

**PROSPECTS, STRATEGIES AND CHALLENGES OF ADAPTING  
MODERN INFORMATION AND COMMUNICATION TECHNOLOGIES IN  
FOLK DEVELOPMENT COLLEGES: A CASE OF NORTHERN ZONE  
TANZANIA**

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REQUIREMENT FOR THE AWARD OF MASTER DEGREE OF  
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**2015**

**CERTIFICATION**

The undersigned certifies that she has read and hereby recommends for acceptance by the Open University of Tanzania, a dissertation titled: “**Prospects, Strategies and Challenges of Adapting Modern Information and Communication Technologies (MICTs) in Folk Development Colleges (FDCs): A Case of Northern Zone Tanzania**” in partial fulfillment of the requirements for the degree of Masters of Education in Open and Distance Learning of Open University of Tanzania.

.....

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(Supervisor)

.....

Date

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**DECLARATION**

I, **Anna Joseph Ng'unda**, 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.

.....

Signature

.....

Date

## **DEDICATION**

This dissertation is dedicated to my friend (mummy), Maswai for her support, guidance, sincere encouragement and all her efforts during the study. The work is also dedicated to my beloved daughter Mgolegrace and my son Leonarld blessing for their companionship and endless prayers through which I was eager to finish this work.

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**ABSTRACT**

This research intended to determine the prospects of adopting modern information and communication technology (MICTs) in Folk Development Colleges (FDCs) in Northern Tanzania and the challenges that these institutions face as they strive to adopt these technologies to promote lifelong learning. Three objectives led this study: Assess the community members' views on the role of modern information communication technologies in enhancing lifelong learning and promote self-reliance and self-employment; assess the strategies that FDCs employ to obtain, access, and use MICTs to support lifelong learning in FDCs; and determine the prospects and challenges of adopting modern information communication technologies in FDCs. Descriptive survey design was used through interview and observation conducted to access information from thirteen participants. This study found that there is positive views among the community members on the role of modern information communication technologies in enhancing lifelong learning and promote self-reliance and self-employment. Secondly, in all the FDCs visited, modern information technologies are yet to be adopted fully, but are still using old technologies. Further, the study found that there were more challenges than prospects in adopting and using MICTs in FDCs. The reasons provided include lack of electricity, internet connection and knowledge and skills in using these technologies. The study recommends that Government should develop policies, regulations and legal framework to promote MICTs for provision of equal opportunities for quality education at all educational institutions including FDCs. This study covered only northern regions of Tanzania. More studies should be conducted in other regions of the country to draw comparison of the findings.

## TABLE OF CONTENTS

<b>CERTIFICATION .....</b>	<b>ii</b>
<b>COPYRIGHT .....</b>	<b>iii</b>
<b>DECLARATION.....</b>	<b>iv</b>
<b>DEDICATION.....</b>	<b>v</b>
<b>ACKNOWLEDGEMENT .....</b>	<b>vi</b>
<b>ABSTRACT .....</b>	<b>vii</b>
<b>LIST OF TABLES .....</b>	<b>xi</b>
<b>LIST OF FIGURES .....</b>	<b>xii</b>
<b>LIST OF APPENDICES .....</b>	<b>xiii</b>
<b>CHAPTER ONE .....</b>	<b>1</b>
<b>THE PROBLEM AND ITS CONTEXT .....</b>	<b>1</b>
1.1 Introduction .....	1
1.2 Background to the Study .....	1
1.3 Statement of the Problem .....	10
1.4 Objectives of the Study .....	10
1.5 Research Questions .....	11
1.6 Significance of the Study .....	11
1.7 Scope and Limitation of the Study .....	11
<b>CHAPTER TWO .....</b>	<b>13</b>
<b>LITERATURE REVIEW.....</b>	<b>13</b>
2.1 Introduction .....	13
2.2 Theoretical Framework .....	13
2.2.1 Theory of Participatory Rural Appraisal .....	13



2.2.2	Socio-Cultural Theory .....	14
2.2.3	Applicability of Socio-Cultural Theory in this Study .....	16
2.3	Empirical Studies .....	17
2.3.1	Role of Modern Information Communication Technologies in Lifelong Learning .....	17
2.3.2	The Role of Adult Education in Development.....	21
2.4	Adult Education and Self-Reliance/Self-Employment .....	25
2.7	Strategies to Obtain, Access, and use MICTs .....	28
2.5	Prospects and Challenges of Adopting Modern Information Communication Technologies.....	32
2.6	Knowledge Gap.....	36
	<b>CHAPTER THREE .....</b>	<b>37</b>
	<b>RESEARCH METHODOLOGY .....</b>	<b>37</b>
3.1	Introduction .....	37
3.2	Research Design .....	37
3.3	Research Approaches .....	38
3.4	Area of Study .....	38
3.5	Study Population .....	39
3.6	Sampling Procedures and Sample Size .....	39
3.7	Purposive Sampling.....	39
3.8	Instruments for Data Collection .....	40
3.9	Validity and Reliability of Instrument .....	41
3.9.1	Validity.....	41
3.9.2	Reliability.....	41

3.10	Data Analysis .....	42
3.11	Credibility of the Study .....	42
3.12	Ethical Issues .....	42
3.13	Chapter Summary .....	43
	<b>CHAPTER FOUR.....</b>	<b>44</b>
	<b>DATA PRESENTATION, ANALYSIS AND INTERPRETATION.....</b>	<b>44</b>
4.1	Introduction .....	44
4.2	Demographic Characteristics of Respondents.....	44
4.3	Role of Modern Information Communication Technologies in Enhancing Lifelong Learning and Promote Self-Reliance and Self- Employment .....	46
4.4	Strategies FDCs Employ to Obtain, Access, and use MICTs to Support Lifelong Learning.....	50
4.5	Prospects and Challenges of Adopting Modern Information Communication Technologies in FDCs .....	52
	<b>CHAPTER FIVE.....</b>	<b>55</b>
	<b>SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS .</b>	<b>55</b>
5.1	Introduction .....	55
5.2	Summary of the Study .....	55
5.3	Discussion .....	55
5.4	Chapter Summary .....	58
5.5	Recommendations .....	59
5.6	Recommendations for Further Studies .....	59
	<b>REFERENCES.....</b>	<b>60</b>
	<b>APPENDICES .....</b>	<b>66</b>

**LIST OF TABLES**

Table 4.1: Results about the Demographic Information of Student (Graduates)

Respondents..... 45

Table 4.2: Results about the Demographic Information of Tutors Respondents..... 45

**LIST OF FIGURES**

Figure 2.1: Vygotsky’s Model of Mediated Learning ..... 15

Figure 2.2: The classic Innovation Adoption Curve ..... 28

Figure 2.3: A Model of Stages in the Innovation – Decision Process ..... 30

## **LIST OF APPENDICES**

Appendix I: Mwongozo wa Kuhoji Wakufunzi wa Vyuo vya Maendeleo ya Wananchi Wanajamii na Wanachuo Waliohitimu .....	66
Appendix II: Interview Guide for Tutors, Graduates and Community Members.....	67
Appendix III: Observation Checklist for Tutors, Graduates and Community Members' .....	68

**LIST OF ABBREVIATION**

DTCs	District Training Centres
FDCs	Fold Development Colleges
FTCs	Folk high school
ICT	Information and Communication Technology
JF	Jamii Forum
KCMCO	Kilimanjaro Christian Medical College
KDDP	Kenya Vocational Training Sector
LLL	Life Long Learning
MICTs	Modern Information and Communication Technologies
MOCU	Mwenge Cooperative University
MOEVT	Ministry of Education and Vocations Training
MUCCOBs	Moshi University of Cooperative and Business Studies
MWECU	Mwenge University College of Education
PRA	Participatory Rural Appraisal
RTCs	Rural Training Centres
SMMUCO	Stefano Moshi Memorial University
VETA	Vocational Education Training Authority

## **CHAPTER ONE**

### **THE PROBLEM AND ITS CONTEXT**

#### **1.1 Introduction**

This chapter presents the background information on the research problem regarding the Folk Development Colleges Prospects and Challenges. The chapter is organized into different subsections namely background to the study, Statement of the problem, Objectives of the study Research questions, Significance of the study and Scope and limitation of the study.

#### **1.2 Background to the Study**

The value and importance of modern information and communication technologies (MICTs) in the provision of education is globally acknowledged and well established in literature (Yusuf, & Balogun, 2011; Garrison, 2000; Mushi, 2006). Modern information communication technologies are perceived to facilitate knowledge generation among learners by engaging them; in critical thinking, exploring personal attitudes and values, expressing ideas, and reflecting upon learning. MICTs also foster social presence by enhancing communication and fostering a feeling of belonging in a community among lifelong (Abawajy, 2012).

Given such attributes, most educators consider MICTs as important ingredients for strengthening lifelong learning (Yusuf & Balogun, 2011) and one of indicators of quality that has emerged in research on adult and community education such as Folk Development Colleges in Tanzania (Anderson, 2003). Since 1960s and 1970s an urge to promote lifelong learning through Adult Education innovations was very

prominent in Tanzania with the goal to empower people to become self-reliant and self-employed and bring change to the communities (Mushi, 1991). Self-reliance means a state of being self independent.

That is, doing things independently rather than waiting to be told what to do or having things done on behalf. Self employed, on the other hand, entails, the ability to work both independently and freely in community with others without depending on others to instruct what to do. Adult education was meant to inculcate into the learners this sense of responsibility and of working hard for personal improvement in the village life (Nyerere, 1968). Nyerere's education philosophy was. to encourage and foster the socialist goals of living and working together, for the common good (Nyerere, 1968).

Lifelong learning is a concept with multidimensional meanings. These meanings depend on the goal of the lifelong learner (Jarvis *et al.* 1998, pg. 2-3). However, the concept has gained new value in the current global economy in terms of both personal achievement national developments (Bentley, 1998; Jarvis *et al.*, 1998).

Goodyear (2000) defines lifelong learning as all learning from all:

“...areas such as kindergarten; formal education in the school years; further and higher education; informal learning in the community, home or workplace; training courses in industry; non-vocational adult education courses in colleges and universities, and so on. The all-embracing character of the term may seem, at first glance, unhelpful. But it does emphasise the need for a holistic perspective on learning and for what might be called ‘joined-up education’ – approaches to education which identify and systematically remove damaging discontinuities between different phases and settings for learning.” (pg. 2).

This implies that lifelong learning is not limited to one dimension. In personal life for example, lifelong learning can be seen at periods of major change in a person's



life: as one starts to walk, speak the first word, changing a career, accessing a job, changing social roles (for example when becoming a parent), or in occasions of changing lifestyles (for example when taking up a new hobby or sport). In many professions, activities and hobbies require constant updating of one's knowledge, skill or attitude. Farmers need to upgrade their farming knowledge, skills and techniques, teachers need to learning new content, methodologies of teaching and examining students, doctors need to keep their medical knowledge up-to date,

In national development, lifelong learning can also be witnessed in different sectors of society: in formal education at different levels (from pre-school to universities), in workplaces (on-the-job training, workplace learning), in the labour market (work-related projects and lifelong learning courses, educational enterprises, labour unions) and in civil society (community centers, liberal education etc aiming at enhancing social skills, school- and work-preparing skills). All these learning within the nation may lead to as the changes from autocratic to democracy; formal organizations recognizing lifelong learning or knowledge gained from lifelong learning as valid. National support of literacy programmes, income-generating activities or raising the people's awareness on violence, oppression and exploitation.

Among the initiatives to promote lifelong learning in Tanzania, adult education initiatives were the establishment of literacy, post literacy and Folk Development Colleges (FDCs). FDCs were established to enable the literates to acquire some academic and technical skills that they missed for failure to access formal education. This study focuses on FDCs in North zone of Tanzania to assess whether FDCs have attained the above goals.

The idea of establishment of FDCs can be traced back from the former. Farmers Training Centers (FTCs), District Training Centers (DTCs), and Rural Training Centers (RTCs) which were established in 1962, 1965 and 1968 in Tanzania (Moshia, 1985). These training institutions were converted to FDCs after the president's visit to Sweden where he was impressed by that country's Folk High Schools (FHS). In October 1973 Tanzania sent a delegation to Sweden to study the working of the FHS. The delegation recommended the adaption of such colleges to meet the national requirement (Ibid).

As pointed out above, the idea of FDCs in Tanzania originated from Scandinavian countries, where the Folk High Schools (FHS) were practiced. Like Tanzania, FHS is a system of non-formal adult education emerged in response to the need to educate rural citizens who would not otherwise have access to higher education; since then, they have spread to urban areas as well, but continue to serve a unique set of functions in each Scandinavian country (Bagley et al 2009).

According to Bagley *et al* (2009), In Norway and Denmark, Folk High Schools offer a year of courses which do not directly contribute toward one's degree, but instead offer students the invaluable opportunity to explore various topics and subjects without concern for grades. In Sweden, specifically Folk High Schools offer both a non-graded "year off," as well as the opportunity for students to complete their upper secondary school requirements in a noncompetitive and individualized setting. These institutions focus on more free and informal deliberations rather than normal formal education provisions. They play a great role in promoting lifelong learning and shed

light on basic questions surrounding life of people both as individuals and as members of the society.

In Tanzania FDCs were established by the Ministry of National Education in 1975 under the Act No 96 of 1975 under section 5 with a role to provide skills and knowledge to adults to enable them to contribute to rapid modernization of the country, to facilitate and ease follow up activities related to literacy campaigns and to improve the standard of general education particularly standard seven (primary school) leavers.

Among the FDCs main goals are; To develop personalities of individuals, their ability to think, feel and appreciate people's problems so that they could help others participate more fully in the social and economic activities of their community; To advance the adults knowledge so that they could make better decisions in personal and public matters; To help adults to understand the county's philosophy of socialism and self-reliance and encourage them to play an active role in political matters; To advance community knowledge, skills and abilities for democratic participation in cooperative endeavors; and to promote knowledge and advance skills in agriculture, handcraft, domestic science and health science (Mjengwa, 2004). As stipulated by the Ministry of Education and Vocational Training (2008), FDCs in Tanzania have the following role to play:

...focuses on the development and advancement of adult knowledge, skills and abilities to enable citizens to participate in democratic, economic and cooperative endeavors. Folk education also promotes knowledge and skills in agriculture, handcraft, domestic science and health science. This serves to broaden the knowledge of the population as a whole, and in the process, it prepares adults for self employment (MoVT, 2008, p. x).

Since the FDCs were meant to inculcate self-reliant and self-employment spirits, In the era of knowledge economy, the fast updating speed of knowledge, the emerging of new technologies as tool for provisioning education cannot be over emphasized. Modern technology is the theory and practice of using of education theory and modern information technology, through the design, development, utilization, evaluation and management of the teaching process and teaching resources, to achieve optimal teaching effect (Long et al., 2015). The special kinds of programmes that were offered as core and supporting programmes (Mosha, 1985) could be offered using modern educational technologies.

According to Mosha, the core programmes were those identified as essential to provide knowledge and skills for self-reliance and self-employment while supporting programmes were those identified as potential to broaden the learners' mental faculties in general knowledge and which would enable them to utilize the knowledge gained from core programmes. Core programmes include agriculture, and technical education, such as Carpentry, Masonry, Metal work, Domestic Science, and Accountancy. Supporting programmes include Political Education, Political Economy, Culture, Adult Education, Language and Bookkeeping, (Mosha, 1985). Modern educational technology can be applied to serve all learners regardless of their educational backgrounds, learning requirements, gender, social economic position, age and location.

While FDCs have imparted knowledge and skills to learners for over thirty years, their effectiveness in combating poverty and promote self-reliance and self-employment is yet to be determined. Despite this bleak situation the same FDCs

Philosophy is being used elsewhere in the world to provide education to the grassroots.

Many African countries have also embraced FDC philosophy though in different names and goals. Polytechnics of Kenya, Mozambique, Zambia and Malawi for example play the same role. The polytechnics are found in Cities, Municipalities and some in the local communities.

Citing to Barkan and Okumu (1979) Lukambuzi, (2004) identified the role of polytechnics in Mozambique as to provide skills, solve unemployment problems and bridge the gap between formal and informal education. Subjects taught include domestic science, tailoring, cookery, mechanics, masonry, carpentry, patterning and fashion making to mention few. Theory is integrated with practical work to allow learners to use skills and knowledge they have acquired which can be applied to real environments (p.14).

In Kenya the National Council of Churches of Kenya initiated the Youth Polytechnics in 1968. In 1971 the Government introduced the concept of supporting Youth polytechnics set up by local communities and churches. This was a strategy to ensure that school leavers had access to technical, entrepreneurial and business skills with a goal to enable them engage in income generating activities hence improve the standards of communities in which they live, and stem rural-urban migration. Local communities, religious and other nongovernmental organizations support Youth Polytechnics in different parts of the country. (KIDDP, N.Y). For example, youth polytechnics, widely known as village polytechnics are regarded as the solution to

the problems of youth unemployment. Village polytechnics started as low-cost, post primary training centers in rural areas in Kenya. Polytechnics in Kenya are supported by Italy under Development Programme Support which has been instrumental in supporting Kenya Vocational Training Sector (KIDDP).

In Botswana, the builder's brigades of Botswana were instituted to employ young men and women in productive activities for the aim of fighting against poverty and youth unemployment (Sheffield, 1973). Kilon (1976) explained the concept of 'Brigade center' in Botswana as a cluster of brigades such as builders, carpenters, auto-mechanics and farmers organized under a single local governing authority in a single locality started in 1965. These institutions resemble with FDCs in their roles, functions and goals of establishment.

According to Sheffield (1973), the brigades in Botswana have attracted a great deal of attention because they provide vocational training to school leavers at a little or no cost to the government and because they make innovative use of scarce resources. Among the three types of folk development colleges in Africa, those in Tanzania are the most challenged. A study by Mjengwa, (2004) found that most of FDCs in Tanzania lack most of the important resources. They are poorly staffed and their management lack of leadership skills.

These affect the outcome of their activities (Mjengwa, 2004). Mjengwa further found that many FDCs lack support from the local authorities and their activities are impeded by the poverty level of the community they serve (Wedgwood, 2005). From this stance, the deteriorating quality of FDCs to a greater extent rests with people in

rural Tanzania. Likewise, this sad situation of FDCs is negatively affecting the quality of rural development initiatives in Tanzania.

As an alternative way, the country has allowed Vocational Education Training Authority (VETA) to examine the students and accredit these institutions (Mjengwa, 2004). However, this turn of events has brought other challenges to this noble institution. The philosophy of informal deliberations has been turned to formal education provisions and linear than cyclic promotion of lifelong learning among the rural population. Furthermore, the language of instruction in VETA English, which affects the FDCs and its target group very negatively. Most students are folk people, whose language is Kiswahili and the exams given in English are a huge barrier to the success of many FDC candidates (Mjengwa, 2004).

However, although the challenges that were facing FDCs were facing -- poorly staffed and lack of leadership skills are valid; these challenges were exacerbated by failure to grapple with modern technologies that could provide the learners with modern trades. Most of FDCs have traditionally offered traditional trades such as carpentry, masonry, tailoring, and farming within the framework of traditional teaching and learning. Consequently, modern trades such as motor mechanics, computer technology, refrigeration, radio repair, television repair, hairdressing and many others cannot be offered because of the above challenges of lack of incompetent staff. This impediment plus the fact that most of these colleges do not have adequate workshops, classes, dormitories, storage space and teacher housing it is high time that the government start considering the use of modern information technology to provide more teaching resource and serve more people. FDCs require

new training techniques, such as live broadcasting and on line interactive materials. This innovation, it is hoped, will offset many of the challenges Msimba's (2004) study shows -- that many colleges lack properly functioning infrastructure such as water, electricity, telephone and transport facilities, as well as teaching and learning facilities and equipment.

### **1.3 Statement of the Problem**

The development of life skills and lifelong learning to promote self-reliance and self-employment cannot be effective in a strict formal and setting using traditional methodologies. This is the reason that the hope to eradicate rural poverty in rural communities in North Zone has not been achieved. Furthermore, there is no study that has explored how modern information technologies can enhance lifelong learning in such settings as in Folk Development Colleges This study aims to fill this gap in the literature. It explores the community member's views on the importance of information communication technologies in FDCs in promoting self-reliance and self-employment among the FDC alumni.

### **1.4 Objectives of the Study**

Specifically the study intends:

- (i) Asses the community members' views on the role of modern information communication technologies in enhancing lifelong learning and promote self-reliance and self-employment.
- (ii) Assess the strategies that FDCs employ to obtain, access, and use MICTs to support lifelong learning in FDCs.



- (iii) Determine the prospects and challenges of adopting modern information communication technologies in FDCs

### **1.5 Research Questions**

The research was guided by the following questions:

- (i) What are the community members' views on the role of modern information communication technologies in enhancing lifelong learning and promote self-reliance and self-employment?
- (ii) What are the strategies that FDCs employ to obtain, access, and use MICTs to support lifelong learning in FDCs?
- (iii) What are the prospects and challenges of adopting modern information communication technologies in FDCs?

### **1.6 Significance of the Study**

The findings of this study was create awareness and understanding on the status of FDCs in promoting self-employment and self-reliance to North Zone youth and adults. Also the findings of this study may influence education planners and policy makers to understand the status of FDCs and review their objectives and curriculum content to fit to the current social economic development of the Country. Furthermore the findings of this study stimulated further research studies concerning folk development colleges' prospects and challenges.

### **1.7 Scope and Limitation of the Study**

The study was conducted to only two regions Kilimanjaro and Arusha, Folk Development Colleges in North zone. The colleges namely Msinga, Mamtukuna in

Kilimanjaro, and Mtwambu in Arusha region. As a case of three colleges, the study had a limitation of generalizing the findings to other colleges of the same training programmes. The study was deal with FDC tutors, trainees and community members. Both quantitative and qualitative method of data generation and analysis was used so as to obtain the relevant information.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews a variety of related literature which comprises a theoretical framework guides the study and empirical studies on adult education and development, adult education and rural development, adult education and self-reliance/self-employment. It ends up with knowledge gap on the literature.

#### **2.2 Theoretical Framework**

Theory provides road map to tackle research problems. Never the less, all theories are contextual (Redding *et al.*, 2003). The theoretical framework to be adapted in this study was guided the current and future understanding of the role of adult education and FDCs in particular in promoting self-reliance and self-employment. Developmental theory of participatory developments specifically Participatory Rural Appraisal (PRA) and Socio-cultural theory are the theories which was adopted in this study because of their appropriateness.

##### **2.2.1 Theory of Participatory Rural Appraisal (PRA)**

PRA has been described as family of approaches, methods and behaviors that enable people to express and analyze the realities of their lives and conditions, to plan what actions to take, to monitor and evaluate the results (Chambers, 1994). PRA uses a wide range of methods developed by practitioners specifically to help local people, rural and urban as it is more shared and owned by local people (ibid). Participatory methods include mapping and modeling, transect walks, matrix scoring, seasonal

calendars, trend and change analysis well-being and wealth ranking and grouping, and analytical diagramming (ibid). Chambers, (1993) argued that an influential finding of PRA is, that villagers have a greater capacity to map, model, quantify and estimate, rank, score and diagram than outsiders have.

The Participatory Rural Appraisal has been used in different areas of research. Chambers (1994) identified four major sectors in which PRA can be applied. These include natural resources management, agriculture, poverty and social programs, and health and food security (ibid). Dipholo, (2007) associated PRA with adult education programs aimed at marginalized people from the decision making process and attempt to make them self-aware in order to contribute to the process of development.

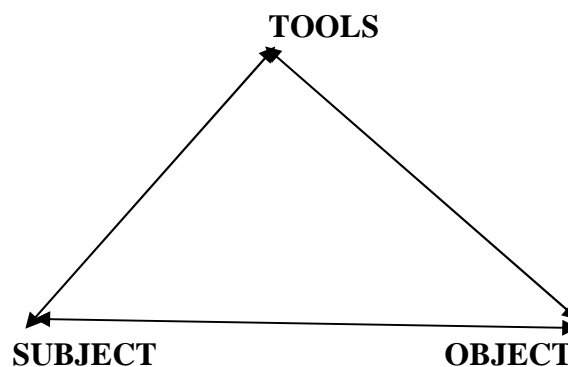
In this study, PRA approach is relevant in exploring the community members' views on the effectiveness of FDCs in promoting Self-reliance and Self-employment to community members. The approach enables community members to express and analyze the realities of FDCs in their community and suggest the actions to take, and to monitor FDCs in promoting self-reliance and self-employment. The approach also helped the researcher to involve FDC tutors' in the research in order to understand their perceptions of their role in promoting self-reliance and self-employment to FDC alumni.

### **2.2.2 Socio-Cultural Theory**

In this study Vygotsky's socio-cultural theory was applied. This theory looks at the important contributions that the society makes to individual development. The theory

stresses the interactions between developing people and the culture in which they live. Crawford (1996) argued that socio-cultural theory focuses not only on how adults learn and peer influence individual learning but also on how cultural beliefs and attitudes impact how instruction and learning takes place. Socio-cultural theory focuses on learning context in which students play an active role in learning and learning becomes a reciprocal experience for the student and teacher (ibid).

Although much of socio-cultural theorists focus on children and their learning, some elements of it were important in explaining the effectiveness of FDCs on its learners. Moore (1998) argued that children are surrounded by other people who interact and communicate with them. As they mature, they become part of other social networks (e.g. school, college, church, work, volunteer organizations) that continue to shape their thinking, learning and development through social interaction. According to Vygotsky Concept formation originates from social interaction, not from human mind as he argued “every function in the child’s cultural development appears twice; first on the social level and later on the individual level” (Vygotsky, 1978).



**Figure 2.1: Vygotsky’s Model of Mediated Learning**

Source: Swai E.V (2006, p. 41)

In summary according to Vygotsky, human activity consists of a subject (or actor), an object (either an entity or a goal), and mediational tools and signs. The Figure 1.1 represents the Vygotsky's Model of Mediated Learning. According to Vygotsky (1978) Participation in social and cultural activities is key to learning and to the development of cognition and culture. Knowledge is not raw materials obtained by sensory, but mediated culturally by tools and symbols.

Citing to Vygotsky (1978) Swai (2006) identifies tools as “things that people use to master and triumph over nature or change their environment” (p:40). In this context, tools stand for MICTs such computer, internet networks, smart phones etc. These can be used to change human external environment such as accessing information, accessing employment, and the like. This environment here may be lack of access to information, employment and the like, with a goal to be self reliant.

In Vygotsky's frame of mind was termed as objects. Objects are cultural entities that people work to change and transform to achieve a perceived goal. Subject means individuals or in this context, participants in FDCs whose goal is to be self reliant. To achieve their goal, these individuals must appropriate the tools (MICTs) to achieve their object (employment leading to self reliance).

### **2.2.3 Applicability of Socio-Cultural Theory in this Study**

Socio-cultural theory of learning is relevant in this study in exploring the community members' views on the role of MICTs in promoting Self-reliance and Self-employment in FDCs since the FDCs seek to develop human capital in rural Tanzania. Vygotsky (1978) intensifies the idea that human's mind cannot be

separated from the society arguing that one's totality, including cognitive development, behaviour and actions are mediated by social and cultural context including the social economic development, and in this context, the availability of MICTs. The theory places adult learners in FDCs at the centre of their studies with intended goal to be self reliant. With regards to this theory the researcher was able to understand the perceptions and the prospects of MICTs in transforming FDCs. Lack of technological mediated education makes the FDC learners and graduates more and more dependent on others in daily life, narrows employment possibilities and increases the danger that the potentially harmful effects of the unrestrained application of technology.

Thus this study is framed within the above theories-Participatory rural appraisal, socio-cultural and adult education and development. These theories individually and together helped explain the role of FDCs in promoting self-reliance and self-employment.

## **2.3 Empirical Studies**

### **2.3.1 Role of Modern Information Communication Technologies in Lifelong Learning**

Laal (2013) did a study on the role of interactive information and technology in lifelong learning. She reviewed the literature on the history of interactive information and technology and its the potential to address the needs of LLL. She found that interactive information and technology can make LLL a reality. With electronic tools, people, she found, can learn virtually anytime and anyplace they choose without obstacles. Further, Laal found that technology makes learning a private and

personal experience and motivate learners. Laal suggested that people need to upgrade their skills throughout their adult lives to cope with modern life, both in their work and in their private lives.

Noor-Ul-Amin (2014) did a study on the role of ICT in enhancing teaching and learning process, the quality and accessibility of education, enhancing learning environment, the quality and accessibility of education, and in enhancing learning motivation and scholastic performance. He found that *the use of ICT in education lends itself to more student-centred learning settings*. He further found that the adoption and use of ICTs in education have a positive impact on teaching, learning, and research. In addition, Noor-Ul-Amin found that ICTs increase flexibility so that learners can access the education regardless of time and geographical barriers. He suggested that all educational settings should adopt and use ICT to raise students' performance and achievement.

Sife (2013) did a study on the behavior of students in accessing modern information technologies. He used questionnaire to collect data from 126 postgraduate students. Sife found that most students were accessing web resources from their modems, however most were using simple search while advanced search was rarely used. Sife proposed that libraries should promote use of e resources among students through integration of information literacy in curricular.

Ishengoma & Mtaho (2014) conducted a study on online social network by analyzing a local online social network the Jamii forum (JF) as well as interviewing 70 students from the University of Dodoma. They found that there was a marked difference



between the forum popularity as and ways the participants accessed it. They suggested that these problems be addressed to make the Jamii forum more effective as an education forum.

Sydney & Jan (2014) investigated Instructor and students experience of e learning at University of Dar es salaam. The study involved 120 students and 8 instructors using a questionnaire administered to students' interview with selected students the instructor and technician who provided technical support and observed class room activities and the online environment. The study which suggests leaning towards constructivist learning theory and course design reveals a mismatch between relatively advanced technological infrastructure and little interaction experience by most students.

The study found that the inhibiting factors towards effective utilization of web based resources to be type of e learning design and pedagogical strategies used by instructors which prevented students form learning collaboratively to remedy the situation Sydney and Jan (2014) suggest that e learning design be improved from methods that focus on knowledge transmission to methods that engage students in social interaction through use of social learning tools such as discussion forums, podcast and blogs.

Matto & Bwalo (2012) conducted a study on prospects of Digital Libraries in enhancing academic materials access: A survey of Libraries in higher learning institutions in Kilimanjaro region which suggest inclining towards measuring cognitive presence was conducted. A total of 80 students and 20 instructors took part.

Higher learning institutions involved in the study were Moshi University of cooperative and business studies (MUCCOBs) Moshi Cooperative University (MoCU), Mwenge University college of education (MWECU), Kilimanjaro Christian Medical College (KCMCo) and Stefano Moshi memorial University (SMMUCo). The study revealed a mismatch between awareness on advantages of digital technologies and actual implementation. Challenges identified were shortage of funds, low technology, power rationing, inadequate ICT tools and personnel to manage digital technologies. He proposes that the government provide a mechanism for stable power supply to higher learning institutions and those higher learning institutions should deliberately put up efforts to acquire tools for digital libraries to do so they need to collaborate to seek and allocate funds for digital library implementation.

Mtega, Dulle & Bernard (2014) conducted a study aimed at investigating the extent to which agricultural researchers and extension workers were aware of social media and how they put it into practice in their daily work. The study which was positively inclined towards constructivist teaching and learning approaches, involved 107 respondents in the first phase and 148 in the second phase. Respondents were from agricultural research and training institutions as well as agricultural extension departments from selected districts across the country. Structured questionnaires were administered to selected respondents.

Findings show that 43.9% of the respondents were aware of Web 2.0 while 56.1% knew nothing about this concept. Facebook and Wikipedia were found to be the most used Web 2.0 tools by many respondents while Delicious, Pworks, Picasa and Digg

were identified as among the less commonly used tools by majority of the respondents. The study recommends the need for providing appropriate Web 2.0 training packages to agricultural extension workers, researchers, trainers and other stakeholders in order to enhance knowledge sharing among them for improved agricultural productivity in the country.

### **2.3.2 The Role of Adult Education in Development**

McLean (2009) did a study on the effect of adult education on sustainable development in Jamaica. She used a quantitative approach with survey method. Her focus was on finding out whether adult learners were engaged in activities that moved them from awareness about sustainability to taking action for achieving sustainable development. She focused on five sectors including agriculture, automotive trade/transportation, building and construction services, and hospitality services programs to assess the effects of adult education in realizing the organizational goals. The findings revealed that, the sociopolitical condition in the country was a major barrier to achieve sustainable development. McLean attached this sociopolitical condition with the failure to apply the theories and content of adult education in real life situation.

Nambinga (2007) did a study investigating the role played by Adult basic education in the development of rural Namibia. The focus was on the relevance of the programmes offered in helping women of the area in their development. The researcher used a qualitative research strategies and interview, observation and documentary analysis to understand relevant skills needed to develop the women participation as they concentrated on literacy and numeracy. The findings revealed

that, women needed skills that could help them generate income to improve their living conditions. The researcher suggests that, adult basic education should include the content that would uplift and improve the lives of the participants on a social, economic and educational level.

Snyder and Tendese (1995) on their book African women and development viewed adult education as an answer to Africans women development. They identified relevant adult education programs relating to the needs of the community life such as health, family planning and money- making projects empower adults to become economically independent and self-reliant. These authors suggested that, Adult education programs should be designed to empower adults to realize their potential, to be able to start their own business, gain skills that can enable them to be employed, among others.

James (2009) did a study on awareness and application of life skills education in primary schools in post-conflict areas in Uganda. The focus of the study was on eliminating high levels of poverty especially in rural areas and unemployment to adult learners for their development. The researcher used a cross-sectional survey and questionnaire, interview guides and observation. The study revealed that the application of life skills by pupils was weak and most teachers face numerous problems in the promotion of life skills did not eliminate poverty and unemployment. James suggested that materials on life skills need to be supplied to schools, a core subject on life skills be introduced in schools and funding life skills activities could be considered.

In summary the work of Snyder and Tendese 1995; Ndambinga 2007; James 2009; and McLean 2009 give insight on the significant role played by adult education in development and provision of life-skills which help adult learners to cope with the social demands especially in eliminating poverty and unemployment. However, facts remain that adult education play an important role in rural development. The following part scrutinizes this issue.

Akinpelu (1985) did a study on post literacy and vocational training in the context of rural development and income generation in Africa. His focus was on the contribution of the village polytechnic of Kenya, the builder's brigades of Botswana and the Folk Development Colleges of Tanzania in self-development, particularly income-generation and economic issues. The study found that, there is a sufficiently strong economic basis for such a programme to be successful in spite of the differences in socio-political ideologies. The study suggested that vocational training can be a viable option for rural unemployment and poverty reduction.

Simiyu (1990) did a study on vocational and technical education and training in Kenya. He focused on exploring the benefits that might accrue from youth polytechnic in producing graduates for self or salaried-employment to participate fully in the development of rural areas and urban areas. The researcher used a case study and observation, interviews, and questionnaires. Findings of the study revealed that trainees acquired necessary skills for both salaried jobs and self-employment which were relevant to rural and urban development though the technology applicable in the rural area was somewhat different from that in the urban area because of the unavailability of electricity. The researcher suggested that the

government should consider taking full responsibility of providing tools, equipment (including maintenance), and materials and other miscellaneous facilities necessary for the day-to-day operations in the youth polytechnics. Also pedagogy or professional training in instruction methods and refresher courses for skills upgrading should be arranged for the instructors to up-date their knowledge and skills.

Matsepe (2002) did a study on adult education as an agent for social change in Lesotho. The researcher focused on the role played by adult education in both urban and rural communities for development. The researcher used a descriptive approach with case studies, interview, questionnaire and observation. The study revealed that the role played by adult education is important as an agent for social change. It provides solution to pressing issues and problems of the disadvantaged groups. The researcher suggested that follow up studies are needed in order to assess impact of adult education in Lesotho.

Mutanyatta (2007) did a tracer study of youths who had completed studies from FDCs in Tanzania. His focus was on the crucial role played by FDCs in promoting adult basic education, vocational skill training and poverty reduction in rural Tanzania. Specifically he focused on ex-trainees from FDCs who became pro-active and attempted Vocational Education and Training Authority (VETA), trade tests, their test performance and their subsequent employment opportunities there by combating youth unemployment and poverty. The researcher used anecdotal evidence and interview and documentation. The findings of the study shows that a reasonable number of ex-trainees passed trade test revealed the relevance and

effectiveness of the internal efficiency of the FDCs. Also ex-trainees managed to secure self-employment in-line with the philosophy of FDCs mission. The researcher suggested that, FDCs should be spread in all districts in this era of science, technology and information communication technology to enhance rapid rural development and eradicate poverty.

In summary the work of Akinpelu 1985; Simiyu 1990; Matsepe 2002; and Mutanyatta 2007; increase understanding on how adult education promotes rural development. Vocational training institutions are seen as important aspect to community or rural development. However, evidence exists that adult education promotes self-reliance and self-employment. The next section examines this issue.

#### **2.4 Adult Education and Self-Reliance/Self-Employment**

Marques (2010) did a comparative study on the contribution of entrepreneurship education in the development of life skills in Young people in Belgium and Ireland. The focus of the study was on the development of skills that makes adult learners more entrepreneurial in their daily lives in order for them to be self-reliant. The researcher used a qualitative approach and interview and documentary research. The study found that Belgium and Ireland have recognized the important role of education and training in the development of skills and the personality, important for the labor market for youth to be self-reliant and self-employed. The study suggests that, entrepreneurship to adult learners should be considered as a general attitude that can be useful in all work activities and everyday life for self-reliance, self-employment and development in general.

Palmer (2004) did a study on the perceived importance of the occupational work ethic among Adult students in technical colleges in Georgia. The focus of the study was on the importance of work ethic instruction in technical education which serves a vital role in preparing students for employment. The researcher used a quantitative research and survey and interview in the study.

The findings of the study revealed the inclusion of reflection and the emotional dimension of learning as additional strategies for incorporating work ethic into the classroom because students' perceptions about their work experiences impact their thoughts about work ethic. The researcher suggested that adult learners need opportunities to reflect on their experiences, critique them, and apply this knowledge in meeting their future employment goals.

Al-Alawneh (2009) did a study examining educators 'and employers 'perceptions on career and technical education graduates 'employability skills for the labor market in Jordan. The researcher focused on improving the quality of technical education institutions graduates in the local and global labour market competition. The researcher used a survey method and questionnaire. Findings of the study revealed that there are no significant differences between employers 'and educators 'perceptions on graduates of career and technical education in terms of fundamental skills and personal management skills in the labour market. Al-Alawneh suggested that both employers and educators need specific type of skills that are important in the workplace. The study suggests that, graduates need to market themselves to be employable and equipped with generic and technical skills needed in the labor



market. Furthermore, he suggested that graduates need skills on how to transfer attained skills to the workplace.

Ogundele *et al* (2012) did a study on entrepreneurship training and education as a strategic tool for poverty alleviation in Nigeria. The study focused on the effect of entrepreneurship training on poverty alleviation to adult's learners and promoting self-reliance. Researchers used a quantitative study with stratified random sampling technique where 250 entrepreneurs and apprenticeships from five local government areas in Lagos state, South Western Nigeria were selected. Data were gathered through a self-monitored questionnaire survey. Findings revealed that youth empowerment was influenced by their acquired technical skill. The study suggested that effective technical education, youth empowerment, and social welfare service are catalyst for poverty alleviation and self-reliance to adults.

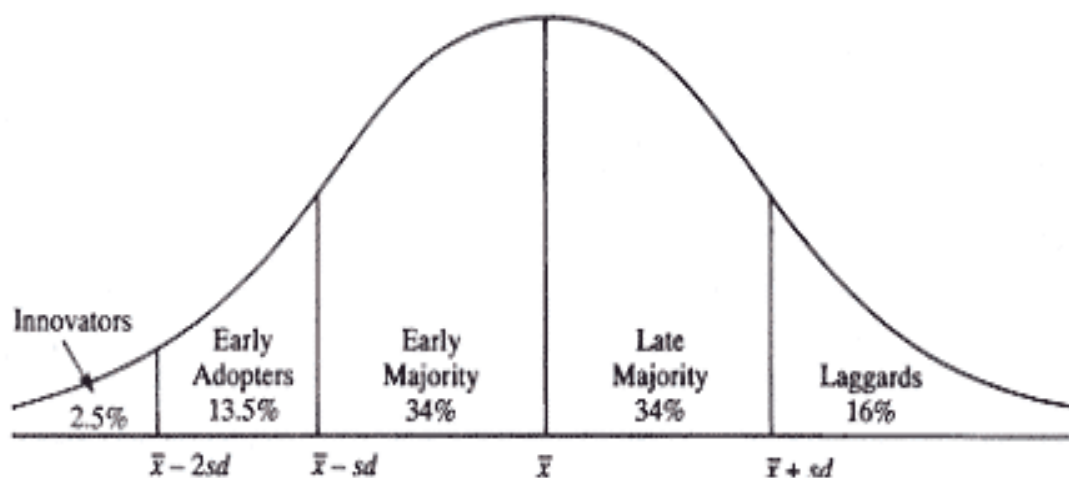
In summary, the work of Ogundele *et al* 2012; Marques 2010; Palmer 2004; and Al-Alawneh 2009 shows role played by adult education in the creation of opportunities for self-reliance and self-employment. Both developed and developing countries have used several means to treat problems encountered by young graduates of primary schools and adult learners to fight against poverty and unemployment.

Generally studies above expand the knowledge of the researcher on the important role played by adult education in promoting development, rural development and self-reliance/ self-employment. The literature revealed that adult education programs and technical education are regarded as one of the solution for poverty and unemployment alleviation in rural and urban communities.

## 2.7 Strategies to Obtain, Access, and use MICTs

In the literature it is hard to find empirical research that has focused on the strategies to obtain, access, and use MICTs to support lifelong learning. However, the literature that looks on the strategies indicates building ICT infrastructure and provide hardware including buying computers, having computer rooms and networks (local, intranets and Internet) for education and training as among the first step. Another strategy includes developing human resources to meet the needs of the MICTs, while other include promoting innovative thinking, communication, problem solving skills, research and information retrieval and processing skills.

Some of the scholars who perceive technology to have potential to enhance learning tend to advocate a stage by stage process in enhancing interactive learning, for teaching learning purpose. Reasons for doing so as explained by Rogers (1995) are that; when new technology is introduced its adoption normally is slow at the start as only few institutions or individuals 2.5% termed as innovators readily accept and adopt the technology.



**Figure 2.2: The classic Innovation Adoption Curve**

Source: Rogers (1995)

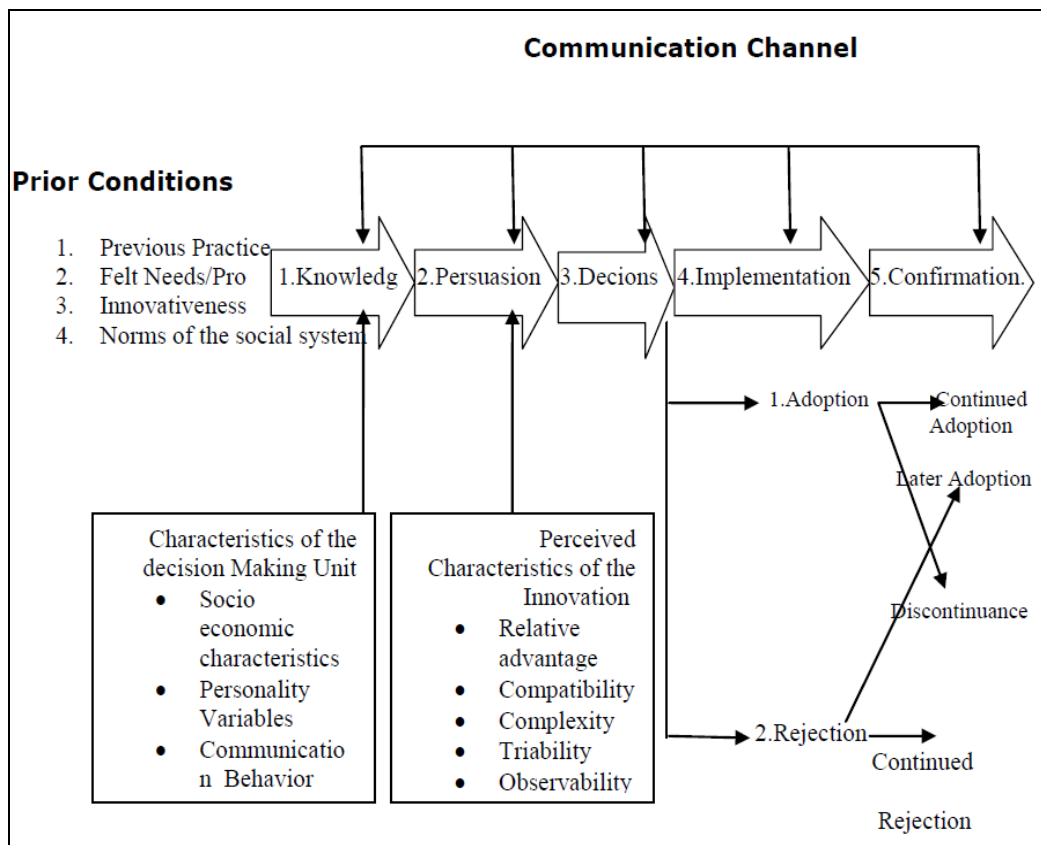
Later adoption becomes more rapid followed after early adopters who make up 13.5% of the population and the early majority 34% adopt the technology, then leveling off till only a small number of laggards remain who make up 16% of the population. The curve indicates a small number of individuals adopting the innovation early (left tail), followed by the majority of adopters. – According to Rogers (1995) this is normal and a healthy sign.

Following this line of thinking we should not be alarmed when we find out that enhancement of interactive learning through e learning technologies is slow. Since the strategy to enhance use of particular technology follows what Rogers (1995) calls as a diffusion process by which an innovation is communicated through channels over time among members of a social system. This process follows five stages of communication: knowledge, persuasion, decision, implementation and confirmation.

Following this line of thinking MICTs should be regarded as innovations starting from those already familiar with the technology; that is those with the required skills and facilities at their disposal. Strategies to enhance interactive learning should start with learning about the innovation knowledge as a first step, where an individual becomes aware of the innovation and its functions. Taking e learning enhanced interaction skills as an innovation this would require communicating information about the advantages of e learning enhanced interactive learning to targeted students.

The second step is processing the new information, or persuasion, where an individual forms a favorable or unfavorable attitude towards the innovation. Which means at this stage, students in higher learning institutions should be encouraged to

use interactive learning for teaching learning purposes. The third step is constructing personal facts of the innovation, or decision, leading the individual to a choice of adopting or rejecting the innovation which means students will only be willing to accept use of e learning enhanced interactive learning if they find that its use fits their learning needs and style. The fourth step is putting the innovation into use. The fifth step is verifying the decision made, or confirmation, wherein the individual evaluates the innovation decision. The following figure shows Rogers's sequential steps of the innovation-decision process.



**Figure 2.3: A Model of Stages in the Innovation – Decision Process**

Source: Rogers, (1995)

Since MICTs usage is still at infancy stage in most higher learning institutions in Tanzania, the major barrier towards this approach would be an equivalent situation

that would arise when applying the diffusion of innovation theory for the purpose of enhancing learner interaction in higher learning institutions in Tanzania. If the proposed Rogers (1995) communication stages for enhancing interactive learning in higher learning institutions would be followed it would mean that; Only 13.5 % (early adopters) will be using interactive learning for teaching learning purposes as these would be the targeted users in the first stage of the communication process.

A much deeper investigation using the entire higher learning institutions students and faculty population as market potentials for e-learning interactive learning as an innovation, would place e-learning interactive learning enhancement as an innovation emerging from those already using internet/computers. The so termed innovators and adopters will be those students who receive higher grades than those who are not targeted users at this stage.

Another shortcoming is that the strategy assumes that the act of innovating is positive and the act of rejecting an innovation is negative. It might be that though the innovation is good, the person intending to adopt it has good reason for not adopting it, which might be the high costs involved, accessibility, availability and lack of or poor digital technology application skills among others.

According to Hall, (2002) the so considered as tougher to work with audience who are termed by Rogers (1995) as laggards, have been created by a long history of neglect. The existing situations in Tanzania especially for FDC participants seem to support such contention. If the proposed steps to adopt, access and use MICTs are followed, most of those who will be left out will be found in remote locations where

there are no internet connections, no electricity and economic means to travel to regional centers where such facilities are located. For this reason the strategies to adopt, access and use MICTs that do not target this group would end up repeating the same problems experienced when using previous technologies (Hall, 2002) which would result into increasing the digital divide between remote students and urban students with the urban students scoring higher grades than those in remote locations.

## **2.5 Prospects and Challenges of Adopting Modern Information**

### **Communication Technologies**

Reviewed studies in this section have tended to look into strategies to adopt, access and use MICTs targeting all students including those in remote locations and less economically endowed. The studies reviewed show that enhancement of interactive learning involves use of right techniques, but also it involves an understanding of context, in particular how students learn and how they process information (Clark, 1983). Taking this line of approach Johnson (2007) conducted a study on promoting learner - learner interactions through ecological assessments of the online environment. The study reviewed three courses taught by three instructors from two different higher learning institutions. Findings show several shortcomings for all courses reviewed: course A the instructor posted numerous announcements but provided brief replies to discussion boards, this was found to limit learner-learner interaction.

While the instructor for course B had created a process for peer editing applications but no learners used this opportunity, the reasons identified being that students were required to make only three postings to meet the requirements for the course. For

course C the learner- learner interaction was found to lack for the reasons that the course provided some flexibility in learning such that student were found to be at different levels starting and finishing time for the course. Johnson (2007) argues that instructors should expect some students, who value the independent nature and flexibility of an online program to be unwilling to interact with one another.

Similarly Conaway, Easton & Schimdit (2005) conducted a study on strategies for enhancing students' interactive learning and immediacy in online courses. They analyzed content of 255 student message on a discussion board of a course in business research methods taught by one of the authors. The course was required for all students enrolled in an online course, which was being delivered exclusively via internet.

Findings indicated that increased interaction in terms of a number of students postings on the discussion board did not correlate with higher final grades in this project. The team with the highest level of interaction (209) postings and the team with lowest level of postings (43) both scored 92.5 % on their final project. While the team with lowest level of interactions (29) postings scored 97.5% which was the highest grade on the project.

They identified the main reason to be the poor contents of the messages posted which do not provide high levels of immediacy in forms of supportive feedback, compliments, expression of appreciation or agreement. They suggest that instructors should aim at promoting quality messages rather than large number of messages which lack quality.

In Kenya, Amutabi (2004) examined the problems of access and utilization of Information and Communication Technology (ICT) in education in Africa, using Kenya as a case study. He interrogated the role that new forms of ICT such as the Internet have played in higher education in the past decade. Interviews with lecturers and students were used to gather the data and documentary review from files on correspondence, internal reports, minutes of meetings and committee reports at various universities together donor reports and newsletters and brochures were also used to get the information.

Amutabi found that there were lack of trained and experienced technical personnel to manage, control and maintain MICTs, the problem that led to MICTs to be managed, controlled and maintained virtually on *trial and error* basis. He suggested that MICTs are appropriate for use in the Kenyan context and have the potential to revolutionize the quality of training and status of lecturers and students at public universities. He also suggested that educational institutions carefully planned for and implemented, could have a significant impact on the self image, confidence, knowledge and professionalism as it would enable them to participate in the carnival of knowledge.

A study by Bain (2011) was more interested in the way integrated activities in course design engaged learners in an online discussion. The study focused on learners' engagement with online discussion and their perceptions of how engaging in online discussion impacts on learning. A grounded theory approach was used in the collection and analysis of six learner case studies within a higher education setting, exploring learners' interactions in online discussion, and their perceptions of learning



through online discussion. Insights into the learners' interactions were provided by the learners themselves through semi-structured interviews.

Findings show that in the two discipline settings within this study, the tutor had designed activities specifically intended to engage learners in online discussion, but in both settings there were limitations to how learners chose to engage in this. Tutors need to be explicit about the rationale for including online discussion as part of the learning experiences, not just in terms of noting expectations of frequency of posting or desired response times, but in terms of what is meant by discussion and how discussion is expected to develop as the learning activity progresses. Tutors should explain to learners why online discussion in the form of written contributions may be helpful in terms of developing thinking and moving from an individual perspective to a collective informed perspective or shared perspective.

Lwoga & Nagunwa (2012) study looked into issues involved in developing e learning technologies to complement competency based medical education at Muhimbili University of Health and Allied Sciences. The sample of the study comprised 106 first year students who were asked to fill a questionnaire which was used to assess their research skills taught in information course. The study demonstrated that most students did not use their computer skills for academic purposes but used them mostly for social interaction purposes Lwoga & Nagunwa (2012) suggests that there is a need to address information literacy and information search strategies, as a practical and useful skill. The study findings further showed that issues related to facilities, that is internet connectivity and electrical power also need to be addressed.

## **2.6 Knowledge Gap**

The empirical literature reviewed in this section, have contributed at understanding the effectiveness of different strategies that could be used to adopt, access and use MICTs. However, most studies employed a mixed approach as data gathering technique using structured questionnaires or structured interviews as the main form of data gathering. Such shortcomings work at limiting the focus and generalization of findings. Furthermore shortcomings revealed are not the only limitations equally important are the choice and use of e learning tools. The next section looks into studies which examined this issue.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter attempts to delineate research procedures that were used in carrying out the present study. Specifically, it described the way to achieve the intended research objectives under the present investigation. It was covered the following sub-sections: research design, research approach, research area, population of the study, sampling procedures and sample size, tools used, description and development of tools, validity and reliability of instruments, data analysis plan and ethical issues in research.

#### **3.2 Research Design**

Research design is a road map which helps researchers to understand where they are going and where they want to be at the completion of the journey (Kothari, 2004). As a road map research design helps to determine the best way to reach the destination (Loudon *et al.*, 2007). Research design gives the guidelines or specific steps that have to be followed so as to get evidence in relation to the questions of the study.

This study used descriptive survey design. According to Kombo and Tromp (2006), a descriptive survey research design focuses on information about people's attitudes, opinions, habits or any of the various educational or social issues of the study. This design was used when a researcher wants to get enough information on a problem under study. The reason behind the choice of this type of research design is that, it

helps the researcher to deeply describe views and peoples insights about the research problem (Bryman, 2004).

### **3.3 Research Approaches**

The study mainly used qualitative approach but supplemented with some quantitative elements. Bryman (2004) contend that, qualitative approach is most appropriate in studying social realities through multiple tools of data collection that are qualitative in nature. Qualitative approach was used for descriptive data especially data obtained from interviews observation and documentary studies. In this study, qualitative approach was supplemented with some quantitative elements such as measures of central tendency in data analysis and presentation for objective results and interpretation of facts. Borg and Gall (1983) maintain that, no any research being purely quantitative or qualitative completely independent unless is supplemented by some elements of the other.

### **3.4 Area of Study**

The study was conducted in North Zone focusing on three Folk Development Colleges located in Kilimanjaro and Arusha region. The institutions are situated in the researchers' working region where the researcher has been experiencing the operations of various activities conducted by FDCs and looking through various documents on the operations of FDCs, the researcher became convinced there could be a need to explore community members views on the effectiveness of FDCs in promoting self-reliance and self-employment among the FDC alumni. These reasons could help the researcher to get the reliable data pertaining to this study.

### **3.5 Study Population**

According to Kombo and Tromp (2006), population refers to a group of individuals, objects or items from which samples are taken for measurements. Mugenda and Mugenda (1999) define population as a complete set of individuals, cases or objects with some common observable characteristics. The population of this study was included ex-students and tutors from Folk Development Colleges and the community members around the three folk colleges in North Zone.

### **3.6 Sampling Procedures and Sample Size**

Cohen et al. (2000) define sample as a section or a part of the targeted population whose information can be generalized to the large population. It is a process of selecting number of individuals for a study in a way that the sample represented the large group from where it was selected. In this study purposive sampling and simple random sampling techniques was used.

### **3.7 Purposive Sampling**

Purposive sampling was used in the selection of tutors with regard to the subjects they teach, consideration was made on technical subjects and principal subjects. In order to meet the objectives of the study and get relevant information, the researcher selected few tutors who was available, ready to be interviewed and who were potentially rich in information needed for the study, which, according to Miles and Huberman (1994), are those from which one can learn a great deal about issues of central importance to the purpose of the research. Considering this, the researcher through a pilot study, set a boundary of cases that could be studied within the set time limit. The reason for including tutors is to try to get their opinions on their roles

in promoting self-reliance and self-employment among the FDC alumni in the era of globalization.

Ex- trainees were also purposely selected from the population of the communities. The researcher consulted tutors and community members in order to get FDC ex-trainees in a pilot study and select cases that could be studied within the set time limit. It was therefore not expected that the persons chosen were representative of the population but rather possessed the information needed for the study. The reason of including students in this study is to get detail information on whether the skills they got when they were at those colleges enable them to be self -reliant and self-employed.

Simple random sampling was employed in selecting the required sample of the community members to participate in the study. Random sampling is the one in which every item of the universe has an equal chance of inclusion in the sample (Bryman 2004 and Kothari 2004). The reason of including this sample is to get community members views on the effectiveness of FDC in promoting Self-reliance and Self-employment in their community. The researcher selected the community members randomly from the community on the basis of their experiences. Gender was considered in the selection of the sample.

### **3.8 Instruments for Data Collection**

In the study, two major types of instruments for data collection namely observation and interview guide was used. Observation and interview guides were used to collect primary data. Observation and interview guide used to collect data from tutors

concerning with their roles in promoting life skills necessary for self-employment and self-reliance for students after their studies. Interview guide and observation was used to collect qualitative data from ex-students and community members on their views about the effectiveness of FDCs in promoting self-employment and self-reliance.

### **3.9 Validity and Reliability of Instrument**

#### **3.9.1 Validity**

According to Cohen, Manion & Marrison (2000) validation referred to how well the instrument collected information that was supposed together, that is validation checked relevance scope. In other hand Wangusa (2007) define validity as the extent to which an instrument measures what it was constructed to measure, so to ensure validity of instrument the study questions was developed under close guidance of the supervisor, then the questions designed was conducted pre-test to five community members in order to identify ambiguous questions and to make corrections before employing them in the field.

#### **3.9.2 Reliability**

Spector (1997) say reliability is consistency in measurement. Ahuja (2001) defined reliability as the ability of an instrument to produce a consistent or same result. Test re-test method was used to measure reliability of the instrument; in this researcher administered a test of the instrument twice at two different points with two weeks' interval to five (5) same groups of community members in different communities from those included in this study. The consistency in the answers was considered to be reliable.

### **3.10 Data Analysis**

Most of the qualitative data and open ended questions from the interview guide and observation in this study was be sorted, edited and the key findings was be analyzed in a descriptive manner as a text.

### **3.11 Credibility of the Study**

The term credibility is used when determining the extent to which the findings of inquiry are considered to be believable. It is concerned with the degree to which the findings provide authentic presentations of the cultural worlds of the people being investigated.

The credibility of the study was sought out by using structural corroboration to ensure that information obtained from the respondents were accurate. Structural corroboration has been defined as a means through which multiple types of data are related to each other to support or contradict the interpretation and evaluation of a state of affairs (Eisner, 1998). The same questions were asked by using two different methods namely interview and focused group discussion.

### **3.12 Ethical Issues**

Masson and Bramble (1997) argued that, consideration of the ethics and values in research reminds the researcher his responsibility for acknowledging literature source, keeping the public informed and protecting privacy as well as welfare of human objective. For the purpose of this study the researcher was ask for permission from the authority of the Open University of Tanzania before conducting the research, after getting the permission, the information was be sent to the selected



study area. Also the respondents was be informed about the purpose of the study and they was be assured that confidentiality would be maintained and that information collected would be used for academic purpose only.

### **3.13 Chapter Summary**

This chapter delineates research procedures that were used in carrying out the present study. It described the way to achieve the intended research objectives under the present investigation. The chapter presents the research design, research approach, research area, population of the study, sampling procedures and sample size, tools used, description and development of tools, validity and reliability of instruments, data analysis plan and ethical issues in research.

## **CHAPTER FOUR**

### **DATA PRESENTATION, ANALYSIS AND INTERPRETATION**

#### **4.1 Introduction**

This chapter presents the data about the community members' views on the role of modern information communication technologies can enhance lifelong learning and promote self-reliance and self-employment; the strategies that FDCs employ to obtain, access, and use MICTs to support lifelong learning in their institutions; and the challenges that educators face as they strategize to adopt modern information communication technologies. The chapter is organized into four sections. The first section presents demographic data of the respondents. These data are presented to provide a clear picture of the nature of people who participated in this study. The second section presents the data on research question about the community members' views on the role of modern information communication technologies can enhance lifelong learning and promote self-reliance and self-employment. The third section presents the data on the strategies that FDCs employ to obtain, access, and use MICTs to support lifelong learning in FDCs. The fourth section presents the data on the challenges that educators face as they strategize to adopt modern information communication technologies in FDCs.

#### **4.2 Demographic Characteristics of Respondents**

The tutors' and graduates' demographic information comprised of their sex, age, type of occupation and experience of working for the tutors were sought out and their responses are summarized on the Table 4.1 and 4.2.

**Table 4.1: Results about the Demographic Information of Student (Graduates)**

<b>Respondents</b>		
<b>Particulars</b>	<b>Frequency(f)</b>	<b>Percentage (%)</b>
<b>Sex</b>		
Male	3	60
Female	2	40
<b>Total</b>	<b>5</b>	<b>100</b>
<b>Age</b>		
20-29 yrs	2	60
30-40 yrs	3	40
	<b>5</b>	<b>100</b>
<b>Type of occupation</b>		
agro vet	2	40
Electrical engineering	1	20
Animal husbandry	2	40
<b>Total</b>	<b>5</b>	<b>100</b>

Source: Field Data

**Table 4.2: Results about the Demographic Information of Tutors Respondents**

<b>Particulars</b>	<b>Frequency(f)</b>	<b>Percentage (%)</b>
<b>Gender of tutor respondents</b>		
Male	4	50
Female	4	50
	<b>8</b>	<b>100</b>
<b>Age of tutor respondents</b>		
25-34yrs	2	50
35-44yrs	2	25
45-54yrs	4	25
	<b>8</b>	<b>100</b>
<b>Teaching experience :</b>		
1-9yrs	4	50
10-19yrs	2	25
20-29yrs	2	25
<b>Total</b>	<b>8</b>	<b>100</b>

Source: Field Data

Table 4.1 indicate that out of 5 graduates who participated in the study 3(60%) were male while the remaining 2(40%) were female, the researcher wanted to have gender balance but due to the sampling technique used the number of male exceeded that of female to a small percentage which had no much effect in the study. Age of the graduates ranged from 20 years up to 40 years where 3(60%) had ages ranging from 20-29 yrs and 2(40%) aged between 30-40 yrs.

Results from Table 4.2 indicate that gender of the tutors who took part in this study was equal implying that the researcher was able to collect information from both genders which is important in ensuring credibility of the study. Teaching experience differed from one tutor to another Table 4.2 indicate that majority of tutors 4(50%) had the working experience of 1 to 9 years, 25% were experienced between 10 to 19 years and 20 to 29 years respectively.

### **4.3 Role of Modern Information Communication Technologies in Enhancing Lifelong Learning and Promote Self-Reliance and Self- Employment**

The first objective was set to solicit information from the community members on their views on the role of modern information communication technologies in enhancing lifelong learning and promote self-reliance and self- employment. It was assumed that if the FDCs are equipped with modern information and communication technologies such as computers and internet connection, it would facilitate lifelong learning and easier way to get information on funding for job creation. This is because MICTs have the potential to expose the learners with the most current information, which they could use to learn better and access further resources such as employment avenues. Through interview, asked the following question: What are

your views on the role of modern information communication technologies in enhancing lifelong learning and promote self-reliance and self-employment? Some of the responses were as follows:

Male 1: I think the role of modern information communication technologies in FDCs can really help the learners become self-reliant and become independent. Many of them have their own businesses. For example, the agro vet shop there is owned by FDC graduate and many business people around here schooled in FDC. If they were ICT competent, they would be in a better position to know where to get things and where to sale their products.

Male 2: My views are very positive about modern information communication technologies in FDCs in training people in agriculture, carpentry, masonry, mechanics, tailoring, cookery, you name it. These are very useful skills, but to help the learners become modern, ICT is a must

Male 3: Oh, modern information communication technologies in FDCs are very useful especially in rural areas. Nowadays we don't get problem when it happens the issue of doing electrical installations of our new houses. For instance wiring of one of the school in our village was done by a person from this village. Similarly, we have veterinary officers who graduated from FDC. Now just imagine if he was competent in ICT, all the information about animals and their diseases would be in his finger tips, and this would not make him to always go to the district to ask for directions.

Findings from interview revealed that the majority of community members see the prospects of modern information technologies in enhancing learning and increasing a chance to employment and self-reliance. The findings are in line with (DEFID) (1996) a study conducted in Tanzania by the International Labour Organization (ILO) in co-operation with the Ministry of Labour and Youth Development and the Ministry of Education and Culture revealed that ICT reduce unemployment to youths. Also a study by Ogundele *et al* 2012; Marques 2010; Palmer 2004; and Al-Alawneh 2009 who found that effective technical education is that which is provided through modern information and communication technologies such as computer assisted models. As these scholars opined, modern information and communication technologies have the capacity to enhance:

**Female 1:** I know modern technologies can do wonders in helping one to learn for life. My grand children know a lot of things just because they have electronic tools, such as smart phones and other things I see them looking at. I wish I had access to these modern information and communication technologies, I am sure I would not be here in the village. Female 2: I think if FDCs could use modern technologies to teach, people, especially those in the rural villages would learn a lot of things without being forced to attend classes. They would continue with their work, but also learning.

Female 3: In modern time, modern information and communication technologies are necessary to cope with modern life. If FDCs could use ICT in teaching, people would learn more things in shorter time.

It can be deduced from the responses that the female graduates of FDC's had big ideas about what MICTs can do to the learners, including helping the learners learn for life and finding jobs outside the village. These women also had faith in modern technologies in enhancing learning without leaving one's economic activities. Such responses correspond to the study by Laal (2013) found that interactive information and technology could make LLL a reality. With electronic tools, Laal suggested, people could learn virtually anytime and anyplace they chose without obstacles.

FDC Trainer 1: Modern information communication technologies are very useful in enhancing teaching and learning in FDCs. For example, the government is now talking of reaching out to everybody including those with disabilities. If there computers and internet, even those who could not go to these colleges, could be reached where they live.

FDC Trainer 2: ICT, like any other teaching and learning resource motivate the learners. When learners are motivated, they will learn better and understand what they are supposed to learn. In that situation, they will learn for life and gain employment because they are competent.

FDC Trainer 3: I think ICT in teaching and learning even in FDCs is a good thing. Just imagine a class where everybody is busy learning without waiting for the teacher to tell them what to do or what to learn, but people are learning something from the internet for example, how to make bricks, and others learning how to raise chicken. This is what we call student centered learning.

These FDC trainers are positive about what MICTs can do in teaching and learning. Their observations are in line with that of Noor-Ul-Amin (2014) who studied the role of ICT in enhancing teaching and learning and found that *the use of ICT in education lends itself to more student-centered learning settings.*

It can safely be concluded that community members had positive views on the role of modern information communication technologies in enhancing lifelong learning and promote self-reliance and self-employment. FDC male graduates had views that modern information technologies had prospects in enhancing learning and increasing a chance to employment and self-reliance. Female graduates on the part have views that MICTs can help the learners learn for life and finding jobs outside the village. These women also considered MICTs as important in enhancing learning without leaving one's economic activities. FDC trainers had the view that MICTs can enhance teaching and learning, where *ICT can support student-centered learning.*

#### **4.4 Strategies FDCs Employ to Obtain, Access, and use MICTs to Support Lifelong Learning**

The second objective aimed to access information from the community members on their perceptions about the strategies that FDCs employ to obtain, access, and use MICTs to support lifelong learning in FDCs. This objective assumed that FDC's had some access to MICTs and that there were many strategies to access and use them. Interviews were used to solicit information from FDCs graduates and instructors. The question was: What strategies do FDCs employ to obtain, access, and use MICTs to support lifelong learning?



Community member 1: When I was a student of FDC, we did not use modern information and communication technologies, rather we used old ones, such as hoes to farm, and wood to make bricks. We came to have one computer, which as a donation from outside, but this was used by the principal. So, if we became lifelong learners, it is not because of MICTs, but individual struggle to remain knowledgeable.

Community Member 2: I for one used to fear MICTs. During my time people used to think computers bring cancer. It is only three years that many people are able to use cell phones without fearing cancer. Things are changing and people are start seeing MICTs as having potential to learn.

FDC Trainer 1: Mm, these are not here yet. In our FDCs, we still use old and outdated technologies. Not only this one, but in all the FDCs I have visited, most have no money to have these new technologies such as computers and sophisticated machines.

As can be deduced from the above responses, MICTs are yet to be adopted fully in FDCs as they are still using old technologies such as hand hoes and wood. These participants provide reasons for this; some are due to fear for health or lack of resources to have these modern technologies. These trends of thoughts are in line with a study by Rogers (1995) who looked into the ways new technologies are adopted, saying that when new technology is introduced its adoption normally is slow at the start as only few institutions or individuals 2.5% termed as innovators

readily accept and adopt the technology, later adoption becomes more rapid followed after early adopters who make up 13.5% of the population and the early majority 34% adopt the technology, then leveling off till only a small number of laggards remain who make up 16% of the population.

#### **4.5 Prospects and Challenges of Adopting Modern Information**

##### **Communication Technologies in FDCs**

The third and the last objective was to determine the prospects and challenges of adopting modern information communication technologies in FDCs. Interview was used to solicit information for this objective. Also observation was the main research tool for this objective. The researcher visited four FDCs and economic projects in the surrounding community and asked question to determine prospects and challenges of adopting modern information communication technologies in FDCs and in the economic activities of the people surrounding these institutions, especially those who had graduated from the FDCs. Interview question was: What are the prospects and challenges of adopting modern information communication technologies in FDCs/economic activities?

FDC Principal 1: We are still lacking trained people to use these technologies. We will need to train our staffs on MICT before we think of buying things like computer and other modern technologies.

FDC Principal 1: MICTs are important in teaching and learning, but Tanzania still lags behind in making sure that internet is connected in rural areas. Without internet, it will be very hard to think of MICTs to teach in FDCs.

FDC Principal 1: All the FDCs would like to use modern technologies to teach. The problem is electricity. Many FDCs are located in rural areas where there is no electricity.

Business man 1: I know MICTs have the potential to revolutionize business, but our country has not seen this potential. We will have to wait for a very long time until the communities like this gets electricity and internet connection.

From the above responses, there are more challenges than prospects in adopting and using MICTs in FDCs. The challenges identified as lack of electricity, internet connection and knowledge and skills in using these technologies. These findings are in line with Amutabi's (2004) observation in Kenya where he examined the problems of access and utilization of Information and Communication Technology (ICT) in education in Africa, using Kenya as a case study. Amutabi found that there were lack of trained and experienced technical personnel to manage, control and maintain MICTs, the problem that led to MICTs to be managed, controlled and maintained virtually on *trial and error* basis.

This chapter presents the data on views of community members on the role of modern information communication technologies in enhancing lifelong learning and promotes self-reliance and self-employment. It also presented the data on the strategies that FDCs employ to obtain, access, and use MICTs to support lifelong learning in their institutions. The further presents the data on the challenges that educators face as they strategize to adopt modern information communication technologies. The key findings are that community members had positive views on

the role of modern information communication technologies in enhancing lifelong learning and promote self-reliance and self-employment. Furthermore, it was found that MICTs are yet to be adopted fully in FDCs as they are still using old technologies such as hand hoes and wood. It was further found that there were more challenges than prospects in adopting and using MICTs in FDCs due to lack of electricity, internet connection and knowledge and skills in using these technologies.

## **CHAPTER FIVE**

### **SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter gives the summary of the study, conclusions and recommendations. The purpose of the study was to assess effectiveness of the FDC's in producing competent graduates.

#### **5.2 Summary of the Study**

The study was conducted in Northern regions of Tanzania (Arusha, and Kilimanjaro) aiming at investigating the effectiveness of the FDC's in producing competent graduates. The study was guided by three objectives:

- (i) Asses the community members' views on the role of modern information communication technologies in enhancing lifelong learning and promote self-reliance and self-employment
- (ii) Assess the strategies that FDCs employ to obtain, access, and use MICTs to support lifelong learning in FDCs.
- (iii) Determine the prospects and challenges of adopting modern information communication technologies in FDCs

#### **5.3 Discussion**

If modern information and communication technologies (MICTs) have been globally acknowledged as important in the provision of education (Yusuf, & Balogun, 2011; Garrison, 2000; Mushi, 2006), learning institutions like FDCs must strive to adopt and use them to facilitate knowledge generation among learners. However, if FDCs

lag behind in adopting and using these technologies, it will be hard for their learners to engage in lifelong long especially after completing their studies. Despite the continued and increased efforts by the government of Tanzania to establish and strengthen non formal educational institutions such as Folk Development Colleges (FDCs) with a goal to enable the literates to acquire some academic and technical skills that would enable them to compete in the current global economy, these institutions are yet to adopt the modern information and communication technologies.

Consequently, FDCs in Tanzania are characterized by outdated technologies that cannot facilitate knowledge generation among learners while in the college, nor foster social network after the programme to facilitate employment or a feeling of belonging in a community of lifelong (Abawajy, 2012). As a result, most graduates continue to engage in outdated economic activities with narrow focus in terms of marketing of their produces.

Given the current status of FDCs in Tanzania and the unsatisfactory condition of their graduates, there is a need to transform FDCs by introducing modern information technologies to enhance teaching and learning. Tutors in FDCs need to be concerned with how to transform these institutions by adopting and using MICTs To that end, we need to assess the community members' views on the role of modern information communication technologies in enhancing lifelong learning and promote self-reliance and self-employment; assess the strategies that FDCs employ to obtain, access, and use MICTs to support lifelong learning in FDCs; and determine the

prospects and challenges of adopting modern information communication technologies in FDCs.

When we come to know more about the views of community members and the prospects of FDCs in adopting MICTs, we will be in a better position to propose the best strategies. The present study attempted to address this need by assessing the community members' views on the role of modern information communication technologies; assessing the strategies that FDCs employ to obtain, access, and use MICTs; and determining the prospects and challenges of adopting modern information communication technologies in FDCs. For this reason, this study is significant in terms of its potential to contribute to the gap in the literature.

As Noor-Ul-Amin (2014) reports, ICT's role is to enhance teaching and learning and it lends itself to more student-centered learning settings. Likewise, in the current study the respondents had positive views on the role of modern information communication technologies in enhancing lifelong learning and promote self-reliance and self-employment. This implies that modern information technologies had a chance to be adopted in FDCs because of their prospects in enhancing learning and increasing a chance to employment and self-reliance. If the FDCs management in collaboration with community members put their efforts together and adopt MICTs, this can help the learners learn for life without leaving their economic activities and find jobs outside their villages.

The study also found that MICTs were yet to be adopted fully in FDCs as these institutions were still using old technologies such as hand hoes and wood. As Rogers

(1995) observed, it is normal for new technologies to be adopted slowly. Rogers (1995) points that the adoption of new technologies is normally slow at the start, but it increases as more people adopt them until only a small number of laggards remain who make up 16% of the population.

This implies that, not all the institutions can adopt MICTs at once, but they adopt slowly. However, FDC management can start thinking of the strategies to adopt MICTs, starting with exploring the most affordable technologies such as cell phones, television and those which are more affordable before they embark on more expensive and sophisticated ones such as computers. To start slow, FDCs can slowly start to adopt NICTs without being impeded by the challenges that were identified in this study that included lack of electricity, internet connection and knowledge and skills in using these technologies.

#### **5.4 Chapter Summary**

This study found that there is positive views among the community members on the role of modern information communication technologies in enhancing lifelong learning and promote self-reliance and self-employment. Secondly, in all the FDCs visited, modern information technologies are yet to be adopted fully, these FDCs are still using old technologies such as hand hoes and wood. While many institutions in Tanzania have the prospects of adopting MICTs, this study found that there were more challenges than prospects in adopting and using MICTs in FDCs. The reasons provided include lack of electricity, internet connection and knowledge and skills in using these technologies.



## **5.5 Recommendations**

- (i) Government should develop policies, regulations and legal framework to promote MICTs for provision of equal opportunities for quality education at all educational institutions including FDCs.
- (ii) Ministry of Education and Vocational Training should register commitment towards the development and support all educational institutions to adopt and use MICTs.
- (iii) Media should be used to sensitize the society on the importance of MICTs as a major strategy in promoting effective and efficient provision of education.
- (iv) The managements of FDCs to collaborate with the public and private institutions to share MICTs to offset high prices in individual adoption of these modern technologies.

## **5.6 Recommendations for Further Studies**

This study covered only northern regions of Tanzania. More studies should be conducted in other regions of the country to draw comparison of the findings.

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## APPENDICES

### **Appendix I: Mwongozo wa Kuhoji Wakufunzi wa Vyuo vya Maendeleo ya Wananchi Wanajamii na Wanachuo Waliohitimu**

- (i) Jina la chuo ..... (ii). Jinsia yako .....(iii). Umri wako ni miaka mingapi..... iv) Uzoefu wako kazini ni miaka mingapi..... (v) Unafundisha masomo gani? .....

1. Kozi zinazotolewa na vyuo hivi zinaendana na maendeleo ya sayansi na teknolojia ya kisasa?
2. Je wewe una nafasi gani ya kuwawezesha wanachuo kujiajiri wenyewe?
3. Ni nafasi ya serekali kuwawezesha wanachuo kujiajiri na kujitegemea baada ya mafunzo yao hapa chuoni?
4. Vyuo vya maendeleo ya wananchi ni muhimu kwa taifa, tafadhali toa maoni yako.
5. Nini mawazo yako juu ya uboreshwaji wa vyuo vya maendeleo ya wananchi nchini?
6. Je una maoni gani juu ya Tehama katika kusaidia watu wajifunze ili wajitegemee and kujiajiri?
7. Ni njia gani vyuo vya maendeleo vinatumia ili kuanza kutumia teahama kwa kufundishia ili wananchi waweze kusoma bila kukoma?
8. Kwa mtizamo wako, kuna uwezekano au changamoto gani katika kuanza kutumia Tehama katika vyuo vya maendeleo?

**Asante kwa ushirikiano wako**



**Appendix II: Interview Guide for Tutors, Graduates and Community Members****English (version)**

1. (i) Name of the college .....
- (ii) Gender.....
- (iii) How old are you?
- (iv) How many years you have been working?
- (v) Which subject are you teaching?
  
2. The courses providing in this institution are they relevant with the modern science and technology development?
  
3. What are your roles that could enhance the graduate students to become self employment?
  
4. Are the government roles, responsibilities to enable graduate students to become self - reliant and self employment after completion of their studies?
  
5. Are the folk development colleges potential national wise, what is your views?
  
6. What are your opinions on how to make these institutions to be modern?
  
7. What are your suggestions in the use of modern information and communication technologies in enhancing lifelong learning, self reliance and self employment?
  
8. Which types of methodologies could be applied in the application of modern information and communication technologies in enhancing lifelong learning?
  
9. What are your opinions, suggestions on prospects or challenges in the application of modern information and communication technologies?

**Thank you for your cooperation**

**Appendix III: Observation Checklist for Tutors, Graduates and Community Members'**

1. Modern information and communication technologies
2. Old technologies
3. None

**SCORES**

1.	Classroom technologies	1	2	3
2.	Work shop technologies			
3.	Economic activities technologies			
4.	Community technologies			

Thank you for your cooperation.