municipal. The researcher selected the Morogoro municipal because of its geographical location it was easily accessed, further the place had a good sample representation due to the presence of in- service teachers. Also the area was purposely selected because such kind of study had never been conducted in this municipal. Furthermore the area comprises a lot of in- service teachers with different cultural backgrounds socio-economic status and life experiences of the in- service teachers.

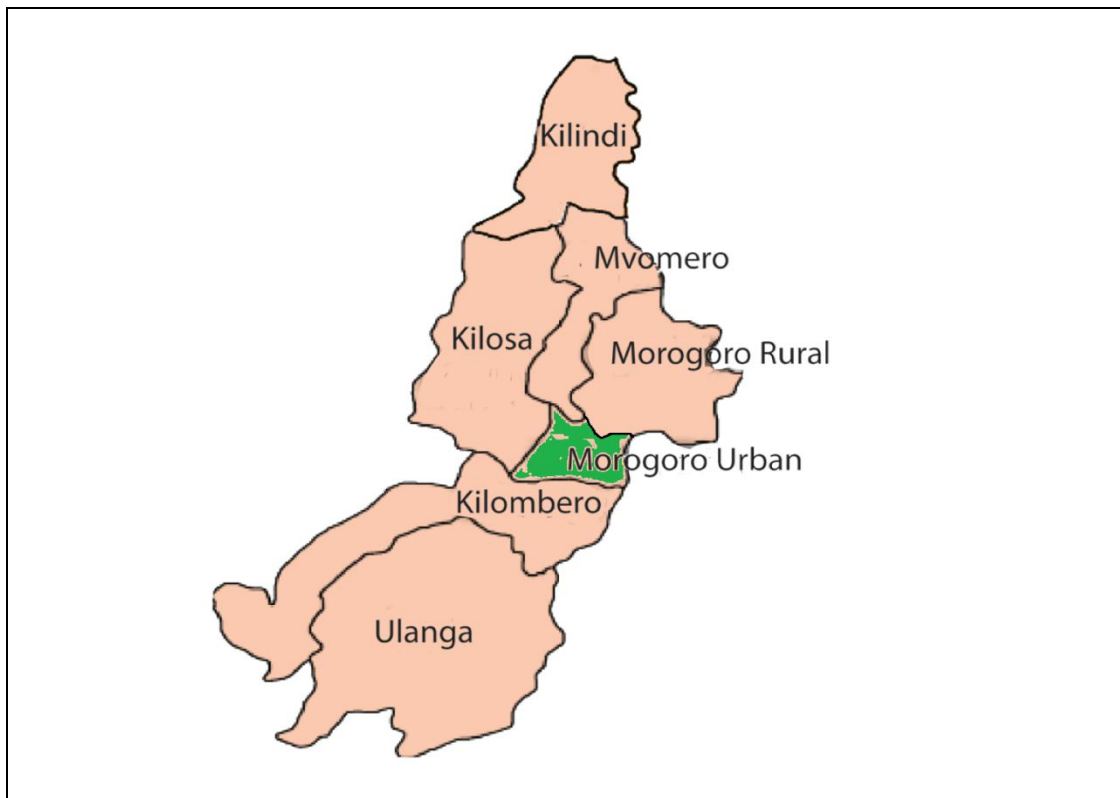


Figure 3.1: Map of Morogoro Region

3.5 Population of the Study

Population of the study comprised in-service ODL teachers and administrators at Morogoro Region Centre.

3.6 The Sampling Procedure of the Study

Sample is a representation of the population from which it was selected. Whereby, sampling procedures refers to the process of selecting a number of individuals from a population to obtain information regarding a phenomenon in a way that ensures that the population, were fully represented (Brink, 1991). Moreover, the idea of sampling in qualitative research is to select participants who are best able to give the researcher access to a special perspective, experience or condition which the researcher wishes to understand (Morse, 1994).

3.6.1 Purposive Sampling

Cohen, Manion and Morrison (2000) contends that, purposive sampling technique was usually applied in a condition where the researcher already knows something about the nature of the population and purposely selects particular respondents because they were seen as the ones who were likely to give the most valuable data. In this study purposive sampling occupied to obtain the coordinators of the selected samples. Moreover, purposive sampling technique was selected because they were administrators of the selected colleges also are responsible for supervision, inspection, controlling and monitoring of the teaching and learning process. They were key implementers of the daily college activities who have sufficient information concerning the challenges facing in-service teachers in acquiring education through ODL using ICT.

3.6.2 Stratified Random Sampling

In this study the sample was drawn from the Stratified random sampling involves in-service teachers were selected equally to participate in the study.

3.6.3 Snow Ball, Chain, Or Network Sampling

Normally used when the initially selected subjects suggest the names of others who would be appropriate for the sample. These next subjects might then suggest others and so on (Ary et.al, 2010). In this study Snowball was used as a type of sampling because potential respondents for the recent study were scattered in different areas within the area of the study. The researcher was familiar with one respondent after interviewing him, the researcher asked the respondent the name and place of other respondent he responded, then the process went on to six participants.

3.6.4 Simple Random Sampling (SRS)

Simple random sampling was produced by a scheme, which ensures that each subgroup of the population size had an equal probability of being chosen as a sample.

In this study the researcher prepared pieces of papers written different numbers in such pieces of papers and place them in the box then mixed well, the participants were allowed to select only one piece of paper without repetitions there after the researcher was choose participants with only even numbers to represent others. As (Kothari, 2004) points out that write the name of each element of a restricted population on a slip of paper, put the slips of paper so arranged into a box or a bag and mix them thoroughly and then draw (without looking) the essential number of slips for the sample one after the other without replacement.

3.7 The Sample Size of the Study

A sample is a small group of subjects drawn from the population in which a researcher is attracted in the purposes of drawing conclusions about the universe or population (Kothari, 2004). Leedy (1986) adds that the results from the sample can be used to make generalizations about the entire population as long as it is truly representative of the population.

According to Tripathi (2002) sample units should be heterogeneous and the study considered Tripathi's views. Also, Cohen et al. (2007) describe sample as a section or a part of the targeted population whose information generalized to the larger population. It was the act of selecting the number of individuals in a study in a way

that the sample represented the respondents from where they selected in Morogoro municipal because the nature of the study, descriptive research which required qualitative approach and tool of data collection require few respondents.

The sample size of the study comprised 24 (twenty four) participants because expected to had vast experiences relevant for the study. ODL in-service teachers and two administrators from Open University. In total therefore, the study were involve 24 respondents because the nature of the research approach and instruments employed, interview need manageable respondents to minimize time and cost.

3.8 Data Collection Tools

The study were used interviews, Questionnaires and documentations in order to got the views on the challenges facing in-service teacher in accessing education through Open and Distance Learning by using ICT. Each type of instrument was used depending on the kind of respondent, time factor and environment. Two types of data collection, which were:

3.8.1 Primary Data

Primary data are those, which are collected for the first time by the researcher (Babbie, 1990). Primary data were obtained by the use of structured questionnaires containing closed and open-ended questions. Interview was conducted for supplementary information that verified answers obtained from questionnaires.

3.8.1.1 Interview

Interview is a technique in which information is collected through verbal communication in the form of face-to-face interaction between the researcher and the

subject (Cohen et al 2000). Personal interviews were conducted to respondents in order to obtain the first hand information, this was a willing of respondent and had sufficient time to respond face to face questions. The data gathering was preferred due to its merit of flexibility allowed the researcher to use guiding questions in order to make sure that all issues were covered. The technique enabled the researcher to meet with respondents face to face and understand their feelings during conversation on the challenges facing in-service teachers in acquiring education through ODL by using ICT. The questions and answers asked during the interviews were recorded because was so flexible to permit restricting of questions as the situation demanded.

3.8.1.2 Questionnaire

Questionnaires were formatted in a set of questions that were drawn up to meet the objectives of the study Keya, Makau and Omary (1989). The questions in this case were relevant to the objectives of the study and to the individual respondents. The questions were open and closed these questions were engaged to all respondents.

3.8.1.3 Documentary Sources/Review

This was from secondary sources of various documentaries such as reports, office files and other relevant materials studied. The researcher read the documents in order to get useful information to supplement the primary data. The researcher obtained the enrollment of the OUT students 2017/2018.

3.8.1.4 Secondary Data

Secondary data are those data, which had already been collected by someone else. This can be published or unpublished information (Kothari, 1985). Secondary data

was collected from various documents such as; books, newsletters, reports, magazines, journals, daily newspapers and web resources inform the internet.

3.9 Data Quality Control

Data quality control ensures researchers to obtain data of high quality. This was achieved by observing the following; pre-testing of the research instruments and abiding to ethical issues.

3.9.1 Pre-testing of the Research Instruments

The testing of research instruments was considered important because it helped to measure their clarity, consistency and validity. The questionnaires were tested on a small sample of five respondents from Morogoro municipal. The findings from this study were used to refine the questions to improve clarity, reliability and validity of instruments. This was aimed at rewriting and improving the questionnaires by avoiding inconsistency or ambiguity.

3.10 Data Analysis

In this study data analyzed by using qualitative and quantitative methods. Descriptive statistics used to analyze qualitative data. Data were verified, compiled, coded, summarized and presentation was done in form of tables. These were edited, coded, classified and tabulated by using percentage. After interviews and questionnaire filling, preparation of data for analysis followed. This provided a platform for discussion and presentation of results.

3.11 Reliability and Validity

Reliability and validity of the instruments used in this study verified by the researcher after going through various literatures. Also the researcher was pre-tested the instrument by allowing the lecturers to go through the question items to cross check if at all they were easy to understand and provide the relevant output.

3.11.1 Reliability

In a quantitative research reliability could be taken as something of a fit between what the researcher recorded as data and what exactly happened in the natural setting that were studied to ensure more accuracy and informal talks with other people outside the sample of the respondents geared towards enhancing reliability as part of this research. According to Best and Khan (2006) reliability means consistency and stability of the tool of data collection such as questionnaire. In this study reliability was checked through pilot study. Questionnaires were administered to respondents.

3.11.2 Validity

The questionnaires were distributed to twenty two ODL in-service teachers and two administrators with different characteristics of respondents adequately helped the researcher to achieve the objectives of the study (Neurman, 2007). To ensure that the study is valid the researcher applied multi-methods strategy from multi-source, interviews and questionnaires. Brock-Utnes (1996) propose that triangulation and traditional way of treating validity in quantitative study. In this study questionnaires adhere to the respondent's ethics thus the use of suitable terminologies of challenges facing in-service teachers in acquiring education through ODL by using ICT at Morogoro municipal. By observing reliability and validity the researcher provided

more reasonable information that could answer the problem of the study more precisely.

3.12 Ethical Consideration

Ethical considerations was taken to ensure investigation of challenges facing in-service teachers therefore attention was paid to rules and regulations when conducting research activities in the field. In the study ethical issues was adhered to as verkevisser (2003) emphasized that when we developed our data collection techniques we need to consider whether our research procedures were likely to cause any physical or emotional harm such as violating informants right to privacy. The research requested for permission to conduct the study from responsible authorities. Where necessary consent of respondents and confidentiality were observed. Furthermore, the language used was user friendly. It was therefore imperative that ethical issues concerns started as early as planning phase and was a part and parcel of the research proceedings till the compilation of final report (Mhalila, 2007).

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION OF FINDINGS

4.1 Information of the Respondents

This chapter presents the findings of this study. This information is presented according to the objectives of this study. The first part presents the demographic information of the respondents. Background information was on personal information of the respondents with various demographic characteristics in terms of education level, gender and experience of using ICTs. The diversity of the respondents was necessary to get this information as it has influence on the way one perceives the challenges encountered and the role of information communication technologies (ICTs) in facilitating distance learning. The second part presents the findings, which is followed by the summary of the chapter.

4.2 Demographic Characteristics of Respondents

This section gives brief characteristics of the respondents involved in the study. It presents characteristics associated to size, gender, education, and working experience of respondents.

2.2.1 Size of Respondents Involved in the Study

A total of 24 respondents took part in the study, out of these 22(91.6%) respondents were target sample for questionnaires. 24(100%) respondents were interviewed; this included 2(8.33%). Lecturers and 22(91.66%) from the Open University in-service teachers at Morogoro municipal. Table 4.1 summaries these findings.

Table 4.1: Size of the Respondents

Respondents	Size	Percentages
In-service teachers learning students	22	91.7
Administrators	2	8.3
Total	24	100

Source: Research Field Data, 2017

4.2.2 Education Level of Respondents

The researcher in her study employed respondents with different level of education in order to get different opinions on the topic under study as summarized on the table below.

The respondents were asked to give information about their level of education. Twenty four respondents responded to this question, it was found that 75% of the respondents were degree holders 25% had masters.

Table 4. 2: Education Level of Respondents

Education Level	No: of Respondent	Percentage
Diploma	0	0
Degree	18	75
Masters	6	25
Total	24	100

Source: Research Field Data 2017

The research statistics showed that, the majority of respondents about 75% were degree holders while 25% of the respondents had masters and above.

4.2.3 Gender of the respondents

The study expected both male and female respondents. Table below shows the distribution of the respondents according to their gender.

Table 4.3: Shows Gender

Gender	Number of Respondents	Percent
Female	15	62.5
Male	9	37.5
Total	24	100

Source: Field Data, 2017

The researcher in the study considered the gender in order to get different opinions on the topic under study. There were 62.5% female and 37.5% male

4.2.4 Experience in using ICT of the Respondents

The first research question aimed to examine the experience of ICT that the in-service teachers have and how they use it to learn at Open University of Tanzania. Before determining this experience it was important to get the background information of the respondents on exposure to computer. To get a sense of their experience, questionnaires were distributed to 22 teachers learning students and all were returned, coded and analyzed using SPSS statistical package for analysis. The completed questionnaires gave a 100% response rate. The main reason for the high response rate was the cooperation that was received from research assistants during the distribution and collection of the questionnaires. The results of this information were presented and discussed in various formats below.

4.3 The Experiences of the In-service Teachers Learning Students which they Face in using ICT to Learn at Open University of Tanzania

This is the first research objective of this study the findings were shown in the Table 4.1.

Table 4. 4: The Experiences of the In-service Teachers which they Face in using ICT to Learn at Open University of Tanzania

Questions	Response	No of Respondents	Percentages
Did you have experience in using ICT?	YES	21	95.45
	NO	1	4.54
If yes for how long?	2- 4 years	18	81.81
	More than 4 years	4	18.18
How does ICT help you to reach your learning goals?	Help learners to access materials	21	95.45
	It reduces the dependence of the use of hard copies materials.	2	9.09
Which kind of device you use to get materials?	Personal Computer[Pc]	14	63.63
	Cell phone	7	31.81
	Any other	1	4.54
Did you attend any ICT course?	YES	19	86.36
	NO	3	13.63
If Yes for how long?	3- 6months	8	36.36
	1year and More than 2 years	14	63.64
Do you think ICT is appropriate source of materials to open and Distance Learning students?	YES	20	90.90
	NO	2	9.09
If Yes why?	It minimizes cost	6	27.27
	Helps get materials in the website	14	63.63
	No because it is difficult to use ICT due to lack of network.	2	9.10

As the data presented in the table above, it revealed that 95.45% of the respondents had experience in using ICT while 4.54 % of the respondents had no experience in using ICT. According to these findings it shows that most of the respondents had experience in using ICT compared to those who had no experience in using ICT. Furthermore, most of the respondents had experience of two to four years in using

ICT while few of them had experience of more than four years. As table 4.4 indicates that, 81.81% of the respondents had experience of two to four years in using ICT while 18.18% of respondents had experience of more than four years.

The data revealed that ICT were more important to in-service teachers that helps them to access materials, it reduces the dependence on hard copies materials like books through the use of search engine and soft copy. Also allowed them to search learning materials and to get materials which simplify the whole process of learning. As the table 4.1 indicates that 95.45.% of the respondents were used ICT to access materials, 9.09% of the respondents said that, they use ICT which help them to reducing the dependence on hard copies materials like books through the use of search engine and soft copy. Moreover 9.09% of respondents reveled that ICT allowed them to search learning materials and 18.18% of respondents said that, they get materials which simplify the whole process of learning.

In contrast, Table 4.4 shows that 63.63% of respondents said that were used Personal Computers (Pc) as a proper device for searching their learning materials,31.81% “were used Cell phone as a source of their learning materials and 4.54% were used other devices for searching materials. According to these data it shows that most of the in-service teachers learning students depend on computer as a major source of their learning materials and few of them went to internet café for searching materials, ICTs enable access to and use of information that may not be commonly available in certain contexts (Asian Development Bank (ADB), 2009), but only one respondents said that did not use personal computer and internet they were used other devices none from the above.

However most of the in-service teachers were attended ICT courses. Those who attended were 86.36% of respondents and 13.63% respondents were not attended any ICT course. According to these data it showed that most of the respondents were attended ICT courses Only 36.36% of the respondents were attended ICT course for 3-6months while one year and more than 2 years were 63.64% of respondents they attended ICT courses. So according to data above it shows that most of the respondents had knowledge of ICT because studied for more than one year.

Also most of the respondents said that ICT was the appropriate source of materials to open and Distance Learning students, because 90.9% of respondents said use ICT to search materials which were used for their learning process and only 9.10% of respondents did not use ICT as a source of their learning materials.

However 27.27% of respondents said that ICT was an appropriate source of their learning materials because it helped them to minimize cost of travelling from one place to another for seeking learning materials and 31.81% of respondents said that ICT was an appropriate source of learning materials because a lot of materials were found in the website for learning and sometimes no Lecturers to consult directly if you need learning materials. Enable us to search different materials from different sources.

Additionally 13.64% of respondents said that ICT was appropriate because now days Open University of Tanzania do not provide support on materials to their students therefore their only source of their learning materials were ICT. Also 9.09% of

respondents said that they used ICT to get study materials through search engine like google.

Also there were some about 9.09% of respondents who responds that ICT was not an appropriate source of their learning materials because there were other source of searching materials to learn than using ICT for example Libraries and others said it was difficult to use ICT because of lack of money and network sometimes when needed. Under these objective questionnaire method of data collection were mainly used and interviews was used as a supplementary tool for data collection to questionnaire, all these methods were administered to in-service teachers learning students. Opinions were sought from 22 respondents from in-service teachers, which were used as a unity of analysis. A number of previous studies have shown that an appropriate use of ICT can raise educational quality and connect learning to real-life situations (Lowther,et al. 2008:Weert and Tatnall 2005) ICT tends to expand access of education. According to Tinio (2002) ICT is potentially a powerful tool for extending educational opportunities both formal and non-formal. ICTs were potential tools previously underserved constituencies scattered and rural populations.

Furthermore, Holmberg (1989), Peter (1988) and Keegan (1990) insist on individualization learner freedom and cost effectiveness of learner-paced designs in the practice and even the definitions of ODL. Also Moore (1993) states that enlarged peer interaction can increase participation and completion rates and result in learning outcome gains in ODL courses especially to in-service teachers. Interpersonal learning activities also result in enhanced social integration of learners and course and programmers completion rates and hence improve quality of learning.. It has

been argued that ICT is a principal driver of economic development and social change worldwide (Kozma, 2005; Leech, 2008).

Moreover, there are researchers those supports this study like Farrell (2007) who asserts that while technicians can be employed to fix and maintain computers, teachers and educators must know how to exploit ICT for what it does best-opening learners up to the world of knowledge.

The above quantitative information was triangulated by interview to get the actual views of the respondents. The question was: What is your experience in ICTs and how do you use it to learn at Open University of Tanzania? The following were some of the responses:

Female Teacher 1: I had experience in ICT and I got training on ICT so that I could join the Open University of Tanzania. The ICT skill helps to surf learning materials. If I did not have the a b c of computer I don't know how I could learn at OUT

Female Teacher 2: I had trained in ICT when I attended the ICT courses at my College before I joined at the Open University. I use the skills to Communicate with the teachers by e-mail or sms in my smart phone. I normally use my phone because we always have a problem of low Internet service, and sometimes lack of bundle and electricity.

Male Teacher 1: I learnt ICT while studying at OUT. Before joining the university I did know anything in relation to ICT. When I went

to the Regional office for Learning materials, they told me I had to search for them on the internet. They showed me how to do it, and I am using the skill to access the materials.

Male Teacher 2: I got ICT skills from my school during the capacity building session. Our Head of school had a degree from OUT and he encouraged us to learn to use Computer. I learnt a lot from him and I am using this skill to learn a lot of things from the internet and to communicate with the instructors and with other students.

From the above, it can be said that the majority of respondents had experience in ICTs. Some underwent formal training, other learnt from the colleagues and from the regional coordination centres, and others just learnt by themselves. They all use the skill to access the materials and to communicate with the instructors and with their colleagues.

These findings are in line with the ideas of Mwakilama and Nawe (2005), who did a research in two Colleges of the University of Dar es salaam. These two scholars suggested that ICT skills provide the learners with capacity to locate and evaluate relevant information in order to engage with it or to solve a problem arising from it. However, unlike their suggestion, no respondent mentioned using ICT skills to solve problems. Likewise, Mossberger et al (2003) observed that technical ability are important to access ICT, and by this they meant the skills to operate the hardware and software of ICT, as well as the skills of using network systems to access and share information.

4.4 The Challenges that the In-service Teachers Face in using ICT to Learn at Open University of Tanzania

The second objective was to assess the challenges that in-service teachers face as they access education through ICT as a media of instruction. Questionnaire and interview were used to solicit this information. The question was: What are the challenges that face when you use ICT as a media of instruction? The responses from questionnaire were as follows:

Table 4.5: Challenges that the in-service Teachers Face in using ICT to Learn at Open University of Tanzania

Questions	Response	No of Respondents	Percentages
What are the challenges that face when you use ICT as a media of instruction?	It consume time	7	31.81
	Network problem	7	31.81
	Lack of knowledge on how to use ICT.	5	22.72
	It was expensive to buy a personal computer	3	13.63

Source: Research Field Data, 2017

As the data presented in the Table 4.5, it revealed that 31.81% of the respondents said that, using ICT it consume more time in searching materials while 31.81 % of the respondents revealed that, it was difficult to use ICT due to the network problems because sometimes when they want to use ICT may found that network were not available.

Moreover, about 22.72% said that, lack of knowledge was a major challenge to them; most the respondents had no skill on how to operate computers and to search materials. About 13.63% revealed that, computers were too expensive to buy it because most of the teachers had small salary.

The above quantitative data was triangulated by qualitative information obtained from the interview sessions. The question was: What are the challenges that face when you use ICT as a media of instruction? The responses were as follows:

Female Teacher 1: Actually, I don't feel to have adequate skills in ICTs and this to me is a major challenge especially when I am supposed to access the materials on line. Although in groups we learn from each other, when alone, I cannot figure out how to access the materials. This is a challenge for me.

Female Teacher 2: I have three young children and this I can say is a major challenge for me and for many women learners in ODL. Learning through distance needs a lot of time and it is nearly to impossible to get that time.

Male Teacher 1: A major challenge for me is lack of computer, personal computer. I have been depending on the computers in internet cafes and when I am at work or at home I cannot learn. Besides, the cafes are in town and I have to travel to access the materials in their computer. The other challenge is the cost of printing the materials. Now that we are not financially supported, it becomes very hard to print all the materials you find related to the assignments.

Male Teacher 2: Actually a major challenge that I see because of learning though ICT is Communication, both in accessing the materials and communicating with my Instructors. It is very hard to get the needed materials due to slowness of internet. I also face challenge getting though from the instructors to get the Information I want or to get a help with the materials that I cannot access on line. So I feel that this is a challenge because it is very difficult to learn all by yourself and when you go to the DRC, he keep pointing me to the head of department and I have never been able to talk to him/her.

Others mentioned low internet service, lack of bundle, time consuming, expenses to buy computer, electricity problem and lack of knowledge on how to search materials by using computers.

The data from interview corroborate those from the questionnaire where the majority of the respondents indicated time and network problem as key challenges. As Warschauner, (2003) observed, lack of ICT skills was a critical challenge as learner and may lead to unsuccessful in on line learning. Likewise, Cross (1981) identified three distinct categories of challenges facing ODL students: Situational, institutional and dispositional. According to Cross, situational challenges include job and home responsibilities that reduce time for study. Institutional related challenges include poor logistics system or a lack of suitable advising (Kruger and Casey, 2000).

All in all, the main challenges that the respondents in this study face, which include lack of time, lack of computer, lack of skills and lack of communication.

Institutional related challenges include poor logistics system or a lack of suitable advising (Kruger and Casey, 2000).

Zirnkle (2001) acknowledged specific challenges facing distance learners as program costs, lack of equipment and infrastructure, instructional concerns and poor technical assistance. Other challenges recognized by Zirnkle were insufficient feedback and poor teacher contact, alienation and isolation, and poor student support services.

Garland (2007) recognized some situational challenges for students persistence in distance learning. These include poor learning environment and lack of time. For example, students felt that the course took more time than expected because they failed to judge the demands of work, home and school. Kember (1989) argued that poor time organization leads to challenges such as learners' incapability to mix the demands of off campus study with family, work and social commitments.

Ukpo (2005) found that in-service teachers who enrolled in the ODL face challenges associated to disappointment of trainees to obtain training materials on time, students' commitment in other economic activities to enhancement their family incomes and poor learners support services especially where study centres were under resourced and overloaded

Robinson (1991) categorizes the problems as follows: Those rating to study techniques and learning difficulties which would increase in involvedness with the range of media being used.

Many countries in developing world are fraught with problems and limitations, Shafiqul(2009) identified some problems related to ICT-based education, identified that, problems were technology and moral issues, affordability, technological imperialism, socialization and humanization of technology, appropriateness and acceptability of ODL by using ICT.

4.5 The Strategies to Mediate the Challenges that Teachers Face in using ICT to Learn

An effective learners' support services system that provides onsite face to face, timely feedback on student performance and access to library services, student achievement will be undermined and dropout rates and postponement will increase. ODL also presents new challenges in information, dissemination, especially in developing countries. Mossberger et al (2003) observes that technical competence desired in order to have successful access to contemporary ICT. Technical ability refers to the skills needed to operate the hardware and software of ICT, including the skills of using networked systems to access and share information (Warschauner, 2003), provide adequate technical support (Liu and Szabo 2009; Tezci 2011a; Yildirim 2007).

Maintain partnerships that assist in service teachers learning students share effective technology practices and experiences (Ertmer and Otterbreit-Leftwich 2010); Provide workshops that in service teachers learning students allow to reflect upon effective strategies for using technology (Almekhlafi and Almeqdadi 2010). Offer opportunities to virtually observe in service teachers learning students who use technology (Frederick, Schweizer and Lowe 2006). Augment curriculum with

technology-enhanced materials (Goktas, Yildirim and Yildirim2009). Provide enough freedom for teachers in selecting and covering curriculum materials(Honan 2008).Provide effective, timely, and permanent training to in service teachers learning students in order to develop ICT skills and to manage a technology-rich classroom (Hutchison and Reinking 2011).

According to Tezci (2011a), teachers should learn not only how to use technology to improve traditional teaching or increase productivity, but also should learn from a student centered. This means that teachers need to use ICT in more creative and productive ways.

In order to create more attractive and rewarding activities and more effective lessons (Birch and Irvine 2009; Honan 2008). Hence, Castro Sánchez and Alemán (2011) suggested that teachers keep an open mind about ICT integration in classroom. However, Yildirim (2007) found that in service teachers learning students use ICT more regularly for the preparation of handouts and tests than to promote critical thinking. Similarly, Palak and Walls (2009) create that teachers mostly use technology to support their accessible teaching approaches and not often to promote student-centered learning.

More training must be provided in-service teachers learning -students on how to use ICT to search materials and ICT skills should useful in the classroom in order to integrate effective Technology strategies (Supon and Ruffini 2009). Help teachers cope with these difficulties, Chen (2008) suggested that rather than only providing education theories, ICT researchers should also document examples of how teachers

achieve meaningful and effective technology integration to meet their pedagogical goals and requirements. The results showed that the accessibility of procedures ICT tools, the establishment of disciplinary and education.

Table 4.6: Explore the Views of In-service Teachers on the Strategies to Mediate the Challenges that Teachers face in using ICT to Learn

Questions	Response	No of Respondents	Percentages
Suggest the way forward to mediate the challenges above?	Regional centres should have enough personal computers to enable learners to satisfy their learners needs	10	45.45
	Government should invest on ICT	5	22.72
	Reduction of cell phone price which could allow many people to manage the cost.	7	31.81

Source: Research Field Data, 2017

According to the table 4.6 above the respondents suggested some strategies to mediate the challenges face in-service teachers to learn through ODL using ICT, about 45.45% of the respondents said that, the Regional centres should had enough personal computers to enable learners to satisfy their learning goal and provide the skills to all in-service teachers on how to use computers, 22.72% of the respondents revealed that, the Government should provide enough computers to all universities especially to Open University which would help the in-service teachers to achieve their learning goals so it is better to invest on ICT and 31.81% suggested that, the computer suppliers should be given an advice to reduce the cost of selling the

computers and the cell phone price which could allow many people to manage the cost. Now days most of the researchers put more emphases on mobile learning such as Quinn (2000) for example suggested that mobile learning can encourage learning in a real-world context, and help bridge school, after school, and home environments. Mossberger et al (2003) observes that technical ability needed in order to have useful access to recent ICT was a challenge to in- service teachers' learning- students. Technical capability refers to the skills required to operate the hardware and software of ICT, including the skills of using network systems to access and share information (Warschauner, 2003).

Furthermore, Mossberger et al (2003) observed that technical competence desired in order to have successful access to contemporary ICT. Technical ability refers to the skills needed to operate the hardware and software of ICT, including the skills of using networked systems to access and share information (Warschauner, 2003), provide adequate technical support (Liu and Szabo 2009; Tezci 2011a; Yildirim 2007).

According to Tezci (2011a), teachers should learn not only how to use technology to improve traditional teaching or increase productivity, but also should learn from a student centered. This means that teachers need to use ICT in more creative and productive ways. The above Literatures observed that there were some strategies were took place to mediate some challenges those face in-service teachers and maintain partnerships that assist in service teachers share effective technology practices and experiences (Ertmer and Otterbreit-Leftwich 2010)

Furthermore, as Lowther et al. (2008) have stated that there are three important characteristics are needed to develop good quality teaching and learning with ICT :autonomy, capability and creativity.

The above quantitative data were triangulated by qualitative information obtained from the interview sessions. The question was: The question was, what ways can you suggest to mediate the challenges of learning through ICT at the Open University of Tanzania? The responses were as follows:

Female Teacher 1: The major solution to me is that, it is better wait until you got salary This will allow me to buy a bundle which will help to access internet

Female Teacher 2: I suggest the way forward that, the government should encourage more people to invest on the internet cafes which would help in-service teachers to search materials easily so as to achieve the learning goals easily.

Male Teacher 1: A major strategy to mediate the challenges which face in-service teachers about electricity problem is to wait until the problem is over.

Male Teacher 2: I will solve through this challenge by having enough time for searching Materials and to advise the Computer sellers to reduce the money for buying those devices in order to help the in-service teachers to achieve their learning goals.

4.6 Summary of the Objectives

This chapter presented and discussed the major findings of the study basing on the Research objectives. The major issues discussed were the experience of the in-service teachers which they face in using ICT to learn at Open University of Tanzania, challenges that in-service teachers face as they access education through ICT as a media of instruction and the strategies used to mediate the challenges that teachers face in using ICT to learn.

The findings of the study revealed that most in-service teachers had experience in using ICT while few of them had no experience in using ICT. Furthermore, most of the respondents had experience of two to four years in using ICT while few of them had experience of more than four years. The data revealed that ICT were more important to in-service teachers that helps them to access materials, it reduces the dependence on hard copies materials like books through the use of search engine and soft copy. Also allowed them to search learning materials and to get materials, which simplify the whole process of learning. So according to data above it shows that most of the respondents had knowledge of ICT because studied for more than one year.

The second objective was to assess the challenges that in-service teachers face as they access education through ICT as a media of instruction. Questionnaire and interview were used to solicit this information.

Most of the respondents said that, using ICT it consume more time in searching materials, it was difficult to use ICT due to the network problems because sometimes when they want to use ICT may found that network were not available, lack of

knowledge was a major challenge to them, most the respondents had no skill on how to operate computers and to search materials and computers were too expensive to buy it because most of the teachers had low salary.

Others mentioned low internet service, lack of bundle and electricity problem. Likewise, Cross (1981) identified three distinct categories of challenges facing ODL students: Situational, institutional and dispositional.

According to the findings most of the respondents said that, in order to mediate the challenges that face in-service teachers the technical competence desired in order to have successful access to contemporary ICT, provide adequate technical support, the Regional centres should had enough personal computers to enable learners to satisfy their learning goal and provide the skills to all in-service teachers on how to use computers, the Government should provide enough computers to all universities especially to Open University of Tanzania, computer suppliers should be given an advice to reduce the cost of selling the computers and the cell phone price which could allow many people to manage the cost.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Summary of the study

This study aimed on the investigation the challenges facing in-service teachers in accessing education through ODL by using ICT in Morogoro municipal. This chapter provides the highlights of the challenges facing in-service teachers accessing education through open and distance learning using ICT. The study was guided by the following study objectives:

To examine the experiences that the in service teachers face while using ICT to learn at Open University of Tanzania; To assess the challenges that in-service teachers face as they access education through ICT as a media of instruction; and To explore the views of in –service teachers on the strategies to mediate the challenges that teachers face in using ICT to learn.

Chapter one presents introduction of study, background of the study, ODL in Tanzania, an overview of open university of Tanzania, statement of the problem, three specific objectives, significance of the study, delimitation of the study, definition of the key terms and limitation of the study. Chapter two is confined to review of theoretical and empirical literature, while chapter 3 presents research approaches, which mainly involved was qualitative methods and minor quantitative methods.

5.2 Discussion

5.2.1 Experiences of the n-service Teachers in using ICT to learn at Open

University of Tanzania

Objective 1 confirmed that the majority of respondents had experience in ICT and most of them used this experience to access the materials on line. This means that among the challenges that the in-service teachers face as they access education through open and distance learning (ODL) by using information communication technology (ICT) are not related to lack of skills in ICT. Thus, the challenges were outside the individual learners and they were, as we saw in objective 2, related to time, financial and structural issues. Most respondents in this study had ICT skill, which enabled them to handle a wide range of varying computer applications for various purposes (Tondeur, et al 2008).

According to (Bordbar, 2010), teachers' experience in ICT can be a major predictor of quality learning and teaching as this skill will be helpful in integrating ICT in teaching. Bordbar further argued that teachers with experience with computers have greater confidence in their ability to use them effectively and their confidence relate to their perceptions of their ability to use computers in the classroom, particularly in relation to accessing materials and learning.

5.2.2 Challenges that In-service Teachers Face as they Access Education through ICT

Objective 2 revealed that, there were challenges which in-service teachers face when they acquire education through open and distance learning using ICT which involves: time consuming, network problem, shortage of electricity, expenses in

owning computer for buying bundles to access the internet. These were valid challenges because they impeded the learning and searching for the relevant materials. For learners to learn, access to the relevant materials is necessary. Inability to access relevant materials led to the learners to rely on scant information they got from the OUT website, such as course outlines. Course outlines are too skeletons to help the learners stretch the information and construct knowledge without the added information that could be accessed in the internet. Ukpo (2005) suggested that lack of information can lead to failure to on line learners enrolled to ODL institutions using ICT. It would not be a surprise therefore, if the majority of in service teachers at OUT fail or get low grades because of infrastructural and structural challenges that they face and which impede them from accessing the relevant materials for learning.

5.2.3 Strategies to Mediate the Challenges that Teachers Face in using ICT to Learn

This objective 3 revealed that, the challenges the teachers faced could be mediated by advising the Regional Directors to ensure they enough computers and internet in their centres to enable learners to satisfy their learning needs. Another mediation strategy was for the government to reduce the prices of cell phone to allow many people to possess the phones, especially smart phone, which are more easily manageable, especially in terms of internet.

Several researchers are in support of Encourage mobile learning saying, they can support learning anywhere, anytime and they allow students to gather, access, and process information outside the classroom. Quinn (2000) for example suggested that mobile learning can encourage learning in a real-world context, and help bridge

school, after school, and home environments. Therefore, as the respondents in this study pointed, mobile learning is relatively low cost and accessibility in low-income workers, like teachers.

5.3 Conclusion

This study revealed that there were several challenges faced in-service teachers. The challenges include individual, instructional and institutional related challenges. Most respondents showed that they had challenges in accessing the materials using ICT. This concurs with several others both lack of experience in the application of technology and absence of these technologies (UNESCO, 2004, Mbusa, 2009, Basaza et al, 2010). Nonetheless, ICT is the major ingredient in the effectiveness of ODL. In the modern digital world application of ICT in ODL was not a matter of choice, but a must (Cosmas and Mbwete, 2009). Furthermore, there were other challenges like electricity problem, it consume time, Network problem which may consume more time during the process of searching materials.

5.4 Recommendations

In the light of the findings and conclusions the following recommendations were put forward:

- (i) The OUT should ensure that all the Regional Centres are equipped with adequate computers and internet services to allow students to access materials on line.
- (ii) OUT should integrate computer training in the course content pursued by the learners at all the levels to equip them with the necessary ICT skills that will enable them to use different ICT facilities.

- (iii) The Ministry of Education, Science and Technology should lobby to the government to lower the prices of ICT gadgets and facilities such as smart phones, internet and computers.
- (iv) OUT should find a way to provide students with relevant materials through Mobile learning.

5.3.1 Recommendations for Further Studies

This study was confined to few in-service teachers accessing education through Open University of Tanzania in Morogoro District only. It was recommended that a similar study should be conducted in the whole country to Open and Distance Learning in-service teachers.

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APPENDIXES

Appendix I: Workplan and Activities Schedule

		DATE	TO	BE	C	O	M	P	L	E	T	E	2016
	ACTIVITIES	J	F	M	A	M	J	J	A	S	O	N	D
1.	Preparing concept paper												
2.	Submission of concept paper												
3.	Improving the concept paper												
													2017
	Preparing proposal and submitting												
5.	Fund request and receive from donor												
6.	Revision of Research Instruments												
7.	Pre-testing of research instruments												
8.	Data collection												
9.	Data analysis												
10.	Writing chapter 1-3												
11.	Improving chapter 1-3												
12.	Writing chapter 1-3												
13.	Writing chapter 4												
14.	Improving chapter 4												

Appendix II: Research Questionnaires for In-Service Teachers

Date.....

Questions.

Either put tick to correct alternatives given in the following questions;

1. Do you have experience in using ICT?

(YES) ()

(NO) ()

If Yes for how long?

a) 2years. ()

b) 3years. ()

c) 4years. ()

d) Any other specify. ()

2. How does ICT help you to reach your learning goals?

3. Which kind of device you use to get materials?

a) Personal computer (Pc) ()

b) Internet cafe ()

c) Phone ()

d) Ipad ()

e) Any other () Specify.

4. Did you attend any ICT course?

a) Yes ()

b) No ()

i) If Yes for how long?

a) 3 months ()

- b) 6months ()
- c) 1year ()
- d) More than 2 years ()

ii) No, how did you get this skill?

5. Do you think ICT is an appropriate source of materials to Open and Distance Learning students?

- a) Yes ()
- b) No ()

If Yes
why?.....

If no why?.....

6) What are the challenges that you face when you use ICT as a media of instructions?

7) Do you have access of ICT at your Regional centers?

- a) YES ()
- b) NO ()

If yes, are they enough?

It is accessible?

8) Suggest the way forward to mediate the challenges above.

Appendix III: Interview Guide for In-Service Teachers Learning Students

1. Do you have a skill of using ICT as a media of instruction in your learning process?
2. How does that skill help you to learn at Open University of Tanzania?
3. Where did you get that skill?
4. When did you get that ICT skill is it before or after joining Open University?
5. Is there any challenges that you face as you face as you access education through ICT as a media of instructions?
6. What are the challenges that you face you face as you use ICT as a media of instruction
7. How can you solve these challenges?
8. What should be done in order to help in -service teachers learning students to achieve their learning goals through ICT?

Appendix IV: Interview Guide for Administrators

1. How many students are enrolled at Open University in Morogoro Region?
2. How many computers do you have for students use at this centre?
3. Does the present computer satisfy the needs of the students?
4. What other ICT devices do you use to help your students to reach their goals?
5. What are the challenges do you get from the students when learn through ICT?
6. How do you solve the challenges?
7. What should be done in order to mediate the challenges facing students when learning by using ICT?

APPENDIX D

Appendix V: Research Clearance Letter

HALMASHAURI YA MANISPAA MOROGORO

Simu/Nukushi Na: 023 – 2614727
 Barua pepe: info@morogoromc.go.tz
 Tovuti: www.morogoro.go.tz
 Unapojibu taja:



Ofisi ya Mkurugenzi wa Manispaa,
 S.L.P 166,
 MOROGORO,
 TANZANIA

Kumb. Na: R.10/MMC024/66

28 Agosti 2017

Telise Sebastian Msongole,
 Chuo Kikuu Huria cha Tanzania,
 Kituo cha Morogoro,
 S.L.P 2062,
MOROGORO

YAH: KIBALI CHA KUFANYA UTAFITI

Tafadhali husika na somo tajwa hapo juu.

Ofisi imepokea barua yako ya tarehe 13/7/2017 ambayo pamoja na mambo mengine umeombewa kibali cha kufanya utafiti katika maudhui ya *“Changamoto zinazowakabili watumishi walimu walio masomoni kupitia Elimu Masafa kwa kutumia Teknolojia ya Habari na Mawasiliano”*.

Kwa barua hii, napenda kukujulisha kuwa kibali kimetolewa kwa ajili ya kufanya uafiti huo.

Nakutakia utafiti mwema.

A.H. Buhety

Kny: MKURUGENZI WA MANISPAA
 MOROGORO

K.N.Y. MKURUGENZI WA MANISPAA
 MOROGORO

Nakala:
 Mkurugenzi,
 Chuo Kikuu Huria cha Tanzania,
 Kituo cha Morogoro