THE ROLE OF INTERNET COMMUNICATION IN THE PROCESS OF SOCIAL DEVELOPMENT DAR ES SALAAM

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Dedication

This research is dedicated to my family members, especially parents and my lovely sister Doris who have always tried their level best to give out the support. Mass communication practitioners especially those who are working hard to the community as to hold up the social development.

The work has also dedicated to all communicators in the society to whom the researcher believes should be respected, and all students that are struggle to study hard in order to come up with the new strategies in order to build up the practice of social communication through the uses of science and technology.

Student's declaration

I hereby declare that this work is original and has not been submitted to any college or university for an academic credit. The necessary information from other sources has been cited in full.

Signed

Francis alquin.
.....

FRANCIS ALQUIN
Student

Date.....

Approval

This study has been submitted for examination with my approval as the University supervisor

Signed

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MUDOOLA HERBERT
Supervisor

Date……..……

Abstract

Internet can potentially help break down some of the major barriers to developments that are presently faced by low income populations. They can provide *shared* access to information and communication technologies (ICTs) that can offer development services in a number of areas that can assist in the development process. However, with obstacle such as poor infrastructures, high prices and inconsistent legislation still many challenges have to be faced. This research is a Bachelor of Mass Communication for the Faculty of social sciences, Kampala International University.

The main goal of this research is to determine the role of internet communication in the process of social development in Dar es salaam, Tanzania. In order to reach this goal, the field study was performed in Dar es Salaam.

Since Internet cafés are the main access to the in Tanzania, they could provide basic access to services such as health and education. Moreover, they could provide relatively cheap and efficient way of communicating, considering the limited purchasing power and poor infrastructure in Tanzania. Nevertheless, increased interest in the Internet is not in line with increased awareness in terms of using the Internet for educational, commercial, social or political purposes. The existing business model of most Internet cafés is unsustainable and uneconomic.

This is due to the unrealistic charges for offered services, lack of reliable power supply, expensive bandwidth, connectivity down-time and high competition. This will result in the closing down of Internet cafés in the future. The current provision of courses and

training by Internet cafés in the use of computers and the Internet is very limited. Considering the limited ICT personnel in Tanzania, the internet cafés could be appropriate training centers as they are already equipped with the necessary ICT facilities.

Also in the field of education Internet could play a major part, given the absence of computers in Tanzanian schools. Besides, Internet could be a good alternative to the subsidized telecenters when connectivity is provided.

Due to an absence of a national IXP Tanzania lacks cheap and high capacity connections to the global Internet. The high cost of Internet bandwidth is passed on to the Internet cafés. Even though the price charged by these cafés for offered services is not extremely high, it could obstruct a certain group with limited financial means from using Internet cafés, hindering the further diffusion of the Internet.

The inconsistent ICT policies, the monopoly in fixed-line services and the lack of compensation for suffered losses is undermining further development of Internet cafés. This is also to the detriment of growth of the local ICT market.

List of abbreviations

COSTECH Tanzania Commission for Science and Technology

DIT Dar es Salaam Institute for Information Technology

ICT Information and Communication Technology

IDRC International Development Research Centre

ISP Internet Service Provider

ITU International Telecommunication Union

LAN Local Area Network

NGO Non-Governmental Organization

TCC Tanzania Communication Commission

TCL Tanzanian Telecommunication Company Limited

UCC University Computing Center

UDSM University of Dar es Salaam

UNDP United Nations Development Programme

UNESCO United Nations Educational, Scientific and Cultural Organization

US$ United States Dollar

VoIP Voice over Internet Protocol

UYOGA United Youth Generations of Africa

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CHAPTER ONE
INTRODUCTION

1.0 Background of the study

The Internet is central to the network revolution of the growth of a global network of computer networks as a result of the rapid development of the information and communication technologies (ICTs). Information and Communications Technologies (ICT) advances since the end of the 20th Century have led to multiple convergences of content, computing, telecommunications and broadcasting. It has impacted the way business is conducted, facilitated learning and knowledge sharing, generated global information flows, empowered citizens and communities in ways that have redefined governance, and have created significant wealth and economic growth resulting in a global information society.

Under the development of Internet services, Tanzania has made remarkable progress in organizing ICT, despite the 1974 Prohibition Order on Electronic Computers and Television Sets. The achievements were a result of various adjustments since the early nineties in policy, regulatory and commercial facets, both macroeconomic and within ICT's converging sectors. The private sector has actively contributed to these achievements by investing in among others, support facilities, training centres and sales outlets. These efforts have enabled government departments, institutions of learning, Non-Governmental Organisations (NGOs), as well as other entrepreneurs; acquire ICT solutions that address their individual problems most appropriately.

Tanzania achieved notable progress in deploying ICT despite the 1974 Prohibition Order on Electronic Computers and Television Sets. The achievements were a result of various adjustments since the early nineties in policy, regulatory and commercial facets, both macroeconomic and within ICT's converging sectors. The private sector has actively contributed to these achievements by investing in among others, support facilities, training centres and sales outlets. These efforts have enabled government departments,

institutions of learning, Non-Governmental Organisations (NGOs), as well as other entrepreneurs; acquire ICT solutions that address their individual problems most appropriately.

Currently very few educational institutions have computer laboratories and other multi-media facilities. These facilities are more in private schools than in public schools. Even fewer of these facilities are linked to the Internet. At universities and other institutions of higher learning, few computers are available for use by students and academic staff. However, they are not enough to meet the demand. Access to Online and distance learning for ICT is also still limited and in general, there is a shortage of well-qualified professionals of ICT in Tanzania. There are also no well-established ICT professional profiles, and a standardized process of evaluation or certification of the different courses offered by various training centres is lacking. Furthermore, opportunities for training are mostly limited to few urban centers.

Many Internet users Tanzania access the ICT through Internet Cafés. There is therefore a need to reduce barriers in deploying ICT and in developing the required human capital for sustainable participation of Tanzanian Society in the ICT industry. On the other hand, there is already a significant improvement in the penetration of fixed and mobile telephone lines and public pay-phones in urban centres. However, the available e-readiness evidence shows that there is a need to increase the availability of ICT as a result of the high current demand and burgeoning awareness.

There are a number of vibrant websites with the majority publishing local news on the Web, while others demonstrate some convergence by giving access to local radio programmes on the Internet. Despite the innovation of relatively few websites, the Web has yet to become a dominant medium for society to communicate, particularly because of the few websites that are in Kiswahili. However, an encouraging phenomenon is that Kiswahili is recognised as being the African language with the greatest Web presence.

There is sufficient evidence that several large organisations and companies make extensive use Internet access. The tourism sector makes heavy use Internet access to provide improved customer and information services.

Internet communication plays a lot into the social development where by it has involved among the particular needs of the human beings that they have to improve. For example; Education system, the health sector and Empowerment and participation

1.1 Statement of the problem

The lack of an overall policy and poor harmonisation of initiatives, has led to random adoption of different systems and standards, unnecessary duplication of effort, and waste of scarce resources, especially through the loss of potential synergies. Therefore, the National ICT policy deploys a broad-based national strategy to address Tanzania's developmental agenda.

As with the introduction of any broad societal innovation, there are a variety of potential barriers and stimuli to implementation, which can be technological, institutional, legal, or societal in nature. Furthermore, the importance and functionality of an Internet communication depend on decisions of individuals or organizations, made within the constraints of the existing technical and legal environment.

As a result a general picture could be drawn of the experiences with Internet services from Internet cafes, Dar es Salaam and the factors stimulating or impeding the functioning of the services. Finally, on basis of the results certain conclusions will be reached. In order to reach this goal the following research problem has been defined:
To be able to tackle this research problem a number of research questions have been formulated.

1.2 objectives of the study

To be able to tackle this research, this study has two sets of objectives namely the overall objective and specific objectives as further mentioned below:

1.2.1 Overall objective

To identify and analyse the state, Internet communication and the ICT policies regarding Internet access in Tanzania

1.2.2 Specific objectives

This will identify and analyze the role of internet communication on the socio development.

i) To find out the role of internet on the education system particularly ICT
ii) To assess the impact of internet on the health care processes
iii) To identify the role of internet into the cultural diversity
iv) Internet and social participation

1.3 Research questions

i) How has the education system been influenced by the internet communication?
ii) What could be the impact of internet communication on the health care?
iii) What extent are the cultural levels interacts by the uses of internet communication?
iv) Identify the role of internet in the fostering empowerment and participation?

1.4 The scope of the study

As regards the geographical coverage the study is going to be performed in, Dar es Salaam, The city has been divided into three municipal districts; *Kinondoni*, *Ilala* and *Temeke* with the estimated population of 3.5 million.

The Internet communication is so wide subject to be covered by this research. In view of the researcher is basically going to cover the roles of Internet in the process of social development in relation to the people of Dar es Salaam in urban and rural areas. The research is going to focus on the implementation of Internet services on the education

system in relation with (ICTs, health care, language and the cultural diversity. economic situation of Internet services, the education system in relation with (ICTs),

1.5 Significance

An Internet access can provide opportunities for different parties. Communities benefit because it gives them access to ICT. This access has the potential to empower communities so that they can play a part in their own development and make their voices heard. Governments benefit because ICT can help reduce poverty by empowering communities. Governments can also use Internet services to deliver many services, such as health education. In addition, it enables government to stay in touch with people in remote areas. The private sector also benefits because ICTs meet development objectives, and integrate isolated communities into the mainstream economy and society in a sustainable way.

Increasingly, this service brings opportunity which offers development services in a number of areas that can assist in the development process. For example,

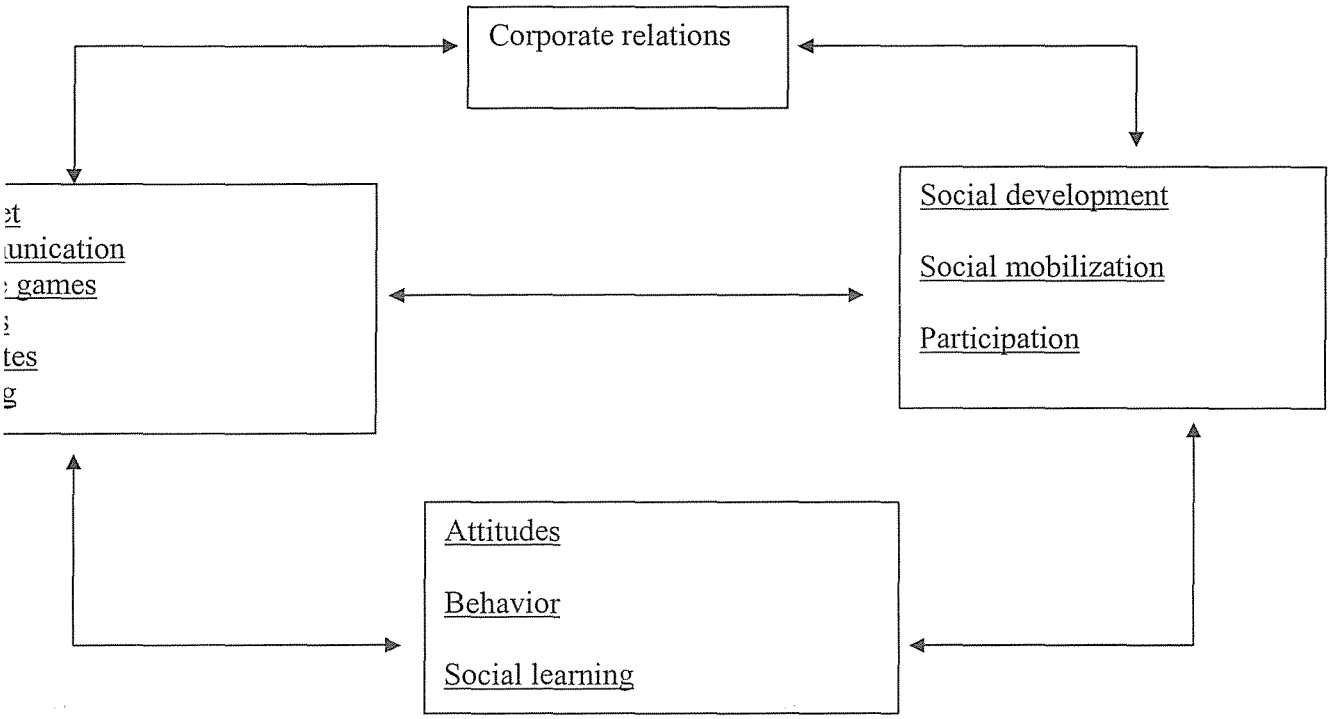
It is a way of sending messages between relatives and friends residing at distant locations but enabled by virtual proximity to provide technical, material, cultural, social or moral support.

It may mean access to open schools and universities, enabling people to study in areas where there are no facilities. Apart from that it may mean access to books, which can be downloaded and printed. It may be a way to obtain urgent medical advice in areas where there is no doctor.

It may mean a way to get support and information on agricultural projects, natural resource management and small business development. And it means being able to connect with government and other institutions: asking questions, raising concerns and sending complaints.

Furthermore, this research can provide a basis for other research concerning this topic in other areas in Tanzania.

1.6 Conceptual framework



1.7 Limitation

i. There is limited access to internet services by persons with no formal education, as a result of lack of training in English language, here by limiting culture integration in the usage and tactile of internet.

ii. Lack of a comprehensive policy to guide the planning and implementation of internet and social development

iii. Inadequate supply of documentation materials, by the information ministry has greatly hindered this research.

iv. Lack of a qualifications framework to link internet learners from non-formal users to formal users.

v. Many hard to reach communities/groups of people around the municipalities due to insufficient personal funds.

CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

This concerned the work of other people who have written about the subject of the internet communication. Many people have written on issues about the internet in dare s salaam, the role, the significances, the effects and other aspects of social development.

2.1 Internet and education

Pantaleon N Shoki, Afrol.com, 5 February (2003) The University of Dar Es Salaam also has an international data license. But this is only for a closed user-group comprising the University community and, as such, is not liable to the hefty license fees charged to commercial users. It is however precluded from re-sale to the general public.

Recently Jambonet has been launched with the objective of reaching those areas, which are not currently served by the present Internet services in order to make sure that more Tanzanians exploit the benefits offered by the Internet. The current concentration of Internet services is found in Dar es Salaam, Arusha and Mwanza. There is some radio-based email transmission in some rural parts of the country and most of this is religious institution such as the dioceses.

Balancing act October 23 (2007), COSTECH state that, The University of Dar es Salaam (UDSM) has set up a full Internet service for the campus with support from the Government of the Netherlands. The Post Office of Tanzania is planning a large VSAT network, which link 17 towns to Dar es Salaam.

The HealthNet node at Muhimbili University College of Health Sciences was the first email provider in the country

In developing countries, in particular, we see clear tendencies of increased concentration of information flows to urban and central areas (Wong, 2002; Mwesige, 2004). Economically disadvantaged countries and rural and peripheral districts within these

nations tend to fall further behind in human resource development as well as in economic progress and political participation and thus widening the intra-country or national digital divide.

Kling (1999) argued that Internet use is a question of social as well as technological access. Technological access refers to infrastructure and the physical availability of computer hardware and software, while social access refers to the mix of professional knowledge, economic resources, and technical skills required for the use of ICT. Chen & Wellman (2004) were looking at Internet use in eight countries: UK, US, Germany, Italy, Japan, Korea, China and Mexico. Across these eight countries, socioeconomic status, gender, life stage, and geographic location significantly affected people's access to and use of the Internet.

2.2 Government policy and the internet

Further more, the Government policy is a barrier to growth Shoki, Victoria, (2003) added that existing telecommunication policies and the state Telco monopoly are undermining the development of the Internet in Tanzania. This difficulty was highlighted in a recent public policy dialogue on ICT. Professor Beda Mutagahywa of the University of Dar Es Salaam urged policy-makers in Tanzania to create policy principles for convergent services that mix technology (unregulated and highly competitive) and content. KPMG's IT Director said at the same event that Tanzania lacked a policy backed by a appropriate legal and regulatory environment to stimulate investment in ICT development. These obstacles to Tanzania benefiting from ICT opportunities obstruct Tanzanians from fostering regional co-operation to harmonies regulation, increase competition, and rationalise usage of scarce bandwidth to the better good. Reliable power and technologies are hampering IT development, making costs of opening cyber cafes very high.

The Government has an eThinkTank (http://www.ethink.tz.com/), which was launched by David Sawe in the President's Office and Simbo Ntiro from KPMG. Also according to Derek Wyatt's report there is an ambitious project to offer greater online access using the spare capacity of the military's communications system.

Changes for the better in the ICT can only be achieved if the Government works wholeheartedly with the private sector. Companies dealing with computers have forecast a boom in Tanzania's Information Technology (IT) sector in the country in the coming few years due to the rapid changes caused by the transition from a socialist to market economy. Datel, Wilken Afsat, SITA and Simbanet are companies providing data communication services in the country.

2.3 Internet and telecommunication

Tanzania Telecoms Market Overview & Statistics 8 Dec (2006) argues that Tanzania has a fully competitive mobile sector comprising four networks and two fixed-line operators. The country's Internet market remains largely untapped owing to limited fixed-line infrastructure. However, following the partial privatization of the incumbent telco and the end of its monopoly in 2005, more pervasive fixed-line and Internet services can be expected, mainly driven by wireless systems. VoIP Internet telephony was liberalized under a new competition framework in 2005 and ADSL broadband services were introduced. A new submarine fibre optic cable to be launched in 2006 will dramatically improve Tanzania's international connectivity while the country's utility companies are preparing to sell capacity on their fibre networks.

2.4 Internet on health development

Pantaleon N Shoki, Afrol.com, 5 February (2003) states that The number of people transacting serious health, as well as law commerce, business is still very low. It is almost insignificant when one looks at the current literacy figures or the number of university graduates, most of who do not own e-mail accounts, let alone visit different websites for non-academic purposes.

2.5 Language and internet communication

Kling (1999)The study reveals that Internet users are more likely to be well-off and better educated than non-users and, that men are more likely than women both to access and to use the Internet regularly. In both developed and developing countries, the Internet penetration rate among younger people is substantially higher than that among older

people. Students who can get online via school connections make up a big share of Internet users in developing countries, and geographic location also affects access to and use of the Internet, with more affluent regions having higher Internet penetration rates than poorer ones. Moreover, the intersection of socio status, gender, age, language and geographic location tend to increase the digital divide in mutually reinforcing ways within and between countries. The largest gap is between better educated, affluent, younger, English speaking men in developed cities and less-educated, poor, older, non-English speaking women in underdeveloped rural areas.

According to UN ICT Task Force (2002), in Sub-Saharan African countries, the divide between urban and rural areas is even greater than in the rest of the world. Most of the services and users are concentrated in the towns, while the majority of Africans are scattered in small communities spread-out across vast rural areas. Very limited diffusion of the telecommunications networks into rural areas (often over 75 percent of the country's telephone lines are concentrated in the capital city) and irregular or non-existent electricity supplies are a common feature and a major barrier to the use of ICT, especially outside the major towns.

2.6 Internet into the cultural diversity

Issmaïl Nnafie (2002) study reveals that about 42% percent of the users they are either very or somewhat interested in recreational content such as games, movies and music. 18% responded they are either very or somewhat interested in pornography content. Though the interest in the latter content seems to be little, it turned out from own, friends', colleagues' and even administrators' experience that watching pornography is one of the major pastimes for most young and male users. This was also illustrated by this cartoon in the Guardian in September 2002.

2.7 Internet on social participation

This is the big blow to the development of internet communication industry in the country whereby so far only 2 percent of the total population have access to internet services according to UNDP Report released in 2006.According to a survey conducted by

an organization UYOGA, currently 60% of Internet Cafes in Dar have been closed down between January and September this year, marginalising the city with the rest of the world.

According to Center for International Development and Conflict Management (CIDCM) Cyber cafes around in Dar es Salaam and customers spend their time emailing friends and family, surfing the net, or making illegal Voice over IP calls. By some counts, there are more cyber cafes in Tanzania than in any other African country, yet is estimated that about 1% of the total population of the country as an Internet user. The advent of the Internet in Tanzania was made possible only because of political, economic, and social reforms in the country that in 1990 was the most socialized in Africa.

The critical issues in Tanzania since the introduction of the Internet to the country in 1990 have been negotiating the first satellite data transmissions, negotiating the structure and relationships between public and private industries involved in provision of telecommunications, negotiating government regulations of the sector, negotiations over the legality of voice over IP, and negotiations over a national internet exchange point.
In 1993, the government of Tanzania established independent regulatory agencies for broadcasting and telecom and agreed to the unbundling of telecom and postal organizations.

UN ICT Task Force (2002) this basis of theoretical and empirical studies will be used in the upcoming analysis of Tanzanian data to investigate if there are any differences in quantity or quality of public internet access points with their use and users. When studying the users, we have concentrated on, socio aspects.

2.8 The internet situation in Dar es Salaam

UYOGA, October 16, (2007) After experiencing mushrooming of internet cafes during the past five years, Dar es salaam city which is the country's biggest commercial city with an estimated population of nearly 4 million people now are suffering from heavy cost imposed by Internet providers, during that time players were forced in this sector and the

price was reduced to 500Tshs per hr, but today nearly half of them have been closed down. Weather this is measured by a number of internet cafés, that have been closed down in the last few years or the total number of people who have been locked out due to high costs of internet communication, the scenario is a big blow to Tanzania as well as Africa, where only 4 percent of the population have access to the internet.

A negotiation continues on this issue and donors are ready to assist in establishing an IXP for Tanzania. Despite all the problems associated with bringing the Internet to Tanzania, it has diffused rapidly in the capital and is beginning to diffuse to other major cities. Two factors continue to hamper the diffusion of the Internet across the country: cost and infrastructural capacity. http://www.cidcm.umd.edu/ntn/tanzania/summary_tanzania.pdf (CIDCM)

According to Tanzania ICT policy report (2003) Tanzania's tele-density is low, with the number of fixed and mobile cellular lines currently standing at 12 telephone lines per 1000 people (i.e. a teledensity of 1.2) and the number of mobile phone subscribers currently stands at 81 per 10,000 inhabitants. In contrast, the City of Dar es Salaam has 5 fixed lines and 10 mobile phone subscribers per 100 people. Tanzania's Public Switched Telephone Network (PSTN), using fibre optic, microwave and satellite-based links, is now over 95% digital. This paves the way for allowing the provision of new services enabled by ICT. The coverage of the network infrastructure is limited to urban areas and thus lack of telecommunications and other infrastructures in the rural areas remains a basic impediment to the provision of such new ICT services.

CHAPTER THREE
METHODOLOGY

3.0 Introduction

In this chapter empirical issues are formulated and determined. These issues with the purpose of finding out the socio-economic effects of the development of Internet communication in Dar es Salaam include the type and method of research, research design, study population, sampling, sample size, and the methods of data collection.

3.1 Research design

The research based on the quantitative method. It is basically a descriptive research design because it's to tell us how the people of Dar es Salaam are affected by the act of Internet communication.

The cross sectional survey research design is to used because the cross section of people are going to be respondents including those from urban and rural areas, student from schools and higher learning, across the organization affiliations, an occupational status among others in Dar es salaam.

3.2 Study population

Although it is very difficult to involve the whole population in this research because of time and money, the study population will cover the people from all three districts in Dar es Salaam, and all these must have an experience of Internet services, organizations and other relevant information different sources were consulted to gather information in Dar es Salaam.

3.3 Sample methods

Approach	Methods of data collection	Sampling methods	Sample size
Quantitative	Questionnaires	Cluster random	60 Secondary school & university students 10 Members of internet service providers 60 Internet cafes users
	Structured interviews	Simple random	20 Members of the healthcare NGOs

3.4 Sample techniques

The *cluster random* method and the *simple random* method are going to be used for the data collections. A list of questions is going to be given in *cluster random* to the respondents because many of them knows how to read and write besides it will be easy and less expensive to collect data from the groups of people, for example a group of the secondary school students. The purposes of collecting data through the *Simple random method is* basically going to be focused on collecting data from friends and colleagues where by the structured interviews will be done randomly because it allows conversation and it is an oral way of communication that helps the interviewee to understand well the questions.

3.5 Sampling

The sampling method is going to be used is the *cluster random*. This method involves the different groups of people where they can give out the results of the questionnaires according to their perceptions. As depending on the geographical position also the *simple random* method is going to be used in all the districts *Kinondoni, Ilala and Temeke*

3.6 Sample size

60 Secondary school & university students are going to be interviewed where by 20 from Ilala, 20 Kinondoni and 20 from Temeke.

10 Members of internet service providers from different organizations with the access of Internet services.

60 Internet cafes users where by 20 people in Kinondoni, 20 Ilala and 20 from Temeke will also given the list of questionnaires.

Members of the healthcare NGOs with the total of 20 will also be interviewed

3.7 Methods of data collection

Questionnaire, This method of data collection where by a written or printed form used in gathering information on some subject or subjects, consisting of a set of questions to be submitted to one or more persons. This method will be used to collect all data because the research will focus the respondents who know how to read and write.

Structured interview, This method of data collection that involves a conversation between the interviewer and the interviewee or a respondent for purpose of getting a particular data, will be used to collect data especially for those who are doing ICT, mobile Internet survives.

3.8 Data analysis

Data analysed is basically making sense out of the data by using different methods and techniques in order to meet the objectives of the study. The obtained data were analyzed and evaluated using the following data analysis, Programs like MS Excel,

Sample frequency distribution tables,

Percentages also has been used to make the data collected,

Qualitative and simple quantitative methods were also used and

Standard descriptive statistical techniques

CHAPTER FOUR
DISCUSSION OF RESULTS

4.0 Internet liberalization overview

Access and connectivity started when Liberalization of the Tanzanian telecommunication sector begun in 1993. Since then modest progress has been made in the expansion and modernisation of this sector. Despite this, substantial demand even for basic services remains unsatisfied and there is a disparity in the distribution of telecom facilities and services. Access is still predominantly in urban areas particularly Dar es Salaam.

Commercial Internet access was established in Tanzania in 1996, there are between 20,000 to 30,000 Internet subscribers in the country, with more users through corporate LANs. However, the main means of Internet access are Internet cafes. Though accurate figures are not available, the proliferation of Internet cafés indicates that there is a great and unsatisfied demand in the country for Internet access.

Traditionally, the business environment in Tanzania has been suffering from unclear tax regimes, corruption and other administrative barriers. The use of ICT, particularly computers, has been very limited for a long time. High import duties on computers (and software) made it difficult to acquire equipment. In 2001, the regulatory and tax regimes were revised which has led to a growth in the use of ICT by the private sector. Currently, many enterprises have set up websites and a couple of newspapers and other media are available on-line. However, the use of Internet by the private sector is in general still in the initial phase, employing the Internet for more advanced applications such as e-commerce is insignificant.

Furthermore, the number of people using the Internet for matters related to education, business, government, health, etc is still very low.

4.0.1 Internet Service Providers (ISPs)

There are currently 22 licensed ISPs in Tanzania, of which most of them are operating only in big cities such as Dar es Salaam, Arusha and Mwanza. The ISPs have an estimate subscriber base of 20,000 to30, 000. Mostly the big (ISPs) are Africa Online, Raha.com, Tele2 (Formerly Cyber Twiga), Cats-Net Ltd, Internet Africa, Habari Net Zanzinet, and UCC

The cost for Internet access is expensive considering the standard of living in Dar es Salaam. This is due to the scarce and extremely expensive Internet bandwidth, which is partially caused by a lack of agreement among ISPs on setting up a "neutral" national Internet Exchange Point (IXP). An IXP is the service that ISPs collectively establish to exchange local traffic from their respective backbone services without having to pass this traffic over costly, slower international links.

As a result, Tanzania lacks cheaper and high capacity connections to the global Internet and the country continues to lose considerable foreign exchange through payment of local traffic, which goes through international gateways such as Europe and the United States. This is an inappropriate use of scarce and expensive resource that increases the cost of local Internet access for users.

4.0.2 Internet cafes

As noted earlier, increased demand for Internet access has resulted in growth of Internet cafes in Dar es Salaam. Due to an absence of statistical records it is hard to find out the exactly number of these cafes. Statistical lists estimate that around 200 internet cafes in Dar es salaam.

4.2 ICT regulations

In Tanzania, just like in many other countries in the world, the reform and restructuring of the ICT sector started with the separation of regulatory functions from operational activities on one hand and the separation of postal services from telecommunications operations on the other. This process started with the Tanzania Communications Act in

1993, during which the Tanzanian Posts and Telecommunications Corporation (TPTC) was dissolved. TPTC, formerly the exclusive provider of telecommunications and postal services and the regulator of the sector, was replaced by the Tanzanian Telecommunication Company Limited (TTCL), the Tanzanian Postal Corporation (TPC) and the Tanzania Communications Commission (TCC). TCC was established as the postal and telecommunication regulator and manager of radio frequency spectrum in Tanzania. TTCL and TPC were established as commercial entities. Commercialization of TTCL, as well as the separation of postal and telecommunication operations, were considered as key initial steps in creating a competitive environment.

4.2.1 ICT Regulator

Since its establishment in 1994, TCC has made efforts to achieve the country's objective of developing an appropriate telecommunication infrastructure and creating a conducive regulatory environment for investment and encouraging competition. A number of licenses have been issued to telecommunication service providers in the country. They include basic telecom, mobile, data, Internet services and telecom equipment importers and installation.

All telecommunication services are provided competitively except for the basic fixed telephone services. The assessment of regulatory achievements in Tanzania is, however, ambiguous. Compared to other East-African countries, regulation is functioning well. TCC has been for more than seven years. Mobile telephony and the Internet are booming.

Privatization led to mobile telephony connectivity, through the telecommunication companies. Currently, there are five mobile licensed operators: Vodacom, Tigo, Zantel,, Celtel (operating as Zain)

Results show that majority (92%) of the surveyed users think that ICT is important for development, where by (98%) think that ICT could be used to improve education, healthcare (84%), transport and communication (90%), and business and service sector.

Other areas mentioned are tourism (66%), agriculture (58%) and industry (49%). The largest proportion (80%) of users considers education as of first priority for improvement.

4.3 The basic users

Almost 150 internet users were interviewed, 60 secondary and university students, 10 members of internet providers, 20 members of the healthcare NGOs and other 60 internet cafes users.

The survey on users of Internet cafés indicates Internet café usage is predominantly male (63% male and 37% female). Most of the users (69%) are single and (35%) are married, students (50%), businessmen/women 7%, professionals (23%), teacher (15%) and worker (5%).

Figure 1 Distribution of correspondents

Characteristic	**Total (N)**	**Frequency %**
All respondents	150	100
Sex of respondents		
Male	94	63
Female	56	37
Marital status		
Single	104	69
Married	46	31
Occupation		
Students	75	50
Businessmen/women	22	5
Professionals	35	23
Teacher	11	7
Worker	7	15

The findings show that, age distribution of correspondents the average of the users is 25.0 and the major age category is 15-25 with the total of (61%), as it is shown on the table 1.2

Age distribution of user

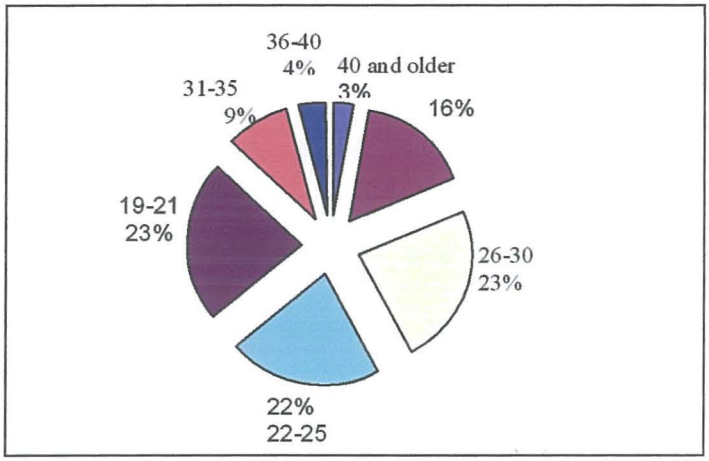


Figure 1.2 Age distribution of users

4.4 Education

The different components of the education system will be discussed from the uses of internet in education and ICT point of view. First, the passage of children from primary, secondary schools, colleges and universities and other will be addressed.

4.5 The situation of primary education

Almost all primary schools are public and some are private, of which only a very small proportion have electricity and fewer have telephones, and moreover, *there are almost low computer access in Dar es Salaam primary schools.*

4.6 The situation of secondary education

Secondary education suffers from problems of quantity, quality, access and participation. Despite the uses of computers, there is almost no ICT access in Dar es Salaam secondary schools

With regard to computers in schools, their presence is minimal. What computer access there is confined mostly to the private/elite schools, thus worsening the inequities,

however, curriculum for computer training in secondary schools is developed, which basically comprises computer applications and Internet use. There is also an official secondary school Computer Studies syllabus for forms 1-4, which was developed in 1996 and issued in 1997.

4.7 The situation of colleges and universities

The University of Dar es Salaam (UDSM) is the major tertiary level institution in Tanzania. Smaller, specialised universities and colleges exist in other parts of the country UDSM is increasingly engaged in offering ICT-based education tools, with the *University Computing Centre (UCC)* providing connectivity and Internet access to all UDSM entities. It operates a fibre-optic backbone on the whole campus and connects outside institutes with microwave links to this backbone. Moreover, it recently became the Tanzanian provider of the "CISCO Networking Academy" that offers standardised network administration modules.

Another supplier of technology related degrees is the *Dar es Salaam Institute for Information Technology (DIT).* DIT's vision is to become a centre of excellence in the fields of applied science and technology. It has a Department of Computing, a Department of Electronics and a Department of Telecommunications, offering degree and diploma courses in related subjects. Additionally, it offers professional training courses related to computer subjects.

4.8 Other training institutes

Most of the training providers are small and have a limited number of courses and seats available. Training is generally available on a short-term basis targeting customers who are looking for basic ICT knowledge. *Apart from UDSM, there are only a limited number of private ICT training providers offering ICT career education and advanced further education for ICT professionals.*

The study users are relatively well educated. Most (51%) have bachelors degree as highest level of education received. For 17% it is technical secondary education, 21% of secondary education, 3% primary education and 7% are postgraduates.

The level of internet users in education

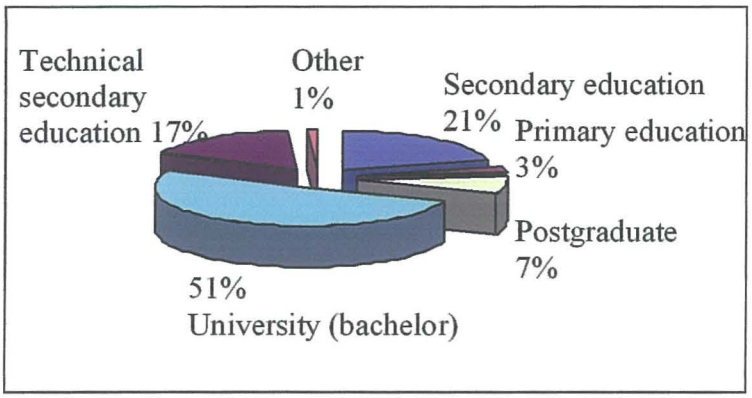


Figure 1.3 The level of education received by users.

4.9 Internet and culture

The penetration of the Internet in Tanzania differs from one country to another, depending on each country's government policy, legal and regulatory frameworks, competition among Internet service providers (ISPs), and pricing of telecommunications.

The cultural category is difficult to define exactly, but it consists of elements like motivation, attitudes (for example to information and technology), and religion. There is a very clear geographical digital divide between urban and rural areas in terms of public internet access points and access to the Internet.

The largest proportion is (76%) of the users believes the Internet has a positive impact on the Tanzanian culture. 20% think the impact is to some extent positive and 4% think it is negative.

Perceptions on the impact of culture

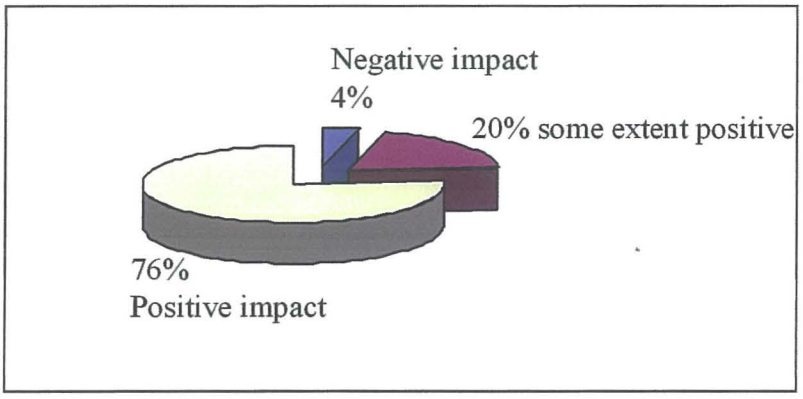
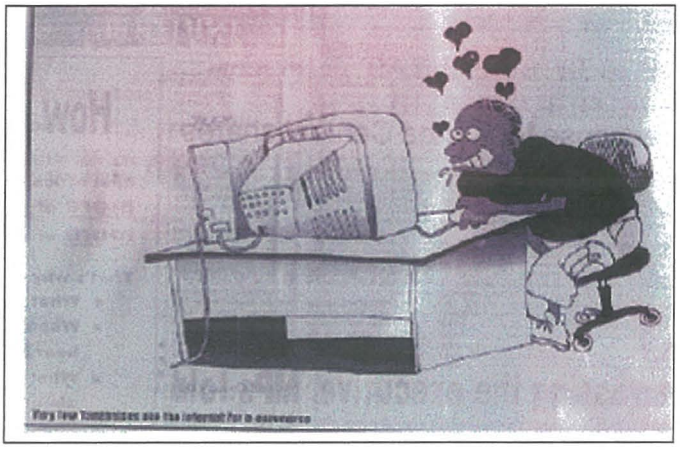


Figure 1.4 The impact of internet use on the cultural changes

Internet has affected many of the cultural expressions in Dar es Salaam, in particular, hip hop music and culture. The hip hop scene in Dar es Salaam articulates a blending of local cultural struggles and the indigenization of global influences. Hip hop music and culture arrived in Tanzania, taking its cues from various African American styling. The users highlight that Tanzanian hip hop's connection to US culture where it draws upon style, music, and look that is not restricted to any local region or language.

Through the internet, young people who seen the films, music and videos coming from outside and start break-dancing and rapping. The adaptations of language, fashion, style, and content within Dar es Salaam hip hop culture have evolved gradually. The result of this evolution has created a localized form of hip hop, often showcasing native dialectic lyrical performances and traditional garbs. While hip hop in Dar es Salaam is a clear reflection of Tanzanian localized struggle and culture, it also engages in and compromises with aspects of Western culture

However the internet supervisor's experience that watching pornography is one of the major pastimes for most young and male users. *This was also illustrated by this cartoon in the Guardian in September 20*, 2001



5.0 Internet for health

Internet user's perception declare that, ICT for health is being used in the few areas in Dar es Salaam, especially in the city centre and some of the big health centers to facilitate remote consultation, diagnosis and treatment. Nurses use digital cameras to download images of symptoms onto a computer and transfer them for examination by doctors.

However the use of internet in health sector is still very poor in Dar es Salaam, and even the whole country. Access to health services is low due to limited facilities (infrastructure and equipment), low availability of essential drugs, and limited number of personnel. However, in Tanzania malnutrition is still common particularly in rural areas and urban areas other than Dar es Salaam.

5.1 Internet for empowerment and participation

ICT contribute to fostering empowerment and participation and making government processes more efficient and transparent by encouraging communication and information sharing among people and organizations, and within government.

Here *development goals cannot be achieved by government efforts alone.* The involvement of civil society and the private sector is crucial**.** Computer network for government services and local information allows citizens to have faster and more transparent access to government services.

Through the uses of an email and ICT, the decision making is done by giving out ideas and views where by alternatively these are the *feedback* to the government or other institutions. All government authorities have got their websites with the email address as to allow people to give out feedback. But the results shows that, its rarely for the people to use internet (email) and ICT to communicate with the government authorities or institutions because most of the them are using telephone and other oral communication.

However a big number of people uses internet to communicate with the private institutions or organizations rather than government institutions where they also have website access. Media organizations are the mostly involved into the decision making where in most cases everyday they receive feedback from the people which depends on their programs that on the other hand contribute to the empowerment and participation. In Dar es Salaam.

Generally the internet users gave out the purposes of using internet where by it shows that; music (70%), chats and to keep in touch with friends or family (96%), study related to assignments (82%), buying and identifying products (60%) and job search (64%). keep in touch with friends (96%) search for information (35%) social participation (32%) commercial learning (13%) literary/artistic work (13%) academic learning (45%) and pornography (71%)

General purposes of using Internet

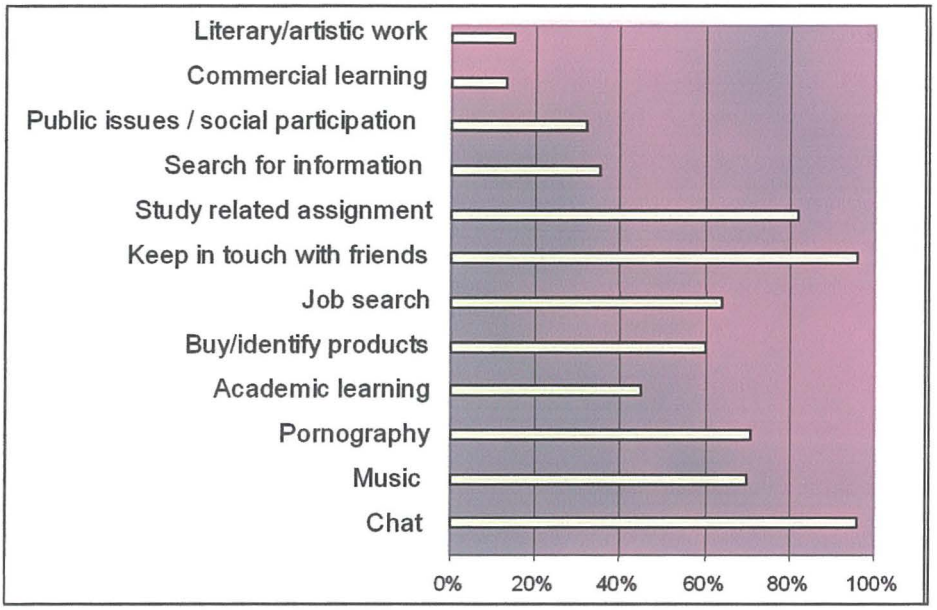


Figure 1.5 The general purposes of using Internet

CHAPTER FIVE
SUMMARY CONCLUSION AND RECOMENDATIONS

6.0 Introduction

The main goal of this research is to *determine the role of internet communication in the process of social development in Dar es Salaam*. In order to achieve this goal, a research problem was identified that was translated into a number of research questions.

6.1 Summary

6.1.1 Internet and ICT

ICT can be a great means to enhance socio development. However, it should be noted that ICT is not an isolated solution for the developing world's problems. Socio development depends on many factors that should be addressed through an overall development strategy.

The Internet could have unlimited potential to bring people together from across the world, facilitating basic services, such as health and education. It could also offer a relatively cheap and efficient way of communicating, and moreover, it could enhance the participation of backward economies in the global economy. Unfortunately, in developing countries Internet access is very limited, due to obstacles such as high prices, poor infrastructures and irrelevant content.

To overcome these obstacles, *telecenters* are being set up, offering public access to ICT services. But still many challenges have to be faced, such as the insufficient telecommunication infrastructure, illiteracy and funding. Moreover, there is a lack of awareness regarding the use of ICT, notably the Internet, which obstructs a sustainable and beneficial use of this new medium.

With the living of under 1$ per day of the population below the poverty line, Tanzania is among the world's poorest countries. Moreover, the Tanzanian education system is in a crisis and there are almost no computers in Tanzanian primary and secondary schools.

The *University of Dar es Salaam* and the *Dar es Salaam Institute for Information Technology* are the major institutions at the tertiary level which offer ICT-based education. Outside the formal education system there are several ICT training centers. Nevertheless, there is a lack of qualified instructors and job practice and moreover, the supply of ICT graduates does not match the demand for qualified ICT personnel in Tanzania.

With low teledensity, huge waiting lists for main lines and high local connection rates, Tanzania faces a huge task to modernize its ICT sector. The incumbent's network has still quality problems, which remains a basic impediment to the provision of ICT, particularly in rural areas. On the other hand, mobile telephony enjoys a strong growth, but the current tariffs are still too high for the majority of the population. There is a growing competition in the data market area, but most of the operators are only active in big cities.

Moreover, *Tanzania lacks cheaper and high capacity connections to the global Internet.* This is partially caused by a lack of agreement among ISPs on setting up a national IXP. The main constraints concerning local applications are the small size of the Tanzanian market and the small skilled capacity to support the ICT industry. In addition, the use of Internet by the private sector in Tanzania is still in the initial phase.

The Internet has yet to become a dominant medium for the Tanzanian society, particularly because of the relatively few websites available in Swahili.

The main means of Internet access are the Internet cafés. The proliferation of these cafés indicates that there is a great and unsatisfied demand in the country for Internet access. There are around 350 Internet cafés in the country, 120 of which are located in Dar es Salaam. The unsupported growth of Internet cafés shows that they could be a good alternative to the subsidized telecenters.

6.1.2 ICT regulations

TCC is the postal and telecommunication regulator and manager of radio spectrum in Tanzania.However, TCC's achievements are ambiguous. With inconsistent regulations and its lack of professionalism and trust, regulation is believed to be the greatest problem for business. Tanzania is currently underway to develop its own national ICT policy. On the other hand, the document lacks specificity and clarity and furthermore, it does not present realistic and matching strategies on how to achieve its objectives.

The most prominent initiative to develop a comprehensive national ICT framework is the ethink-tank, which consists of industry representatives, government officials and donor organizations. The ethink-tank is being seen as a very useful initiative for Tanzania's ICT development, and is rapidly becoming an influential focal point for ICT-related issues in the country.

Though Tanzania has experienced a very rapid growth in Internet cafés, the government has been slow to encourage further investment. Existing ICT policies and TTCL's monopoly are undermining further development. Furthermore, the lack of reliable power supply and the expensive bandwidth are making costs of opening or maintaining Internet cafés very high. But worse still are the periods of connectivity down-time, without any realizable service obligations on their Electricity Company or ISP to refund the café for periods of down-time. This will result in the closing down of Internet cafés in the future

6.1.3 The users

Results indicate that users are predominantly male, young and relatively well-educated with an average income much higher than the average in Tanzania. Also it turns out that most users have neither a computer nor an Internet connection at home.
Most users use Internet primarily for communication. Computer is the most used equipment and e-mail and chat the most used services. Furthermore, Internet telephony is used and like the administrators, most users want the prohibition of Internet telephony abolished.

Assessment of the interests in various contents on the Internet shows that in general increased access to the Internet is not in line with increased awareness in terms of using the Internet for educational, commercial, social or political purposes.

Conclusion

Since Internet cafés are the main access to the Internet in Tanzania, they provide basic access to services such as health and education. Moreover, they could provide relatively cheap and efficient way of communicating, considering the limited purchasing power and poor infrastructure in Tanzania. However, increased interest in the Internet is not in line with increased awareness in terms of using the Internet for educational, commercial, social or political purposes.

Internet is very limited, considering the limited ICT personnel in Tanzania, increasingly the internet access in Tanzania could be appropriate, if training centers are already equipped with the necessary ICT facilities. Also in the field of education Internet cafés could play a major part, given the absence of computers in Tanzanian schools. Furthermore, Internet is a good alternative to the subsidized telecenters when connectivity is provided.

7.0 Recommendations

The recommendations are directed to the party best able to act on the problems. These parties include:

7.1 Internet users

Internet users should be made aware of the potentials the Internet could have. It is not for communication and entertainment only. Instead, *it is a powerful and cheap resource that can be used for learning, education, research, commerce, employment, discussions, exploring the world and other cultures and above all, to make one heard.* Concerned parties should think of ways to increase the awareness among users in order to get the most out of the Internet.

7.2 Empowerment and participation

Very few know about the existence of the Government telecom regulator TCC and the Tanzania national website. For that reason, the regulator should propagate itself more strongly to the general public in order to build trust and to create an atmosphere of transparency and responsibility. By doing so, the gap between policymakers and the community could be reduced, which could initiate better and more efficient policymaking.

Users should be encouraged and stimulated to start up a discussion forum on the Internet where they could express their concerns, share and discuss ideas about certain topics such as the Internet, policies, moral values, ethical issues and received services. In addition, this forum could serve as an important medium to keep policymakers notified about current developments and views within the community. Also, it might be used by policymakers themselves to inform the community about specific matters.

7.3 The internet and culture

More websites with Swahili and local relevant content should be designed as *it might be an essential medium for the Tanzanian society to communicate.* Furthermore, it could be an efficient and cheap way for governments, NGOs, institutions, companies etc. to provide information on relevant topics such as health, poverty, education, politics, culture, and business.

7.4 ICT and schools

Since there is a shortage of ICT facilities at schools, it might be opportunities for these schools to cooperate closely with Internet cafés since the latter already have the necessary facilities. Schools, Internet cafés and other concerned parties should discuss arrangements and develop methods on how to utilize these cafés for educational purposes. For example, students might be given assignments which they carry out in Internet cafés. By doing so, students will not only get familiar with the Internet but also with its practical use such as for educational purposes.

7.5 Health

Since there is a shortage of IT-skilled people and training centers in Dar es Salaam, ICT access should be stimulated and encouraged to offer the health courses in the use of computers, applications and the Internet. This will also improve the health sector and the financial situation. Funds and resources must be sought in order to finance the necessary requirements.

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United Nations: www.un.org/millennium/

University Computing Center: www.ucc.co.tz

University of Dar es Salaam: www.udsm.ac.tz

Appendix 1. Questionnaire

1. Sex: Male [ ] Female Age: [ ]

2. Occupation:
[ ] Student
[ ] worker
[ ] businessman/women
[ ] professional

3. Highest level of school attained:
[ ] None [ ] Primary education
Secondary education:
[ ] Ordinary level (1-4) [ ] Advanced level (high school, 5-6)
Technical secondary education:
[ ] Vocational training [ ] Advanced diploma level
Colleges
[ ] University (bachelor)
[ ] Postgraduate .
[ ] Other, *namely:* .....

4. For which purposes do you use the Internet services?
Study related assignments [ ] Keep in touch with friends/family [ ]
Social participation [ ] Pornography (x-pics/movies etc) [ ]
Job search [ ] Academic learning (math, languages etc) [ ]
Buy/identify products via Internet [ ] Literary/artistic work [ ]
Music [ ]
Chat [ ]
Commercial learning [ ]

Other use, *namely:* .....

5. Where do you use the Internet services?
[ ] At home [ ] In office [ ] In Internet Café
[ ] University/School [ ] Library [ ] Elsewhere, in.....

6. Do you search for information on the Internet? [ ] Yes [ ] No *(skip next*

7. Do you use email (internet) for any participation for the social development? How?

8. What is your perception? the uses of internet in Dar es salaam on health care/services is
[ ] good [ ] very good [ ] moderate [ ] poor [ ] very poor
Why?.....

10. What is your perception, the impact of the Internet on cultural changes is...
[ ] Strongly negative [ ] somewhat [ ] strongly positive
[ ] Negative [ ] Positive
Why.....

11 What is your perception, of the internet liberalization, ICT regulations?

12. Optional:

If you wish, you can give your e-mail address. It will be used exceptionally, in case it is necessary to make some corrections. It will also allow us to inform you, once this study is finished, where you can find the results
on the Internet. In any case, your address will not be given nor used for commercial purposes.
E-mail: .....

Thank you for taking the time to fill in this questionnaire.

Appendix 2, Glossary of ICT terms

Dial-Up connection

A Dial-Up connection refers to an Internet connection over a phone line where one must dial the phone number of an ISP. Each dial-up customer shares the ISP's bank of modems with the entire ISP's other dial-up customers, which is a more efficient use of the ISP's resources.

Integrated Services Digital Network (ISDN)

ISDN is a set of standards for digital transmission over ordinary telephone copperwire as well as over other media. In concept ISDN is the integration of both analog or voice data together with digital data over the same network.

Internet Protocol (IP)

IP is the method or protocol by which data is sent from one computer to another on the Internet. Each computer (known as a host) on the Internet has at least one IP address that uniquely identifies it from all other computers on the Internet.

Internet Service Provider (ISP)

An ISP Internet Service Provider is a company that provides individuals and other companies access to the Internet and other related services such as website building and virtual hosting.

Leased line

A leased line is a permanent connection made between 2 locations. In effect it is a telephone line that is open all of the time, but rather than paying for it by the minute and second as one would for a normal telephone or ISDN connection, a leased line is rented by the month or year.

Local Area Network (LAN)

A LAN is a group of computers and associated devices that share a common communications line and typically share the resources of a single processor or server within a small geographic area (for example, within an office building).

Modem

A modem modulates outgoing digital signals from a computer or other digital device to analog signals for a conventional copper twisted pair telephone line and demodulates the incoming analog signal and converts it to a digital signal for the digital device.

Appendix 3, Figure 1 Distribution of correspondents

Appendix 4, Figure 1.2 Age distribution of users

Appendix 5, Figure 1.3 The level of education received by users.

Appendix 6, Figure 1.4 The impact of internet use on the cultural changes

Appendix 7, Figure 1.5 The general purposes of using Internet

Appendix 8, A map of Dar es Salaam