



The Revolutionary Government of Zanzibar
Ministry of Education and Vocational Training, Zanzibar

Zanzibar ICT Policy in Education

"Providing a Relevant 21st Century Quality Education for All"

July 2019

FOREWORD

Information and Communications Technology (ICT) has brought profound changes to almost every aspect of our lives. The use of Computers, electronic databases, Internet, mobile phones, radios and televisions are found in all parts of the world, Zanzibar included. They are found in all varieties of businesses and industries, as well as in our firms. Zanzibar being a composition of islands and islets, the modern technologies have never before linked us better with our neighbors in the East African Community and the world. In order for Zanzibar to develop socially and economically; and to take her rightful place among the nations of the region and the world, Zanzibar must ensure that her citizens are relevantly equipped with the knowledge and skills to effectively use these enabling technologies; nothing less than the future of the country and her children depends on this.

Education is essential for ensuring that the young people, and learners of all ages, are equipped with relevant knowledge and skills needed to find meaningful employment and, above all, become responsible citizens. This includes the knowledge and skills to positively use ICTs effectively and appropriately as defined by the country's own cultural norms.

The Education Policy (2006) of the Revolutionary Government of Zanzibar emphasizes the need for ICT integration in the educational development in Zanzibar. On this basis, the ICT Policy for Education outlined in this document provides guidelines for ensuring that learners at all levels of education in Zanzibar, from pre-primary to university, are provided with a relevant quality ICT-enhanced education; an education that will prepare them and the country well for life in the 21st Century and beyond. This policy provides a foundation upon which to build a comprehensive national plan for ICT use in education.

The 'ICT in Education' Policy was built on the back of a consultative approach with all relevant stakeholders through many rounds of brainstorming and group discussion. Various workshops with officers from relevant divisions in this Ministry and other stakeholders have been conducted to gather inputs and feedback for the formulation of the ICT in education policy. A governance mechanism is infused into the policy framework to address all pertinent issues relating to ICT in education. The governance mechanism points out to stakeholders the critical areas to take action and address pertinent issues in a transparent manner. A specific section on implementing and managing the policy is also included in this policy to focus on strategies and measures to ensure the policy is implemented and communicated effectively to relevant stakeholders.

The successful implementation of this ICT Policy in Education will require hard work and sustained commitment to the goals and objectives it sets forth at all levels of the government and at individual levels. It will equally require support from the business and industrial community. It will require school leaders, teachers and parents working together to support the young people.

I want to thank all the partners and stakeholders who have worked with the Ministry of Education and Vocational Training (MoEVT) to put this policy together. It has been

a long time in the making, but I believe that this policy provides the means for us to make significant progress in providing our people with a relevant quality ICT-enhanced education and to ensure a productive future for the citizens of Zanzibar within Zanzibar and elsewhere in the world.

.....
Honorable Riziki Pembe Juma,
Minister for Education and Vocational Training, Zanzibar
July 2019.

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Abbreviations

DEO	District Education Officer
EMIS	Education Management Information Systems
ICT	Information and Communication Technology
ISP	Internet Service Provider
M&E	Monitoring and Evaluation
ZSGPR	Zanzibar Strategy for Growth and Poverty Reduction
MoEVT	Ministry of Education and Vocational Training
PPP	Public Private Partnership
RALGA	Regional Administration and Local Government
REO	Regional Education Officer
SMC	School Management Committee
RGoZ	The Revolutionary Government of Zanzibar
TCs	Teacher Centre
ToR	Terms of Reference
TTC	Teacher Training College
TV	Television
ZISP	Zanzibar Improving Student's Prospects
TZ21	Twenty First Century Basic Education Project

GLOSSARY

For the purpose of this document the following words mean:

Computer	means any electronic, magnetic, optical or other high-speed data processing device or system which performs logical, arithmetic and memory functions by manipulations of electronic, magnetic or optical impulses, and includes all input, output, processing, storage, software and communication facilities which are connected or related as a system or network;
Digital Divide or Digital Gap	A term used to describe the discrepancy between people who have access to the resources to use new information and communication technology tools such as internet and people who don't have the resources and access to technology. The term also describes the technological gap between countries that have fully exploited ICT and those that have not. The digital divide is often associated with the resulting gap in terms of economic development.
E-Government	Means public service provided electronically by a ministry or Government Department, local authority, or body established by or under any law or controlled or funded by the Government.
E-Learning	Means the use of Technology to enable people learn anytime and anywhere. It can include training, the delivery or just-in-time information and guidance from experts. It is essentially network-enabled transfer of skills and knowledge.
Fiber Optic	Means a technology that uses glass (or plastic) threads (fiber) to transmit data. Optical fiber is used by many telecommunications companies to transmit telephone signals, Internet communication and cable television signals.
ICT	ICT refers to a wide variety of information and communication devices, applications and services related to the creation, manipulation, storage, transmission and retrieval of data and information in electronic forms. It can include radio, television, computers, broadband and other computer networks, satellite communication systems, mobile phones, video-conferencing systems, social media, management information systems, digital resources and many more services, systems and application of electronic nature.

ICT in Education Includes all of the above plus a wide variety of specific purpose tools, applications and services including, but not limited to: digital textbooks, electronic whiteboards, audio language systems, virtual digital laboratories, video games and virtual reality systems, student and classroom management systems, learning management systems, school management systems, education management information systems digitally-based distance learning systems, e-learning management systems aligned with curriculum.

Information Society Means social, business and educational environment where individuals and organizations communicate and access the world's commercial, educational and entertainment resources over a universal network linking them together.

Infrastructure refers to an integrated system of facilities used to provide one or more ICT services.

Interconnection refers to physical and logical linking of two separate networks so that customers of one network can reach and communicate with customers of the other network.

Internet Means an interconnected system of networks that connects computers via the Transmission Control Protocol Internet Control Protocol (TCP/IP) and includes future versions thereof.

Quality relevant education" Is an education that prepares all for high standards to pursue further studies, find meaningful productive employment and become responsible citizens committed to lifelong learning.

The Government Means the Revolutionary Government of Zanzibar.

The Ministry Means the Ministry responsible for education in the Revolutionary Government of Zanzibar.

Universal access Refers to allowing everyone in the country to have access to ICT facilities within a reasonable distance and at a reasonable cost.

CHAPTER ONE

INTRODUCTION

1.1 Background and Context

The Government has set very forward-looking goals for educational development in Zanzibar. According to Zanzibar Vision 2020, education and training are among the key factors for promoting sustainable livelihoods through freely chosen productive employment and work. These will result into growth of the economy, poverty reduction and provision of adequate healthcare and employment opportunities for all citizens. The Government has long acknowledged that education and ICT would contribute to the achievement of the Government's long-term development goals.

The need for the ICT Policy in Education is influenced by National and International factors. At the International level, Zanzibar embraced the UN's Sustainable Development Goals (SDGs). Goal 4 of the SDGs is to "Ensure Inclusive and quality Education for all and promote Lifelong learning." At the national level, the Zanzibar Education Policy (2006), emphasizes the role of ICT in education in development of human capacity to enhance competitiveness, modernize teaching and the learning environment and facilitate equity of access and to develop individuals who are capable of functioning effectively in a technologically driven society.

There is a great potential for ICT to expand access to education to places where schools are far from the community or overcrowded, improve the quality and the relevance of education and promote lifelong learning to adults. ICT in education can enhance, enrich and extend children's learning. It can transform teaching and learning when deployed appropriately, substantially changing the traditional classroom to one where students can learn collaboratively and construct knowledge for themselves.

It is against this backdrop that the Government of Zanzibar puts forth this ICT Policy in Education; the policy which, if implemented properly, will lead to a higher quality of more relevant education, increased learner achievement and enhance the economic and social development of Zanzibar.

1.2 Situation Analysis

The Government of Zanzibar has made significant strides in expanding access to and improving the quality of education during the last 50 years. It has gained achievements in high enrollment rates at all education levels, e.g. in early childhood education, primary and secondary education as well as higher education. The remaining challenge however is to consolidate these achievements in order to improve the overall education system as well as to improved quality and skilled human resources in accordance with the 21st Century Global competency, who will in turn support the country's growing economy and the transition to a Middle-Income Country. The priority areas are improving access to quality education, improving the quality of teaching and learning, improving the quality assurance

systems in our educational system, improving education management and governance, improving relevance and competitiveness of higher education system and improving relevance of education to meet the labour market needs.

The 12-year compulsory Basic education is a strategic step to widen the participation of all children in Zanzibar by ensuring the smooth transition at all education level, reducing dropout rates and supporting students with adequate infrastructure capacity and teaching quality. Another important aspect of the 12-year compulsory basic education is for the education system to better respond to the needs of the labour market.

On the other hand, the Government's strategy to improve the teaching learning quality is by strengthening curriculum. This includes review and revision of pre-primary and primary school curriculum through reducing the number of teaching subjects and improving the content to ensure it provides the learners with a diversified curriculum that will allow students to develop optimally in accordance with their potential and preparing and enabling teachers to implement the curriculum.

1.2.1 Current Use of ICT in Education

There have been a number of ICT initiatives in education. Some of the initiatives that have been implemented in education in Zanzibar over the past 20 years are as follows:

The following are some of the initiatives and projects:

- Radio Instruction to Strengthen Education (RISE); the use of radio programs to improve Pre-School and Lower Primary Education.
- Zanzibar Teacher Upgrading by Radio (ZTUR).
- 21st Century Basic Education project (TZ21).
- Provision of reliable connectivity and internet access.
- Zanzibar Improving Student's Prospects (ZISP).
- Provision of ICT literacy training and instructional use of ICT to school leaders and teachers to develop local ICT-based content among others.
- Provision of computers and other ICT tools to the schools, Teacher Training Colleges (TTCs) and Teacher Centers (TCs).
- Development of digital content and train lower primary teachers on how to use ICT effectively as an instructional tool.
- Extend and strengthen ICT network(s) throughout the Ministry and between the Ministries, regional, district offices and schools.
- Establishment of the Education Media Centre
- Local universities offering various courses on ICT

While there has been success, most of the earlier initiatives have been relatively small-scale pilot projects that have operated largely independent of each other. Most efforts to introduce ICT's in education had focused on provision of computers in schools, conducting training in basic IT skills that were less meaningful in the context of teaching and learning in the short and long term.

The lack of a comprehensive ICT policy in education has limited the effective alignment and integration of these projects with each other, as well as, and more importantly with broader efforts to improve the education system. This lack of integration and alignment has resulted in less than optimal use of the resources available to the Government and has limited the impacts of most of these early initiatives. Further sustainability has also been an issue due to inadequate efforts that have been made to scale-up earlier success.

Despite the shortcomings cited above, there are reasons to be optimistic about the situation. As a result of earlier and current ICT initiatives, there is a growing cadre of system leaders, university and school leaders, teachers and university faculties and others who are motivated, committed and prepared to increase ICT use in education. Bachelor and diploma programs, as well as other ICT-related programs are now offered at different academic Institutions in Zanzibar. The establishment of ICT related Departments in different public institutions is a reflection of the Government's commitment in this matter.

There are some opportunities that may facilitate ICT integration in the education process. These include, the national ICT infrastructure (i.e. availability of stable power in many areas of the country, availability of optical fiber services, expansion of digital TV and radio services, availability of mobile phones and other telecommunication infrastructure and availability of Media Education Centre) which are improving and are poised for dramatic development. Moreover, the private sector companies have expressed their willingness to partner with the Government to expedite the introduction and use of ICT in education. Zanzibar's involvement in the East African Community promises the potential of new and expanded opportunities for private sector development in the provision of ICT services in the country.

CHAPTER TWO

THE POLICY OVERVIEW

2.1 Rationale

This Policy affirms the Government's belief in the power of ICT to extending access to quality education for all students, improving the teaching and learning environment, enhancing of students' performance and strengthening management of educational resources more effectively and efficiently. This belief is supported by a large and growing body of experience and research from many countries in our region and from around the world.

The policy document affirms the commitment of the Government of Zanzibar to do all in its power to enhance the quality of education through the use of ICT. It is intended to be aligned with and supportive of the Government of Zanzibar's commitment to build an education system that meets the needs of the country's long-term social and economic development and equips every learner for a productive and satisfying life in the 21st Century.

ICT is changing the world around us. Sophisticated digital technologies and applications are everywhere. They are changing everything in business and industry, in the ways that governments do business and, in our homes, and daily lives. From international research and experience, countries that fail to make ICT a central part of their social-economic and educational development strategies risk being left out of the rapidly growing and increasingly competitive knowledge-based global economy. All the countries that people point to as examples of successful social and economic development, e.g., Finland, Ireland, Malaysia, Singapore, South Korea and others, had many years ago, made investment in ICT in education a priority.

In Africa, Rwanda has been in the forefront on the use of ICT in its economic and social development. The country has attained success in the use of ICT due to the transformation of its educational system and adopting ICT as one of the tools for teaching and learning. Zanzibar is bound to make the necessary changes in its education and focusing efforts on using and integrating ICT for quality lifelong learning opportunities for all and at all levels of education. ICT must be harnessed to strengthening educational systems, knowledge dissemination, information access, quality, effective learning and effective service delivery.

This policy document provides a framework including a set of guidelines, rules and regulations, strategies and key components that the Ministry is committed to pursuing in order to ensure the appropriate, effective and efficient implementation of ICT in education in Zanzibar. The policy objectives and corresponding actions have been identified and will be implemented systematically through the ICT policy action plan. The Policy goals, desired policy objectives and policy statements are articulated.

2.1.1 Why ICT in Education?

The importance of ICT in education is two-fold. First, it provides a powerful means of helping learners master the skills and acquire the knowledge that they will need to become productive citizens and better contribute to the development of Zanzibar. ICT helps to close the digital and learning divides that persist in some contexts. It extends and strengthens the instructional strategies used by teachers; supports the use of more advanced research methods; enables teachers and learners to access educational resources from around the world and helps prepare students for new forms of research and employment by nurturing the development of 21st Century knowledge and skills.

Secondly, it helps to provide decision-makers, managers and administrators with more relevant, reliable and timely data and information for guiding system development than is available through traditional means. It will help leaders to monitor and evaluate system performance on a regular basis, target resources more effectively and efficiently and achieve higher results.

There are seven reasons why an ICT Policy in Education is critically needed in Zanzibar in order:

- i)** To encourage and ensure the appropriate, effective and efficient use of ICT to improve the relevance and quality of education and increase the performance of students in educational institutions.
- ii)** To provide an organizing framework for integrating and aligning all ICT initiatives in education toward the common goal of providing all students including those with special needs, the knowledge and skills needed to continue with their education, find productive and meaningful employment and become responsible citizens.
- iii)** To serve as a catalyst for the economic and social development of Zanzibar.
- iv)** To maximize the impact and ensure the responsible use of public funds in implementing ICT in education.
- v)** To make the teaching and learning process more interactive and engaging, leading to improved quality of education
- vi)** To enhance the efficiency and effectiveness of education delivery.
- vii)** To facilitate lifelong learning as well as innovation in education.

The need and importance of ICT in education is as follows:

- Education is a lifelong process; therefore, its access is needed anytime and anywhere.
- Information explosion is an ever-increasing phenomenon; therefore, there is a need to get access to information.
- Education should meet the needs of varieties of learners and therefore IT is an important vehicle in meeting those needs.
- Technological literacy is a prerequisite for every individual and society
- The increased access to education will result in bringing down the cost of education.

2.2 Scope of the Policy

This policy covers all levels of education from pre-primary to higher education. It also includes Regional and District Administration Management units and all affiliated Semi- Autonomous Educational Bodies dealing with formal and non-formal education.

This policy is intended to serve as the foundation for all other ICT initiatives in education. It lays out the minimum expectations for all educational institutions, within the limits of prevailing legal and regulatory frameworks and their own resources, to pursue higher standards.

2.3 Vision

The Government's vision for Zanzibar ICT in education is as follows:

An Inclusive, equitable and knowledgeable ICT-based learning society

2.4 Mission

To promote Inclusive teaching and learning together with lifelong learners by ensuring the availability of accessible, efficient, reliable, affordable ICT enhanced quality relevant education in Zanzibar.

2.5 General Objective.

The general objective of the policy is to harness the potentials of ICT towards achieving inclusive, equitable and lifelong educational opportunities for all to produce people capable of working and participating in the new economies and societies arising from ICT and related development.

2.5.1 The specific objectives of the policy are to:

- (i) Facilitate the development and use of ICT as a pedagogical tool for teaching and learning, and for the professional development of teachers, administrators and educational managers.
- (ii) Promote development of local IT applications and multi-media contents for greater access to quality education and relevance to the citizens.
- (iii) Encourage and facilitate the use of ICT resources as a teaching, researching, innovating and communicating tool among government officials, teachers, students and community members.
- (iv) Ensure the equitable access to ICT resources by students, teachers, educational managers and administrators in all educational institutions and offices.
- (v) Set clear standards and guidelines, rules and regulations as well as protocols governing all aspects of ICT in education at all public and private schools, colleges, teacher centers and education offices.
- (vi) Ensure a reliable and affordable secured connectivity in internet access for all schools, teacher training colleges, teacher centers and all regional and district education offices.
- (vii) Promote the harmonization of activities, approaches and standards in the educational uses of ICT.
- (viii) Develop a robust monitoring and evaluation system to be used regularly to support ICT integration in education.
- (ix) Encourage partnerships between the various ICT stakeholders in the Education sector.
- (x) Facilitate the use of ICT as a tool for assessment and evaluation of education, as well as administration and management.

2.6 Policy Alignment, Integration and Coordination

Successful effective and efficient implementation of this policy will depend on the thoughtful alignment, integration and coordination of this policy and the plans that will be developed to implement it, with many other relevant government policies and initiatives including, but not limited to:

- The Zanzibar Education Policy (2006),
- The government's commitments for achieving the U.N goals of the Sustainable Development Goals especially for SDGs-4; Education 2030 Agenda.
- Zanzibar Strategy for Growth and Poverty Reduction (MKUZA II and III)
- Zanzibar Vision 2020
- Zanzibar ICT Policy 2013, and
- e-Government Policy 2015

2.6.1 Zanzibar ICT Policy

The principal objective of the Zanzibar ICT Policy is to facilitate sustainable economic growth and development, and poverty eradication through productive and effective technologies. The Policy also aims at pursuing progress towards full socio-economic inclusion of citizens through universal access. Further, the Policy looks at stimulating investment in ICT sector while at the same time encouraging the spirit of innovation through research and development. The policy envisages harnessing the potential of ICTs and related emerging technologies to eradicate poverty, support free and compulsory basic education, improve maternal health, combat diseases, maximize agricultural production, ensure food security, promote trade and industry, ensure environmental sustainability, develop global partnerships for national development, and incorporate technology in mainstream implementation of development policies.

In the area of human resource development, the policy emphasizes integrating ICTs in teaching curricula at all levels of education; establishing e-educational networks for sharing educational resources and promoting e-learning at all levels; encouraging and supporting ICT training for decision-makers, community and civil society leaders; creating opportunities and providing assistance for the disadvantaged, women and the youth to acquire ICT competencies and skills and enhancing capacity for research and development in ICT sector.

2.6.2 THE ZANZIBAR E-GOVERNMENT STRATEGY

The E-Government Strategy, which was adopted in 2015, emphasizes transformation of Government services from manual to digital-based operations. The Government's specific objectives include improved coordination of government agencies to reduce duplication of efforts and to enhance efficiency in utilization of resources, to improve the competitive position of the country through provision of timely information and delivery of services. Other objectives are to reduce transaction costs, and to engage citizens and the private sector through digital and on-line service provision. In pursuing these objectives, the Strategy gave considerable emphasis on the use of education to equip the nation with appropriate ICT competencies and skills and related innovations.

Substantial efforts will be made to establish and maintain productive working relationships with other Government Departments that will need to be involved in the implementation of this policy including, but not limited to curriculum development, teacher professional development, human resources development, Infrastructure Development and Equipment and Capacity Building.

CHAPTER THREE

POLICY ISSUES, STATEMENTS AND STRATEGIES

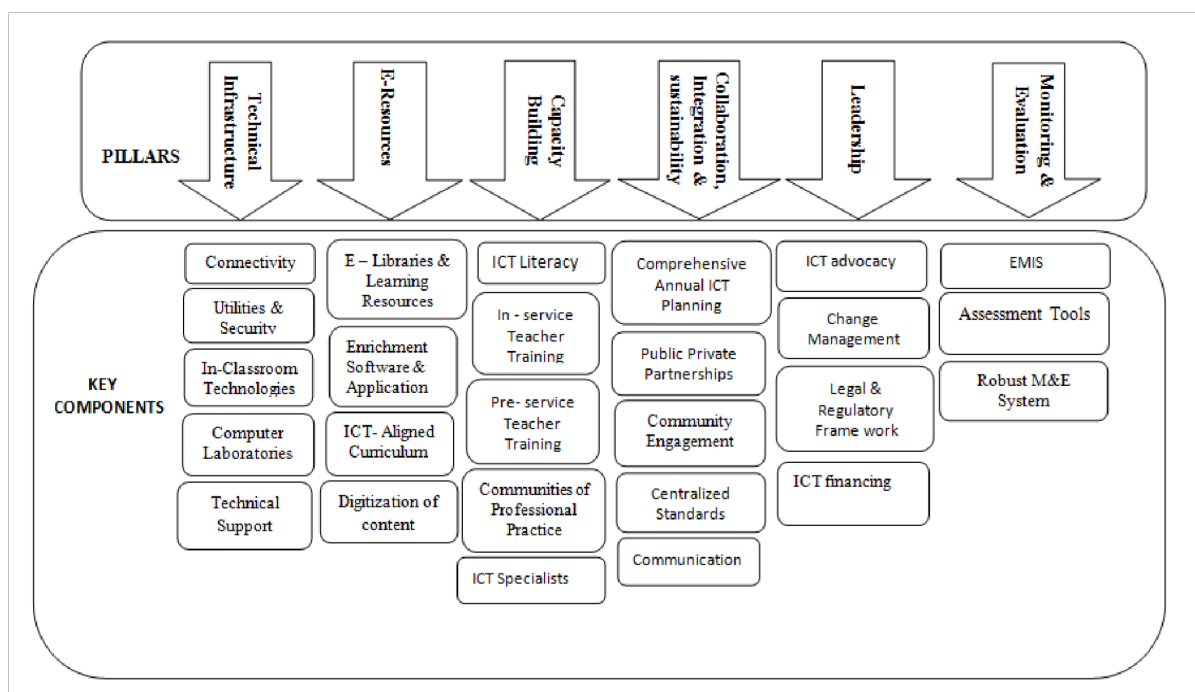
3.1 Policy Pillars

From an international experience and research, it is known that, successful implementation of this policy will depend on careful coordination, integration and alignment of multiple activities and efforts across the following six key policy pillars:

- (i) Technical Infrastructure
- (ii) E-Resources
- (iii) Capacity building
- (iv) Collaboration, integration and sustainability
- (v) Leadership and
- (vi) Monitoring and Evaluation (M&E)

It shall thus be the policy of the government of Zanzibar to give priority to activities and initiatives included under one of these six pillars.

Model/framework of Zanzibar ICT Policy in Education



3.2 Technical Infrastructure

Technical infrastructure refers to issues of connectivity, utilities, security, teaching and learning technologies and technical support. While all of these are important, connectivity is especially important. Lack of connectivity in institutions in some

communities is the main reason for persistent and in some cases growing digital divides and achievement gaps in education.

Connectivity and internet access provide opportunities for sharing limited resources, applications, services and supports the development of online teaching materials and other e-Contents. Without connectivity it is impossible to access the wealth of information and knowledge available on the internet or communicate and collaborate with colleagues and peers. Further, connectivity is also essential to the regular collection, processing, analysis, dissemination and use of data and information from schools and other sources that are needed to support policy making, management and system administration.

Nevertheless, connectivity alone will not be enough. All institutions must be provided with access to stable electricity and communication systems, the hardware and software. They must include those requirements of people with special needs that require support in new instructional strategies, the means to secure all ICT equipment from vandalism or theft and the technical support to ensure that all equipment run properly and reliably.

3.2.1 Issues

- Inadequate infrastructure including - less-secured facilities, lack of a proper environment to maintain equipment and lack of stable electricity in some rural and remote areas.
- Poor quality of connectivity including low transfer speeds, limited bandwidth and unstable connections.
- Poor school infrastructure and overcrowded classrooms

3.2.2 Policy Statement 1: *The Government shall ensure there is an adequate ICT technical infrastructure in the education system.*

3.2.3 Strategies:

- a. Ensure the establishment of fast reliable internet connectivity in all schools, teacher training colleges, teacher centers, technical and vocational institutes, universities and the Ministry, including in all regional and district administrative units.
- b. Ensure that all schools, teacher training colleges, teacher centers, technical and vocational institutes, universities and the Ministry, including in all regional and district administrative units are linked by a secured national ICT backbone.
- c. Ensure the establishment of access to a broad array of digital learning resources in all schools, teacher training colleges, teacher centers, technical and vocational

institutes, universities and the Ministry, including in all regional and district administrative units.

- d. Ensure the availability of proper and secure facilities and utilities to support ICT in all schools, teacher training colleges, and teacher centers, technical and educational offices.
- e. Ensure the availability of appropriate technologies in classrooms in all schools, teacher training colleges, teacher centers, and all relevant institutions.
- f. Ensure access to adequate on-site and remote technical support for all schools, teacher training colleges, teacher centers and education offices.
- g. Ensure that reliable measures are in place in all schools, teacher training colleges, teacher centers, technical and vocational institutes and universities to protect all systems, data and applications from unanticipated equipment malfunction and human errors, such as, disaster recovery systems, Power backup systems (generator and solar).
- h. Develop systems to ensure regular maintenance and ICT support services for all schools, teacher training colleges and the educational offices.
- i. Establish public-private partnerships to encourage private sector participation in the provision of resources adequate for ensuring effective development of the necessary ICT tools and infrastructure.
- j. Ensure National and international acceptable standards on ICT in education are adopted.

3.2.4 Inclusive Education

ICT represents a major opportunity for providing learners an opportunity to develop to their full potential including disadvantaged children and those with Special Education needs who have been excluded in getting education.

3.2.5 Issues.

- Lack of education opportunities for disadvantaged children and children with special needs;
- Lack of ICT infrastructure for teaching and learning for disadvantaged children and children with special needs

3.2.6 Policy Statement 2. *The Government and Development Partners shall ensure that special ICT infrastructure is available to support disadvantaged children and those with special education needs.*

3.2.7 Strategies

- Promote individualized learning in order to reduce disparities in educational development and performance.
- Institute mechanisms to promote gender-equity through the use of ICT in education.
- Promote the use of assistive technologies to support those who are physically and mentally challenged.
- Educate stakeholders on the ICT needs for children with special education needs.
- Provide training of teachers on ICT infrastructure and equipment for disadvantaged children and those with special education needs.

3.3 E- Resources

E-Resources refers to access to digital learning resources of all kinds which can be accessed through computer, television, radio and mobile phones. It includes resources borrowed from shared resource sites as well as resources developed locally. It includes resources to support the development of 21st Century knowledge and skills, access to supplementary and enrichment software, the establishment of e-Libraries (increasingly referred to as eLearning Resource Centers) and a host of ICT-based assessment tools for use by students, teachers and system managers to assess student performance and teacher effectiveness on an on-going basis. E-Resources also include an ICT-Aligned Curriculum, that is, the revision of existing curricula, textbooks and learning materials to integrate utilization of ICT.

E-Resources, also referred to as E-Content comes in many forms including: structured lesson plans, resources that supplement and complement teacher-led lessons, access to online resources to support student research, learning portals that serve as sources for sharing and exchanging ideas. All have important contributions to make to efforts for improving teaching and learning.

From research and experience, we know that without timely availability of adequate and appropriate E-Resources, teacher and student enthusiasm for ICT-enhanced teaching and learning can quickly decrease. To be most effective, E-Content must be aligned with national curriculum and learning standards; support core learning objectives by providing access to an array of complementary, supplementary and remedial materials and activities; be available in the local language and affordable.

Further, for maximum impact E-Content must include access to resources that go beyond routine drill and practice and to support the development of higher-order thinking skills, such as critical thinking and the ability to locate, synthesize, evaluate and use relevant information for problem solving.

3.3.1 Issues

- Very limited e-Content and other e-Resources aligned with local curriculum
 - Limited number of teachers, educational and school leaders proficient in the use of ICT for instructional purposes and in improving the quality of education.
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3.3.2 Policy Statement 3: *The Government shall ensure the availability of adequate E-Resources to support the achievement of educational goals and objectives of the education system.*

3.3.3 Strategies:

- a) Ensure that all schools, Teacher Training colleges, Teacher Centers, universities and other formal and informal public educational institutions have access to a full array of digital learning resources via reliable internet access and intranet.
- b) Reorganize existing curricula so that it corresponds with ICT enhanced teaching and learning strategies.
- c) Ensure the availability of enrichment software and applications to complement and supplement traditional educational materials to formal and informal, private and public educational institutions
- d) Mobilize higher learning institutions to support the use of ICT for teaching higher order thinking skills, the 21st Century knowledge and skills, at all levels especially schools and teacher training institutions.
- e) Ensure the establishment of E-Libraries to increase E-Resource Learning Centers in Teacher Training Colleges, Teacher Centers and other formal and informal public educational institutions.
- f) Encourage and support the use of locally-developed ICT solutions, including both hardware and software solutions and the creation of local content.
- g) Establish strong mechanism of digitization of educational content.

3.4 Capacity Building

Capacity building refers to the development of human resources and organization capacity to support ICT implementation. It includes, ICT literacy training for all professional and key support staff; in-service and pre-service professional development of teachers; the development of ICT-based communities of professional practice for teachers and school leaders, communities that connect

them to practical information, resources and expertise that can empower and inspire them to provide more effective teaching for all learners and the development of ICT-specialist teachers in schools who are capable of routine management and maintenance of ICT facilities in their schools.

Capacity-building to support effective integration and use of ICTs in education is challenging, multi-dimensional and extremely critical to the success of such efforts. Without a fully informed leadership, adequately prepared teachers, skilled technical support and a supportive legal and regulatory environment the benefits of ICT enhanced teaching and learning will not be realized.

Educators at all levels will be challenged by efforts to integrate and use ICTs in education, especially classroom teachers, in particular for whom the task will be most challenging. It is teachers who are being asked simultaneously to learn to use technology themselves, develop new pedagogic models and methods that support development of 21st Century competencies, incorporate technology in their teaching, facilitate students' use of ICTs, create a regular stream of exciting ICT-based learning activities for their students, develop and share e-Content with colleagues. Therefore, effective integration and use of ICTs will require much more than an introduction to computers for teachers. The provision of career long professional development opportunities for teachers is essential for successful integration and use of ICTs in classrooms. Professional development must begin early, be multi-dimensional and be included in an institutionalized commitment for supporting career-long professional development.

Professional support of several other types of staff is also essential to successful ICT initiatives. Leaders, and in particular principals must be sufficiently knowledgeable to provide effective overall leadership, develop effective strategies and set realistic targets. Principals must be able to distinguish between effective and not-as effective use of ICTs in classrooms if they are to support their teachers. Competent technical assistance must be developed and available at the school levels.

3.4.1 Issues

- Insufficient number of qualified technical personnel to manage and maintain ICT resources.
- Inadequate training and capacity development resulting in underutilization of ICT facilities.
- Poor awareness of the environmental impact resulting from the use and disposal of ICT resources and equipment.
- Limited number of teachers proficient in the use of ICT for instructional purposes
- Teachers with limited knowledge of how to teach 21st Century Knowledge and skills
- Limited number of educational and school leaders proficient in the use of ICT for improving the quality of education

- Inadequate number of qualified ICT maintenance and support staff

3.4.2 Policy Statement 4: *The Government in collaboration with Development Partners and Private Sectors shall ensure the capacity building for ICT management and use is enhanced at all educational levels and including the people with special educational needs.*

3.4.3 Strategies:

- Provide all learners, school and university leaders, teachers and relevant educational staff with access to basic ICT literacy training.
- Provide pre-service and in-service capacity building to teachers on how to use ICT for instructional purposes and professional development.
- Establish on-line communities of professional practice to provide all teachers with opportunities to engage in regular professional exchanges of knowledge, information and effective strategies for using ICT to improve their instructional practice and increase student performance.
- Ensure training of at least two ICT specialist teachers in every school to provide an array of basic ICT support services at the school for their colleagues
- Develop and maintain institutional capacity for ICT systems management and maintenance in all schools and relevant Ministry departments.
- Work with all Teacher Training Colleges, Teacher Centers, Colleges and Universities to develop programs and build capacity to deliver all the professional development and training opportunities.
- Promote distance education and virtual institutions, particularly in higher education and training.

3.5 Collaboration, Integration and Sustainability

Collaboration, integration and sustainability refer to a set of strategies and activities to support the effective and efficient development, alignment and integration of ICT initiatives in the education sector and to sustain successful initiatives into the future. This includes, an active commitment to collaborative development, an annual process of ICT plan reviews and revisions; the development of multi-stakeholder partners (public-private partnerships) to support ICT development and maintenance; strategies and activities to increase community participation;

ownership and support for ICT in schools; the development of technical standards and protocols for ICT use system-wide; and the development and implementation of communication strategies to keep all stakeholders informed and supportive.

Collaboration and teamwork are often cited as a distinguishing characteristic of high-performing organizations, including schools, which are critically important to the successful implementation of ICT in education. Integrating ICT in education is a complex undertaking; one that touches virtually all other components of the system. Effective use of ICT in support of efforts to improve the quality of education and increase student performance requires the thoughtful alignment and integration of ICT with many components of the education system, including notably: learning standards, curriculum and e-content, pedagogy, the use of time, infrastructure and the professional development of principals and teachers. It requires the commitment and active participation of many and varied stakeholders at all levels. Only through a commitment to collaboration and teamwork, i.e., working together closely over time, can the various system components and stakeholders be brought into alignment to ensure the appropriate, effective and efficient deployment of ICT in education.

ICT also has a role to play in increasing collaboration and teamwork among students, teachers, principals and others by providing new means to share knowledge, ideas, strategies, methods and materials. ICT is proving to be a valuable tool for facilitating collaborative learning among students, creating communities of professional practice among teachers and principals and building consensus among stakeholders about what is required to improve quality and increase students' performance.

3.5.1 Issues

- Inadequate collaboration among stakeholder in ICT infrastructure development
- Insufficient professional development and collaborative professional exchange.

3.5.2 Policy Statement 5: *The Government shall ensure the ICT solution for education is developed collaboratively, carefully integrated and sustained over time in the education system.*

3.5.3 Strategies:

- a) Develop minimum standards and guidelines governing the development of ICT products and services for quality assurance and adherence to the National and International standards for better ICT integration and deployment in education.
- b) Establish timely comprehensive sector-wide ICT review and planning process.
- c) Develop annual institution-based ICT plans aligned with the comprehensive Ministerial annual education

plans, as well as with the National ICT policy and any all other relevant government policies and regulations.

- d) Establish public-private partnerships to secure the support and coordination of the activities of public, private and civil society organizations to support and sustain all efforts to use ICT appropriately, effectively and efficiently in all educational institutions.
- e) Develop initiatives to increase parent and community participation in all efforts to use ICT appropriately, effectively and efficiently in all schools, teacher training colleges, teacher centers, technical and vocational institutes and universities.
- f) Encourage and support the development of 'community schools' to extend the use of school-based ICT in support of formal and informal after-school programs for all learners, including adults and people with special needs.
- g) Develop a comprehensive communications plan for keeping all schools, ICT initiative managers, communities, public-private partners, stakeholders and MOEVT and other relevant Government leaders well informed about all plans, issues, successes, challenges, new developments and opportunities related to the implementation of ICT in education.
- h) Ensure that educational institutions adapt their teaching methods to use ICT in teaching and learning.

3.6 Leadership

Leadership refers to the important roles and responsibilities that leaders at all levels from school to the ministry have for assuring broad-based support for on-going efforts; for managing the change process; for keeping efforts focused, on track and on budget and for supporting continuous improvement.

Competent, actively committed and sustained leadership at all levels is essential for successful implementation, scale-up and sustainability for ICT integration in Education. Leadership from the top is essential to the articulation of a compelling broadly-shared vision, the creation of a culture of change and shared responsibility, inspiring and motivating staff and engaging stakeholders in a sustained effort to provide quality education for all learners.

At the national level, leadership is important for ensuring that sector ICT activities are aligned with national social economic goals and objectives and are integrated appropriately and effectively with other core sector activities, in particular curriculum development and professional development for principals and teachers. It is also important for ensuring maximum impact and efficient use of resources and that activities are monitored and evaluated on an ongoing basis to ensure the

equitable distribution of opportunities and outcomes for all learners. Further, national leadership is needed to help create communities of professional practice linking schools, principals, teachers and students and providing opportunities for system-wide sharing of resources and lessons learned.

At the institutional level, leadership is important for establishing a culture of innovation, collaboration and change; communicating with and involving parents and the community; and ensuring that teachers and university faculties have the time, resources and opportunities for professional development that are required to integrate and use ICT effectively in their teaching.

Equally leadership is important for supervision of ICT financing for the education.

3.6.1 Issues

- Ineffective leadership frameworks at different levels to champion the integration of ICTs in the socio-economic development process;
- The role of ICT in the provision of education and management is minimal.
- Reluctance to change among some groups.
- Insufficient data-based management for informed decision making

3.6.2 Policy Statement 6: *The Government shall ensure that competent, actively committed and sustained leadership is developed and maintained at all levels.*

3.6.3 Strategies:

- a. Proactively engage all stakeholders to maintain a priority focus on ICT use in education and ensure a continuing flow of adequate resources to improve the quality of education and increase the performance of all students.
- b. Provide all school heads and relevant Ministerial unit leaders with professional development and training in the models and methods of managing change with a particular focus on management of system change (transformation) as a result of ICT.
- c. Ensure the alignment of this policy and all ICT initiatives and activities in the education sector with all broader governmental legal statutes and international standards related to ICT in the education sector as specified in this policy.
- d. Carry out regular monitoring and evaluation to keep financing initiatives on track.
- e. Learn from regional and international experiences the tested and proved means of supporting ICT in education initiatives.

- f. Develop programs to encourage parents, community, private sectors and other stakeholders to promote and support learning using ICT.
- g. Develop programs that inclusively encourage ICT uses among people with special needs by empowering them with required knowledge and skills.
- h. Develop strategies to support research and innovation of ICT in education.

3.7 ICT Financing

The successful implementation of this policy will require adequate on-going annual financing of the ICT activities included under each pillar. That said, ICT is a priority of the government and as such it is expected that the government will direct resources adequately to implement this policy in a timely manner.

While it is expected that donors will continue to support ICT initiatives in education, the government will be ultimately responsible for the costs of scaling-up successful initiatives and paying the costs of maintaining and upgrading ICT. Initiatives will have to be prioritized and implementation done in phases. Regular monitoring and evaluation will be critical to keeping initiatives on track and ensuring the achievement of results on time and on budget. The efficient use of resources will be essential, as will the identification of new resources. The PPP which have been tested and proven as a means of supporting ICT initiatives in education in other countries will be an important part of the financing strategy. Further the Ministry will work with other governmental, private sector and civil society partners to obtain optimal preferential pricing, including educational and volume discounts and favorable tax rates.

3.7.1 Issues

Inadequate financial resources to meet all needs and to scale-up and sustain successful ICT initiatives.

3.7.2 Policy Statement 7: The Government, Development Partners and Private sector shall ensure the Financing of the implementation of this ICT Policy is enhanced.

3.7.3 Strategies:

- a) Allocate adequate multi-year and annual budgets for the effective development of ICT integration in Education.
- b) Establish a sustainable ICT in Education Development Fund.
- c) Develop a public annual program for recognizing outstanding contributions by individuals, groups of individuals, institutions (public or private) and private sector partners for the development and use of ICT in education.

- d) The Government, private sector, civil society and development partners work together to enhance the access of optimal preferential pricing, including educational and volume discounts and favorable tax free on ICT resources.
- e) Seek financial and other assistance (in collaboration with other stakeholders) and make necessary budgetary provisions for planning, implementation and sustainability of ICT initiatives and apply principles of “total cost of ownership” for cost reduction.

3.8 Monitoring and Evaluation.

Monitoring and Evaluation is the key component of quality assurance roles in many programs. For sustainable and effective ICT integration in Education, the monitoring and evaluation system shall be put in place.

3.8.1 Policy Statement 8: The Government and other stakeholders shall ensure that Monitoring and evaluation of ICT is an integral component at all levels of the educational system.

3.8.2 Issues

- ICTs are not being well used in the M&E process.
- No common set of Indicators.
- The ICT issues are known but the tools for tackling them are not.
- Few international comparative studies have been done.

3.8.3 Strategies:

- a) Develop a robust system for monitoring and evaluating the development and performance of all ICT initiatives in education.
- b) Re-examine ICT tools for data collection to make them user friendly.
- c) Establishing links with associated Ministries for strengthening internal linkages.
- d) Developing professional capacity for computerizing data processing and analysis for concrete reporting systems.
- e) Re-examine Education Management Information System (EMIS) to support more effective and efficient administration, management, planning, policy analysis and decision-making.

CHAPTER FOUR

LEGAL AND REGULATORY FRAMEWORK

4.1 LEGAL FRAMEWORK

The Revolutionary Government of Zanzibar provides free and compulsory basic education for 12 years up to Ordinary Secondary to all children irrespective of their gender, ethnicity or religion. The Education Act No. 6 of 1982 and other related Acts have full mandate on development of Education in Zanzibar. The Ministry shall promote cooperation with all stakeholders at appropriate forums to enhance user confidence, build trust, and protect both data and network integrity. This would also lead to consideration of existing and potential threats to ICT and address other information security and network safety issues.

The Ministry in collaboration with other Government Ministries such as the Ministry responsible for e-Government and Ministry responsible for Communication and the private sectors shall detect, respond to and prevent cyber-crime and misuse of ICT. This will be done through various ways such as developing guidelines that take into account ongoing efforts in these areas and considering legislation that allows effective investigation and disciplinary action in case of misuse. Other measures to be put in place will include promotion of effective mutual assistance efforts and strengthening institutional support at the national, provincial and district levels.

The Ministry shall encourage education and awareness creation about online privacy and the means shall provide a consolidated effective legal and regulatory framework, offering a conducive environment for the development of ICT in Education and taking account of issues associated with the convergence of telecommunication, broadcasting and information systems, so as to open new opportunities to the citizens.

Strategies

- a) Review the existing legislations, taking cognizance of international best practices, and foster a clear and supportive legal framework that promotes and supports the long-term development of the ICT in Education sector.
- b) Promote confidence for engagement with the information society through enactment of legislations addressing issues including computer and computer related crime, consumer protection, intellectual property rights, dispute resolution and security.
- c) Establish a comprehensive legal framework for e-education and innovation.
- d) Monitor trends in ICT legislation internationally and adopt legislations that will establish a framework for creation of an Information system.
- e) Empower local authorities to become ICT users, promoters and participants, as well as direct beneficiaries in the regulatory processes.

- f) Establish an ICT in Education Governing Board to monitor proper implementation of this policy.

4.2 Regulatory Framework

- a) Develop appropriate regulations that would ensure fair and equitable competition amongst service providers and promote rapid growth of new services and applications in education.
- b) Promote appropriate training for the community on regulatory issues, including law enforcement agencies.

CHAPTER FIVE

INSTITUTIONAL FRAMEWORK FOR POLICY IMPLEMENTATION

5.1 Policy Implementation

Effective ICT implementation is complex and multi-faceted. It requires simultaneous attention to multiple moving parts, attention to countless details, smart and conscientious management as well as regular monitoring and evaluation. Also, it requires broad-based cooperation, participation and the capacity to manage multiple stakeholders on an ongoing basis. In an era of scarce resources, it requires fiscal responsibility, creative thinking, innovation and alternative sources of funding.

The strategy for implementing this Policy will be built around the following key elements:

- a) Fiscal Responsibility, i.e., responsible stewardship of government resources, including and careful attention to the efficient use of resources.
- b) Comprehensive Annual ICT Planning to coordinate and to ensure on-going alignment and integration of ICT activities sector-wide.
- c) Active Leadership, Management and Oversight of all ICT activities to minimize redundancies, maximize efficiencies and keep all activities on track and within budget.
- d) Development of Centralized Standards and Protocols to ensure the effective and efficient integration and consistent quality across all activities.
- e) The Development of Multi-Stakeholder Partnerships to secure resources and commitments of support from all stakeholders to ensure the successful integration and use of ICT in education.
- f) On-going broad-based communication, consultation and collaboration with all stakeholders to ensure their on-going support for efforts to increase ICT use in education and the effectiveness of ICT initiatives.
- g) On-going monitoring and evaluation to ensure that implementation proceeds as intended and that results are achieved in a timely manner.

5.2 Roles and Responsibilities

Successful implementation of this policy depends on the participation and cooperation of many agencies, bodies, institutions, departments, schools, colleges, University and individuals.

5.2.1 Role of the Government

The Government is committed to a pro-equity approach in the implementation of this policy. It is the policy of the government that the ICT programs and services that will be developed as a result of this policy will be made available to all educational institutions, teachers and all learners regardless of gender, geographic location, economic background, ethnic or religious affiliation, physical limitations or intellectual capacity. Further, the Government is committed to actively extending all programs and services to meet the needs of traditional underserved populations and close any persistent gaps in access to digital learning resources and ICT-enhanced education, allocate adequate funds necessary to implement this Policy, establish legislative and regulatory framework to enable smooth execution of this Policy and provide appropriate incentives and enabling environment for investment in the ICT sector.

5.2.2 Roles and Responsibilities of the Ministry Responsible for Finance

- a) To mobilize and allocate adequate financial resources to ensure implementation of this policy and the associated strategic master plan for education.
- b) To provide financial support to ensure the sustainability of ICT in Education to cater for license/subscription renewal, human capacity building etc.
- c) To establish incentive measures to encourage investments in the area of ICT in Education from latest technology deployment and human capacity building.
- d) To allocate adequate funds in its annual budget for ICT procurement, maintenance of equipment, software, systems, network and rapid change of technology.
- e) To provide special incentives in procurement of the ICT equipment.

5.2.3 Role of the Ministry responsible for Education

The Ministry responsible for Education is the Government entity with ultimate and overall responsibility for leading and managing the implementation of the ICT Policy in Education in Zanzibar. Within the Ministry, the Department of ICT in Education is responsible for day-to-day administration of all ICT initiatives in the education sector.

The Ministry will be responsibility for all aspects of ICT policy implementation in education including:

- a) Drafting and reviewing the policy,
- b) Developing an initial sector-wide ICT Master plan,
- c) Developing annual comprehensive ICT plans,

- d) Develop and implement school-based ICT plans,
- e) Aligning, integrating and coordinating all ICT initiatives in the education sector,
- f) Developing and managing Public-Private Partnerships (PPP) to support ICT implementation,
- g) Development and management of an ICT communications strategy for the Education sector,
- h) Development of ICT standards in the education sector,
- i) Developing a robust system for monitoring and evaluating ICT initiatives and keeping the ministry leadership fully informed in all issues related to ICT in the education sector.
- j) Review the existing curriculum of pre-primary, primary, secondary and teacher's education to include ICT foundation skills, basic technical maintenance and skills that will enable teachers to use ICT as pedagogical tools for improvement of teaching and learning.
- k) Procurement of ICT equipment and distributing them to schools

5.2.4 Role of the Higher Education and Research Institutions

For successful integration and implementation of ICT in Education, the Education and research institutions will be responsible for promoting ICT curricula that shall be used in training, developing competent human capital and relevant scientific research outputs for ICT development in Zanzibar. The training institutions shall be responsible for:

- a) Building capacity to education stakeholders (i.e. teachers, students, education managers and community members) on ICT related programs.
- b) Integration of ICT content as part of the curricula for all levels
- c) Adoption of relevant ICT infrastructure to support e-learning
- d) Conducting research and innovation on ICT
- e) Introduction of virtual learning facilities
- f) Promoting the local contents.

5.2.5 The roles and responsibilities of Heads of Schools

- a) Enforce the use of ICT for all teachers.
- b) Coordinate with the relevant Department on how to enhance the use of ICT in education through the implementation of ICT initiatives.
- c) Create, manage and organize a conducive environment for ICT in education.

- d) Monitor the performance of the school administrators, ICT coordinators and ICT technicians and ensure rectification is implemented if performance levels drop below the Educational standard.
- e) Evaluate and monitor teachers' utilization rate in relation to using ICT as an enabler for teaching and learning.
- f) Send periodic updates to the state level of the Ministry on the teachers' utilization rate of ICT as an enabler of education.
- g) Participate as part of a committee for measuring teachers' Key Performance Indicators in relation to teachers' performance in the deployment of ICT as an enabler for education

5.2.6 Roles and responsibilities of the Ministry responsible for RALGA

The Ministry responsible for Regional Administration and Local Government (RALGA) is the link between the Central Government and communities. This Ministry shall be responsible for providing conducive environment to local councils and schools for better implementation of this Policy at local government levels. The Local Council shall ensure that pre-primary and primary schools are provided with essential infrastructure and equipment for the implementation of ICT in the education Policy. Also, the council should recruit teachers of ICT for their schools.

5.2.7 Role of the Ministry Responsible for e-Government

The Ministry will be responsible for developing e-government policy and to facilitate its implementation in the Government institutions. The E-Government Agency will be responsible for harmonizing, coordinating, overseeing, promoting e-government initiatives across all public institutions and enforce set standards. It will use academic institutions in conducting ICT research and innovative approaches to support E-Education services and ensure that E-Government is rolled out for Education.

5.2.8 Role of the Ministry Responsible for Communication

For successful implementation of this Policy, the Ministry responsible for Communication has the following responsibilities:

- a) Put in place the necessary ICT infrastructure to foster the reliable connectivity to educational institutions and storage of their systems.
- b) Facilitation of technical advice and support on ICT related programs.
- c) Enabling physical accessibility for learning institutions.
- d) Regulate the ICT sector for public interest. Protect the interests of all ICT users and consumers as well as the public at large.
- e) Ensure that ICT providers and consumers obey the existing laws. Manage common national ICT resources effectively.

- f) Ensure that, where possible and necessary, ISPs meet their responsibilities and provide the services at set standards.
- g) Ensure that there is adequate information available to consumers on ICT issues and ensure destructive incidences to consumers are minimized.
- h) Develop a communication strategy to manage various issues that arise from technology.
- i) Develop special discounts for academic institutions to access the internet and other telecommunication services in a reasonable and affordable cost.

5.2.9 Role of the National Public Broadcasting Service

This service will be provided by the Zanzibar Broadcasting Corporation in collaboration with the Ministry responsible for Education by establishing a special educational channel and ensuring that multimedia education programs are developed and broadcasted.

5.2.10 Role of Private Broadcasting Services

Private Broadcasting service providers will be expected to provide a diversity of programming with an educational content and ensure the educational channel is freely available all the time in their decoders and contributes to job creation.

5.2.11 Role of the Community Broadcasting Services

Community broadcasting service providers, who are fully controlled by a non-profit entity, shall ensure they work closely with the Ministry responsible for education in supporting educational programs. They will be required to:

- a) Focus on the provision of programs that highlight community issues, including, but not limited to, developmental issues, health care, basic information, general education and environmental affairs.
- b) Ensure the educational channel is freely available all the time in their decoders and contributes to job creation.
- c) Connecting with public education channel during the broadcasting time.

5.2.12 Role of Development Partners

Development partners will play a complementary role towards realisation of development of goals and objectives of this policy. Within the ICT policy framework, the Government will foster linkages with various development partners to provide financial, material and technical assistance as well as build capacity for sustainability.

5.2.13 Role of the Civil Society Organizations

Civil Society Organizations play an important role in the social and economic development of the country in implementing this Policy. The civil society shall participate in creation of ICT awareness, transparency and accountability in matters pertaining to the ICT sector. They will be

to inform the policy making process by making relevant contributions with regard to ICT access, e-education, poverty reduction and e - Governance.

5.2.14 Role of Public-Private Partnerships (PPP)

Underway in many countries, the PPPs can be a very effective means of increasing support and securing resources for educational reforms. They also expedite the effective and efficient introduction of ICT in education. Recognizing that they have an important stake in the outcomes of the education system, increasing numbers of private and civil sector organizations are working with governments to help to achieve educational, economic and social development objectives.

In Zanzibar, partnerships with the private sector such as telecom companies and internet service providers (ISP) are already in place to facilitate the establishment of Internet connectivity in many communities and educational institutions. The development of PPPs will be essential to the timely and efficient implementation of the Zanzibar ICT Policy in Education. As such those responsible for implementation of this policy are encouraged, within the limits of current legal and regulatory frameworks to explore the establishment of partnerships with private and civil sector organizations to help expedite implementation of this policy.

5.2.15 Role of Media

Introducing changes and making them effective requires well prepared awareness programs to target community; and this is when Media comes into useful play and the following are expected out of them: -

- i. Prepare and air ICT related awareness programs
- ii. Publish periodic magazines with issues related to ICT development, effective use and associated risks both at national, regional and global scope.
- iii. Working closely with local ICT experts to translate awareness programs from other parts of the world that are yet relevant to our environment.
- iv. Promote live programs in relation to ICT issues and promote question and answer approaches.

CHAPTER SIX

MONITORING AND EVALUATION FRAMEWORK

6.0 Monitoring Framework

The Ministry is the lead agency and is responsible for the monitoring and evaluation of the implementation of the ICT in Education Policy at all levels of the education sector. There is need for a systematic Monitoring and Evaluation (M&E) of all activities. Monitoring and evaluation will be carried out for researching and developing ICT integration, to learn from past experiences, to improve implementation and service delivery, to assess and allocate resources, and to assess results. Annual and quarterly performance reports on ICT interventions will indicate whether or not the performance indicators are being achieved. An impact evaluation will help assess the transformation in the educational sector to embrace ICTs.

The focus is on:

- Working in close collaboration with key stakeholders to establish criteria, indicators and benchmarks for assessment of implementation and impact of ICT in education.
- Creating processes and systems that promote information sharing, equity, transparency, and accountability for all stakeholders in the implementation of this policy.
- Using ICTs to support the efforts of different stakeholders in monitoring the performance of the education process and institutions.
- Integrating EMIS in all stakeholders' activities for monitoring and evaluation.
- Conducting regular reviews and assessments of the value added and impact of the stakeholder's partnerships in the education system at all levels.

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