UNIVERSITY OF NAIROBI

DEPARTMENT OF SOCIOLOGY AND SOCIAL WORK

INTEGRATING INFORMATION COMMUNICATION TECHNOLOGIES TRAINING IN YOUTH INITIATIVES AND ITS ENHANCEMENT OF THEIR EMPLOYMENT OPPORTUNITIES: A Case Study of NAIROBITS Trust Youth Organization Programme

BY

BERYL MARY NDOLO

C50/61629/2011

A PROJECT PAPER SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTER OF ARTS DEGREE IN SOCIOLOGY WITH A SPECIALIZATION IN RURAL SOCIOLOGY AND COMMUNITY DEVELOPMENT

JUNE, 2015

DECLARATION

This research project paper is my original work and has not been submitted for examination to any other university.

Signed_____ Date _____

BERYL MARY NDOLO

C50/61629/2011

This research project paper has been submitted for examination with my approval as the University Supervisor.

Signed_____ Date _____

PROF. PRESTON CHITERE

UNIVERSITY OF NAIROBI

DEDICATION

This project is dedicated to my dad Dr. Philip J Ndolo, who educated and instilled in me the value of hard work and to my mum, Rose Apiyo Ndolo, who continuously encouraged and inspired me to further my studies. To my brothers and sisters Duncan, Eugene, Rawlings, Carol, Faith, Muirel and Linda, God bless you all.

To my friends Huba, Steve, Ibrahim, Tobias, Faith and Linda, thank you for the continued support. The NairoBits Program, Thank you for embracing ICT.

ACKNOWLEDGEMENTS

I am first and foremost grateful to the Almighty God for how far He has brought me.

I am also greedily indebted to my supervisor Prof. P. Chitere for his patience, understanding, directives, guidance, dedication and encouragement which greatly contributed to the completion of this research project.

My sincere appreciation also goes to my family and friends for their support and encouragement especially when the going got tough.

My deep appreciation is also extended to the NairoBits Program Trust for allowing me to carry out this research in their institution.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

CBO   Community Based Organization

GoK   Government of Kenya

ICT   Information Communication Technology

UN   United Nations

UNDP   United Nations

UNEP   United Nations Environmental Program

ABSTRACT

The concept of youth is intrinsically linked with idea of transition from childhood to adulthood, a phase of life in which the individual needs protection, shelter and guidance to one of self- determination, maturity, independence, responsibility and accountability or decision making. The situation of the youths worldwide is changing as a result of the dynamic and ever changing cultures. The changing circumstances mean that there is need for greater attention for the concerns of the youth. Lack of employment opportunities represents one of the major and most pressing problems of the youth. In many cities aspect of unemployment leads to idealness where the youth converge in a certain area in the community to converse, drink and even smoke. Some of them develop survival tactics in indulging in criminal activities so as to survive.

This was a descriptive study and the main objective of this study was to assess how adoption of ICT integration is enhancing employment opportunities and promoting development of youth in the low income settlements where NairoBits centers are situated. Particularly, the study sought to identify the level of adoption of ICT components by sampled youth and to investigate the benefits obtained by youth ICT adopters from the training.

The study was quantitative and relied on primary and secondary data to source for information. Data was gathered through questionnaire and observation guide. Sampling was done using both probability and non-probability sampling. The study sampled 75 youth from three NairoBits centers namely; Kibera, Kayole and Mathare complemented by 10 Key Informants.

The study findings pointed to a helpful relationship which resulted in varied benefits on individual respondent of the sampled NairoBits Group. Apart from adopting and embracing ICT aspects, majority of the youth were employed in formal employment and some have ventured in self-employment. Through these, the youth have been able to improve their living standard and even improve the community in which they come from in terms of security, employment opportunities. Empowered youth in a society enhance the realization of the required development.

The study recommends that the government there should improve the youth initiatives by encouraging them to embrace ICT as a way of finding solutions for unemployment. The government could do this by reducing prices of ICT aspects so as to be affordable to the youth especially in the informal settlements, regular supervision by the government on the curriculum taught in different youth initiatives are up to standard with the current market needs and providing financial loans to the youths to improve their socio-economic development.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

In view of the limited opportunities which can be offered through wage employment, integrating information communication Technology (ICT) in youth program is increasingly being recognized as a highly viable and effective response to growing problems of youth unemployment (World Youth Report 2005). The term ICT covers internet services, telecommunication equipment and services, media and broadcasting, and other information and communication activities (Achola, 2006). ICT can be used to generate the best result when one is ready to adapt to it. The youth are best group that can embrace ICT as they are at their prime stage in understanding of ICT concepts.

The perception of ICTs as a fundamental development tool of the 21st century rests on several assumptions. At the macro level, it assumes that introduction and use of ICTs will improve the efficiency of developing countries industrial infrastructure, enhance their overall economic performance and strengthen their competitive capacities in the global market. At micro level, it assumes that ICTs will contribute to the improvement in the provision of basic social services, help to disseminate valuable information on production and conservation, improve the efficiency of governments and enhance the provision of education and health (UNESCO, 2006)

Vicas (2000) notes that the info- technological revolution, led by advances in information and communication technology, is restructuring the global social economic equations- shifting from income divide to digital divide (DD). This indicates that ICT divide can be experienced between youth organizations, individuals

and countries, thus there is a need to close the DD by embracing ICT. Many channels of communication expression, opportunity, and information, are driven and powered by technology. The youth are the prime consumers of new technology. Therefore, it is not surprising when they regard the youth as major players in the ICT revolution as many of the products are geared towards the youth, and sometimes even created by them.

The youth need to build and embrace the 'e- revolutionary society" so that they become technologically literate and create jobs for themselves. The youth development initiatives are embracing ICTs in terms of strategic tool. As ICTs continue to pique youth interest, the technological revolution will continue to evolve as new generation of creativity, and consequently, improve livelihoods of the youth through addressing the challenges that they face. The Government of Kenya (Gok) adopted this by embracing ICT and formulating an ICT policy.

The term youth has been defined in several ways. The term can take two perspectives either psychological perspective which takes into account the age of an individual or sociological approach where a particular society or cultural group has its own definition of who constitutes the youth. From psychological point of view, youths constitute the period between childhood and adulthood. This definition focused on the onset of physical and psychological or cognitive development of an individual. Sociologically, the term youth depends on how the society defines it. It can be how a particular cultural group defines it and may therefore, include children and the young adult of about twenty five years (UNICEF, 1997:3).

Age limits are formal reflection of society's judgment about evolution of children's capacity and responsibility and by no means the only indicators of maturation

(UNICEF, 1997:25). Unlike the two definitions, the psychological and sociological perspective, and the socio- psychological characteristics of the youth are believed to be universal. They are said to undergo stressful and traumatic experiences, confusing, and turbulent, bizarre and unpredictable behaviors. Omari's (1982) book Psychology and Education in changing times defines youth as a crisis period that is said to be only problematic in industrial nations and rapidly changing societies like Kenya, not in traditional societies where adequate guidelines and controls are prescribed.

In Kenya, the youth are persons in the age bracket 15 to 30 years unlike International Labour Organization (ILO, 2011) definition of 15 to 24 years. This definition takes into account the physical, psychological, cultural, social, biological and political definition of the term. Currently, Kenyan youth constitute about 9.1 million and account for approximately 38% of the population, of which 57% are female.

High population growth rate in the country may hinder economic growth of the country, especially with the fast increasing number of youth. The youth form 60% of the total labour force hence forming the largest source of human capital. Medium Term plan (2008-2012) review of Vision 2030 projects the number of youth to increase from the current 11 million to 16 million during the period under review (MTP, 2008-2012).

According to the Kenya integrated budget and household survey (2005/06), 45.9% of the population are poor. During the same period, it was estimated that 49.1% of the rural population and 33.7% of the urban population were poor. Unemployment levels are relatively high; the working-age population (persons aged 15-64 years) in Kenya is estimated at 19.8 million persons with a labour force participation rate (the ratio on total force to the working- age population) of 73%. Youth (persons aged 15-24)

unemployment rate (25%) is relatively high when compared with the overall unemployment rate of 12.7% (KIHBS, 2005/06).

Kenya's literacy level is about 74% with low secondary school education net enrolment rate (NER 32%). Only 15% of adult aged 15-64 years have attained secondary schools education and above and the national average number of schooling is estimated as 8.4 years among adults. A large number of youth graduating from the formal education system are unemployed despite the fact that opportunities for high technology and skilled workforce exist.

According to MTP (2008-2012), it is estimated that approximately 500,000 graduates enter the job market every year. This poses a great threat to the stability of the country incase these youths are not employed. Unemployment among the youth confronts dynamic challenges. Their lives are shaped by the forces beyond their control such as prevalence of poverty, incidences of crime, unemployment and underemployment, health risks such as HIV/AIDS, the changing nature of politics and the growth of civil society, globalization and new technology (World Bank, 2006).

In Nairobi, urban poverty has an impact on all its habitants but the impact varies among different categories living in town. The youth face many challenges and obstacles in trying to alleviate their poverty as a result of rising costs of living, dropping out of school so as to take care of their siblings due to HIV/AIDS and other structured reason such as being ignored in policy making.

It is estimated that about 92% of the unemployed youth have no vocation or professional skills training (MTP review 2008-2012).This is because of inappropriate education system that makes it difficult for them to enter already exhausted labour

market and to get an adequately paying job. They therefore have to "hustle" their way out or look for their own ways of survival in the slums.

1.1.1 An overview of Kenyan ICT Policy and NairoBits Trust

The National information and communications Technology (ICT) policy of Kenya is a product of the Economic Recovery Strategy for Wealth and Employment Creation (2003-2007) and was developed by the Ministry of Information and Communications in January 2006. This policy aims to encourage sustainable economic growth and poverty reduction, empower youth and disadvantaged groups, stimulate investment and innovation in ICT, and achieve universal access (Kandiri, 2006). One of the objectives of Kenya's ICT policy is to empower the youth by creating additional employment, supporting entrepreneurship to the youth through ICT, developing investments and growth in information technology (IT) hardware, software, internet, training, IT enabled services, Telecommunications and electronic commerce which can be achieved by the youth (Kenya ICT Board, 2009).

The Government of Kenya (GOK) recognizes the importance of ICT in economic development in its quest of achieving the Vision 2030. The Vision is the blue print of GOK to create a globally competitive and prosperous nation with high quality of life by 2030. The vision which is the country's milestone to development is anchored by three pillars namely economic, social and political. The government has initiated major steps to promote its use by pursuing to improve ICT infrastructure in order to bridge the digital divide and lower the cost of communications. The government is also leveling the ground through development and implementation of policy and regulations aimed at attracting investment within the sector. It recognizes information

to be a resource which must be generated, collected, organized, leveraged, secured and preserved to enhance national prosperity (MTP review 2008-2012).

Despite current development policies in Kenya that offer a red carpet welcome to ICT- based industries, the question is whether the state will be able to reap the benefits of ICTs as envisaged in its ICT policy. It is for this reason that the study examined the adoption of ICT by youth group programme, the extent to which ICTs has been integrated in NairoBits Trust programs. The study also looked at how effective ICT in trying to address youth challenges and improving the livelihood of the youth by enhancing employment opportunities.

NairoBits Trust is a non-profitable organization based in Nairobi, Kenya and whose vision is to enable Kenyan Youth in making positive contribution towards a prosperous and balanced society. The Trust seeks to empower marginalized youth between the ages of 15 to 24 living in the low-income settlements. It provides these youth with training in multimedia, entrepreneurship, reproductive health and life skills with an aim of giving them chances in the formal and non-formal employment. Since its inception in 1999 and formal registration in the year 2001, NairoBits has changed lives of more than 7,000 vulnerable youth. Out of these more than 60 % are positively engaged in the formal economy not a mean achievement in the Kenyan economy. This helps the youth to positively change the lives of vulnerable youth in Kenya by improving their access to productive employment as well as their ability to cope with their social environment through creativity and innovation.

NairoBits model of operation involves working with Community Based Organizations (CBOs) with roots in the non-formal settlements. Owing to the versatility of ICT, the subject that NairoBits deals with, NairoBits also works closely with the private sector

as partners in the training. These companies consist mainly those in the in the web design sector. They provide NairoBits with up to date information on what is obtained in the ICT sector. They take part in the curriculum review and act as guest teachers during training. After training, they take the youth on as interns in their companies with more than 90% of them are retained as the employees.

1.2 Statement of the Problem

Development entails growth (Conyers and Hills, 1984). Development is the gradual changes or progression through a number of stages towards some desirable state. Cocoyoc Declaration (1974) redefined the purpose of development not to develop things but to develop man since they have basic needs for food, shelter, clothing, health and education.

For the Government of Kenya (GOK) to develop so as to achieve its vision 2030 and to have meaningful development, there must be a contribution from every individual whether they are children, youth or adults. This depends on the nation's capabilities to promote welfare measures that improve physical, economic, social and mental well-being of youth before and after joining the national workforce. The youth in the slums having not found their places in the new economic, social cultural and political set up, face complex problems which are pressing and demand attention if worse situations are to be avoided.

The young people are potential resources for growth and social development if they are fully and productively engaged. They can also be a source of devastating social tension and conflict if not employed (YES, 2002).

In the view of limited opportunities, quite a number of youth organizations have adopted ICT with the aim of equipping the youth with ICT skills which lead to youth development. This can be seen in a number of institutions which are re-designing their development mandate with the changing times in order to acknowledge the potential offered by ICT in spear-heading knowledgeable societies by the youth. The World Development Report (1998) recognizes the existence of knowledge gap in tackling youth challenges and the fact that successful development entails closing the gap in knowledge through ICT.

Some Youth Based Organizations formed in the communities focus on youth problems, have more roles and they encounter bigger challenges in their attempt to address youth problems. Many focus on proving many training programs but they do not look at how these training have enhanced employment opportunities. Without checking the effectiveness of these trainings to the youth, the GOK will not achieve vision 2030. There are no clear detailed data to show how integration of ICT training enhancing the employment opportunities to the youth in Kenya. It is for this reason that this study focused on how integrating ICT training in NairoBits Trust Program is enhancing employment opportunities and its impact in addressing the youth issues in economic, environmental, social and political in nature. Are the youths able to get employed or creating employment when they go through the program? Did the program change their way of thinking, attitude and how they view the world? How do this program effective in changing the livelihood of these youths. These are some of the questions this study answered.

1.3 Research Question

a) What are the personal characteristics of youth ICT adopters?

b) What are the training needs of the youth in the low- income settlements?

c) Is the training in NairoBits adequate for the youth?

d) What are the youth perceptions towards the NairoBits Trust program?

e) To what extent or level have the sampled youth embraced ICT?

f) What are the benefits obtained by the youth ICT adopters from the training?

1.4 Objectives of the Study

The Main objective of this study was to assess how adoption of ICT integration is enhancing employment opportunities and promoting development of youth in the low income settlements where NairoBits centers are situated. The Specific objectives included:

a) To find out characteristics of youth ICT adopters in NairoBits.

b) To assess the training needs of youth in low- income settlements.

c) To examine the adequacy of NairoBits ICT training.

d) To investigate the youth perceptions towards NairoBits Trust Program.

e) To find out level of adoption of ICT components by sampled youth.

f) To investigate the benefits obtained by youth ICT adopters from the training.

1.5 Scope and Limitation of the Study

The study aimed to understand how adoption of ICT integration is enhancing employment opportunities and promoting development of youth in the low income settlement where NairoBits centers are situated namely Mathare, Kayole, Kariobangi, Eastleigh, Kibera and Mukuru kwa Reuben. Due to financial constraints, the study

was limited to three centers which had the largest number of NairoBits alumini namely: Kayole, Mathare and Kibera.

1.6 Justification for the Study

For any country to develop or achieve meaningful and sustainable development, every individual's contribution to development should be considered, be they children, youth or adults. The National Youth Policy, Session Paper No.3 (2007), the youth form 60% of the total labour force but many of them have not been absorbed in the job market owing to the country's high unemployment level despite them constituting 38% of the Kenyan population.

Government of Kenya like any other governments in Africa, is faced with the growing problems arising from the need to organize national programs that will cater for the needs of young people and enable them to participate more effectively in national development. The findings obtained from the study will helpful to the GOK in coming up with effective policies as far as ICT integration is concerned. The data obtained from the study will also play a role in combating urgent measure like ill health, lack of skills, unemployment, lack of education and environmental hazards among young people. ICT enabled the youth to participate fully in the economic and social development of the country.

Youth unemployment has become a major challenge in 21st century (ILO, 2003). It is important to come up with ways of addressing this issue. This study targeted these youths. GOK (1984-1988) Development Plan states that human resources per capital are the greatest development resources that Kenya has and if the youth are ignored, then the development process will be slow considering that the country currently has a high a proportion of young people.

This study finding will provide a database and literature for understanding the problem of the youth and how ICT adoption in NairoBits Trust program assists in alleviating youth problems. The data can be used as a reference by GOK or other scholars on the effectiveness of ICT. There was a need for carrying out this study because ICT is critical to developing countries due to the dynamic environment that we live in. This is the era of E-generation thus, ICT is very crucial for the youth to understand and embrace the opportunities in this sector.

1.7 Definition of Key Terms

This section deals with common terms as used according to relevance in this study. For the purpose of this study, the terms were defined as follows:

Development

Positive change in the individual youth which can consequently lead to self and community enhanced welfare caused by change of behavior

Community

Refers to residents of the slums where NairoBits Trust operates. These residents included: adults, parents of group members, other adults, youth who are non-member of NairoBits, local population and administration leaders of these areas.

NairoBits Trust

It is youth based organization offering ICT skills to the youths in their ICT centers in Mathare, Kayole Eastleigh, Kariobangi, Kibera and Mukuru kwa Reuben.

Information Communication Technology (ICT)

The study adopted Achola's (2006) definition which referred ICT to technologies and tools that people use to share, distribute, gather information, and to communicate with

one another. This study, specifically, looked at aspects of ICT access and usage of computers, internet, knowledge of web design, information technology (IT) skills, creative multimedia and Entrepreneurship in providing opportunities in employment or entrepreneurship to the youth where NairoBits Trust operates.

ICT Integration

This study measured ICT integration in NairoBits programs in terms of adoption of ICT by the youths.

Digital Divide (DD)

This is the gap between those with regular, effective access to information Technology and those without this access (Mehra et al 2004, p.782). This study of DD focused on the perspective of the NairoBits Trust organization with the access to ICT.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The literature review of this study revolved around the youth challenges not only in Africa but also globally. Many people and organizations had been prompted to write different reports on youths due to the magnitude and manifestation of youth challenges globally.

2.1 Challenges of Youth

According to the UNDP (2006) report, the concept of youth is intrinsically linked with the idea of transition from childhood to adulthood from a phase of life in which the individual needs protection, shelter and guidance to one of self–determination, maturity, independence, responsibility and accountability or decision making. A study by Chigunta (2002) on the social-Economic situations of the Youth in Africa, indicates the situation of the youth globally, is changing as a result of the dynamic and ever-changing cultures. The changing circumstances mean that there is need for greater attention for the concerns of the youth (World Youth Report, 2003).

The Lack of employment opportunities represented one of the most pressing problems for young people. According to the World Youth Report (2011) by the United Nations Department of Economic and Social Affairs (UNDESA), indicated that the views of youth globally in terms of employment and their perspectives about the pursuit of decent work. A survey carried out from 11th October to 7th November 2011, by UNDESA, was based on an e-discussion with young people and representatives of youth-led organization on the transition from schools and training institutions into the world of work. The participants aged 15 to 30years of age shared their own views,

experiences and recommendations on preparing for, entering, and remaining active on the Labour force through intense Debate commenting platform on the website of UNDESA.

The report spells out how young people are disproportionately affected by unemployment, underemployment, vulnerable employment and working poverty. Rates of young people's participation worldwide in the labour force declined in the years between 1998, the youth labour force participation rate fell from 54.7% to 50 .8% (International Labour Organization, 2010, P.3). In 2009, against a total global unemployment rate of 6.3% (ILO,2011a, p.12) the global youth unemployment rate peaked at 12.7%, representing 75.8 million unemployment youth ,marking the largest annual increase over the 20 years of available global estimates (ILO, 2011b, p.4) youth unemployment rates were significantly higher than adult rates in all geographical regions, though with considerable variation. In 2010, the global rate remained at 12.6% despite a marginal reduction in the absolute number of job-seeking youth. Decline in youth labour force participation rates indicate that youths are either engaged in full time schooling or training or they are likely discouraged and stopped looking for work due to extended periods of joblessness. In some cases, youth are simply inactive–neither at work nor in school. Chigunta (2002) notes an aspect of youth unemployment in many cities in Africa to be idleness whereby youth congregates in certain area to converse, drink and smoke. The rate of unemployment has a major impact on the youth making them to develop survival tactics of indulging in crime or even involving themselves in war related issues as was seen in the post-election violence witness in Kenya in 2007/2008 (MTP review 2008-2012).

The need provide more and better jobs for young people exists across countries, especially in developing countries where the youths represents 87% of the world's youth. These youth are often under employed and working in the informal economy under poor conditions unlike their counter parts in the developed countries that are mostly affected by youth unemployment spikes by global economic crisis, and its core challenge is provision of work opportunities for young people who are entering the labour market. In developing countries, the core challenge is not only to generate new employment opportunities for young people, but to also improve the quality of all jobs available for them (World Youth Report, 2011, p.18/19).

The Africa Youth Report 2011(United Nations, Economic commission for Africa, 2011) emphasizes that, "A critical analysis of the current education situations in the region has led stakeholders to believe that there seems to be overemphasis on enrolment numbers rather than attendance and the relevance of Education." This sentiment is echoed by Bwenje, a young Ugandan participant on the World Youth Report (2011), who states that, "instead of training young people to seek jobs they should train students to create jobs".

In Kenya, Moya (2007) highlights that inappropriate school curricula and poor quality education that is largely irrelevant to the needs of the labour market in Kenya. Kenyans youth obtained more formal education over the years. Kenya has witnessed declines in quality and infrastructure at almost all levels since the introduction of the 8-4-4 system (Sifuna, 1992).

Mbatia (1986) concurs with this argument stating that,

"The 8-4-4 system in Kenya's education system will not offer magical solutions unless accompanied by other reforms especially in the political economy of Kenya''

This shows that the education system is geared towards providing basic literacy and numeracy and not industrial skills, and is yet to adjust to the changing demands for knowledge, skills and aptitudes required in the Labour market. This calls for an intervention.

The world Youth Report (2011) also reveals that many higher educational system and institutions as inadequately tailored to the actual dynamic needs of the labour market. The participant reported that formal education curricula are often overly theoretical, leaving students feeling ill-prepared and lacking the necessary practical skills for the labour force. According to a policy Framework for Education draft 11th May, 2012, in aligning Education and Training to the constitution of Kenya (2010) and Kenya Vision 2030 and beyond, The Vision 2030 places great emphasis on the link between education and Labour market, the need for entrepreneurial skills and competences, and strong public and private sector. This considers an education system required to deliver these skills, competences and attitudes, as well as for the quality and form of service delivery and, most especially, the nature of the curriculum. Vision 2030, calls for a curriculum which accommodates individuals and corporate social responsibility, and moral and ethical values. It also calls for the development of technical and entrepreneurial skills, competencies, skills and talents. The content of basic and higher education should be designed to equip all learners to develop their full capacity, enhance the quality of their lives, able to make informed decisions and predisposed to engage in life-long learning.

Although the world Youth Report (2011) may not accurately reflect the average views of young people or the range of diversity among youth, the participants identified emerging opportunities for youth in new types of jobs in the fields of information and communication technologies (ICTS) as a better strategy of addressing youth unemployment. This is echoed in the policy framework for Education draft (2012, p.70), which recognizes that an ICT literate workforce is the foundation on which Kenya can acquire the status of knowledge economy by the year 2030.

2.2 Information and Communication Technology (ICT)

Information and communication Technology usually abbreviated as ICT is usually used as an extension synonym for information technology (IT) in order to incorporate the human component of communication and interacting with one another as the ultimate aim of new technologies. In other words, ICT consist of Information Technology as well as telecommunication, broadcast media, all type of audio and video processing and transmission and network based control and monitoring functions. ICT are the technologies and tools that people use to share, distribute and gather information and communication with one another (Achola, 2006).

According to Jimenez (2006) ICT consist of hardware, software, networks, and media for the collection, storage, processing, transmission and presentation of information (voice, data, text, images) as well as related services. Communication technologies consist of a range of communication media and devices including print, telephone, fax, radio, television, video, audio, computer and the internet.

Although many equate ICTs primarily with mobile and more advanced technologies, the world youth report (2005) argues that ICTs includes all technologies that enable the handling of information and facilitate different forms of communication. Kandiri (2006) groups ICT into three categories namely;

1) Telecommunication technologies including telephones (with fax) and the broadcasting of radio and television, often through satellites.

2) Information technologies using computers to process data and save time and effort.

3) Networking technologies of which the best known is the internet.

This is imperative as the three are very critical in the formulation and indication of ICT based environments. The rapidly advancing ICTs help in addressing socio economic problems caused by the rapid growth of urban youth population in developing countries. ICT offers opportunities to youths for learning skills development and employment (Manacorda Petrongolo, 1999).

Vicas (2000) point that ICT will help the youths to lip frog ahead through distance education, distance health facilities, better access to market information, and better governance. Governments with access to ICT innovations and having capacity to absorb them and use them will have the capacity to reap social and economic advantages. These without access and appropriate capacities risk being marginalized in the 'knowledge societies' of the future. Stehr (2001) points out that ICT has become a global phenomenon of great importance and concern in all spheres of human endeavors, especially in addressing the youth's challenges. For instance, the youth moving into an information technology dominated work place must acquire

necessary skills to avoid being victims of the digital divide.

World youth report (2005) supports this perspective by observing that,

> *"An area where young people have an edge is the emerging information society driven by new technologies. Young people are often the leading innovators in the use and spread of ICTs. They adapt quickly and are generally quite hungry for the great quantities of information, locally and globally, that can be provided through emerging information and communication technologies".*

This statement acknowledges the potential of the youth concerning ICT, their eagerness in learning new concept and putting them in practice.

Contemporary societies are increasingly information based, reinforcing linkages between global development efforts, the creation, accumulation and dissemination of scientific knowledge and innovations of new information technologies ICTs. This has led to a call for organization to embrace ICT aimed at understanding emerging social realities that result from new ICTs (Escobar, 1994).

The government has a challenge of creating a friendly environment for ICT adoption. This is because ICT is no longer a luxury but a necessity for the country to become part of the local and global competitive market. ICT is a dynamic environment. There are new technologies and information released all the time. If the government does not take the leadership role of implementing the right policies, the rapidly changing ICT environment will cause a greater digital divide between the rich and the poor.

2.3 The Digital Divide and Youth Initiatives

A survey of the "have not's" in rural and urban America by the us department of commerce, national telecommunications and information administration (1995), the term digital divide refers to any inequalities between groups, broadly constructed, in terms of access to, use of, or knowledge of information and communication technology. According to Mehra (2004), digital divide refers to the gap between those with regular, effective access to digital and information technology and those without access.

The groups often discussed in the context of a digital divide include socio-economic (rich/poor), racial (white /minority), or geographical (urban/rural). According to Mehra (2004), the main issue concerning access for young people to ICTs is that of the digital divide. To him unless this divide is given priority attention by policy makers and other stakeholders, the gap between the youths who access ICT in their organizations and those who do not will continue to widen.

2.4 Development Opportunities Using ICT

It is essential to note that diverse development opportunities have opened up due to the influence of ICT and developing nations now have the opportunity of leapfrogging into the information age by employing the powers of information and communication technology (Sesan, 2005). In Africa, Nigeria and South Africa for example, has reacted to the global challenge by indicating its interest in the mass production of ICT experts in the tune of almost 1 million people. Job creation is an opportunity provided by ICT.

World Youth Report (2005) presents opportunities in terms of the social development and inclusion of the youth in ICT. Young people often use internet to access entertainment and news site and as a personal meeting space through chat programmes. The youths are also making use of possibilities provided by new technologies to advance their participation in the number of civic activities. There is also an increased emphasis on using ICT in the context of global youth priorities, such as access to education, employment and poverty eradication. Indeed, the statement throws more light on the importance of ICT to the youth. However, besides this globalization and technological development are affecting youth both positively and negatively (Robertson, 1995). Use of ICT brings the danger to the youths because they spend countless hours on the internet watching pornography which is harmful to their morals.

In the millennium declaration of 2000, the international community resolved to ensure that the benefits of new technologies especially ICT, are available to all. This can be seen today as ICT and new media are becoming core components of youth civic engagement and activism. With the existing connection between new media, young people and the internet, it is easier to achieve this. From this statement, it can be inferred that new media and ICT have enabled the youth activism at a general level and influenced the diverse forms it has taken. World Bank (2006), it is important to invest in the young people who are critical actors in the development process. Failure to train millions of unskilled and low skilled youths in Africa will amount to higher social and economic cost to the society in the future.

According to World Youth Report (2005), utilizing information and communication technology to promote youth employment has expanded during the last decade. Local e-commerce may open significant livelihood opportunities for young people and smaller networks and provide young people with the opportunity to develop professionally, without having to relocate from their families and support networks. At the grass-root level, there are several examples of opportunities for entrepreneurship in ICT among lower income youth. The report further points out that, the worldwide expansion of mobile phone networks and the growth in the number of mobile phone subscribers have been phenomenal in recent years. This mobile phone in low and middle income countries have open up many opportunities for young people.

Stehr (2001) in his study notes that there is a growing effort to promote social action and community development among young people through electronic communications, "Cyber participation" and "e-citizenship". In developed countries, ICT's are used for communication of youth movements and contributing to a sense of e-solidarity among individuals and groups with different agendas. Technology has increased youth awareness of issues, problems and crisis in other parts of the world. New technologies bring these issues to people in very direct ways and allows for instantaneous communication among activists. In many countries, internet is the least controlled medium for information, and it can be a powerful tool for activists and advocacy groups, contributing to increased transparency, the development of civic society and democracy (Stehr, 2001).

Gathembe (2001) the continuity of any technological innovation is dependent on its significance by the upcoming generation and this automatically puts the youths under the spotlight when it comes to maximizing the development opportunities opened up by ICT, particularly for developing nations. The youth in developed countries have moved towards self-improvement beyond the formal academic system. Unless the government of Kenya shifts from certificate oriented system to a certification and knowledge based system, the youths are bound not to benefit from ICT.

According to a draft policy framework for education (2012), the government acknowledges that currently people live in a digital age and internationally without both infrastructure to support it to exist and the human resource capacity to make it work, then the Kenyan economy will not function effectively or be internationally competitive. No economy can survive without investment in ICT, and already in Kenya, areas such as banking, communication and tourism industry are almost totally dependent upon it. Social services are also increasingly dependent on reliable IT system and with IT skills and capacities. Human capacities have to be developed and the government recognizes that ICT is very essential and it should start to be taught at a very young age.

ICT is one of the major technological innovations of the 20th century that has contributed to growth in a number of economies, including the US and India (UNDP, 2001) Schech (2002) looks at the promises of ICT for developing countries as something formulated within a broader discourse of modernization and development under the assumption that deficiency in knowledge is partially responsible for underdevelopment. The underlying argument is that the approach to ICTs in development has been framed by modernization theory, which perceived development

spreading from west aided by modern communication technologies. To him, new technologies as tools through which knowledge can be established and disseminated can become sources of empowerment and emancipation.

Empowering each individual is yet another unprecedented potential offered by ICT. Literacy, skills and accessibility to ICT, are key to using them to provide employment for the youth. Every youth is a potential recipient and generator of knowledge in a truly ICT networked world. ICT facilitate the increasing use of exploring and exploiting the world of ICT and to craft that into knowledge. (Draft policy Framework for Education, 2012). This inter-network equality aspect opens up immense opportunities for the youths to absorb knowledge, triangulate the knowledge from different sources and form an informed opinion (Vicas, 2000) ICT further provides them with a powerful medium to voice their concerns about issues affecting them and develop linkages with communities and individuals with similar concerns across geographical barriers. ICT plays a lead role in formation of common cause coalitions, electronic networks, workers and human rights groups and is bringing people together like never before.

However, World Youth Report (2005) points out that lack of access to information and communication technologies has remained a major challenge to the youth programmes. More efforts should be made for the youths in the low income areas such as the youth in the slum to establish connectivity, given that rapid developments in wireless technology have made it possible to overcome the physical impediments of distance and topography at a reasonable cost that for long time have limited the development of telecommunications infrastructure in low income areas.

Despite the fact that ICT have been seen by many scholars to be appropriate in addressing youth challenges like unemployment, major disagreements on the analysis of their effectiveness has risen. Whereas some studies have emphasized the availability of ICT aspects as the prime indicators (World Information Summit, 2006), other scholars have viewed participants or the targeted level of education as being key to understanding ICT scholars like Schech (2002) looks at factors such as conducive ICT environment to be the key aspect of ICT adoption. This study made an attempt to find out whether ICT adoptions by Youth organizations have any influence in youth development in terms of employment opportunities for the youth. This two factors form the basis of this study.

2.5 The Theoretical Model

2.5.1 Modernization Theory

Modernization means the appearance of modes of social life or organization which emerged in Europe from about the 17th Century onwards and which subsequently become more or less worldwide in their influence (Giddens, 1991). Modernization is seen as the process by which individuals or society change from a traditional way of life to a more complex, technologically advanced and rapidly changing style (Roger, 1969 in Mekote, 1991). Modernization theory attempts to identify the social variables which contribute to social progress and development of societies, and seeks to explain the process of social evolution. There is an apparent shift in the whole way of life of the people socially, culturally, economically and even politically. This shift has resulted to advanced lifestyle like education and seeking for employment and because modernity is moving at a fast rate then it does not match the job opportunities for the youth leading to unemployment.

For Giddens (1990) the modern world originated from 17th century and it is today a juggernaut, meaning an advanced stage of modernity. It is radically a high and late modernity. Giddens A juggernaut as;

"A ran away engine of enormous power which together as human beings, we can ride on but which threatens to run out of control. It can resist against us, it crashes those who resist it but at the same time it appears to be in a steady path; sometimes it is erratic to direction we cannot guess……"

The Juggernaut described by Giddens can be equated to technology. Countries or organizations who resist in adopting technology will be left behind or be crashed by advances in various areas of technology or will lag behind in development. The youth organizations have been challenged to be quick in adopting change. This study held to this by looking at the youth organization with access to ICT and those that do not, so as to come up with an appropriate comparison.

The main concept of modernization describes the development from traditional to modern societies (Wehler 1975:11). Walt Whitman Rostow (1960) is an important representative of modernization theoretical approaches. The foundation of Rostow's approach is the classification of societies within five steps of development, which he describes as stages of growth. For modernization theories economic growth is the basis of the modernization-process, but also a change of values within the population of a society is required (Wehler 1975: 39). Economic changes have strong impacts on societies and these changes are supported by political and social transformations (Rostow 1960: 17).

The process of modernization can be seen as increasing dominance of humans over their environment; this progress is inevitable and revolutionary and it emerges in certain stages (Wehler 1975: 16). The first phase is the traditional society; the conditions of production are limited, science and technology barely accessible. This society is based on agriculture and highly hierarchical structures within landowner and families (Rostow 1960: 18).

The next phase can be described as a society in transformation where the preconditions for economic growth are established. The role of science and technology increases, the political system changes towards a strong nation state, which releases from traditional and regional interests and fosters investments in industrial sectors "Investments increase, especially in transport, communication and raw materials, and the result is a general commercial expansion." (Harrison 1988: 26) This transformation also takes part within the population where the importance of personal property and nationalism increases (Lachmann 2004: 91; Rostow 1960: 47).

The next step is the economical rise, in which the industrial sector gains more and more power and starts to play a dominant role within a given society. Through the import of capital and investments the basement for new industry is laid, new employments are provided, the agricultural sector becomes commercialized, natural resources become capitalized and new methods of production develop (Rostow 1960: 22). For Rostow the precondition for the "Take-off" is an increasing quote of investments of 10%.

A society's stadium of mature according to Rostow is accomplished when the national economy has asserted its position in the international market. He arguments that the process from traditional to mature society takes 60 years, because modern technology

needs three generations for an adequate diffusion in a certain society (Rostow 1960: 25). In the following stadium of mass consumption the per-capita income increases towards a level that allows more private consumption than only food and clothing, besides of that, the importance of social welfare increases (Rostow 1960: 94).

To describe the level of development of a nation, modernization theories focus on internal belongings. Values within societies will have to change from traditional agricultural lifestyle towards mass consumption. The nation state has to enforce foreign investments and foster the enlargement of private property and means of production. Most of the approaches are founded in dualistic mindsets that neglect the possibility of coexistence and cooperation between tradition and modernity. Economic growth is seen as the only driving force for enhancing the living conditions of people in developing countries.

The impression we are getting here is that, the theory of modernization centers on change; shift in the whole way of the people. Lash and Urry (1994) points to the shift from economy of goods to economy of sign and spaces as Jean Baudriland (1995) claims that information technology, mass media and cybernetics have affected a transition from an era of industrial production to an era of simulation, and more advanced technologies in which models, signs and codes determine new social order. Thus, it follows that for the youth organizations to be able to attain their goal of developing the youth, it needs to do away with traditional values and attitudes to adopt new technologies.

In agreement with this is Brey's (2003) view on modernity as having recently entered a new phase and is pervasive in contemporary social theory. He cited a characteristic of modernity as the introduction of new technologies-ICT. Schech (2002) looks at the

promises of ICTs for developing countries as something formulated within a broader discourse of modernization and development. This shows that new technologies as tools through which knowledge can be established and disseminated can become sources of empowerment and emancipation. Similarly this study based its understanding on this theory, that the youth organizations are challenged to embrace ICT.

Lastly modernization has enhanced arguments on the "digital divide" that, new ICTs are adding to a growing socio-economic gap between developed and developing countries. Castells (2000) suggests that the digital divide does and will continue to exist, not exclusively between first and third world nations, but among the connected and non-connected networks within discreet regions, between the youth organizations which access ICT and those which do not. Some researchers suggest that the digital divide is shifting from a gap in access and connectivity to ICTs to a knowledge divide (Graham, Mark 2011). A knowledge divide concerning technology presents the possibility that the gap has moved beyond access and having the resources to connect to ICTs to interpreting and understanding information presented once connected (Sciadas, George, 2003). Wade (2002) advances on the digital divide (DD) by offering suggestions on how to narrow the gap by saying,

"DD can be bridged by supplying more ICT to developing countries and especially to the younger generation-the youth".

This statement points that efforts should be aimed at bridging the digital divide in the country by adopting ICT aspects in youth organizations such as computers, internet, and mobile phones. In summary, modernization theory has led to the emergent of ICT. ICT is an aspect born out of change and the need for advancement thus, by

having an appropriate ICT policy in the country can automatically favour the development and adoption of ICT by the youth organizations in a given country.

2.5.2 Innovation Adoption Theory

Rogers (1995) in his comprehensive book Diffusion of innovation (1962:2) he defines diffusion as the process by which an innovation is communicated through certain channels over time among the members of a social system. Diffusion is a special type of communication that is concerned with the spread of messages that are perceived as new ideas. His definition contains four elements that are present in the diffusion of innovation process. These are: (1) Innovation- an idea or practices (2) communication channels – the means by which messages get from one individual to another (3) Time– innovation's rate of adoption and (4) Social system – a set of interrelated units that are engaged in joint problem solving to accomplish a common goal (see Rogers 1962:8).

The elements show how the diffusion of ICT can occur in organizations. The innovation adopted by the youth organizations is the ICT aspects; the organization passes this innovation to the youth, readiness to accept new ideas and put them into practice varies from one organization to the other. This depends on the financial resources of an organization, previous experience with new ideas and the working history of organization.

For Roger (1996), diffusion is the key word in the process therefore the youth organization must first adopt the innovation and learn about before passing it to youth organization who do not offer ICT program. Rogers model, states that innovations are diffused over time in a pattern that resembles an S-shape curve. He theorizes that, an innovation goes through a period of slow, gradual growth before experiencing a

period of relatively dramatic and rapid growth. The theory also states that following the period of rapid growth, the innovation's rate of adoption will gradually stabilize and eventually decline. This is depicted in diagram 1.

Figure 2.1: Theoretical Model: Roger's adoption/ innovation curve
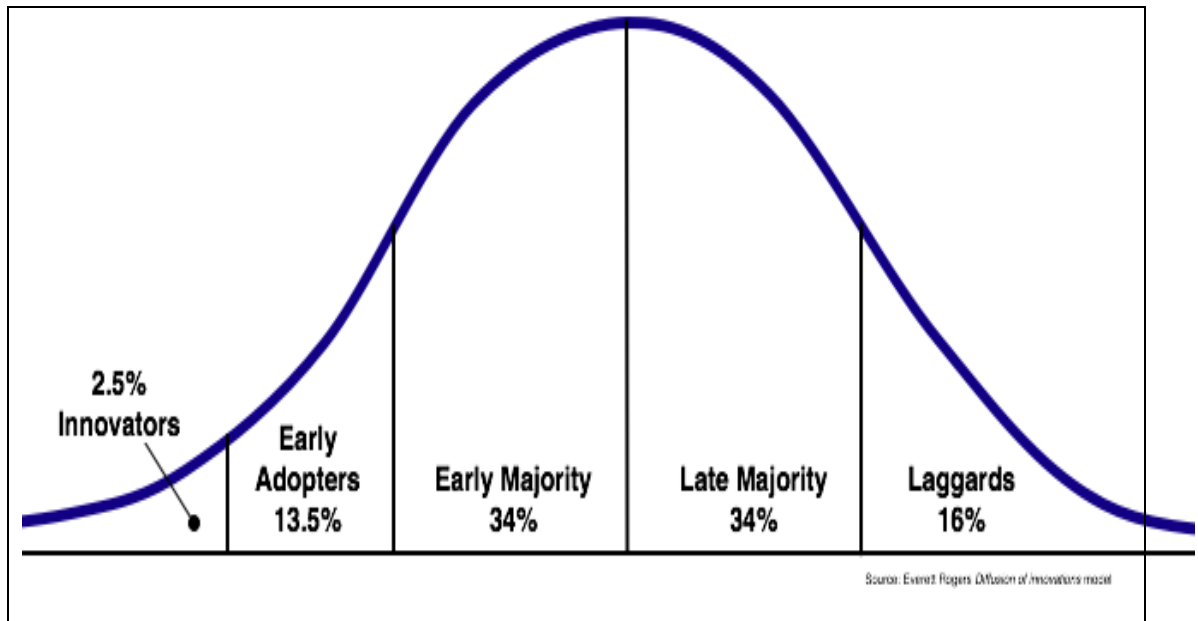
Source: Rogers (1995) innovation Adoption curve

Diagram 1 is Rogers Innovation Adoption curve model which helps us understand the classifications of adopters of innovations into various categories, based on the idea that some organizations are predisposed to being innovative will adoption of ICT than others. The youth organizations who are less predisposed to being innovative will adopt an innovation earlier than those who are less predisposed, but it's worth noting that availability of financial resources is one of the factors which help facilitate adoption of ICT. Innovators are the risk takers and pioneers who adopt an innovation until rather late in the diffusion process, if ever. It is imperative to understand how the youth organizations perceive ICT and the impact it may have on the youth's lives.

2.6 Conceptual Framework

A conceptual framework is a visual or written product, one that "explains, either graphically or in narrative form, the main things to be studied—the key factors, concepts, or variables—and the presumed relationships among them" (Miles and Huberman 1994:18).

Figure 2.2: Conceptual Framework on ICT Adoption in Youth Program

Personal characteristics

- Age
- Gender
- Level of education
- Income
- Marital status
- Family background

Training

- Training needs
- Adequacy of the training

NairoBits Trust Programme

Perception of youth towards NairoBits

Level of adoptions of ICT components

Benefits occurring from adoption of ICT

- Improved income
- Improved self confidence
- Improved technical skills
- Improved decision making skills

2.7 Operational Definition of Variables

Personal characteristics of the youth adopters – This variable referred to the attributes of the youths who have adopted the ICT training programs in NairoBits. This variable included:-

- **Age**- This variable referred to the number of years of an individual since they were born.

- **Gender** – referred to either male or female.

- **Level of Education**- Education referred to gaining of meaningful knowledge through writing and reading. In this study low education will refer to the youths who have not attained a minimum of secondary school education (Form four).

- **Income** – this was the financial status of the youth in terms of Kenyan shillings per month.

- **Marital status**- referred to whether the youth is single, married, divorced or separated.

- **Family background** – referred to whether the youths are orphans, youths are from single family, if both parents are present and the number of siblings.

Adequacy of training to the youth- This variable referred to how the training is adequate to the youth in acquiring ICT knowledge, skills and competencies as a result of teaching vocational or practical skills and knowledge that relate to specific useful competences.

Training needs of youths - This variable helped in understanding the drive behind the youth seeking training in ICT.

Perception of youth towards NairoBits – This variable sought to find out youth views and understanding of NairoBits program.

Level of adoption of the components of the ICT in the youth program

This was the degree to which NairoBits have incorporated the ICT aspects in its program.

Benefits occurring from ICT adoption

This was the degree to which the youth in the programme perceive ICT as a tool of addressing their challenges especially the issue unemployment opportunities.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section sought to address or to find out the result of a given problem on a specific matter of the research problem. It explains the research design, population and the sample size used in the study. It further explains the data collection methods and data analysis methods to be used in the study.

3.1.1 Selection and Description of Research Site

This field research was carried out in areas where NairoBits centres are located. These centres are the in low income areas of Mathare, kariobangi, Kayole, Kibera, Eastleigh and Mukuru kwa Reuben. The low income areas experience a lot of challenges. According to the global report on Human settlements (2003) on "*The Challenge of Slum"* by the United Nations since the adoption of the Millennium Declaration, there are similarities and attributes that characterize the slums globally. These characteristics include lack of proper sanitation and safe water; absence of waste collection system; electricity supply; high number of substandard housing; poor roads; overcrowding; unhealthy living; Poverty and social exclusion and insecure tenure are among the challenges faced in the low income area.

In Kenya, the Government is facing an increasing growth of informal settlements in her urban centers. As rapid urbanization takes its toll, so has the development and growth of slums. More than 34% of Kenya's total population lives in urban areas and of this, more than 71% is confined in informal settlements (UN-Habitat, 2009). This number will continue to increase unless a serious and concerted action by all relevant stakeholders is undertaken.

Kenya's annual informal settlements growth rate of 5%, is the highest in the world and it is likely to double in the next 30 years if positive intervention measures are not put in place (UNDP, 2007). According to UN-Habitat (2003), the experience in these slums shows a strong link that people living in poverty are trapped in their present (World Economic and Social Survey, 2008) situation because they are excluded from the rest of the society. Unfortunately, they are not empowered to allow them to make any significant contribution to community building (United Nations Population Division, 1998; Mutisya, 2010), pushing Nairobi city to the verge of sinking into abyss as the weight of mushrooming slums takes its toll.

These unprecedented rates of urbanization can be linked to massive migratory movements as well as to natural growth, challenging urban planning and thereby causing environmental problems with far reaching effects. While the low quality of housing and the general lack of basic infrastructure especially sanitation, drainage, access to energy and clean water supply result in poor social and environmental conditions, high levels of unemployment and low income give rise to conflicts (Beatley, 2000; Smith & Hanson, 2003; Pamoja Trust, 2009). The situation is not helped by lack of supporting policies for effective urban planning and improvement.

3.1.2 Nairobi's Informal Settlements

Informal settlements have a long history in Nairobi dating from colonial period, where most Africans were barred from the city's designated residential areas since they were reserved for Europeans and Asians. Kenyans who came to the city in search of work had to create informal residential settlements outside the central business district and the planned residential areas which were largely ignored by the colonial government (Amnesty International, 2009).

Mitullah (2003) argues out that the city's first development plans did not include early settlements; hence essential services to the settlements and road construction to link them to other areas of the city were not provided by the local authorities. As a result, Nairobi developed along segregated lines. The city's 1948 Master Plan and other major urban development plans continued to neglect informal settlements (Anyamba, T.J.C., no date).

"The people who live in the slums around Nairobi and other towns of our country require Special attention..." (The President of the Republic of Kenya, His Excellency Hon. Mwai Kibaki)

Nairobi, the capital city of Kenya and one of the largest in Africa, is the hub of trade and business in Eastern Africa. The city's population has grown over the years from 11,500 inhabitants in 1906 to 3.1 million people in 2009 (KNBS, 2010) with more than half the city's population living in informal settlements and slums occupying less than 1% of Nairobi's area and less than 5% in residential area (Mitullah, 2003).

With a rapid urbanization growth rate of about 4%, current population is projected to grow to 5 million by 2015 and to more than 8 million by 2025 (UN, 2001). And unlike cities in developed countries, Nairobi's growth is not accompanied with equal socio-economic and environmental development.

The informal settlements are scattered within Nairobi's nine administrative divisions (Figure 3). Residents in these marginalized areas live in very inhumane and disturbing conditions with severe lack of clean water supply, improved sanitation, housing, health services, and lack of solid waste management facilities (Umande Trust, 2007). In addition to this, slums dwellers face inadequate schooling facilities,

unemployment, lack of energy, lack of drainage systems, high crime rates, and lack of proper governance including security services. This has resulted to life threatening outcomes which lead to mass poverty, contagious diseases, conflicts, and other social, ecological and economic hazards.
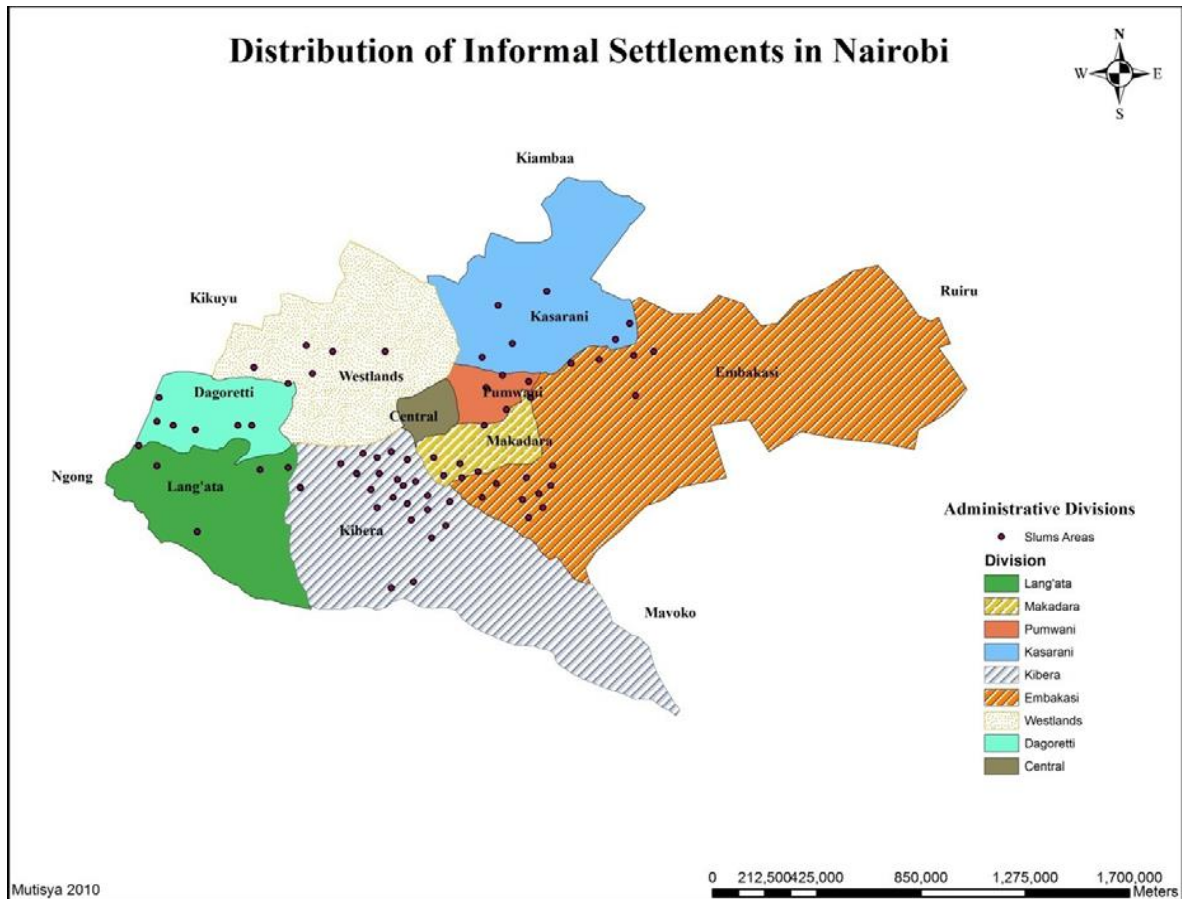
Figure 3.1: Distribution of Informal Settlements in Nairobi Administrative Divisions

Informal settlements in Nairobi are the consequence of both explicit government policy and decades of official indifference. In particular, informal settlements were excluded from city authority planning and budgeting processes. The governments in power have ignored their existence until recently when national authorities and international bodies outlined the dangers of slums to humanity. Complexities

surrounding slums in the city have made it difficult for the government to pass workable policies which if enacted and applied in the right way could help Kenya improve slums life. In Nairobi therefore, the lack of recognition of slums and settlements as residential areas denies residents a range of essential services provided by the government to other residents of the city. These essential services include improved water supply, improved sanitation, electricity, garbage collection, improved health services, education, access roads and transport.

Lack of good governance and proper leadership in these settlements has worsened the situation. The experience of slum-dwellers starkly illustrates that people living in poverty not only face deprivation but are also trapped in poverty because they are excluded from the rest of the society, denied a say, and threatened with violence and insecurity (Amnesty International, 2009). There is indeed a clean lack of empowerment and social capital and corrupt authorities have taken advantage of this.

Kibera informal settlements (began in 1912) have an estimated population of 950,000 people, while Mathare slums (started in 1963) houses more than 500,000 people, Korogocho slums (started in 1980s) has an estimated population of 150,000 people and Mukuru Kwa Njenga (began in 1958) has an estimated population of 100,000 people (Umande Trust, 2007). The study focused on three of the centres of NairoBits that is Kibera, Mathare and Kayole.

3.2 Research Design

A research design is a master plan specifying the methods and procedures for collecting and analyzing the data. It is a strategy or blueprint that plans the action for carrying through the research project data. A research design involved a series of rational decision-making choices depending upon the various options available to the

researchers. This survey sought to understand the effectiveness of integrating ICT in youth development initiative in the slums. The study focused on a sample of youths in NairoBits Trust program from whose inferences were drawn to a larger population.

The study made use of the descriptive research design utilizing both quantitative and qualitative approaches. The descriptive design was selected because of its nature of description and its determination of relationships between variables. It was applicable to the study because the study described in details how ICT integration training in youth initiatives is enhancing employment opportunities in the low income settlement where NairoBits centers are situated. Descriptive research also seeks to determine the degree to which underlying factors exists in a given situation and under given conditions. In the study, the design was used to seek the role of NairoBits Trust Program in their endeavor to improve the lives of the individual youth and the community in low income settlements where their centers are situated. In its quest to understand the effectiveness of integrating ICT in youth development initiatives and how it may be used to address youth challenges in the slums. The study also adopted descriptive research technique to describe data and characteristics about the phenomenon being studied.

3.2.1 Units of Analysis

It refers to those units that we initially describe for the purpose of aggregating their characteristics in order to describe some larger group or abstract phenomenon (Mugenda and Mugenda, 2003). In this study employed NairoBits Trust Program as its unit of analysis.

3.2.2 Units of Observation

It is the subject, object, item or entity from which we measure the characteristic or obtain the data required in the research study (Mugenda and Mugenda, 2003). The unit of observation was the sampled youth in the study area and how they have benefitted from the program.

3.2.3 Target Population

According to Kasomo (2007:27) a population is any group of institutions, people or objectives that have at least one characteristic in common of which we are able to draw conclusions. The target population refers to all the members of a set of people, events or objects to which the results of the research can be generalized (Babbie, 1995). The target population should be explicitly and unequivocally defined, otherwise statements about the target population after analysis of data will not be trustworthy (Kasomo, 2007:27). This study consisted of youth from the three NairoBits Trust centres namely Kibera, Mathare and Kayole.

3.2.4 Sampling Technique of Sites and Respondent Sites

Sampling is the process of selecting units (e.g., people, organizations) from a population of interest so that by studying the sample we may fairly generalize our results back to the population from which they were chosen. In sampling, the population is defined from any group of institutions, people or events, objectives that have at least one characteristic in common (Kasomo, 2007:27). The sample for this study was obtained from the three NairoBits Trust centres in the low income settlements.

This study relied on probability and non-probability sampling in the form of convenience and purposive sampling to ensure representativeness of the target

population. Convenience sampling was used in selecting the area of the study. According to Mugenda and Mugenda (1999, pp.50), in purposive sampling, cases are handpicked because they are informative or they possess the required characteristics. Purposive sampling was used in selecting the key informants who had vital information on the functioning of the NairoBits Trust Centre.

Simple Random sampling was used in this study to select 75 youth in the three centers. Kasomo (2007:32-33), Simple Random sampling is the type of sampling which provides equal chance to every member in the population to be included in the study. The study used randomly generated numbers by a use of a computer program called a Research Randomizer. From the secondary data the youth who had gone through the program in 2012 to April 2014 in the three centers were 1500. The program generated three sets of 25 numbers as indicated below.

Set #1:
644, 807, 1471, 81, 727, 303, 1487, 1338, 1136, 772, 1051, 371, 244, 981, 1359, 708, 325, 659, 1085, 526, 1357, 128, 954, 111, 969

Set #2:
1458, 885, 232, 36, 1460, 1167, 806, 1301, 820, 1123, 687, 821, 23, 329, 1456, 1249, 292, 744, 658, 700, 1220, 1102, 1054, 1061, 1459

Set #3:
526, 132, 621, 328, 1169, 1329, 1395, 1027, 661, 687, 1382, 234, 282, 965, 789, 1240, 1146, 1100, 1016, 3, 1147, 1309, 321, 1457, 616

Set 1 was used to sample 25 youth in Kibera centre, set 2 was used to sample 25 youth in Mathare centre and set 3 was used to sample 25 youth in Kayole centre. The Key informants included 2 trainees from each of the three selected centers and 4 administration managers from the Head Office. The 4 included the Administration

Officer, Finance Officer, Curriculum development officer and Monitoring and Evaluation Officer.

3.3 Data Collection Data Collection Methods

3.3.1 Primary Data

Data collection is integral part of the research design. Data can be collected in a variety of ways, in different settings – field or lab – and from different sources. In order to obtain relevant data in this study, both primary and secondary data was used. Primary data is the data that has been collected from first-hand-experience which usually has not been published yet and is more reliable, authentic and objective. This study used a questionnaire to collect data from the youth. A questionnaire is set of questions used to obtain important information about the population (Mugenda, 2003:71). The questionnaire made it possible to obtain data required to meet the specific objectives of this study. The youth interviewed using questionnaires. Key Informants referred to the persons with whom an interview about a particular organization, social program, problem, or interest group is conducted. Here purposive sampling was used in selecting 10 key informants who were interviewed using a focused discussion group in NairoBits.

Observation checklist: this study also used observational techniques to supplement the survey research method. Observation according to Cohen (1980) is one way of obtaining information about the progress or outcome of an educational programme is to observe directly selected aspects of its development and implementation as they occur. The researcher used direct observation to observe the following: ICT aspects in the organization such as computers, ICT training session, internet services, and phones. Other items that were observed included various initiatives for the youths, the

competence of the youths in using ICT. The observation checklist captured non-verbal behavior of the youth.

3.3.2 Secondary Data

Secondary data was also be used to collect data. Sitton (1966) secondary data refers to the documented information available about the subject of research. It is primarily done to supplement primary data. Secondary data is essential because it helps to reveal the nature of the problem at hand and identifies the problem areas to be tackled. Secondary data was obtained from NGO reports, literature review, official government reports, Newspaper, published books, journals and internet to collect relevant information related to the study.

3.4 Data Analysis

The data collected from this study was analyzed using descriptive statistical data specifically Statistical Packages for Social Sciences (SPSS). This included the use of frequencies, percentages, charts and cross tabulations to show emerging relationships.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF

FINDINGS

4.1 Introduction

This chapter presents the findings of the study based on the objectives presented in chapter one. The researcher collected data from 75 youths of NairoBits Program Trust Centers namely Mathare, Kibera and Kayole and 10 Key Informants of NairoBits Program Trust Organization. The data is presented in frequency tables, pie charts, and bar graphs. This chapter also, includes a discussion and interpretation of the findings of the study. The study set out to assess the effectiveness of integrating ICTs training in youth initiatives for development.

4.1.1 Response Rate

The study sampled 75 youths and 10 key informants of NairoBits Program Trust. The response rate percentage was 100 and this is shown in the table below.

Table 4.1: Response Rate

Sample Category	Expected Responses	Actual Responses	Percentage
Kibera centre	25	25	29.4%
Mathare centre	25	25	29.4%
Kayole centre	25	25	29.4%
Key informants	10	10	11.8%
Total	**85**	**85**	**100%**

Source: Survey Data

4.2 Background Information of the Respondents

This section presents the first objective of this study which was to find out the background information of the respondent's characteristics or personal attributes of individual's i.e. the youths adopters of ICT from the centers and the Key Informants who responded to the questionnaires. The rationale behind the inclusion of these attributes in the analysis is that they help to shed some light on the characteristics of the youth in the program.

4.2.1 Age of the Respondents

The figure below shows the ages of the youth who were surveyed in this study. Of the 75 who were sampled, it is seen that majority of the youth are in the age between 20-24 (49) followed by those in the age of 25-29 years (14), and lastly by those below 19 years of age were 12 in number. This finding concurs with Moya's (2007a) definition of youth where he defines the youth as those between 15-30 years old. This is also the prime age that is best to understand and embrace ICT concepts.

Figure 4.1: Distribution of Respondents' Age Groups (n=75)
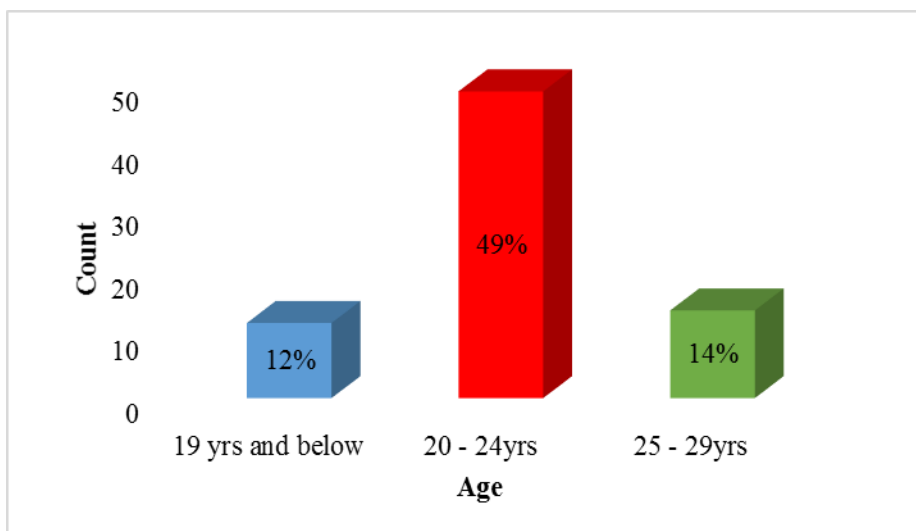
4.2.2 Gender

As seen in the figure below the number of female youths (50.67%) are slightly higher that of their male counterparts (49.33%). ICT has always been associated with the male gender as a science but the findings indicate that female gender has embraced the ICT.

Figure 4.2: Distribution of Respondents' Gender N=75
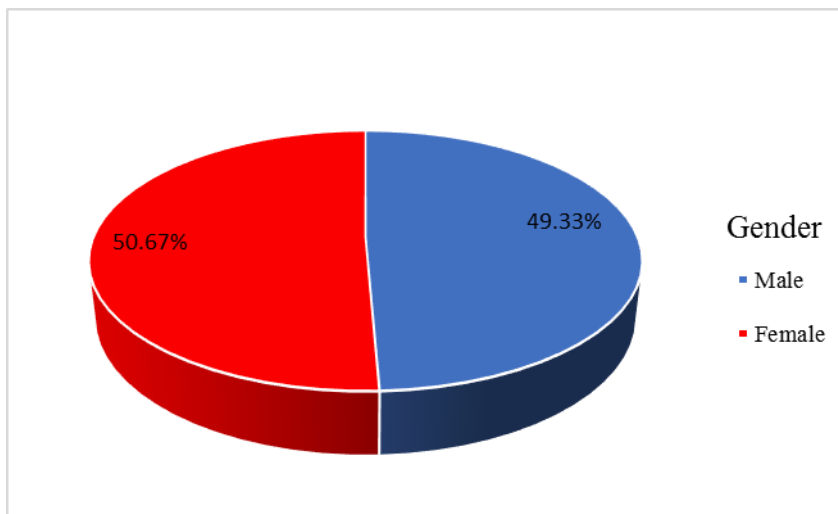
4.2.3 Marital Status

The variable was used to measure its influence on the youth in adapting the use of ICT. As it is seen below that a majority of the respondents (68%) were single. These were followed by the respondents who were married at (6%), and finally by those who were separated (1%). The higher percentage can be attributed to the fact that the study captured the maximum age to be 30 years which is a true scenario in the Kenya where marriage is delayed due to the economic reasons. A person will wait to be financially stable first before settling into marriage. Majority who are single have embraced ICT compared to the married ones.

Figure 4.3: Distribution of Respondents' Marital Status (N=75)
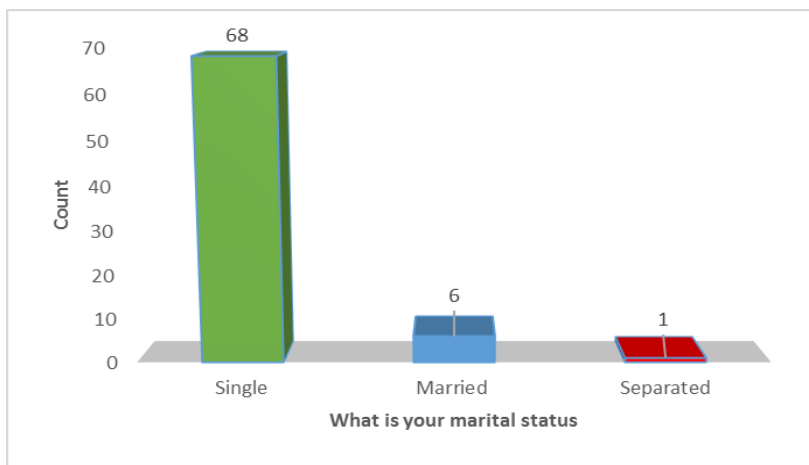
4.2.4 Level of Education

As it can be seen below majority of the youth (50%) have secondary level of education as their highest level, followed by (14%) who have tertiary education, university level (7%) and lastly (4%) had upper primary level of education, this kind of group are expected to adopt ICT at a slower pace. The majority had gone through secondary education. Higher level of education is a key factor that enhances the adoption and advancement of ICT. Low level of education could be attributed to the fact that majority faces a lot of financial limitations especially to cater for school fees and things that facilitate the learning process. This is shown in the figure below.

Figure 4.4: Distribution of Youth by Level of Education (N=75)
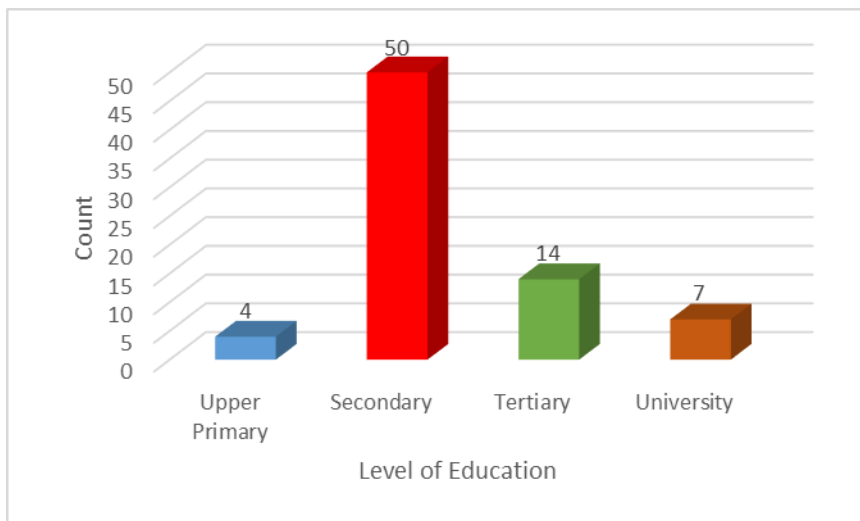
4.2.5 Occupation Status

The next figure shows whether or not the respondents are employed or not and whether they are self employed. The figure below shows majority of the respondents are self-employed (33.33%). This is followed by those who were unemployed (25.33%). Those who were are under formal employed were (24.0%). These respondents usually indicated that they do odd jobs especially in industrial or construction sites in Nairobi to cater for their needs. A small number of them were seen to be casual workers (17.33%). The majority of the youth are employed or self employed compared to unemployed. This indicates that most of the youth are benefitting from ICT training.

Figure 4.5: Distribution of Youth Occupation Status (N=75)
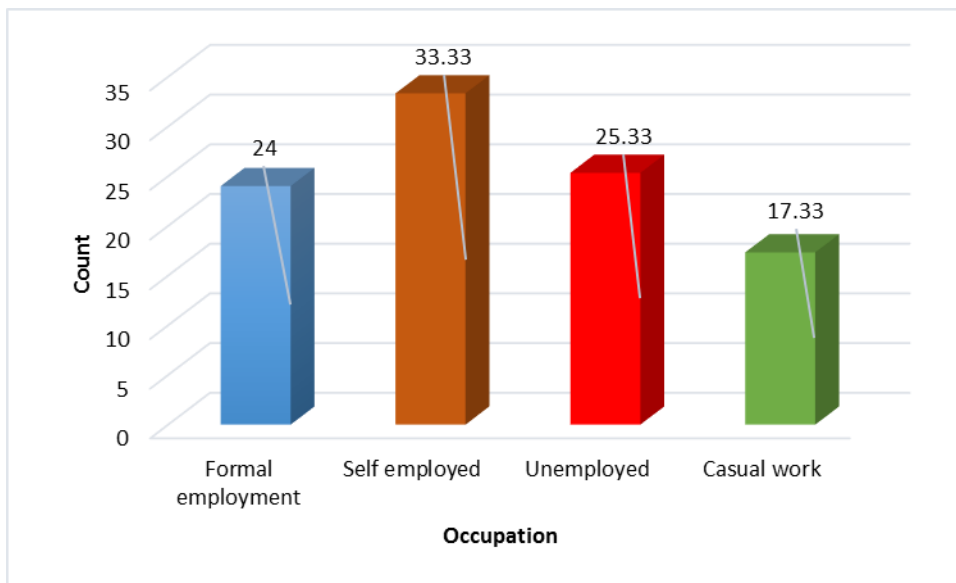
4.2.6 Income Level per Month

Those youth who were earning between kshs 5000-10,999 per month were the majority at (30.667%) followed by those who did not earn anything at (26.667%), those who earned kshs 11,000-15,999 were at (16%). Those youths who earned less than kshs 5,000 were at (12%); those with kshs 16,000-20,000 followed at (10.667%) and the least at (4.0%) were those who earned more than kshs 20,000. These indicate that through there earning their livelihood could change and this could also be a sign of benefits from the adoption of ICT integration training. For those who did not earn anything could indicate that either they did not embrace ICT or there are other factors to be considered in employment.

Figure 4.6: Distribution of Youth's Income per Month (N=75)
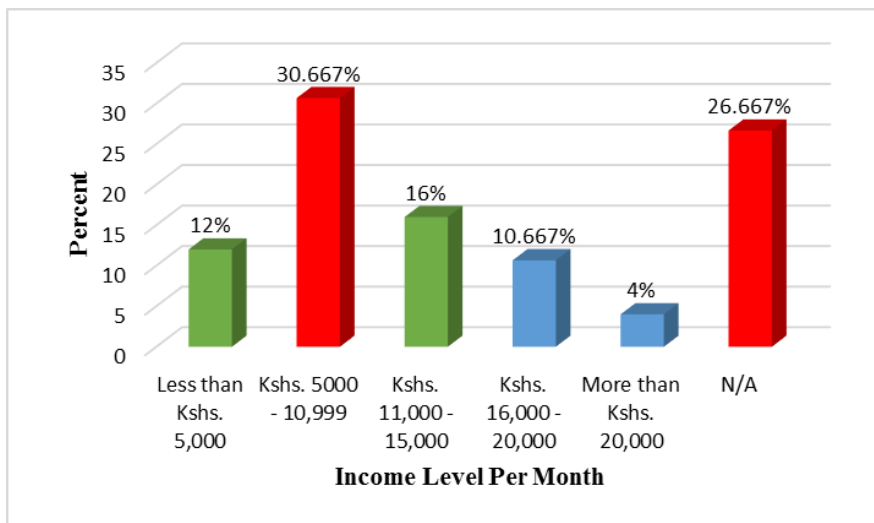
4.2.7 Respondents Family Background

The figure below shows that youths with single parents are (56) followed by those who are orphans (16) and those with both parents are (3) in number. This indicator helped in understanding the plight of the youth in the low income settlement. Most single family and orphans are always associated with financial constrains in the family. This could be more reason or a need for the youth to join free ICT training in NairoBits Trust.

Figure 4.7: Distribution of Youth's Family Background (N=75)
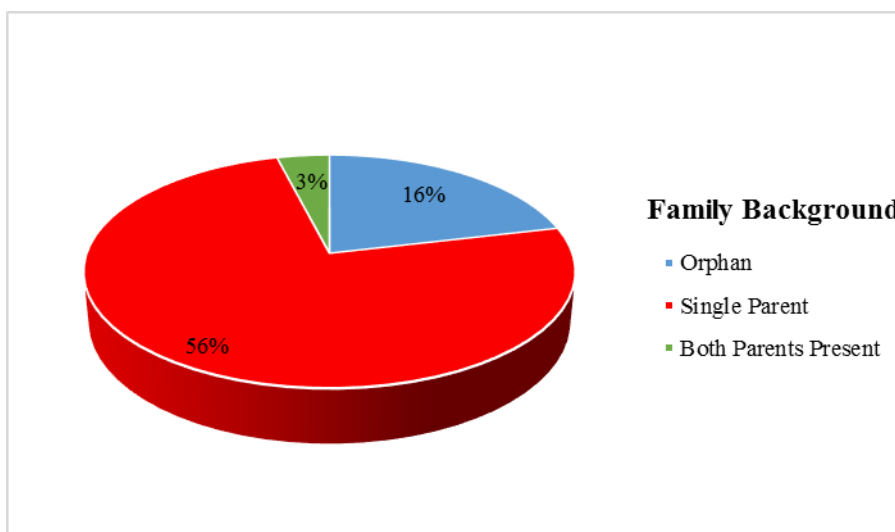
4.2.8 Respondents Number of Siblings

As seen below most respondents have between six to ten siblings (44%), followed by those with between one to five siblings (26.6%), closely followed by those without siblings (18.7%) and lastly by those with more than ten siblings (10.7%). The number of siblings points the great socio-economic responsibility that these youth and their parents have. This to some extent indicates the level of empowerment need of the youth in the informal settlement .

Table 4.2: Distribution Showing Number of Siblings

	Number	**Percentage (%)**
O	14	18.7
1-5	20	26.6
6-10	33	44.0
Above 10	8	10.7
TOTAL	**75**	**100.0**

4.2.9 Respondents Who Were Orphans and Are Supported By Guardians

As it can be seen in the figure below, the youths who are orphans and supported by guardians are (85.333%) while those who are not supported by their guardians are (14.667%). Most of the youth who are supported by the guardians embraced the ICT training. According to the Key informants most of these guardians are also the sponsors of the organization.

Figure 4.8: Distribution Showing Percentage of Orphans Who Were Supported by their Guardians and Who Are Not (N=75)
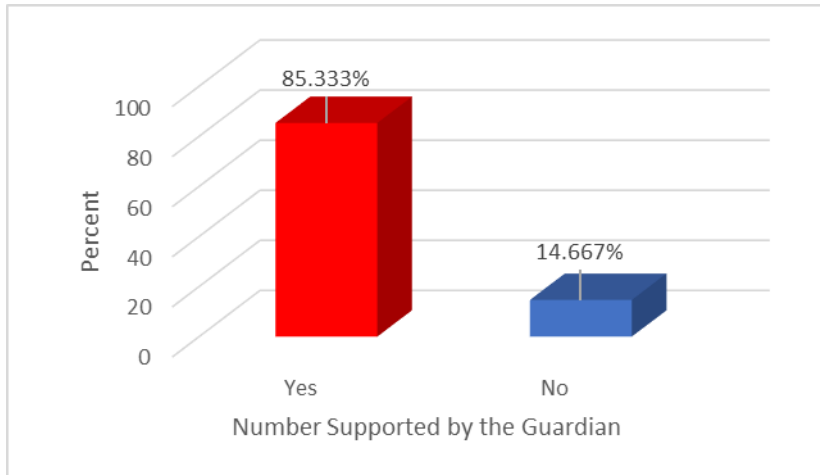
4.3 Background Information on the Training Needs of the Respondents

This section presents the second objective of this study which was to assess training needs of the respondents on reasons that compel them to join NairoBits Trust Program, problem faced, if they had received ICT training and if they were working before joining NairoBits.

4.3.1 Major Reasons for Joining ICT training in NairoBits

Some of the studies cited in the literature review are of the view that the youth are driven by poverty and other related factors such as unemployment to join youth organizations which may offer opportunities for them. Such studies include Moya (2000), Chigunta (2004) and World Youth Report (2005). This study sought to find out evidence to prove the validity of the above claim by asking the youth to give reasons for joining training in NairoBits Trust Program.

The figure below shows the three major reasons that drove the respondent to join ICT training. It can be seen that 28 (37.33%) respondent stated that they joined ICT training so as to gain employment, followed by 22 (29.33%) respondent who joined to

gain knowledge and skills and lastly 16 (21.33%) respondent who joined to be self-employed after the training. The other respondents 9 (12%) gave other reasons other than the above reasons which included: to build their CVs, for fun, the training was free among others.

Figure 4.9: Distribution Stating the Most Important Reason That Drove the Youth towards ICT training in NairoBits (N=75)
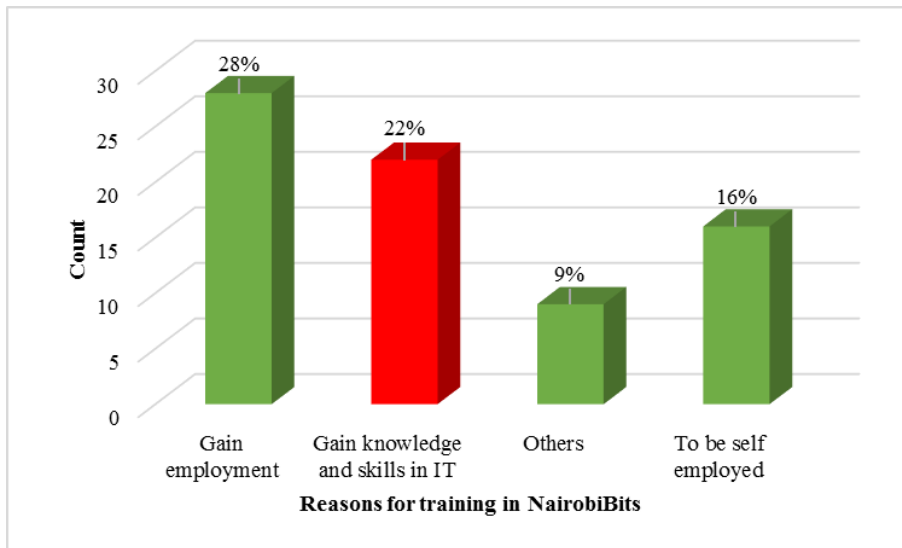
4.3.2 Respondents Response on Whether or Not They Faced Any Problems with ICT Training

The next figure shows whether or not the respondents were faced by any problem. The figure below shows that majority 48 (64%) of the respondent were not faced by any problem, while those faced with a problem were 27 (36%). Among the problem mentioned included lack of Computers in their homes to practiced, some lacked fare to attend all the classes, some feel the course was too complex and they needed to work extra hard to understand the concepts. This can also be attributed to the low level of education as mentioned above the youth may need slower pace to grab the ICT concept.

Figure 4.10: Distribution Showing Response on Whether the Respondent Was Faced With Any Problem or Not With ICT Training (N=75)
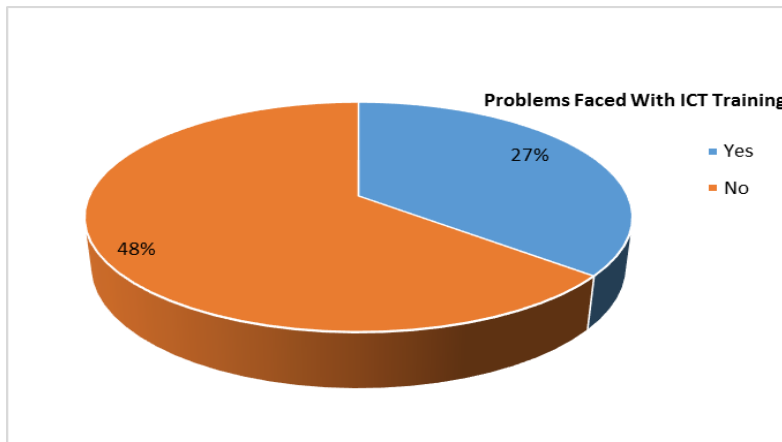
4.3.3 Respondent Response if They Had Received ICT Training before Joining NairoBits

As it can be seen in the figure below, majority had not received prior knowledge of ICT before joining NairoBits 63 (84%). Those who received prior training were 12 (16%). Many of those who had received ICT training before NairoBits (95%) had done computer subject in schools and a few (5%) went to colleges near homes. This indicates that most of the youth adopted ICT.

Figure 4.11: Distribution Showing Whether or Not the Respondent Had Received ICT Training before Joining NairoBits (N=75)
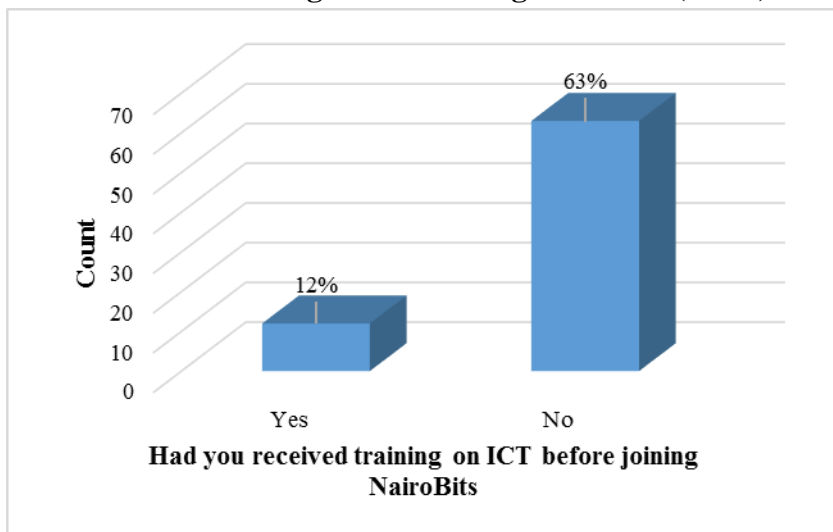
4.3.4 Respondent Response if They Were Working before Joining NairoBits

Tables 4.3 shows that (90.7%) of the respondent were not working before joining NairoBits while only (9.3%) were working and when asked if it was ICT related as shown on table 7 below, only (1.3%) was ICT related and the rest was not ICT related. This indicates that most of the youth were unemployed before the training but this different compared to the percentage of the unemployed on the youth occupation status. The clear difference can be attributed to the fact that adoption of ICT training has enhanced employment opportunities.

Table 4.3: Distribution Showing Whether or Not, The Respondent Was Working before Joining NairoBits.

	Number	Percentage (%)
Yes	7	9.3
No	68	90.7
Total	**75**	**100.0**

Table 4.4: Distribution Showing Whether or Not, The Respondent Was Working In ICT Related Field before Joining NairoBits (N=75)

	Number	Percentage (%)
No	1	1.3
Yes	6	98.7
Total	**7**	**100.0**

The above table 4.4 shows that the majority 98.7% of the youth who were employed in ICT related field before joining NairoBits and only 1.3% was not. The majority can be attributed among the youths who had gone through ICT training before joining

NairoBits. This can also indicate the importance of ICT adoption in enhancing employment opportunities to the youth.

4.4 Background Information on the Adequacy of Training in NairoBits Trust Program

This section indicated the third objective of this study which was to examine the adequacy of ICT training in NairoBits. The indicators of this objective included the course offered in the program, if the program has a particular curriculum that is approved by the GoK and if the curriculum meets current market needs, and lastly the qualifications obtained by the youth after the training in NairoBits Trust.

4.4.1 Analysis on Courses Completed in NairoBits by the Respondents

The figure indicates that course 3 was completed well by 45 (60%) respondents. It is important to indicate that for one to complete course 3, the youth has to have completed courses 1 and 2 respectively before going for attachment. The figure also shows that 10 (13.33%) of the respondent went for attachment after completing course 3. Those who managed to reach course 2 were only 16 (21.33%) and those who dropped out after course 1 were 4 (5.33%). The figure indicates that the majority embraced ICT as compared to (5.33%) who drop out at the lowest level.

Figure 4.12: Distribution Showing the Courses Successfully Completed by the Respondents in NairoBits (N=75)
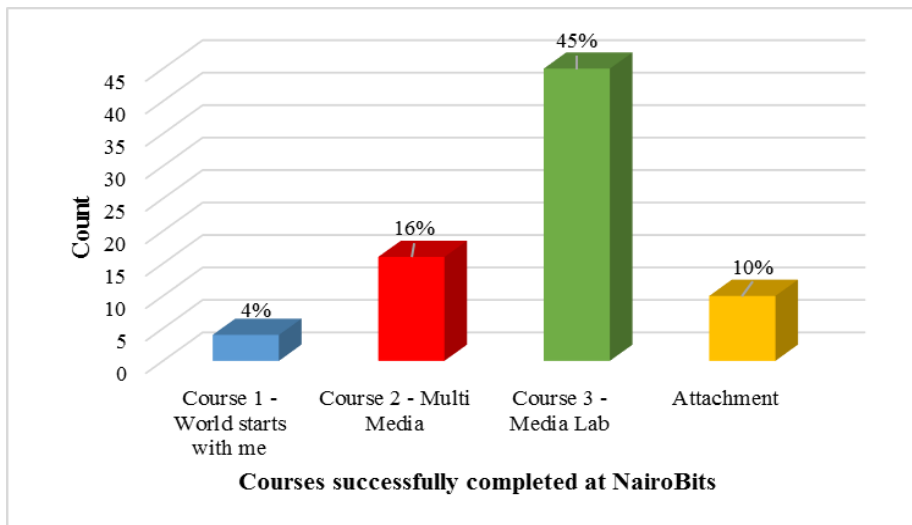
4.4.2 Response on Whether or Not NairoBits follow a Particular ICT Curriculum

The response was affirmative. They all answered YES as shown in the figure below. It is important to indicate that the whole curriculum takes one year and a half to be completed. The youths also mentioned that courses they covered included: Computer packages, Multimedia design, 3D animations, Graphic Designs, Computer Programming, and Software Development among others.

Figure 4.13: Distribution Showing the Respondents Was Affirmative in Their Response (N=75)
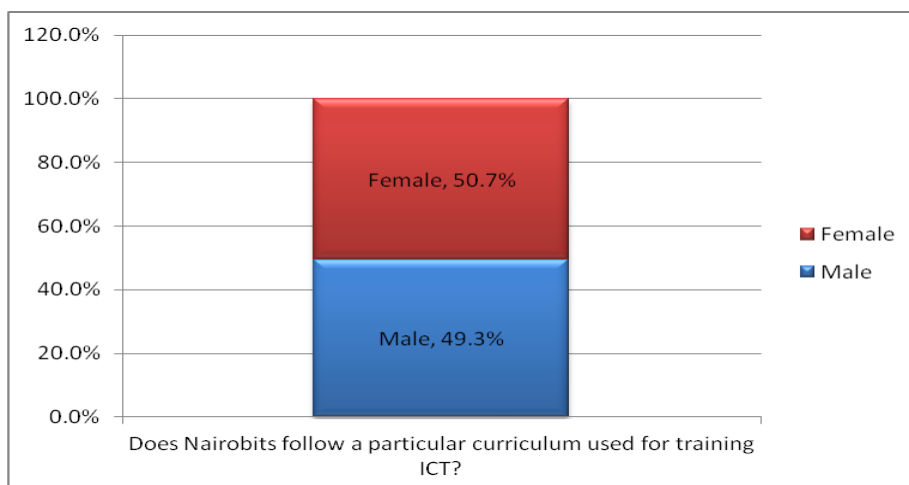
4.4.3 Analysis on Whether the NairoBits Curriculum is Tailored towards Market Needs

From figure 4.14, it can be seen that majority of the respondents 52 (69.33%) acknowledge that the curriculum is tailored towards market needs, followed by 23 (30.67%) who had said the curriculum did not meet market needs. Though the curriculum is approved by the GoK as indicated by the Key informants, more used be done to ensure that the curriculum is tailored towards current market needs.

Figure 4.14: Distribution showing if NairoBits Curriculum is tailored towards market needs (N=75)
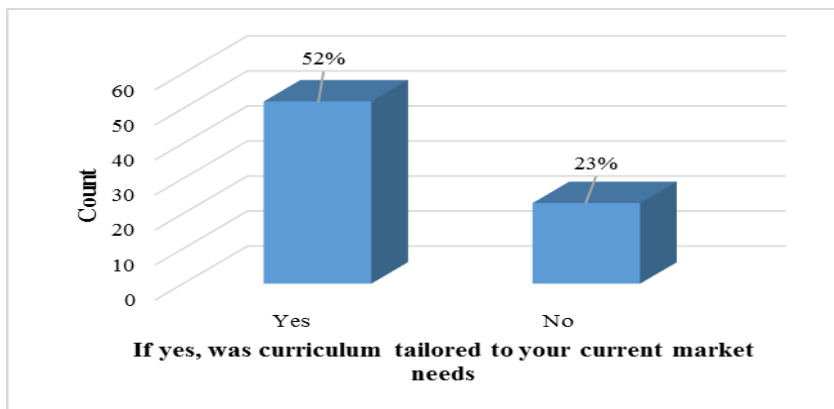
4.4.4 Analysis on Qualifications of the Respondents Given by NairoBits

As seen on table 4.8 below, the majority 55 (73.3%) of the respondents had qualified with diploma. Those with certificates were 20 (26.7%). Diploma is the highest qualification offered in the program and to achieve this the youth have to compete in every level. This indicates that majority embraced ICT through its quest to obtain diploma level.

Table 4.5: Distribution Showing Respondent Qualifications after NairoBits Training

	Number	Percentage (%)
Certificate	20	26.7
Diploma	55	73.3
Total	**75**	**100.0**

4.5 Background Information of the Respondent Perception towards NairoBits

This section presents the fourth objective which was to investigate the respondent's perception on the training in NairoBits Trust Program and the general view on NairoBits.

4.5.1 Response on How the Youth Got To Know NairoBits

As it can be seen in the figure below, majority of the respondent got the information of NairoBits through NairoBits campaigns (46.667%), followed by others (22.667%). Those who got to know of NairoBits through internet were (16%) while those through friends were (14.667%). This indicate that the organization have positive image to the youth. The campaigns drove the youth to the centers to go through the training. According to the Key informants many of the alumni from the program participate in the campaigns. This is significant because the alumni are the role model in the community. The youth can a test to how ICT adoption has enhanced their livelihood.

Figure 4.15: Distribution Showing How Respondent Got To Know NairoBits (N=75)
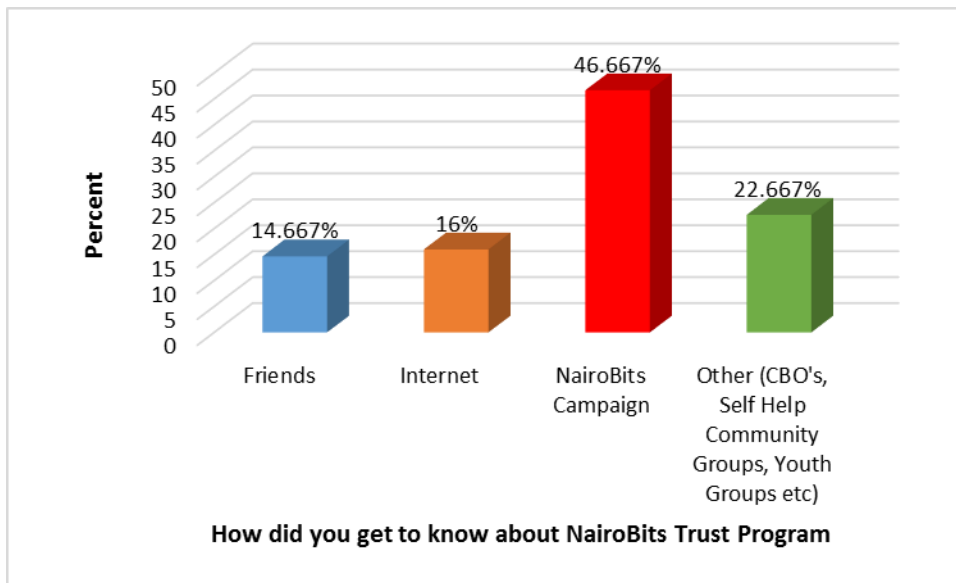
4.5.2 Response on First Impression of NairoBits

The majority of the respondent had a first class impression (48.0%), followed by very satisfactory (36.0%). Those with average had (13.333%) while those who were unsatisfied were (2.667%). Majority's first impression was positive and these made the youth to continue with the ICT training adoption.

Figure 4.16: Distribution Showing Respondent First Impression of NairoBits N=75
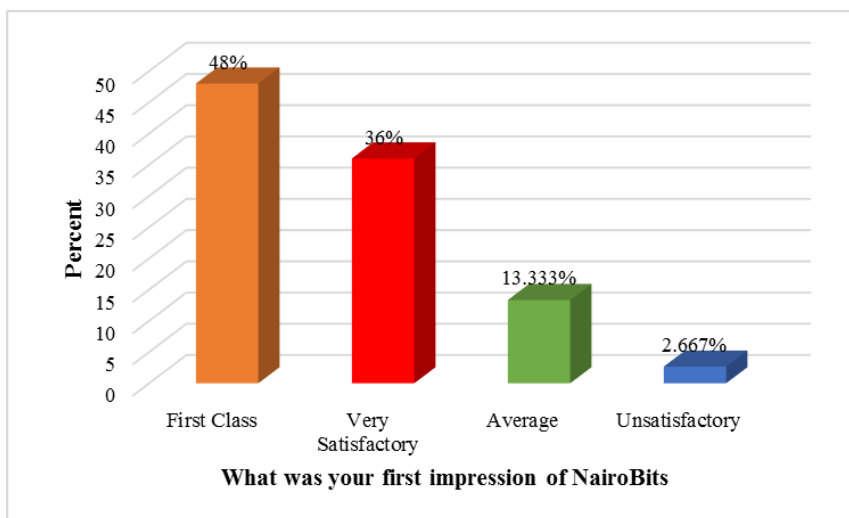
4.5.3 Response if First Impression on NairoBits Changed

The majority of the respondent impression improved for the better (52.0%), (42.667%) remained the same while (5.333%) of the respondent worsened. This can be indicated as the youth embracing ICT aspects. For them to positively embrace the program is an indication that the youth adopted ICT.

Figure 4.17: Distribution Showing Whether the Respondent First Impression of NairoBits Changed (N=75)
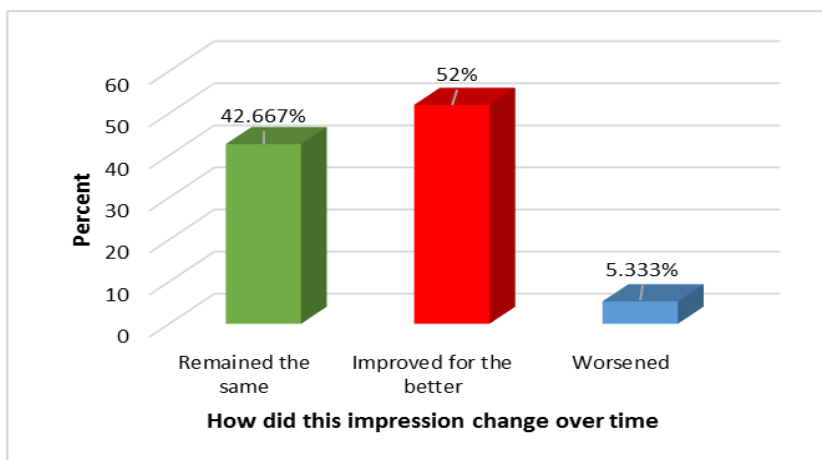
4.5.4 Quality of Training Received on NairoBits

The figure below shows that the majority of the respondents (64.0%) were very satisfied with the quality of training received in NairoBits. (36.0%) of the respondents said the quality was average. This is a positive indicator about the program and how the youth have embraced ICT. Majority indicated that the quality of the program was very satisfactory. This can be attributed to the occupation stations where unemployment was lower than the sum of formal employment, self-employed and casual worker.

Figure 4.18: Distribution Showing Quality of Training Received on NairoBits (N=75)
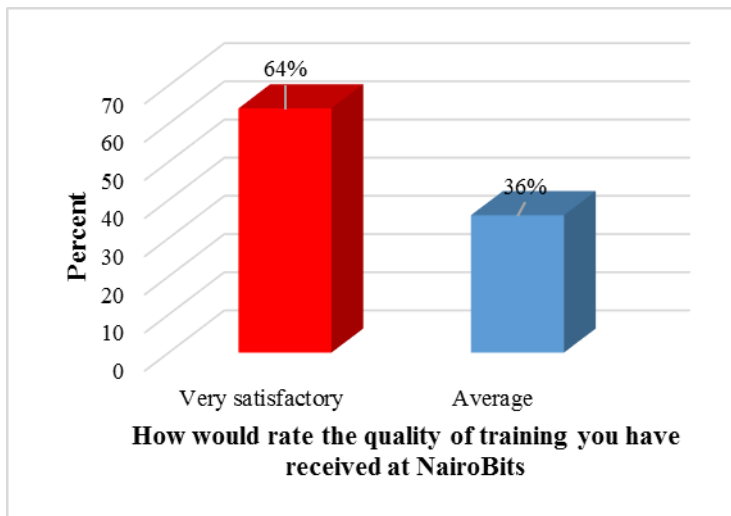
4.5.5 Strength of Services by NairoBits Trainers

Figure 4.19 shows the strength of NairoBits trainers on service delivery in NairoBits by the respondents. 42 (56%) respondents who were the majority said the strength was very good. 17 (22.67%) of the respondents thought they were good while those who thought they were excellent were 16 (21.33%). This indicate that the services rendered in NairoBits positively influenced the respondents in their quest in obtaining the ICT training and adopting it.

Figure 4.19: Distribution Showing the Strength of Services by NairoBits Trainers (n=75)
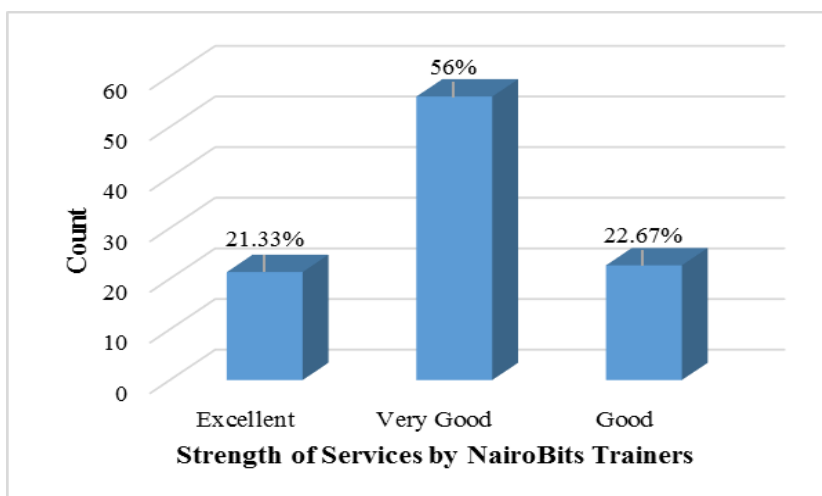
4.5.6 Strength of Services by NairoBits Training Centers

It can be seen on the figure 4.20 below, majority of the respondents 42 (56.76%) said the services on the centers were very good, 23 (31.08%) of the respondents said the services were good. Those who thought the services were excellent were 6 (8.11%) while those of the opinion of fair were only 3 (4.05%). Majority of the respondent had a positive impression of the services offered in the centers. This is an indication that conducive environment for the youth enhances adoption of ICT.

Figure 4.20: Distribution Showing the Strength of Services by Training Centers (N=75)
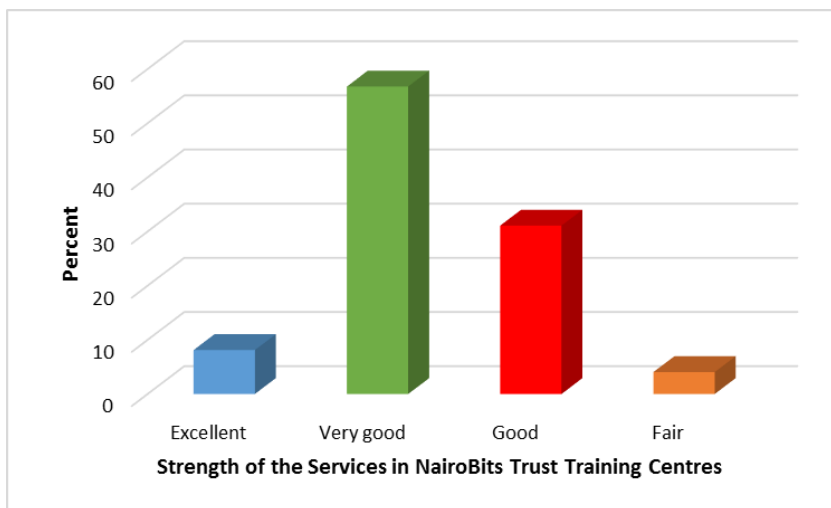
Further analysis cross tabulation on table 4.6 below on the respondents from different centers on the strength of services in training centers indicate that Mathare is the best, then Kibera and lastly, kayole. Many youths from Mathare 24 (96%) said their centre provided very good services. Respondents from Kibera said 13 (52%) the services were good and many respondent from Kayole 12 (48%) said their center was very good in its service delivery.

Table 4.6: A Cross Tabulation on Where the Respondent Studied Compared to the Strength of Services in Their Respective Centers (N=75)

Nairobits Training Centre Attended	Respondent's Perceptions of Strength of Training Services							
	excellent		very good		good		fair	
	number	(%)	number	(%)	Number	(%)	Number	(%)
Kibera	6	8	6	8	13	17.33	0	0
Mathare	0	0	24	32	0	0	1	1.33
Kayole	0	0	12	16	11	14.67	2	2.67
Total	**6**	**8**	**42**	**56**	**23**	**32**	**3**	**4**

4.5.7 Strength of Availability of Training Facilities by the Respondent in Their Respective Centers

Table 4.7 below shows that majority of the respondent in each centre acknowledged that the facilities in the program is very good i.e. 15(60%) Respondent from Kibera agreed that the facilities were very good, in Mathare their 21(84%) and Kayole were 20 (80%) respectively. This indicates that ICT components are available in the various centers. With these aspects, the respondents are able to learn in a best environment where he/she can use these facilities to improve in its adoption.

Table 4.7: A Cross Tabulation of Each Respondent Response on the Strength of Facilities in Their Respective Centers (N=75)

NairoBits Training centers	Respondent's Perception of Centres' Facilities				Total
	Excellent %	Very Good %	Good %	Fair %	
Kibera	9.33	20	1.33	2.67	**33.33**
Mathare	1.33	28	2.67	1.33	**33.33**
Kayole	2.67	26.67	1.33	2.67	**33.34**
Total	**13.33**	**74.67**	**5.33**	**6.67**	**100.00**

4.5.8 Strength of the Training Program

The figure below presents the opinion of the respondent on the strength of the training program. The majority (45.33%) said the program was good. Those who said the program was very good were (37.33%) and (17.33%) were of excellent opinion. When the training is positively embraced by the respondent, there are a likelihood that this could influence the adoption of ICT in these centers.

Figure 4.21: Distribution Showing the Strength of the Training Program (N=75)
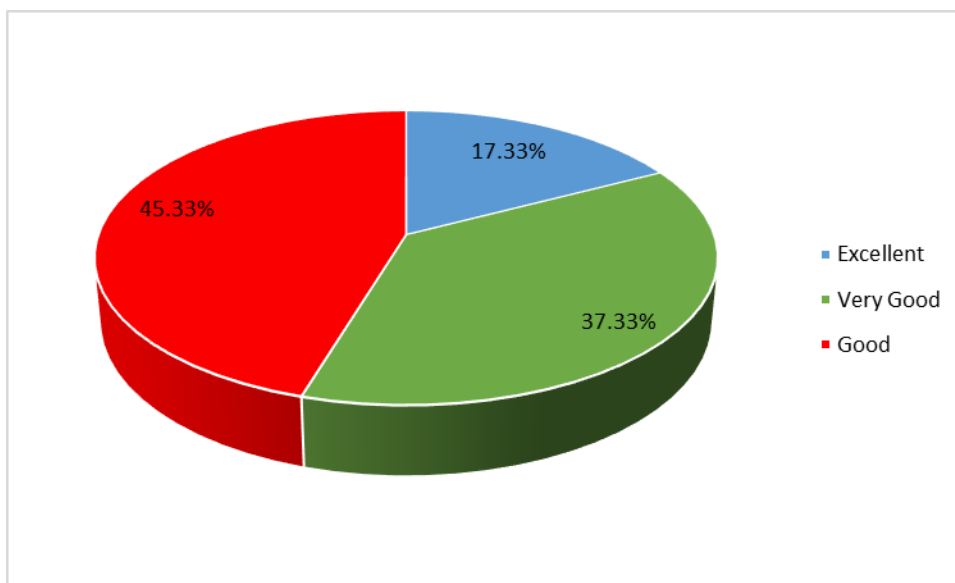
4.6 Background Information on the Level of ICT Adoption

This section presents the fifth objective of this study which was to find out level of adoption components. NairoBits have incorporated the ICT components in its program and how the youth have perceived and embraced the use of ICT in their daily use.

4.6.1 Use Computer before Joining NairoBits

The respondents were asked whether they knew how to use computer before joining NairoBits Program. The majority who were (81.33%) did not know how to use a

computer before joining the program while (18.67%) knew how to use a computer as seen in figure 4.22 below. The youths gave more information as to why they did not know how to use a computer. Among the reasons they gave included lack to fees to go and study, many had to look for casual work to support their family and others sought to postpone the study until they were financially stable. From these reasons we see that financial element plays a major reason to these youths. The ones who knew how to use computers studied computer as a subject in previous schools.

Figure 4.22: Distribution Showing Whether or Not the Respondent Knew How to Use a Computer before NairoBits Program (N=75)
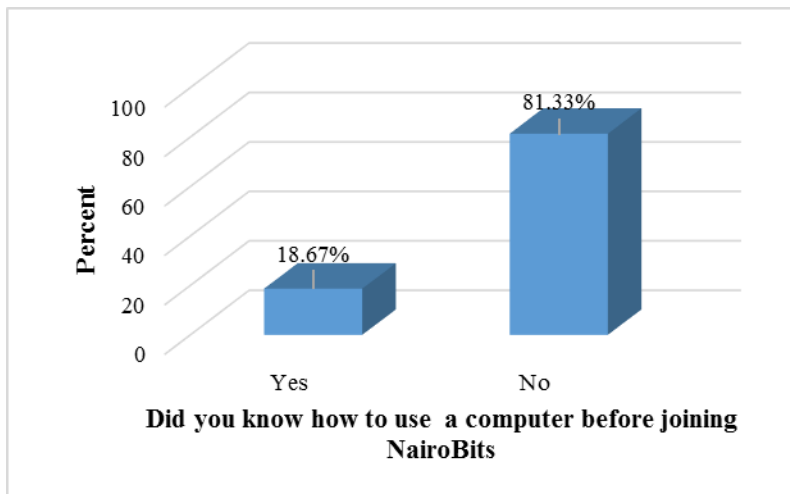
In figure 4.23, the respondent were asked to rate their computer skill after going through the training in NairoBits Trust. The majority (82.67%) use of computer were very adequate. Those with adequate were (14.67%) while those who said fair were only (2.67%). This is a clear indication that the respondents had adopted the ICT component.

Figure 4.23: Distribution Showing Respondent Rate in the Use of Computer after NairoBits (N=75)
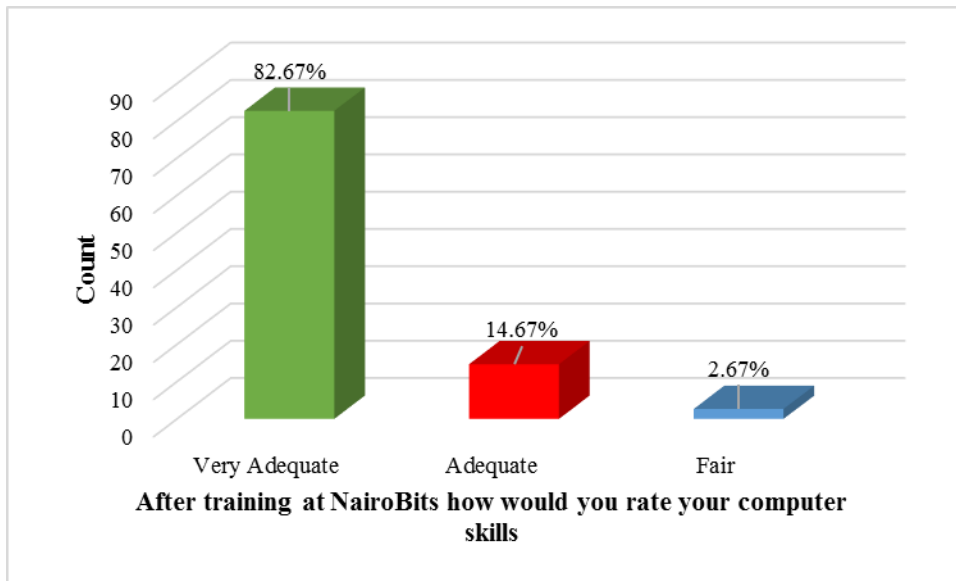
In figure 4.22 and 4.23, it is seen that the respondent embraced the use of computer as one of the ICT component. The researcher sought to find out further the level of adoption through the cross tabulation as shown in table 4.8 below.

Table 4.8: Distribution Showing Whether the Respondent Knew How to Use a Computer before and after NairoBits Training

Before NairoBits Training	After NairoBits Training			Total
	Very Adequate	**Adequate**	**Fair**	
Yes	16	2.67	0	18.67
No	66.67	12	2.66	81.33
Total	**82.67**	**14.67**	**2.66**	**100.00**

N=75

The above table clearly shows that those who had not known how to use computer before NairoBits program, 50 (66.67%) of them have embraced the use of it and their skills are very adequate while 9 (12%) said their skills are adequate. Only 2 (2.67%)

said their skills are fair. Those who had knowledge in the use of computer before, 12

of them said their skills are very adequate and only 2 had adequate skills.

4.6.2 Respondent Rate of Internet Skills

As it seen in figure 4.24 below the majority of the respondent (90.67%) had very

adequate skills in use of internet. (9.33%) said they had adequate skills. The findings

on table 4.9 also show how the respondents use internet in their daily life and job. The

researcher sought to find out if the youth embraced the use of internet. Among those

on formal employment 15 used internet while 3 did not use internet. 21 on those who

are self-employed used internet only 4 didn't use internet. Those on casual work 13

all used internet. For those who were unemployed 18 used internet and only 1 didn't

use internet.

Figure 4.24: Distribution Showing Respondent Rate in the Use of Internet

N=75
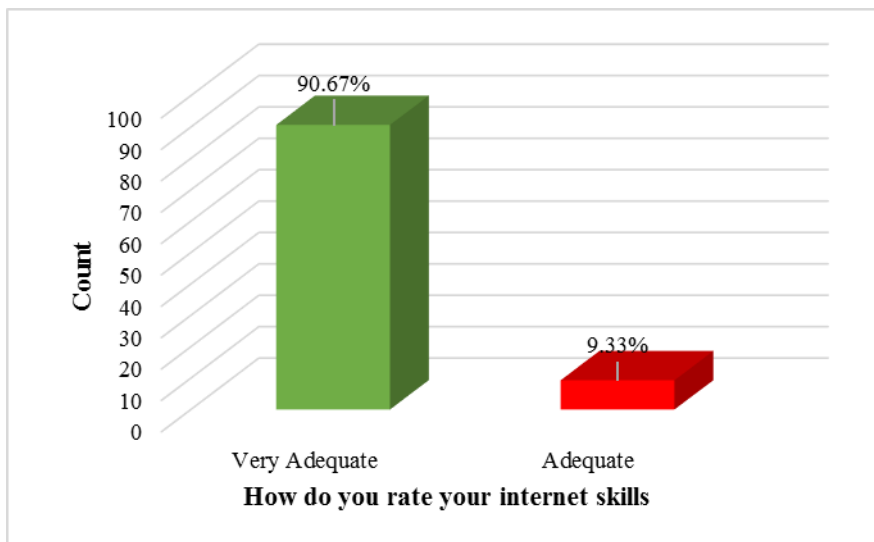
Table 4.9: The Relationship between the Respondent's Occupation and Use of Internet on Their Daily Life

Type of Occupation	Do you use the internet on your day to day life and job?		Total
	Yes %	No %	
Formal Employment	20	4	24
Self Employed	28	5.34	33.34
Unemployed	24	1.33	25.33
Casual Work	17.33	0	17.33
Total	**89.33**	**10.67**	**100.00**

N=75

The table 4.12 shows a cross tabulation between internet use and occupation status. The table indicates that use of internet plays a major role in the respondent occupation. Formally employed (20%), self-employed (28%) and casual work (17.33%) used internet in the daily and job life. This shows that the respondent have embraced and adopted the use of ICT. The unemployed have also embraced internet use. The researcher sought to find out more why this was so (Check for more explanations in 4.6.4).

4.6.3 Respondent Response on Having an E-mail Address

When the Respondents were asked whether they had opened E-mail address, all of them responded affirmatively.

4.6.4 Relationship between E-mail address, Computer, Internet Adoption and Youth Development

The relationship between computer, E-mail address and internet adoption as aspects of ICT were compared with the perceived development for the youth in terms of

improved employment opportunities was analyzed. Computer, E- mail address and internet adoption are the independent variables, while development for the youth is the dependent variable. The rationale behind the inclusion of these independent variables in this analysis is that several studies suggest that computer, internet and having an E-mail address by an individual enhances modern employment opportunities because careers in the 21st century are taking a technical perspective where technological skills are very important. In short we are in the E-generation where computer, E-mail and internet skills are very important considerations in employment. (See Mehra et al, 2004, Curtain, 2000, Chigunta, 2002). Unfortunately, these studies do not tell us exactly how computer adoption enhances employment of the youth.

From the above findings, the majority have embraced the use of E-mail address, computer and internet use. The relationship between ICT components usage and perception of employment opportunities was found to be statistically significant. This implies that adoption and having and using computer, E- mail and internet by the youth has a significant influence to the employment opportunities for the youth. The respondent were asked in the three ICT components helped them in acquiring employment. The youth indicated that currently with the changing world one needs to how to use the three components: computer usage, internet use and an email address to get an employment in formal sector and that the self-employment also need these knowledge to acquire opportunities e.g. online buying depending on the business they are in. the unemployed also needed the components to improve on the chances of getting employed. The unemployed further explained that many of the job opportunities are posted in various website and require you to apply online. For one to

apply for the jobs they will need the ICT components to enhance their chances of getting the opportunity. Some of the youth did not equate having internet skills guarantees one in getting employment though it was important in the global world, there are other factors that contributes to one getting employed. In other words, a small percentage of the studied youth perceive internet use as enhancing employment opportunities. Some scholars noted in the literature review have a different view.

Vicas (2000) argues that simple connectivity is not the lone facilitating factor in email use. Equally important are the nature of work, the desire for career advancement, and the information and integration needs of the youth. But neither the use of email nor web use translates adequately into integrative undertakings.

4.7 Background Information on the Benefits of ICT Training to the Respondent

This section presents the sixth objective of the study which was to investigate the benefits obtained by the respondent achieved after the training in NairoBits.

4.7.1 Respondent Response on Whether or Not They Have Been Employed on Account of Computer or ICT skills

Table 4.10 below shows that majority 56 (74.7%) were employed on account of computer or ICT knowledge. Only 19 (25.3%) were not employed on the account of computer or ICT skills. This shows that there more job opportunities in ICT and that use of ICT in the work places is very essential. The respondent who have adopted and embraced ICT have a better position to be employed in these work places.

Table 4.10: Have You Ever Been Employed on Account of Computer or ICT Skills?

Whether Employed on Account of ICT Skills	Number	Percentage (%)
Yes	56	74.7
No	19	25.3
Total	**75**	**100.0**

4.7.2 NairoBits Training Have Improved Chances of Earning a Living

The majority of the respondent 50 (66.67%) have improved their chances of earning a living after the training while 25 (33.33%) disagreed on the notion of the training enhancing their chances of earning a living. This can be seen on the figure 4.25 below. The majority indicate that ICT training is essential in improving their chances of earning their living because many were employed on the account of ICT.

Figure 4.25: Distribution Showing Whether or Not the Respondents Have Improved Chances of Earning a Living after the Training N=75
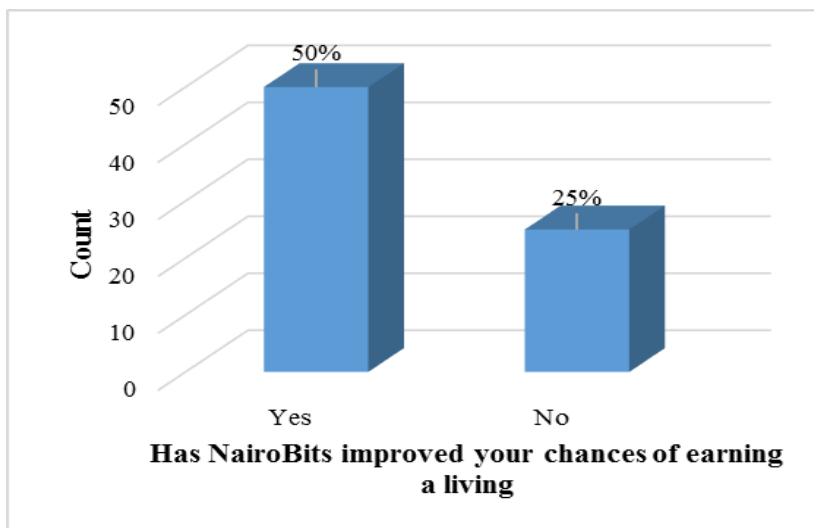
4.7.3 Respondent Recommends a Similar Training to another Person

The majority of the respondent (96%) said they would recommend a similar ICT training to another person. Those of contrary opinion were only (4%) as shown in the figure below. The majority would recommend another person to the training. This indicates that the majority benefitted from the ICT program.

Figure 4.26: Recommend another Youth to the Same Training N=75
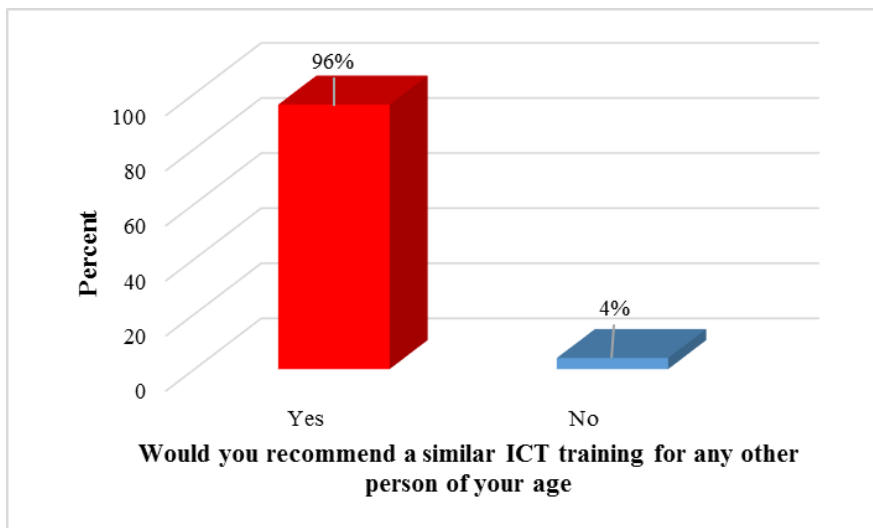
Figure 4.27 below shows how majority (94.67%) of the respondent would volunteer for free if only they would gain ICT skills. Those who would not volunteer were only (5.33%). Here the outcome continues to show the level of adoption of ICT by the youth. The finding also indicates that the respondent benefitted from the program and they have no problem in volunteering because of the ICT benefits.

Figure 4.27: Distribution Showing Respondent Willingness to Volunteer If Only to Gain ICT Skills N= 75
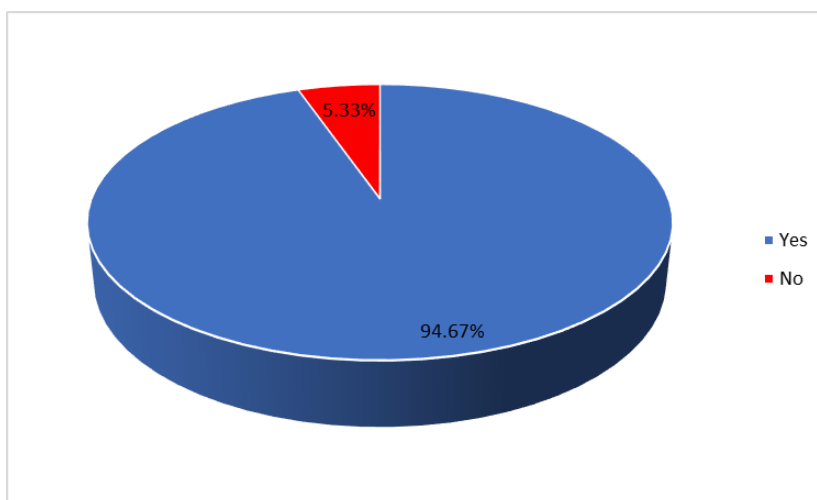
Table 4.11: Response on Whether the Respondents Have the ICT Indicators

Indicators	Frequencies				Total	
	Yes		No			
	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)
Smart phone	68	90.67	7	9.33	75	100
Computer desktop	25	33.33	50	66.67	75	100
Laptop	58	77.33	17	22.67	75	100
Internet/ access to the internet service	70	93.33	5	6.67	75	100
Ipad	25	33.33	50	66.67	75	100
Tablet	15	20	60	80.00	75	100

Table 4.11 shows how the youth have integrated ICT in their daily use. The study found that 68 (90.67%) of the youth had embraced the use of smart phones. This shows that the youth are adapting to current technologies where communication through the use of a smart phones has gained momentum in the world so fast. It is also clear that the exposure in the organization is so much in enhancing their adoption to use of mobile phones as indicated by one of the key informants.

The key aspects of ICT as indicated on the table 4.11 above were related to enhancement of development for the youth in terms of employment opportunities. (71.4%) of the youth accepts that phones enhances employment opportunities. The youth argued that many potential employers will contact those using mobile phones. Apart from that there are many agencies which they have subscribed to who send you a message whenever they are vacancies. When asked about smart phones, tables, ipads, they said these gargets enhances communication with their friends, their clients and with new applications which they can download in their gargets i.e. facebook, whatsapp, twitter e.t.c. help them sell their products. (28.6%) did not equate it to any employment opportunities. To them, the above gargets (table 15) are only aid of communication. However, this view is disputed by the World Youth Report (2005) which noted that the availability of the above aspects of ICT networks in many countries open up to many opportunities for the youth.

4.7.4 Response on How the Organization Has Improved the Community

As mentioned earlier, NairoBits centers are situated in the slums to help improve the community. Their vision is to enable Kenyan Youth to make positive contribution towards a prosperous and balanced society. It provides these youth with training in multimedia, entrepreneurship, reproductive health and life skills with an aim of giving them chances in the formal and non-formal employment. Since its inception in 1999 and formal registration in the year 2001, NairoBits has changed lives of more than 7,000 vulnerable youth. The key informants confirmed that the organization has been improving the community. The respondent also expressed the same sentiment as shown in figure 4.28 below.

Figure 4.28: Distribution Showing How the Nairobits Have Improved the Community N=75
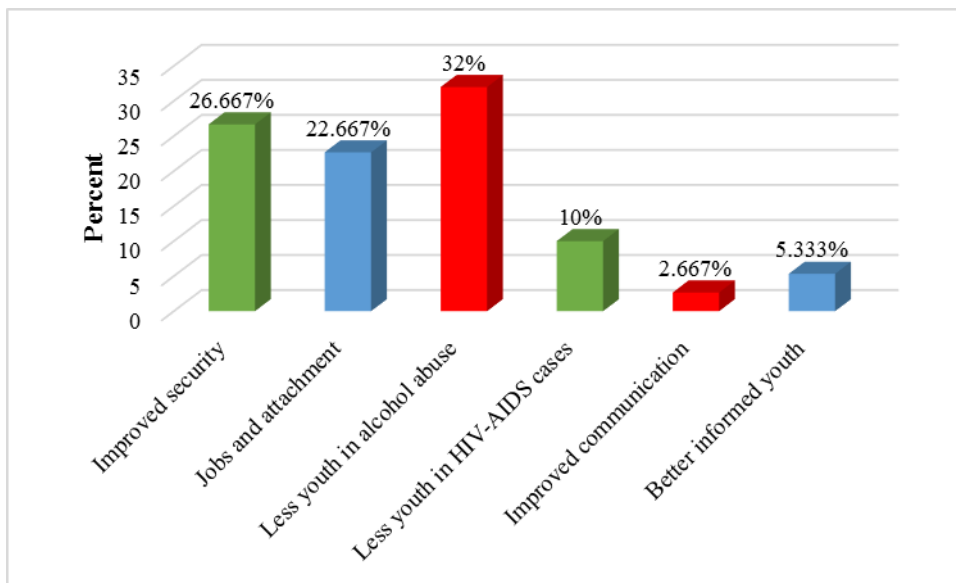
From the figure 4.28 above, the level of security has improved by (26.667%), jobs and attachments by (22.667%). The level of alcohol abuse has reduced by (32.0%), less youth in HIV/AIDS cases through its awareness and training in NairoBits centers at (10.667%), there are improved communication (2.667%) and better informed youths (5.333%). The youth have also benefitted from the training in NairoBits because through the alumni program they have started self-help group. The self-help group assist them in proving entrepreneurial skills and it is a platform for them to acquire loans through their monthly contribution to the self-help group.

4.7.5 Relationship between the Financial Status of NairoBits and ICT Adoption by the Youth

According to the key informants in NairoBits, the program is fully sponsored and the youths study for free. Many youths do not continue with their studies after their O-levels due to finance and poverty related issues. This study sought to find out the relationship between the financial assistance in NairoBits and ICT adoption by the

youth in the organization. Financial status is used in this context as a factor that contribute to ICT adoption by the organization, where the documents reviewed from the organization would highlight how the organization received their funds and how they used the funds to promote ICT adoption and achieving the goal of youth development. It is worth noting that, the relationship between financial status and adoption of ICT was found to be significant. This implies that availability of adequate financial resources in the youth program has a significant bearing on the organization's adoption to ICT.

4.8 Conclusion of Key Findings

It is important to note that the research analyzed the youth attributes in connection with ICT adoption in the NairoBits Trust Program. The youth attributes studied were: Age, Gender, Level of Education, Marital Status, Monthly income and Family background. All these were to help the researcher to know more about the respondent. As attributes it may seem as poor indicators of ICT adoptions but it is significant in terms of understanding the respondent better and how these attributes compel them to study ICT in NairoBits. This can be probably be explained by the fact that there are important factors that must be considered for organizations to adopt ICT. However, findings of the study indicated that the level of Education is an important aspect to be considered when adopting ICT.

From this study, it can be concluded that various factors are very crucial for ICT adoption by the youth these include: Sponsorship and financial status of the organization. Consequently, ICT aspects such as computers, internet and mobile phones had a higher significant level which is an indication of important factors in

ICT compliance. There was an impact on ICT adoption by the youth in relation to their perception of ICT training in enhancing their lives or development.

Although, ICT training and adoption of ICT enhances the opportunities of getting employment, it is a mistake to assume that the training and ICT adoption in youth programs will lead to youth development and addressing all the youth challenges specifically unemployment, in the informal settlement without the government putting more efforts on ICT policies in place. ICT adoption is only means to promote development when the ICT environment is conducive.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.0 Introduction

This chapter summarizes the findings of the study and gives conclusions and recommendations based on the findings of the study. The main findings of the study are summarized and conclusions are made to help fully fill the gap of the objectives, questions which arose and hypotheses tested. Major findings that have a bearing on the study's key objectives are highlighted. To be precise such findings pertain to the adoption ICT aspects, Training in the youth program in NairoBits in Kibera, kayole and Mathare centers in relation to the development of the youth in terms of perceived employment opportunities for the youth who were being studied. Finally, recommendations and areas of further research are made.

5.1 Summary of the Findings of the Study

The study set out to specifically examine the part played by NairoBits Trust Program in integrating ICT training to the youths in informal settlements. The researcher collected data from 75 youths who were trained by NairoBits and from 10 leaders or key informants from NairoBits Trust Program.

The study looked at personal characteristics or attributes of both the youth and the key informants in NairoBits. These characteristics included: age, gender, marital status, Level of education, family background, and income level of the respondents. Other independent variables included: training needs of the youth, adequacy and the perception of youths towards NairoBits Training program.

The finding of the study showed that many of the respondents were single 68% of the age between 20-25 years. The survey also showed that the female gender was slightly

higher than that of the male gender. This clearly shows how the female gender have embraced ICT skills a course which for many years was dominated associated with the male gender. The majority of the youths had secondary school as their highest level of education. Most of the youth were either formally employed, self-employed or going for casual works. Only 25.33% was unemployed. Among the unemployed 10% had gone back to school to further their education.

The researcher sought to find out the training needs of the youths that compelled them to studying ICT in NairoBits. Apart from the courses offered for free to these youths, the majority of them were in need of acquiring skills which will enable them to gain employment and change their livelihood. The curriculum that was certified by the Government of Kenya was used in NairoBits to ensure that the training was adequate and is of up to standard with the current technologies and market needs. The curriculum included the ICT aspects e.g. usage of computer, phones, tablets, ipad, internet e.t.c. The youth perception of youth on the program was also positive.

This study had two dependent variables that attempted to explain, how the ICT adoption by the youth NairoBits initiative helped in addressing youth challenges especially unemployment. The first variable was the Level of adoption of the components of the ICT in the youth program. The findings showed the youth had embraced the use of smart phones. This shows that the youth are adapting to current technologies where communication through the use of a smart phones has gained momentum in the world so fast. It is also clear that the exposure in the organization is so much in enhancing their adoption to use of mobile phones as mentioned by one of the key informants.

The key aspects of ICT were related to enhancement of development for the youth in terms of employment opportunities. (71.4%) of the youth accepts that phones enhances employment opportunities. The use of computer, internet, phones and having an email address was overwhelming embraced by the youth. The relationship between ICT aspect usage by the youth and the perception of employment opportunities was found to be statistically significant at 99.5% confidence level. This finding indicated that adoption and having computer skills by the youth had a significant influence to the employment opportunities for the youth.

The second dependent variable on the benefits occurring from ICT adoption was also surveyed. Majority of the youths who were employed through formal employment and self-employment were employed on the basis of their ICT skills. The relationship between internet adoption and enhancement of job and employment opportunities was found to be 95.4% confidence level. This indicates that the youth perceived that availability of internet services and use of web by the youth significantly influenced the employment opportunities of the youth. This can be explained by the fact that ICT has become an employment sector for the Kenyan youth in the recent years. The number of cyber cafés, use of wifi, modems and internet bundles by phone companies and other agencies have increased due to the demand both in rural and urban centers. Most of the cyber cafes, mobile, wifi and modems are either owned or ran by the youths.

5.2 Conclusions

The youth need to build and embrace the ''e- revolutionary society'' so that they can become technologically literate and create jobs for themselves. As ICTs continue to pique youth interest, the technological revolution will continue to evolve as new

generation of creativity, and consequently, improve the livelihoods of the youth by addressing the challenges the youth face. The youth development initiatives should continue to embrace ICT.

In conclusion, ICT aspects and adoption are crucial in today world. ICT as a fundamental tool in improving efficiency of developing countries industrial infrastructure, enhance overall economic performance and strengthen their competiveness capacities in the global market. From then findings, it can be concluded that ICT adoption has led to youth development, in addressing youth challenges especially unemployment. Finally, apart from employment, the youths have benefitted in terms of improved livelihood in the informal settings. The level of security has improved; there are opportunities for jobs and attachments. The level of alcohol abuse have reduced, less youth in HIV/AIDS cases through its awareness and training in NairoBits centers, there are improved communication and better informed youths.

5.3 Recommendations and Areas of Further Study

Issues of youth unemployment are critical issue in the development of Kenya. Stemming from the above findings; the study proposes the following recommendations:

a. There is need to improve the nature of youth initiatives in different parts in the country. This is because many studies have researched on unemployment but the problem tends to worsen. The study recommends that the government, N.G.Os should embrace ICT as a way of finding solution for it. By embracing ICT, it means that the youth initiatives should be encouraged to use ICT in their organizations.

b. In addition the government should enact the formulation of a common ICT policy for youth CBOs so as to capture the use of ICT by the youth in the schools. Colleges. As the study found out that proper ICT environment enhances adoption of ICT such as computer, mobile phones and internet use.

c. There is also need for regular supervision by the government to ensure that the curriculum taught in different youth initiatives are up to standard with the current market needs. The government can also provide funds to these youth groups so as to educate more youths on ICT.

d. There is need for the financial institutions to provide loans which are attractive to the youth. This would improve youth's socio-economic development as interest rates will not be subjected to the forces of demand and supply.

e. There is a need for the government to reduce the prices of ICT aspects e.g. computers, internet, phones e.t.c.so that the youth can afford these items especially in the informal settlement. By the government establishing connectivity to reduce digital divide, given that rapid development in wireless technology have made it possible to overcome the physical impediments of distance and topography, at a reasonable cost, that have limited the development of telecommunications infrastructure in these areas.

REFERENCES

Abraham, F.M. (2007). *Modern Sociological Theory: An Introduction (10th edition).* Oxford University Press: New Delhi.

Access to Basic Communication and Information Services. http://www.itu.int/acc/rtc/acc-rep.htm

Achola, M.A. (2006). *Youth, Poverty and Destitution in Nairobi: 1945-60, 28th – 30th June. Past and Past Perspective.* IFRA and British Institute in Eastern Africa in Nyeri

Ajayi, G.O. (2006). *ICT Development in Africa: Challenges and Opportunities to the Academic Community.*

Anyamba, T.J.C. and Adebayo A. A. (1994). *Traditional Architecture: Settlement, Evolution and Built Form.* Jomo Kenyatta Foundation: Nairobi.

Baskeville, R., Travis, J. and Truex, D. (1992). *Systems Without Methods: The impact of New Technologies on Information Systems Development Projects.* Kendall

Babbie, E. (1992). The Practice of Social Research. Wadswork Publishing Company: Belmont, California - USA.

Cantwell, J. (1989). *Technological Innovation and Multinational Corporation.* Oxford: Basil Blackwell
http://www.yesweb .org/gkr/res/bg.africa.reg.doc

Chigunta F. (2002). *The Socio-Economic situation of Youth in Africa: Problems, Prospects and Options.* Paper Presented at the Youth in Africa Employment Summit, Alexandria, Egypt.

Chinyere, M. (2005). *Youth for Technology Foundation*: Owerri Digital Village Blocks E & F Okigwe Road Secretariat Owerri, Imo State: Nigeria.

Conyers, D. and Hills, P.J. (1984). An Introduction to Development Planning in the Third World. John Wiley & Sons Australia, Limited.

Daily Nation. 18th August, 2007, Youth Crisis.

Giddens, A. (1990). *The consequences of Modernity.* Polity Press. London.

GOK, (2002). *National Youth Policy Draft.* Government Printers: Nairobi

GOK, (2003). *Report of 1999 Population Census.* Government Printers

GOK, (2012). *Mid Term plan Vision 2030 (2008-2012).* Government Printers

GOK, (2005). *Kenya Integrated Budget & Household Survey (20004/6) of the Population.* Government Printers

GOK, (2005) *Session Paper No.1 of 2005 on a policy Framework for Education, Training and Research*; Government printer, Nairobi Kenya.

GOK, (2007). *Session Paper No.3 of 2005 on the National Youth Policy.* Government Printers Nairobi: Kenya.

GOK, (2009). Pasha Centres http:// www.ict.go.ke/

Gordon, P. Barker (1999). *From Modernization to Globalization: Perspectives on Development & Social Change*. Oxford University Press: New York.

Grzybowski, C. (1984). *Civil Society's Responses to Globalization.*
http://www.corpwatch.org/corner/worldnews/twn/twn10.html

Harnessing Information for Development- A Proposal for a World Bank Group Strategy. http://www.worldbank.org/html/fpd/hanessing/hid3.html

Harvey, M. D. and Barbare, D. (1985). *Computers and Data Processing*. Academic Press: Florida.

ICT Policy, (2003). *A Beginner's Handbook*. APC.

INFO 21: Information and Communication Technologies for Development
http://www.undp.org/info21/index5.htm

International Labour Organization (ILO), (2007). ILO Website (www.ilo.org).

Kandiri, J.M. (2006). *ICT Policy in Kenya and Ways of Improving the Existing Policy. In M.S.S.A.M. A Uonbi (ed.)* Nairobi: University of Nairobi.

Kasomo, D. (2007). *Research Methods in Humanities and Education*. Zapf Chancery Research Consultants and Publishers: Eldoret.

Kehinde, L. O. (2007). *The Present Demand of Information Technology on Nigerian Students.*

Kothari, C.R. (2004). *Research Methodology: Methods and Techniques*. New Age International Limited: New Delhi.

Kristin, Hallberg and James, Bond. (1998). *Revolutions in Technology for Development,* http://www.worldbank.org/html/fpd/technet/revol.html.

LDIA: *Learning for Development in the Information Age*
http://www.bellanet.org/partner/Idia/

lyytnen, K. and Decross, J. I. (2004). *The Impact of Computer Supported Technologies on Information System Development.* North Holland: Amsterdam.

Manacorda, M. and Petrongolo, B. (1999). *Skill Mismatch and Unemployment in OECD Countries.* Economica. 66: 181-207.

Mbatia, P. N. (1987). *Unemployment of Educated Youth in Rural Kenya: A Study of Unemployed Form Four Learners in Murang'a District.* Unpublished M.A. Thesis, Department of Sociology, University of Nairobi: Kenya.

Menhr, (2001). *Background Paper in Information Technology and Development.* Harvard Institute for International Development.
http://www.hiid.harvard.edu/groups/macro/itdev/index.htm

Mwende, N. (2004). *Communication Commission of Kenya's (CCK) Role in ICT Development*. http://www.strathmore.edu/pdf/itc.pdf/cck_mwendde.pdf

Mugenda, M.O. and Mugenda, G.A. (1999). Research Methods: Quantitative and Qualitative Approaches. Acts Press: Nairobi Kenya.

Njeru, E. (2004). *Bridging the Qualitative-Quantitative Methods of Poverty Analysis.* http://www.aga.cornell.ed/sagsq-qcont/njeruws.pdf

O'Higgins, N. (2003). *Trends in the Youth Labour Market in Developing and Transition Countries.* Social Protection Discussion Paper Series No. 0321.

Omari, I. M. (1982). *Psychology and Education in Changing Societies*. New Perspectives from Tanzania: Dar es Salaam University Press.

Rogers, E M. (1986). *Communication Technology: The New Media in Society.* The Free Press: New York

Rogers, E.M. (1995). *Diffusion of Innovations.* The Free Press: New York.

Rogers, E.M. (1996). *Communication and Development: Critical Perspectives.* Sage Publications: New York.

Sesan, O.O. (2001). *Information and communication Technology: Development Opportunities and the Role of Youth*. Obafemi Awolowo University: Ile-Ife, Nigeria

Sesan, O.O. (2006). *eCommerce, Nigeria and the Next Generation*. Obafemi Awolowo University: Ile-Ife, Nigeria

Sifuna, D.N (1992). *Diversifying the Secondary School Curriculum: The African Experience.* International Review of Education, (Kluwer Academic Publishers, *1992*-01-01.

UNDP, (1999). *New Technologies and the Global Race for Knowledge*. Human Development Report Office (HDRO): New York

UNDP, (2006). *Youth and Violent Conflict Society and Development in Crisis.* Bureau for Crisis Prevention and Recovery: New York

UNEP, (1974). *The Cocoyoc Declaration Adopted by the Participants in the UNEP/UNCTAD Symposium on Patterns of Resource Use, Environment and Development Strategies Held at Cocoyoc, Mexico, from 8 to 12 October 1974.* United Nations Environmental Programme.

United Nations, (1999). World Youth Report" UNESCO, (2004), Economic Recovery in Africa Report United Nation population fund, (2005), "The case for investigating in Young People as part of the National Poverty Reduction Strategy. Paper Commissioned by the United Nations population Fund, New York: UNFPA. www.ijbcnet.com International Journal of Business and Commerce Vol. 1, No.10: Jun 2012[61-81] (ISSN: 2225-2436) *Published by Asian Society of Business and Commerce Research* 78

United Nations, (2007). *World Youths Report 2007: Youth PEOPLES Transition to Adulthood: Progress and Challenges,* New York: United States.

United Nations (2007). *World Population.* New York: Department of economic and Social Affairs.

Vicas, 2000. Knowledge Networking for Sustainable Development, KnowNet Initiative, London School of Economics, April 2000. NORTH, Douglas (1990). «A transaction cost theory of politics,» *Journal of Theoretical Politics, 2 (No.)*

World Bank (2009). *Youth and employment in Africa; The potential, the problem, the promise, Africa development Indicators 2008/09*.Washngton DC: World Bank.

World Bank, (2006). *Next Generation.* World Bank: Washington, D.C

APPENDIX I: INTRODUCTION LETTER

Study of the effectiveness of integrating information communication technology (ICT) training in youth initiatives for development: a case study of NairoBits trust youth organization program

Dear Respondent,

My name is Beryl Mary Ndolo, a graduate student at the University of Nairobi in the department of Sociology. I am undertaking the above mentioned research in partial fulfillment of a Master of Arts degree in Sociology (Rural Sociology and Community Development).

I am requesting for your assistance in answering **ALL** of the following questions as truthfully as possible. Any information given herein shall be treated strictly confidential. The data obtained shall be used for the purpose of improving the lives of youth in informal settlement in Kenya and also serve as educational material for posterity.

Thanking you in advance for your cooperation.

Yours' faithfully

Beryl M. Ndolo

APPENDIX II: QUESTIONNAIRE

Name of the youth………………………………………..

Centre …………………………………….…………...

Date of interview……………………………………….

Section A: Personal characteristics

1. Age …………………………………….

    a. <19   [   ]   .

    b. 20-24   [   ]

    c. 25-29   [   ]

    d. 30-34   [   ]

    e. >35   [   ]

2. Gender : (Tick one)

    Male   [   ]   Female [   ]

3. What is your marital status?

    Single   [   ]
    Separated   [   ]
    Widowed   [   ]
    Married   [   ]
    Divorced   [   ]

4. What is your highest level of education?

    Lower Primary School (1-4)   [   ]
    Upper Primary School (5-8)   [   ]
    Secondary School (9-12)   [   ]
    Tertiary Level   [   ]
    University Level   [   ]

5. What is your occupation? …………………………………………………………...

6. What is your Income level per month?

   < ksh. 5000   [   ]

   5000-10,999   [   ]

   11000-15,999   [   ]

   16000-20000   [   ]

   If it is more than ksh. 20,000 specify the amount

   ……………………………………………………………………………………

7. Family background

   a. Orphan   [   ]

   b. Single parent   [   ]

   c. Both parents present   [   ]

   d. Number of siblings …………………………………………….

8. If you are an orphan, are you supported by a guardian?

   Yes   ☐   No   ☐

   If yes, who………………………………………………………………………

Section B: Training needs of the youth

9. State, in order of importance, 3 major reasons that drove you towards ICT training in NairoBits?

   [Rank: I = Most important, II = important, III = Not so important]

   I.…………………………………………………………………………

   ……………………………………………………………………………

   II.…………………………………………………………………………

   ……………………………………………………………………………

   III.…………………………………………………………………………

   ……………………………………………………………………………

10. Did you face any problems with ICT training?

    Yes   ☐   No   ☐

    If yes, which ones

    I.…………………………………………………………………………

    ……………………………………………………………………………

II.…………………………………………………………………………………

…………………………………………………………………………………………

III.…………………………………………………………………………………

…………………………………………………………………………………………

11. Had you received training on ICT before joining NairoBits?

Yes [ ]   No [ ]

If yes, which college? ....

12. Before joining NairoBits program were you working?

Yes [ ]   No [ ]

If yes, was it ICT related work? …………………………………………..

Section C: Adequacy of training

13. Please indicate (tick) the type of computer course you have studied and the period of time it lasted:

Computer packages   [ ]   Months_____   Years _____

Multimedia design: [ ]   Months_____   Years _____

3D animation: [ ]   Months_____   Years_____

Web design: [ ]   Months_____   Years_____

Graphic Design   [ ]   Months_____   Years_____

Computer Programming   [ ]   Months_____   Years_____

Software Development   [ ]   Months_____   Years_____

Others _____ Months_____ Years_____

14. Please indicate the courses you successfully completed at Nairobits

Course 1: World starts with me   [   ]

Course 2: Multimedia   [   ]

Course 3: Media Lab   [   ]

Attachment   [   ]

15. Does Nairobits follow a particular curriculum used for training ICT?

Yes ☐   No ☐

16. If yes, was the curriculum tailored to your current market needs?

Yes ☐   No ☐

17. What qualification did you attain in NairoBits?

    a. Certificate   [   ]

    b. Diploma   [   ]

    c. Degree   [   ]

    d. Any others (Specify)

    …………………………………………………………………………………

Section D: Perception of youths towards NairoBits Trust Program

18. How did you get to know about NairoBits Trust program?

    a. Friends   [   ]

    b. Internet   [   ]

    c. Family   [   ]

    d. Magazines/Newspapers   [   ]

    e. Radio/TV   [   ]

    f. NairoBits campaign   [   ]

    g. Other

    ……………………………………………………………………………….

19. What was your first impression of NairoBits?

    I.   First class   [   ]

    II.   Very satisfactory   [   ]

    III.   Average   [   ]

    IV.   Unsatisfactory   [   ]

    V.   Extremely unsatisfactory   [   ]

20. Did the impression changed over time?

Yes ☐   No ☐

If so, how? …………………………………………………………………………

21. How would you rate the quality of training you have received from NairoBits?

    1. First class   [   ]

    2. Very satisfactory   [   ]

    3. Average   [   ]

    4. Unsatisfactory   [   ]

    5. Extremely unsatisfactory   [   ]

22. If you indicated extremely unsatisfactory or unsatisfactory, mentions in order of importance, 3 major reasons for your answer?

[Rank: I = Most important, II = important, III = Not so important]

I………………………………………………………………………………………

………………………………………………………………………………………

II………………………………………………………………………………………

………………………………………………………………………………………

III………………………………………………………………………………………

………………………………………………………………………………………

23. In the table below, indicate the strength of the following services in NairoBits Trust?

	I = excellent	II= very good	III =good	IV= fair	V= poor
NairoBits trainees					
Training centres					
Facilities					
Teachers					
Training program					

Section E: level of ICT adoption

24. Did you know how to use a computer before joining NairoBits?

Yes   ☐   No☐

If Yes in which way did you use the computer?

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

25. After training at NairoBits how would you rate your computer skills as?

i.	Very adequate	[	]
ii.	Adequate	[	]
iii.	Fair	[	]
iv.	Poor	[	]
v.	Very poor	[	]

26. How do you rate your internet skills?

a.	Very adequate	[	]
b.	Adequate	[	]
c.	Fair	[	]
d.	Poor	[	]
e.	Very poor	[	]

27. Do you use the internet on your day to day life and job?

Yes ☐   No ☐

If yes what do you look for?

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

28. Do you have an E-mail address?

Yes ☐   No ☐

29. How does usage of computer, internet usage and having E-mail address enhances

job opportunity…………………………………………………………………………...

Section F: Benefits of ICT training

30. Have you ever been employed on account of your computer or ICT skills?

    Yes ☐   No ☐

31. Has NairoBits training improved your chances of earning a living?

    Yes ☐   No ☐

    If yes, how……………………………………………………………….…….

    ……………………………………………………………………….…………

    If no, why…………………………………………………………………………

    …………………………………………………………………….…………

32. Has your knowledge improved as a result of the training you received at Nairobits?

    Yes ☐   No ☐

33. Would you recommend a similar ICT training for any other person of your age?

    Yes ☐   No ☐

34. Would you work as a volunteer if only to gain more skill in ICT?

    Yes ☐   No ☐   Maybe ☐

35. Do you know anyone who is self-employed and using the skills learnt at NairoBits for upkeep.

    Yes ☐   No ☐

36. What industry do you work in currently? (*For example* hospitality e.t.c)

    _____

    _____

    _____

    _____

37. Has learning ICT at NairoBits benefitted you in any way?

    a. Yes, I have a job which I got because of the training   [   ]

b. Yes, I have a business which I started after the training   [   ]

c. Yes, I am helping other youth in my community through CBOs [   ]

d. No, I am yet to see the benefit. It was a waste of time.   [   ]

38. What ways would you say NairoBits training has benefitted youth in your local area? (Please tick as many as appropriate)

a. Improved security   [   ] Less youth in HIV-AIDS cases [   ]

b. Jobs and attachments [   ] Improved communication   [   ]

c. Less youth in alcohol abuse   [   ] Better informed youth   [   ]

39. Do you think the knowledge and skills you learned in NairoBits Trust useful in your day to day life.

Yes [   ]   No [   ]

40. Which of the following do you have?

INDICATORS	Yes	No
Smart phone		
Computer desktop		
Internet services		
Laptop		
I pad		
Tablet		
Others (specify)		

41. Have you as trainees of NairoBits formed a self-help group?

Yes [   ]   No [   ]

If yes, indicate:

- Name of the Self-help group? _____

- When it was formed (year) _____

- Number of members _____

- Objectives / Activities_____

_____

_____

If you are a member, in which way have you benefited from the group?

_____

_____

42. Comments (if any)

_____

_____

_____

APPENDIX III: KEY INFORMANT INTERVIEW GUIDE

Part 1: Personal characteristics

1. Date of the interview_____ Interview code _____

2. Name of Key informant_____

3. Age ____

4. Gender (tick one)

   Male ☐   Female ☐

5. Marital status:_____

6. Education level: _____

7. Name of the centre _____

8. Position at the centre_____

9. For how long have you worked for NairoBits?_____

   Part 2: About NairoBits

10. When was Nairobits started? _____

11. Why was it started? _____

12. What type and number of employers do you have?

    _____

    _____

    _____

13. Who were the founders or the pioneer of the organization?

    _____

    _____

    _____

14. Who were the sponsors of the organization?

_____

_____

_____

_____

15. What is the organizational structure of the NairoBits Trust Program?

_____

_____

_____

_____

_____

15. Why did the program target the youths?

_____

_____

_____

_____

16. What are the needs of the youth in the area where NairoBits centres are situated?

_____

_____

_____

_____

_____

Did you carry out any feasibility study in these areas before establishing these centres? If yes what was the outcome?

_____

_____

_____

_____

17. Do you have any specific criteria that you use in selecting the youth in the program?

_____
_____
_____
_____

18. How many youth have you trained since the program started?

_____
_____

19. Is there any particular reason why the organization integrated ICT in its training

program?_____
_____
_____
_____
_____

20. Do you have a particular ICT curriculum that you use in training the youth?

_____
_____
_____

21. Which objectives did you use when you were developing the curriculum?

_____
_____
_____
_____
_____

22. Is the curriculum certified by the government?

_____

_____

_____

23. Have you ever revised the curriculum since you started using it? If so, why?

_____

_____

Other than ICT, are there other courses taught in the program?

_____

_____

_____

Do you make a follow up of the youth who have completed their training in Nairobits? If so, are they employed, self employed or not employed?

_____

_____

_____

_____

If employed of self employed, are they doing ICT related work?

_____

_____

_____

24. Does Nairobits Trust program employ the trained students? If so, which qualifications do you look for?

_____

_____

_____

Comment (if any)