

THE ROLE OF ONLINE COMMUNICATION ON SOCIAL DEVELOPMENT IN MASERU (LESOTHO)

By

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ABSTRACT

The Role of online Communication on Social Development in Maseru (Lesotho)

Majority of developing societies are usually succumbing to numerous socio-economic challenges. Communities in Maseru, the capital of Lesotho, are not excluded from this trend. Online collaborations are consequently at the heart of addressing these challenges.

This study examines the probability of encouraging and engaging online communication for social and economic development in Maseru. The promises of online communication for transforming society and advancing the new economy have rested on the arguments that online communication could expand and widen access to electronic commerce, enhance the quality of distance education, improve the general quality and standard of living, and eventually improve the economy of Maseru. Information Communication Technologies (ICTs) are very powerful tools for diffusing knowledge and information to society which is a fundamental aspect of the development process.

The presence of new communication technologies has a greater influence on human lives than we ever thought. It is imperative that every community in Lesotho examines ways and means of adopting their information communication technology (ICT) infrastructure as soon as possible or face the possibility of social and economic stagnation and isolation. The Internet has ushered in innovative ways of socialising and conducting business. Although it has, through the process of globalization, created a wide space to engage in business and eradicate poverty, many societies are still isolated. There are many reasons for this which could range from voluntary isolation, inadequate infrastructure, ignorance or sheer laziness.

The study was conducted within the paradigm of both qualitative and quantitative methods. Stratified and simple random sampling techniques were used and this allowed the researcher to divide the population of Maseru into various Strata. This research explored why Maseru is slow to adopt ICTs to enhance their economic and social development. Revelations from the study will benefit this community and will also assist in making recommendations for overcoming economic and social decline.

DECLARATION

I, Lelingoana Benedict Lerotholi, declare that this dissertation, The Role of Online Communication on Social and Economic Development in Maseru (Lesotho), is my original work and that no part of the study is plagiarised. Where necessary, credit has been given to authors when their works were used or cited. A bibliography has been provided to indicate references which have been used.

Lelingoana Benedict Lerotholi

Date

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- And finally, all my counterparts for emotional support at all times.

WRITING CONVENTION

Let me draw the reader's attention to the following writing convention, which I am using in the thesis:

I used the abbreviated Harvard style of referencing in this study. For instance, Watson (2008:23), meaning Watson, 2008, page 23.

I have used the words (ICTs and internet), (electronic and online messages through computer and cell phones) as though they mean the same or more less the same in the project.

The graphical representation of data has all been written as either graphs or tables, and it has been presented according to the order of appearance in the study.

I have made great effort to limit the use of footnotes in order to make easier the uninterrupted reading of the study.

I have made use of full terms in headings instead of commonly used terms. I have used Acronyms in paragraphs.

The bibliography has been organised alphabetically.

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LIST OF ACRONYMS

ABC: Atanasoff – Berry Computer

ARPANET: Advanced Research Projects Agency Network

AU: African Union

BOS: Bureau of Statistics

CMC: Computer Mediated Communication

DID: Department of International Development

DOD: Department of Defense

G2C: Government to Citizens

G2G: Government to Government

GNP: Gross National Product

ICTD: Information and Communication Technologies and Development

IP: Internet Protocol

ITU: International Telecommunications Union

LAN: Local Area Network

LCA: Lesotho Communication Authority

MNP: Mobile Number Portability

NET: Networked Readiness Index

NEPAD: The New Partnership for Africa's Development

OSISA: Open Society Initiative for Southern Africa

RAM Southern African Development Community: Random Access Memory

SACU: Southern Africa Customs Union

SADC: Southern African Development Community

SMBs: Small and Medium Businesses

TAM: Technology Acceptance Model

UK: United Kingdom

US: United States

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNCSTD: United Nations Commission on Science and Technology for Development

UNDP: United Nations Development Program

VSATS: Very Small Aperture

WSIS: World Summit on Information Society

WWW: World Wide Web

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CHAPTER1

ORIENTATION

INTRODUCTION

According to Hernandez (2009) technology, especially new communication technology has revolutionised the way in which many communities do business and interact socially. Globalisation has become a reality even to the most remote villages. While most communities have displayed exponential growth and development in all aspects of life, Maseru has displayed little or no social and economic advancements in the past decade (Embassy of United States, 2010).

Scholars argue that new media is an essential tool for transformation, and this ideology is gaining momentum in most countries and cities around the world. According to Internet World Stats (2010) only 4% of the population in Lesotho is exposed to the internet and only 0.7% of the population uses the social media. The Maseru community, sadly, has not yet adopted a Technology Acceptance Model (TAM).

This study examines the probability of engaging online communication for social and economic development in Maseru.

MOTIVATION FOR THE STUDY

According to Snyman (2010) information facilities in most of the organisations are inadequate in Africa. Hafkin & Menou (2006) maintain that lack of solid network communications system has direct financial and development implications on societies. These implications are visible characteristics of Maseru city.

The process of development is directly associated with technological advancements in human civilization. Over the years, technological developments have enhanced social and economic situations. Because of government's work and public administration, digital communication plays a pivotal role in modernising government and the citizens (Snyman 2010). Hernandez

(2009) maintains that enhanced network structures are necessary for social and economic development. However, technological connectivity is appallingly undeveloped in Maseru, and this is the woe of the past as well as the present.

Like many other growing cities, Maseru faces numerous economic, social and educational problems. The role of communication, in particular network communication, remains central to addressing these challenges. The power of computer mediated communication serves as a tool that eventually liberates societies from challenges. Durrant (1996) states that the application of communication technologies has demonstrated social benefits in the following areas of education, health and community development.

Due to poor internet connectivity in Maseru, the business sector bears the brunt of profit loss, which could be generated through electronic advertising. Individuals are also affected in a number of ways. The impact of internet communications according to Durrant (1996) can also be seen in airline reservations, stock purchases and bank transfers across the globe. The cyber world gives greater opportunity for public interaction and participation, thus enhancing general development. Maseru's development has stagnated over the years as a result of poor electronic communication practices.

This study is vital as it seeks to find ways of improving communication practices with the view to enhancing economic and social growth in an otherwise failing economy. If neglected, Maseru would, perhaps, continue to be dependent on its neighbours for hand-outs and other humanitarian services

THE PROBLEM AND ITS SETTING

Similar to many of African countries, excluding Egypt, South Africa, Tunisia and Rwanda, poor and insufficient internet connectivity has always been a mammoth challenge facing Maseru. Despite efforts made in recent years to address this issue, the overwhelming numbers of people still do not seem to take an initiative to improve internet access in Maseru. There should be adequate and visible initiatives on the part of the citizens. The government through its policies should also be fully committed to adopting and applying ICT policy. Computer-mediated

communication is still not viewed as a vital need. The consequences of this situation are more visible in the economic, social, environmental and educational affairs of the country. According to Nevil (2009) there are currently only 6 internet service providers (ISPs) and just over 28 internet cafés throughout the country of about 2 million people.

While many scholars agree that information communication technologies are directly associated with economic and social growth, the community of Maseru has still not yet accepted the need to enhance its information communication technology, and therefore remains primitive. The reasons behind these could be absence of policies or financial constraints. Inadequate and poor internet services have negative impacts on various sectors of the economy. Durrant (1996) states that the shortage of electronic communication facilities has placed financial implications on both corporate sector and ordinary individuals. He further states that human development cannot be realised without technology in place. This study will establish the relationship between electronic networking and human development. The central focus will be to explore how Maseru can use information communication technologies to its advantage in educational, social and economic developments.

CRITICAL QUESTIONS TO BE ANSWERED

The study seeks to answer the following critical questions:

- Is Maseru community aware of the benefits of Information Communication Technology?
- What issues prevent the acceptance of technology usage in Maseru?
- What proportion of the youth in Maseru is adequately exposed to the internet?
- Are there systems in place to educate the youth about the use of internet?
- What traditional communication practices are still being used by traders in Maseru to do business?
- If any, what role does the internet play in trading in Maseru?

OBJECTIVES

- To determine if the Maseru community is aware of the benefits of Information Communication Technology.
- To determine the issues which prevent the acceptance of technology usage in Maseru.
- To determine if Lesotho is adequately educating its children about Information Communication Technology (ICT).
- To determine if there are adequate public internet facilities for the community to acquaint themselves with the use of Information Communication Technology.
- To determine why traditional communication practices are still being used by business houses in Maseru.
- To determine if the internet plays any significant role in Maseru at all.

THE VALUE OF THE STUDY

It is hoped that this research will expose unexplored benefits of ICT usage for the Maseru community. The study will add meaningful value to the society because it will be used to measure and enhance economic and social growth in the community. Further, the study would be used to design a technology acceptance model for Maseru. Technology acceptance model (TAM) is an information systems' theory which models how the users accept and make use of any particular form of technology. Finally, this study will be useful to other researchers who may be interested in the development of similar cities.

RESEARCH METHODOLOGY

Bless *et al.* (2002:18) note that research methodology basically deals with researcher's approach to the entire research process. This research study will employ both qualitative and quantitative approaches. The combination of these will eventually ensure adequate and meaningful data to all.

This research study will be conducted in the capital city Maseru in Lesotho. People's perception of network communications will be surveyed. The survey will also consider the community's attitude towards the use of ICTs.

Stratified random sampling technique will be used to organise the community of Maseru into different categories. In this research study, the target population will specifically be the youth, organisations and communication practitioners who in different ways contribute in the communication activities.

Collection of data in a research study involves capturing or gathering data for the study (*Bless et al.* 2002). Data in this survey will be captured by means of a comprehensive literature review as well as the administration of in-depth questionnaires. These questionnaires will be tested by the supervisor and other professionals in the fields of communication and determine if the data tool will sufficiently assess what the study hopes to attain.

Semi-structured interviews with communication professionals and relevant stakeholders will be done. This will provide adequacy of data capturing.

In order to conceptualise this survey, the theoretical method will utilise the communication model for development suggested by Marsham & Skinner (1999:84). This model permits for a holistic approach to assess the various components of the communication process. The process also includes an analytical view of the communicator, alongside the receiver. Moreover, the process attempts to analyse the content of the message and the signs and symbols of the coding process, collaborations between those taking part, media implemented in the process, interpretation and expressions of messages, the socio-cultural situation of communicators and recipients in the broader background.

The main tool for collecting data will be the questionnaire and semi-structured interviews. Finally, opinions from the respondents will be encoded and analysed in the statistical software program called MoonStats.

ETHICAL REQUIREMENTS

All the interview schedules will be communicated in advance to the concerned interviewees. Estimations of the interview's duration will also be done. The researcher will inform the respondents that the information will remain confidential, and it will not be associated with any individual when the results are officially published in the thesis.

LIMITATION OF THE STUDY

The study will be based in Maseru. Findings and recommendations will not be generalised for use in other developing countries. However, they can be used as guidelines.

CONCLUSION

This chapter attempted to provide an outline of the basis of the study. The section has also provided an outline of the study objectives, problem statement as well as the study significance. The section further provided the limitations, methodology and study limitations. Critical questions to be answered are also provided. The subsequent chapter deals with social communication.

CHAPTER 2

COMMUNICATION

INTRODUCTION

This chapter presents foundational communication issues relating to the research. These issues are related to social communication and community communication practices. The purpose of this chapter is to provide an overview of the communication concepts that provide relevance to this research study. The communication process is discussed and thereafter computer-mediated communication as a means of development is examined. Subsequently, a communication strategy will be analysed together with the technology acceptance model.

COMMUNICATION PROCESS

Human beings have communicated from the very beginnings of times. They spend most of their time communicating more than any other behaviour. According to Williams (1992:21-22), communication is about the exchange of meaningful symbols (messages) between a source and a receiver through a medium. De Beer (1998: 8) notes that the purpose of communication is found in the way human beings interact. He states that it is the need to discover, relate, persuade and play. Communication is essential for one to express his/her feelings about, among other things, what he/she needs or desires. The communicated information must be able to bring about the desired outcome. Both the communicator and recipient must be actively involved in the exchange of meaningful messages.

COMMUNICATION BY OBJECTIVES

The communication-by-objectives approach is a method of communication that breaks the message development process into three major steps (Rico, 2010). These steps include planning a message, composing a draft, and completing a message. Each communication by objectives includes four specific objectives. Communication objectives are important because they serve as a benchmark of communication in any medium. Stanton (2004: 1) maintains that whether we are writing or speaking, trying to persuade, inform, entertain, explain, convince or educate, or to

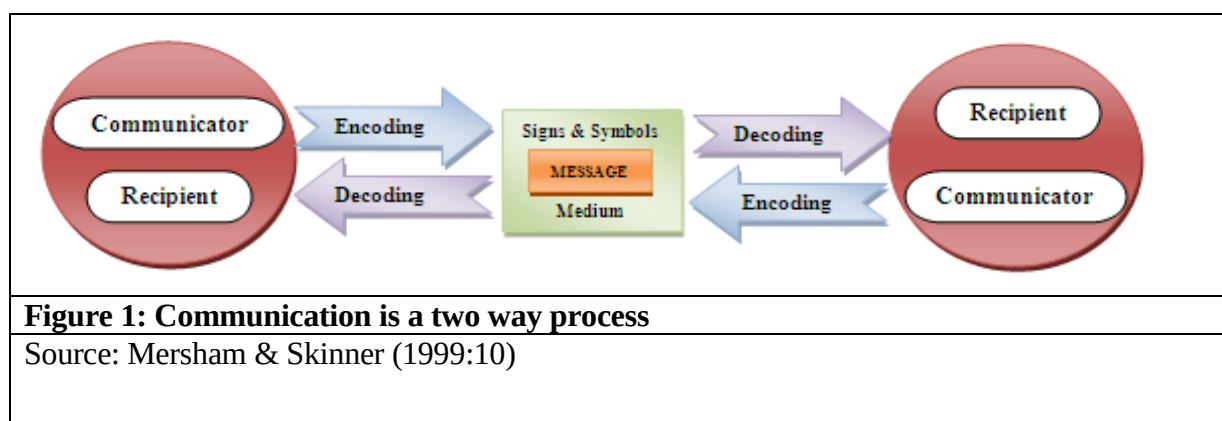
achieve any other objective behind a particular communication activity in which we are engaged, we always have one or a combination of four general objectives in our minds. The objectives thus include the message being received in one form or another, being understood, being accepted, as well as changing the behaviour or attitude of the recipient.

COMMUNICATION CODES

Communication codes are a collection of related signs and/or symbols and the rules that regulate their use in communication. The codes express messages. They are diverse, and may be similar but have different meanings to different groups. Words, for example, are signs or symbols and grammar is a set of rules that regulate their use (Mersham & Skinner 1999:17). Codes, in communication, are a set of symbols and rules of manipulation by which the symbols can be made to carry meaningful information. According to this extended definition, all written and spoken languages are codes.

COMMUNICATION IS A TRANSACTION

According to Sandra & Weaver (2007: 13) a communication transaction is not only about the physical act of communicating, but also a psychological act. The authors argue that impressions are being formed in the minds of the people who are in the process of communication. They state that what people think and know about one another directly affects how they communicate.



Transactional communication basically involves three important principles: Firstly, people engaged in communication are sending messages continuously and simultaneously; secondly, communication events have a past, present, and future; and thirdly, participants in the

communication process play certain roles. The roles that are played by communication participants include encoding, decoding and interpretation (Saundra & Weaver 2007: 13).

COMMUNICATION ROLE

Communication plays a very crucial role in promoting human development in the present-day new climate of social change. Conditions are becoming more conducive for people to start controlling their own course of change as the world becomes more democratic, decentralised, and the economy is market driven. However, it is of great importance to stimulate people's awareness, participation and confidence in their capabilities. Communication and technological skills are central in this task, but they are often under-utilized (Fraser & Villet 1994).

According to Steinberg (2007: 19) people communicate with a purpose in mind, and the most important purpose is to satisfy a personal or social need. He notes that sometimes people need the active co-operation of others to achieve this purpose. For example, asking a patient to 'take a deep breath' enables a doctor to examine for a lung infection.

As mentioned by Steinberg, people communicate with other people in order to satisfy physical and psychological needs. Without at least some interaction with others, most people would suffer serious consequences, such as hallucinations and a loss of our sense of time and space (Steinberg 2007).

The author further notes that communication develops and maintains relationships with others. Relationship in this context refers to any connection, involvement or association of two people, regardless of its source. He also states that people need the love and friendliness of family and friends, together with the co-operation of those in their workplace and social groups, to feel secure around them.

On the role that information plays in the society, Steinberg is of the opinion that people cannot function well in a society without information. Thus, information is one of the driving forces of communication. People obtain and share information for specific reasons. People look for information because they need to know and understand what is going on around them and in other parts of the world.

Decision-making is another driving force of communication. Some decisions can be reached together with others. Such decisions may include community concerns such as access to good health services. Whatever the context, people communicate to obtain and share information that enables them to make informed decisions. At times people need specialised information to draw a conclusion. Other reasons for us communicating with others include persuading them and understanding ourselves better (Steinberg 2007: 20-21).

VERBAL AND NON-VERBAL COMMUNICATION

Communication, according to communication scholars, comes in two forms. These are verbal and non-verbal communication. According to Steinberg (2007: 41) verbal communication entails the use of spoken or written signs called ‘words’ which make up a particular language, such as Dutch or English. Steinberg (2006: 58) on the other hand, describes non-verbal communication as the term that incorporates all human interaction that is not written or spoken. The author states that non-verbal communication involves a wide range of human actions such as body movement, eye contact, and facial expression, as well as the use of touch and space, and tone of voice. Non-verbal communication plays an important role in all human encounters.

SEMIOTICS

Semiotics is the study of how society creates meanings and values of a communication system (De Saussure 1998: 10). The term semiotics derives from the Greek word *semion*, which means sign. According to the author, a sign has a special meaning which is intertwined with our social and cultural values. This author states that language and other symbolic systems like music and images are sign systems. He further goes on to say that these are sign systems because they are governed by rules and conventions that can be easily learnt and shared in a particular community.

Ferdinand & Pierce (1994: 20) define semiotics as ‘the theory and study of signs and symbols, in particular as elements of language or other systems of communication, and comprising semantics, syntactics, and pragmatics’. Watson (2008: 49) defines semiotics as the scientific study of signs and sign systems, which he also calls semiology. The author postulates that the

sign systems are in text form. He also maintains that it is the text and its meaning that attracts the most interest.

Semiotics according to Fourie (2007: 148) is the study of signs and codes - how signs and codes convey a message. Fourie points out that the aim of media semiotics is to sharpen our critical awareness of the ways in which the media manoeuvre or use signs and codes to reflect, represent and imitate aspects of reality with the purpose of giving a specific meaning - usually guided by an underlying ideology or viewpoint.

Fourie further notes that the point of departure of media semiotics is that media content itself is not reality. Thus, in these representations, signs and codes are combined in a structured way to convey the specific meanings the media wish to establish about reality. Watson (2008: 55) concurs by saying that the media present a very specific, complex sign system in the manner that they accommodate numerous other sign systems. The assignment of meaning is clearly a process in this regard. What is noteworthy is the fact that all forms of communication use signs and codes. Fourie (2007: 149) argues that the basic building blocks of the semiotic approach are a focus on signs, sign systems, codes and their meaning.

BASIC ELEMENTS OF SEMIOLOGY

Semiotics separates sign functions for social analysis; thus leading to the co-existence of the signifier and signified. It is very important to note that what enables a sign to function as a complete unit of social meaning is a code. The code can be viewed as the rule for combining a sensory impression with cognitive content and the basic signifiers in a language into a meaningful system (De Saussure 1998).

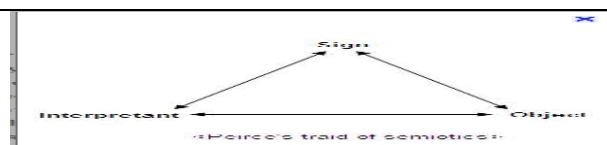


Figure 2: Triadic Model

Source: Ferdinand & Pierce (1994:21)

Semiology according to Watson (2008: 50) involves the signifier, signified and a sign. He points out that a signifier is a sign or image that is perceived, for example, marks on a paper or the sounds in the air, while a signified is a mental concept to which the signifier refers. This mental concept is broadly common to all members of the same culture who happen to share a language and values. The mental concept (signified) is actually the meaning of the signifier. A sign is referred to as a signifying construct (Ferdinand & Pierce 1994: 19).

EFFECTIVE COMMUNICATION

Effective communication deals with the process of minimising misunderstanding. In order to communicate effectively people need not only be able to clearly express themselves, but also the ability to interpret correctly the messages that others send to them. When two people are communicating, it is important for both participants to have the same understanding of the theme of discussion (Saundra & Weaver 2007: 17). Thus, in an ideal communication scenario the message is understood the way it was meant to be. Due to the nature and importance of communication, effective communication is always central to any organisation's efficiency and productivity.

DEVELOPMENT COMMUNICATION

In order to enhance the standard of living in the developing countries, development aid is provided in a form of assistance by rich industrialized societies. Development communication purpose is to find ways to avoid the one-way transmission of (usually) patronising messages from developers to recipients, and to engage recipients in a two-way transactional process in which they participate in the development projects that are planned (Steiberg 2007: 301). Developing countries are usually underdeveloped relative to other countries in terms of physical infrastructure, agriculture, economic performance and the social and political spheres of life. Development and development communication are, therefore, important fields of study in developing countries like Lesotho. Development communication according to Steinberg (2007: 322) refers to communication that promotes development. He further states that there are three approaches to development respectively. These are dominant paradigm, the alternative paradigm and the new paradigm.

COMMUNICATION AT WORK

The very nature of our social, cultural and economic worlds is organisationally centred, hence the need for one to be a competent communicator in organisational settings. Organisational communication practices, according to Pearson *et al.* (2006: 241) can enhance or diminish one's role in charting a better future and ensuring some degree of control over one's work environment. Pearson *et al.* (2006: 242) state that workplace communication occurs in the context of an organisation, and each of us belongs to a number of different organisations. Organisational communication is defined as the ways in which groups of people maintain both their structure (organisation) and order through their symbol-based interactions and let individuals have the freedom to achieve their goals.

COMMUNICATION CONTEXTS

According to Tubbs (2006: 18) human communication occurs in the following contexts:

- Intrapersonal communication
- Interpersonal communication
- Intercultural communication
- Small-group communication
- Organisational communication
- Mass communication
- Digital communication

INTRAPERSONAL COMMUNICATION

Intrapersonal communication is the process of finding within oneself the meaning of messages. This kind of communication occurs within one's own mind - it occurs when one revisits and analyses the interactions that occur between one and others, though it is not limited to such instances. It also includes activities such as solving problems internally, dealing with internal conflict, making future plans, and reflecting on oneself and one's relationship with others (Pearson *et al.* 2006: 18-19). Intrapersonal communication may occur before and during the other forms of communication.

INTERPERSONAL COMMUNICATION

This refers to communication that involves two or more people. Pearson *et al.* (2006: 19) define interpersonal communication as the personal process of finding a meaning from a conversation between at least two people in a manner that gives mutual opportunities for both speaking and listening. The authors further state that similarly to intrapersonal communication, interpersonal communication occurs for different reasons, which include solving problems, resolving conflicts, sharing information, improving others' perception of oneself, as well as fulfilling social needs such as the need to belong or to be loved.

SMALL-GROUP COMMUNICATION

According to Steinberg (2006: 97) a group refers to a collection of individuals who see themselves as belonging together, interact verbally and non-verbally and co-operate in playing certain roles to achieve a definite goal. Thus, the group works towards achieving a specific objective, like solving a problem or partaking in a decision-making process. Examples of small groups are committees and a family. Small-group communication begins with a similarity of interests.

PUBLIC COMMUNICATION

According to Williams (1992: 210) public communication is typically intended for large groups of people, hence the label 'public'. Steinberg (1999: 53) states that public communication refers to situations where a communicator, like a lecturer or an entertainer, does most of the talking while several people listen. Groups of people being addressed in a public-speaking context are much larger than in a small-group context. The result is that interaction between the members is severely limited, or even impossible. However, the relatively face-to-face nature of public communication allows the recipients to actively participate in the communication process through their occasional responses and facial expressions to what the communicator says. This allows the communicator to make on-the-spot changes to the message.

ORGANISATIONAL COMMUNICATION

Mersham & Skinner (1999: 4) state that organisational communication refers to all forms of communication that an organisation's members engage in, and this is also referred to as internal communication. Organisational communication is a necessary communication that takes place as an attempt to achieve a common understanding of an organisation's goals and purpose. This form of communication occurs in large co-operative networks and incorporates almost all aspects of both interpersonal and group communication. Organisational communication involves, among others, the following: keeping records, writing notices, participating in group discussions and completing in reports.

Mersham & Skinner (1999: 148) further point out that organisational communication operates largely in levels, hierarchies and networks. Organisations generally implement hierarchical structures to foster effective communication. The levels of communication include intrapersonal, interpersonal and small-group forms of communication.

MASS COMMUNICATION

Central to an understanding of the operation of mass communication according to Tubbs (2006: 511) is the concept of the gatekeeper. Tubbs defines a gatekeeper as a person who, by selecting, changing, and/or rejecting messages, can influence the transmission of information to a receiver or a group of receivers.

According to Steinberg (2006: 127) mass communication is a process of conveying information, ideas and attitudes to many and diverse recipients through a medium designed for that purpose. The author makes a distinction between mass communication and mass media. She further states that mass media are the technologies and social institutions (such as newspapers, radio and television) that deal with the production and dissemination of messages to a large audience. It is highly important to be aware that while the mass media are vital in the process of mass communication, they actually represent the technological instruments used to send messages to huge audiences; they are not the actual process

AUDIENCES OF MASS COMMUNICATION

Preceding theories assumed that individual members of the audience were passive recipients of mass media information. Media messages were thus thought to directly influence the values, opinions and feelings of the audience. This was based on the assumption that each recipient of mass communication lived in isolation and did not communicate with others. In light of these assumptions, media messages would therefore have a predictable and common influence on all the members of the audience (Steinberg 2007: 266).

THE NEW COMMUNICATION TECHNOLOGIES

Human beings have always had a tendency of underestimating the leverage of electronic devices such as cell phones, personal computers, fax machine, and satellites. According to Tubbs (2006: 540) the electronic documents interchange has greatly improved business communications by sending information from between computers over telephone lines. Tubbs is also of the view that new technologies have caused an exponential increase in the rate of communication over the last decade

DIGITAL COMMUNICATION

Effective digital communication is the ability to create spot-on communication through different media, such as websites, video, audio, text, and animated multimedia. Digital communication is a foundation skill today, as most people will engage in some form of conceptualizing, producing, delivering, and receiving such communication in their job and personal lives. From elementary school to higher education, students can learn various digital communication skills in the course of their studies, whether they build multimedia presentations to demonstrate their knowledge of subject content, create e-portfolios of coursework, or present ideas in a virtual classroom (Jukes & Dosaj 2004). As part of digital communication, online applications to positions in government can help fight corruption and bribery, ensure citizens' have equal opportunities of empowerment and participation, and bring about improved accountability and service delivery.

COMPUTER-MEDIATED COMMUNICATION

Computer Mediated Communication (CMC) is any communicative activity that happens through the use of two or more computers that are connected through a network. The number of network participants increases on a daily basis. While the term has mainly referred to communication that occurs through computer-mediated means, it has also been used to define other forms of text-based communication such as text messaging (Tubbs 2006: 542). Pearson *et al.* (2006: 276) note that almost all forms of computer-mediated communication employ the internet or networked computers to provide interaction among people.

INTERNET COMMUNICATION

Mersham & Skinner (1999: 150) state that the term 'internet' is an abbreviation for 'international network'. It enables millions of computers and other electronic devices (such as cellular phones, portable computers, pagers and video cameras) to communicate with one another by way of telephone lines (cables) and satellites. The internet provides its users access to a series of interconnected computer networks that transfer data by packet-switching using the standard Internet Protocol (IP) worldwide. It is a collection of networks that consist of millions of smaller domestic, academic, business, and government networks, which collectively provide a variety of information and services that are accessible all over the world (Tubbs 2006: 509).

PERSUASION AND COOPERATE COMMUNICATUION

According to Saundra & Weaver (2007: 92) persuasion is a communicative act that is aimed at achieving both these goals – an audience that has been persuaded has understood and believed a message. Saundra & Weaver (2007: 91) further note that persuading someone is performing an act (roughly that of influencing someone's beliefs or desires), usually through the use of a language. As such, persuasion constitutes a spoken word, that is, it is performed in or by speaking. All in all, persuasion is communication that is meant to strengthen, influence, or change how the audience responds to a speaker's utterances.

MARKETING COMMUNICATION

Marketing communication is the term that refers to any type of communication between a firm and its customers, a large audience, with the purpose of (either directly or indirectly) selling the firm's products. This audience includes existing customers, potential customers, the public at large, the firm's competitors and shareholders, financial markets, government or regulatory agencies, and other industries (Saundra & Weaver 2007: 94). Communication between a firm and its customers involves a range of media and forms of communication such as websites, point-of-sale displays, packaging, public relations campaigns, phone calls and many more.

INTRINSIC AND EXTRINSIC MOTIVATION

Intrinsic motivation according to Benabou (2010) refers to an individual's self-motivation as opposed to that caused by external factors like rewards or recognition. Thus, intrinsic motivation results from the pleasure, or sense of satisfaction, one gets from performing the task itself. An intrinsically motivated person will work on a mathematical problem, for example, because the process of solving it is challenging and enjoyable. The person does not work on the task because there is some reward involved, such as a prize, a payment, or, in the case of students, a good grade.

Banabou (2010) on the other hand defines extrinsic motivation as motivation that comes from sources outside an individual. The sources of motivation are benefits such as money or good grades. These rewards provide a sense of satisfaction and pleasure that the task itself may not provide.

CONCLUSION

This chapter has defined the key aspects of communication, which have relevance to this research study. The subsequent chapters are used to demonstrate how these concepts form an essential part of the study. Chapter 3 will deal with the online aspect of communication, which is directly related to this research project.

CHAPTER 3

ONLINE COMMUNICATION

INTRODUCTION

This chapter focuses on computer mediated communication commonly known as online communication. This form of digital communication is seen as the basis of communication strategies for community development, showing how online messages can be effectively utilised in the information age. Computer networks have grabbed an enormous public attention in the early nineties. Consequently, metaphors such as ‘cyberspace’, the ‘net’ and ‘online’, have all attempted to describe an amazing impact of the new communication technologies.

ONLINE COMMUNICATION

According to Rodman (2009:7) an online encounter is normally in the form of computer mediated communication and involves any type of message conveyed through an interposed, or medium, rather than face – to – face. This uses digital media (the internet) and any medium that uses computer – based technology. Knowledgeway (2010) notes that electronic communication provides a powerful new channel that provides a mix of options to interact. Electronic computer communication is a form of digital communication that metaphorically could be characterised as the central nervous system of today’s digital generation. Knowledgeway (2010) further says that organisations are able to use electronic mail, voice mail, bulletin board systems, and facsimile to send messages in text, video or voice form or transmit copies of documents and this can be executed within seconds.

Studies in the Computer Mediated Communication literature that specifically considers communication and Organisational performance according to Ancona & Caldwell (1999:15) suggest that communication satisfaction is important to organisational performance. The strongest link between organisational performance and communication is noted when top management focuses on communication satisfaction. Given the time pressures in modern organisations, it seems impractical to suggest that top management engage in two-way dialogue

with all employees. If an intranet was designed with such goals in mind it could facilitate efficient compromises such as leader-mediated forums that could involve all who were interested. The point here is that such features must be designed into the entire cultural system, not be expected to evolve on their own once the technology is installed (Davidow & Malone 1992).

ONLINE COMMUNICATION AND KNOWLEDGE SHARING

The Global Internet Statistics (2003) states that about 6,798,755 people utilize the Internet for sending and receiving electronic mail (e-mail), accessing databases, viewing images, finding various types of information and sharing information with other Internet users via UseNet, bulletin boards, list-serves and instant messaging systems. The Global Internet Statistics (2003) notes that managers responsible for systems of their organisations often integrate these facilities into their business environment. The managers therefore save very little business resources through the application and incorporation of available networks and network resources.

Granger & Schroeder (1996:87) note that the Internet provides a substantial communication tool to enhance product development and system support as well as offering specific business solutions in the areas of electronic communications), business application software, support, system design and databases. The areas of electronic communication include e-mail, video-conferencing, on-line chatrooms and bulletin boards. Corporate leadership realisation of global networking solutions has therefore stimulated an appreciation of online encounters and recommends collaborative work through the use of electronic media (Granger & Schroeder 1996:87). Efficiently applied and integrated networked communication tools has the capacity to enhance organizational communication and structures, and also has the capacity to support the exchange of what may be referred to as content.

Online communication, an outflow of Internet media integration into the corporate context, has currently become a well-established feature of organisational life. The subsequent 'network enterprise' has been seen as the characteristic of organisational form for the new economy or, rather, an economic environment and paradigm where data and the application of data in

economic endeavour have become an integral part of economic activity and function (Castells 1996:168-172).

According to Rodman (2007:72) CMC (primarily in the form of e-mail) has become the most dominant mode of information sharing both internally and between organisations in the last few years. Rodman notes that one of the most significant functions of communication is to transmit information for interpretation purposes or, rather, share information between communicating parties. Since information may be viewed as a representation of knowledge we can actually infer that one of the most vital functions of communication is to share knowledge between communicating parties.

E.MAIL

An electronic mail has become an essential communication tool in the information era. The early adoption of standards made it possible for messages to be shared across networks and different base machines and software applications. Marsham & Skinner (2001: 225) define an electronic mail as online mail via computer. Making use of an e-mail makes it possible that documents of many types can be easily exchanged. According to Davidow & Malone (1992:43) the widespread use of e-mails has had a number of effects on how people behave. Use of e-mails therefore has had large effects on communications: it has also changed the social network of who talks to whom. Networking is central to e-mail communications.

NETWORKS AND NETWORKING

Marsham & Skinner (2001:153) state that networks and networking are the key principles upon which society in the Information Era is being built. The word network is defined by Marsham & Skinner (2001) as “any structure in the form of a net: a system of lines, a system of units, as, e.g. buildings, agencies, groups of persons, constituting a widely spread organization and having a common purpose.”



Figure 3: Computer network and networking

Source: Adapted from Castells (1996:5)

Thus, networking entails making connections that facilitate the exchange of something. Mersham & Skinner (2001) also note that networking has been a core, if often unstated, behavioral pattern in social and economic systems since the time people first formed groups.

BLOGS

Allen & Seaman (2003:47) are of the view that weblogs, more commonly called “blogs,” have burst upon the internet scene over the past few years. Blogging software which makes possible to put up multimedia content has led people to set up sites for all manner of purposes. Thus, a site can contain text, pictures, movies, and audio clips. The authors note that a common social purpose of blogs is to keep an on-line diary as well as providing commentary on a topic of interest.

INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTs)

Although definitions of information and communication technologies differ, however, they bear some similarities. Monge & Desanctis (1999:2) define ICTs as technologies that enable the

handling of information and facilitate different forms of communication between human actors, between human beings and electronic systems, and between electronic systems.

ICT USES AND BENEFITS

ICT applications are useful in facilitating the development of various aspects of society. They can be used in fields like public administration where they enhance the social, economic and political developments of the citizens in general. They can also be used for rural and urban development; the establishment of telecentres in rural communities, for example, facilitates economic empowerment, while mobile telephony improves communications, enabling rural entrepreneurs to keep tabs with markets that are outside their communities. ICT applications are also useful in the field of transport where they improve road, air and rail transportation. They are especially invaluable in air transport control and the monitoring of freight and day-to-day transport systems. In this category, smart cards in developed countries help facilitate the smooth operation of the transport system (payment for parking meters, identification of authorised parking space occupants (Mansell & Wehn 1998).

McKeown (2001) lists a few uses of ICTs in society as follows:

Delivering services: Services that are currently delivered by ICTs are much improved. For instance, many library users can now renew their books and pay their fines online or over the telephone. Hence ICTs facilitate access to services, allowing, for example, Internet users to search for jobs on the Internet.

Sharing innovation: Through the Internet, users are able to share and exchange information free of charge. Most of this is due to the open source (OS) platform, which allows organisations to get information and mix and expand it so that it can meet the needs of their clients or users. Good and bad practices are therefore shared, preventing organisations from using resources to ‘reinvent the wheel.’

Back office processes: Mobile technologies, such as mobile phones and laptops, can be used to deliver services in remote areas through mobile workers who stay in contact with the main office and allow staff to access and record information when needed.

Collaborative working: In order for any organisation to be successful, there must be collaboration between and within various departments or sections within an organisation for efficiency and joint services. ICTs can play a big role in making the communication and sharing of information possible, not just between public service providers, but also with users.

Reaching users: It is the right of every citizen to receive proper public services. The Internet provides access to 'hard to reach' individuals by transgressing geographical boundaries to bring together individuals with niche interests, thus giving them a stronger voice. With the usage of ICTs a lot could be done much easier than it has been the case in the old days for example, long time ago it took 3-4 months to communicate with a person abroad, but now with the introduction of emails it can only take seconds to communicate with that person.

IT USES OR BENEFITS

Mansell & Wehn (1998) further outline that the following may be seen as IT benefits:

Globalization – interdependent system has made sharing of information universally to be easy and has ended linguistic problems in different continents. Through IT communication is not only cheaper but is also available twenty four hours and seven days a week.

Computerised Internet business – IT has made a lot of businesses to go to the Internet for their own productivity and to increase their number of clients, since using/surfing the Net is much easier and cheaper. Even people in isolated (remote) areas are able to get into Internet and do business.

Communication revolution – IT has made specialist from different field of work to be able to expand their system, programs, and businesses at the same time through the use of IT which they can use at any time.

Low cost business options – the use of emails, telephones, cell phones etc has made communication to be easy. When organisations do business they communicate via emails in seconds and the business is done.

GLOBAL VILLAGE AND GLOBALISATION

In the late 1980s, the term globalization became the common term for describing the accelerating interdependence of different economies around the world. The primary agent of this phenomenon is the transnational corporation. Central to globalization is the revolution in information and communication technologies (Marsham & Skinner 2001:17).

BACKGROUND TO ICT DEVELOPMENT

Computing History

A computer is an electronic device operating under the control of instructions stored in its own memory. It can accept data, process the data according to specified rules, produce results, and stores the results for future use. Mechanical relays were the switching units that were utilised in 1940s in Computers. They Work in such a way that they were opening and closing while doing the calculations. It is said that Mechanical Relays were used in Zuses machines of 1930s. History tells us that around 1950s the Vacuum Tubes took over from Mechanical Relays. The Vacuum Tubes were used in Atanasoff-Berry Computer (ABC) as its switching units instead of relays (Monge & Desantis 1999:97).

This was a very huge technological advance since vacuum tubes could perform calculations significantly and more proficient than relay machines. Unfortunately, this technology could not last long because they could not be made smaller than the way they were made and they had to be put closer to each other because of their heat generation. The transistor came into the picture as was highly recognised as a revolutionary development. The development of this device was seen as a result of series of developments in the applications of physics by many authors from “Fire in the Valley,” Transistors changed computers from being a big machine into a commodity like a Television set (Muganda 2001:2).The integrated circuit, which was invented and introduced in the 60’s, is a very small silicon computer chip made up of even smaller transistors, diodes and resistors.

The microprocessor differed from its predecessors because thousands of smaller integrated circuits could now fit onto a single silicon chip. This progress led to the eventual development of

a mouse and keyboard. The chips also paved the way for the development of RAM (Random Access Memory), which allows data to be stored and updated on a chip various other technological developments have since seen microprocessor technology evolved to the point where we witnessed the birth of the new HP touch smart PCs in the year 2008 (Muganda 2001). This system gives users access to information by tapping or sweeping their fingers across a screen, providing consumers with special features for music, photos, and web access.

GLOBAL ICT INFRASTRUCTURE

According to Kling (1999) Information and Communication Technologies (ICT) infrastructure is the backbone of all ICT applications. Adequate ICT infrastructure should contain, on average, most of the following:

- Equipment, which may include stand-alone and/or networked computer hardware;
- Modems, local area networks (LANs), etc.;
- Intranets or a campus-wide backbone connecting LANs;
- Multi-organizational networks;
- Operating Systems;
- Accessibility;
- Carrier technology, e.g. satellite technology such as VSATs (Very Small Aperture Terminals) and wireless radio and television;
- Fibre-optic technology, unshielded twisted pair and coaxial technology;
- Sufficient bandwidth and router availability are important for efficient access to all ICT devices; and
- Functionality, that is, access to internet and e-mail, conferencing tools, multimedia tools, etc. (Kling 1999).

Huge investments in ICT infrastructure in mainly developed countries have contributed to great advancements in the utilisation of ICTs, both for business and service delivery purposes, and for private utilization. According to Amant & Zemliansky (2005:199) Russia spent over 10 billion on ICT products in 2008. Russian small and medium businesses (SMBs) have also invested heavily in highly technological computer systems. Consequently, Russia has proved to be the

highest spending ICT country in the region. According to Mait (2008) the ICT industry in Japan has extended its focus far beyond the manufacturing of equipment to furthering maintenance and management services and creating audio, video, print and digital content. These new developments are going to boost the ICT market in Japan. Japan is ranked second in the world (with 72.7%) by the ICT Industry Competitive Index. Japan's ICT infrastructure has been developing at a rapid rate over the past few years. It has featured the fastest broadband connection speeds and highest Internet penetration rates globally. Owing to these developments, the country has witnessed the very quick assimilation of multi-function mobile telephones, which contain cameras, barcode readers, music players and contact-less payment functions, and has seen an exponential growth in the number of people using the Internet (Mait 2008).

Japan has over 100 million mobile phones subscribers, which is nearly 80% of its population, and is leading the way in third-generation (or 3G) mobile telephony. Japan has introduced the Mobile Number Portability (MNP), which allows customers to keep their new number when switching to a new carrier. The country is also rising in video conferencing and other means of visual communication. A lot of companies and organisations are opting for video Conferencing to do their operations and improve internal communications (Mait 2008). Nielsen (2007) posits that the United States is still the world's technological powerhouse, confirmed by the results of the Networked Readiness Index (NRI). The US is said to be a Global leader in the ICT industry because of the quality of its market environment for ICT. The country has improved a lot in its ICT infrastructure, ICT penetration and the use of electronic government.

According to the United Kingdom (UK) Trade and Investment Services (2008) the UK is another example of a global leader, with stronger ICT infrastructure than countries like Germany, France, Italy and Spain. In the UK, the privatisation of major ICT service providers led to greater competition and lower prices. This has strengthened the ICT infrastructure that is necessary for companies to prosper, such as e-business, availability of broadband, availability of Wi-Fi, and the provision of secure servers. The E-readiness Rankings placed the UK among the top 10 countries in the world based on the results compiled by the Economist Intelligence Unit (EIU). These rankings measure economic, technological, political, infrastructural and social factors that relate to the development of e-business. The UK has a 24.9% penetration rate of broadband

technology, which is the highest percentage compared to the European Union average of 20%. Broadband subscribers in the UK enjoy the second highest number of verified Wi-Fi hotspots globally behind the US. The UK also has the highest number of secure servers in Europe, and is 3rd globally behind the USA and Japan (UK trade and investment services 2008).

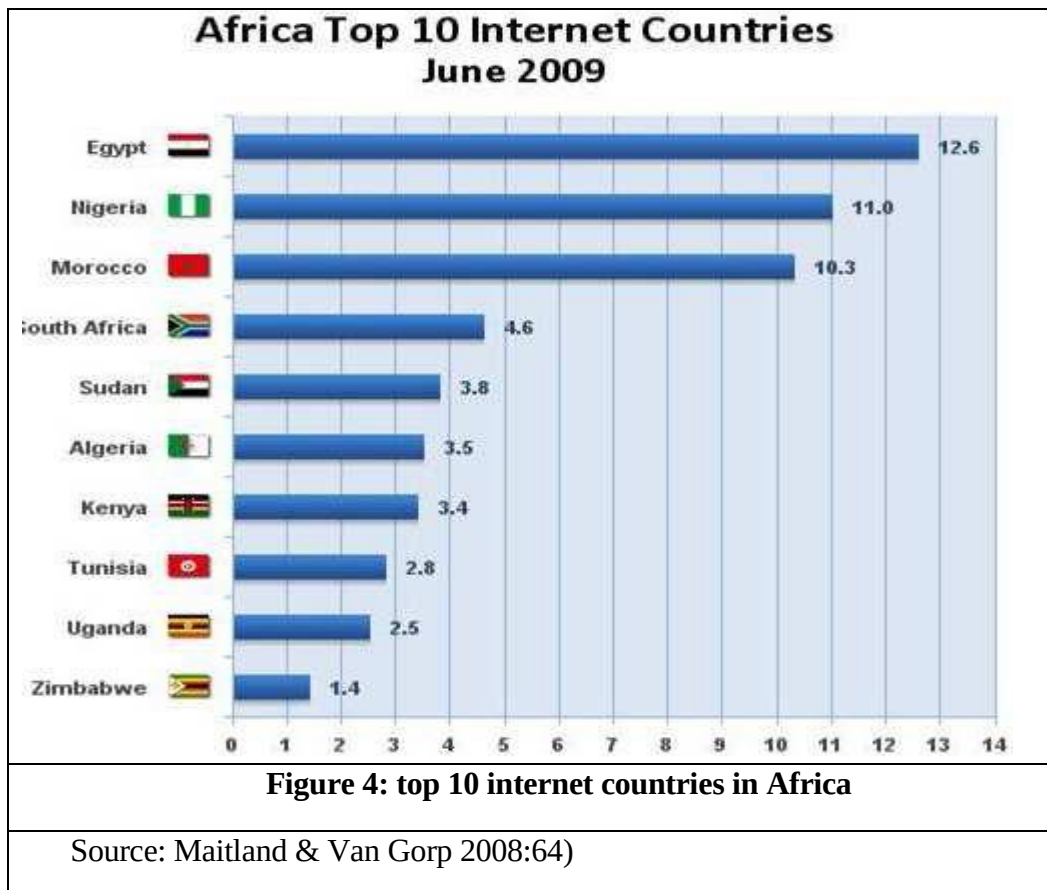
ICT INFRASTRUCTURE IN AFRICA

According to Mutula & Van Brakel (2007:231) ICT, mostly the Internet, has a very important role on the operations of businesses and is declared to be vital for the survival and economic escalation of many countries. Looking at ICT usage in Africa it can be noted that there are barriers that hinder the use of ICT in the continent. For example, Mutula & Van Brakel (2007:236) in the study of e-readiness of the business sector in Egypt, established that the reason for the poor usage of ICTs were unqualified personnel and the lack of awareness on ICT usage or technology. They further state that for that reason the government of Egypt has included computer learning in many schools and universities in the country, so as to build a skilled based society. ICTs are a powerful way to boost economic growth and initiate poverty reduction in Africa. ICTs increase efficiency, provide access to new markets and services, create new opportunities for income generation, and improve governance by giving a voice to the poor (Lisham 2008:1).

According to Lisham (2008:1) the current spread and use of ICT in Africa depends on a number of factors, namely:

- Infrastructure – its availability, functioning and maintenance. This is not limited to only ICT infrastructure, but it also includes transport and electricity.
- Access – it is characterised by facilities that are open to the public, the existence of relevant resources, competence at different levels, and pleasurable experiences with regard to mobile telephony.
- Supportive/enabling environments – these include specific regulatory, enforcement, and overall policy frameworks that allow sound economic and political governance.

Africa has many different types of modern ICT infrastructure available, such as satellite based telephony, mobile cellular phone services, digital satellite television, computers, facsimile services, satellite radio services, and many more (Granger and Schroeder 1996:87). However, Africa is still behind compared to the rest of the world in terms of ICT infrastructure and development, as explained below. Although Africa has shown major improvements in ICT technology due to the arrival of mobile telephony, it is still behind the rest of the world. Tanzania, in East Africa has made major improvements in ICT development, especially in mobile telephony, and the reason behind its success was the regulatory policies and governance. Although Tanzania is one of the small countries in Africa, but it was seen as the Pioneer in the Sub-Saharan Africa because of the good governance and regulatory policies in as far as ICT market development is concerned (Maitland & Van Gorp 2008:64). The figure below indicates how Africa is seen in as far as Internet usage is concerned.



TELECOMMUNICATION FACILITIES

According to Al-Ghaith *et al.* (2010) a number of factors hinder the economic participation of Africa in the world, and these include:

- the high cost of access for end-users to foreign-owned satellite telecommunication providers for cross border, regional and international telecommunications;
- high internet costs;
- low bandwidth;
- poor ICT infrastructure and
- unreliable communication facilities.

DESKTOP COMPUTERS

Many people around the globe have PCs in their homes and in their work places, but this is not the case in Africa. In fact, the availability of desktop computers in Africa is the lowest compared to the rest of the world. Statistics indicate that in 2002, Africa had 1.23 desktop computers per 100 inhabitants (Van Brakel & Chisenga 2003). This is in sharp contrast to 3.95 for Asia, 20.01 for Europe, 27.49 for the Americas, and 38.94 for Oceania. This dismal number can be attributed to the high cost and low earnings of most people on the continent. Another reason for the inability of African organisations to afford computers is that the import rates and sales tax imposed on computers is very high; computer prices in the developed world have gone down, but not in African countries (Van Brakel & Chisenga 2003).

THE INTERNET

The Internet has become a mainstream form of media and an integral part of modern life. The internet has revolutionised the way in which many communities do business and interact socially. Through the internet, globalisation has become a reality even to the most remote villages. In Lesotho, men constitute the majority of Internet users at approximately 54% (2.15 million) of the total Internet population. In terms of age, the 25 - 34 year-old groups dominate, constituting around 36% (1.42 million users) of the online population. The second largest group,

the 35- to 49-year olds, amount to a further 35% (1.37). The majority of the Internet population speaks English and most of the online content is in English (Thai 2009:115).

ONLINE INTERPERSONAL COMMUNICATION

Rodman (2009: 9) says that mediated interpersonal communication entails the sharing of personal messages through some form of interposed device. For instance, people speak to close friends over the telephone, they also send emails to close friends and send instant messages across the nation and around the world. In some cases, we might even send a videotape to far – off relatives. Online interpersonal communication does not involve face – to – face contact; even with a video –phone, one is merely talking to a facsimile of another person. Mediated interpersonal communication is also different from mass communication. In mediated interpersonal communication, a message does not go out to a large audience, it is not produced by professionals, and it allows a considerable amount of interaction and feedback (although not as much as face- to – face communication (Rodman 2009: 10).

ONLINE SMALL GROUP COMMUNICATION

Advances in new communication technologies are considerably altering the manner in which small groups interact as well as redefining our notion of small group. The internet allows asynchronous and synchronous communication among small group members at relatively affordable costs. This medium is changing small group membership, functions, and processes. Online small groups utilize communication technologies (like discussion boards and videoconferencing) as opposed to those in face-to-face situation. The author maintains that with the rapid changes in communication technology, a lot of problems associated with groups that do not meet face-to-face have been reduced or eliminated. Nonetheless, groups that never meet face-to-face can encounter difficult challenges. And yet, not meeting face-to-face also has its demerits (MacGraw-Hill Companies 2000).

The new communication technologies can create new environments that produce more open, fluid, and dynamic small group environments. Online discussions can make collaborative learning in the university classroom easy and enjoyable. Thus, students who are actively engaged

in online discussion have golden opportunities of earning higher grades in large lecture classes. These new communication technologies amazing tools of knowledge diffusion and therefore have the potential to provide an avenue of participation for historically disadvantaged and disenfranchised group members (MacGraw-Hill Companies 2000).

Group Outcomes

Groups that interact either synchronously or asynchronously are likely to attain greater goals. Examples of synchronous groups involve chat rooms, audio or video-conferencing. Asynchronous groups include discussion boards. These noble goals among others involve higher quality decisions, unique solutions, and more creative ideas than face-to-face situations. Listservs, discussion boards, and chat rooms in particular tend to make easier the participation of all group members. This in return makes a remarkable improvement on groups' yield of ideas. For instance, with asynchronous communication (listservs and discussion boards), members of the group have an opportunity to reflect on what others have posted, and contemplate responses. Besides, some software can allow for anonymity in computer- mediated interactions. The findings from organisational research decision making has revealed that this anonymity can produce better contributions to group problem solving and decision making (MacGraw-Hill Companies 2000).

Group Processes

Groups that make use of these new communication technologies stand a chance of solving problems and ultimately reach decisions in significantly less time than face-to-face encounters. Moreover, in mediated communication versus face-to-face interaction, group member participation tends to be greater and more equally distributed among members. However, one shortcoming of face-to-face communication is that, it is much easier for one or two group members to dominate the group in discussion. On the contrary, communicating using technology such as listservs and discussion boards, lengthy posts can simply be deleted or ignored (MacGraw-Hill Companies 2000).

FACTORS INFLUENCING THE ADOPTION OF ONLINE SERVICES

According to Al-Ghaith *et al.* (2010) the internet remains central to any innovations and diffusion of knowledge. However, a number of factors appear to affect its usage and adoption in developing communities. The causal factors as listed by the authors include:

- demographic variables: females are likely to adopt technology than males
- privacy issues: consumers utilize online services because they are convenient and save time;
- e-service quality: service quality on the internet affects overall satisfaction level;
- loyalty: the best preferable attitude of a customer headed for an e-service;
- diffusion and innovation: involves the process by which an innovation is communicated over time;
- relative advantage: this is in terms of expediency and saving of money;
- compatibility: involves the degree to which an innovation is perceived as consistent;
- complexity: this is the extent to which an innovation is perceived as difficult to grasp and use.

Country	Telephone main lines		Cellular phone subscribers		Internet users		
Developed Countries	1990	2005	1990	2005	1990	2005	2008
Sweden	683	717	54	935	6	764	805
United Kingdom	441	528	19	1,088	1	473	798
Australia	456	564	11	906	6	698	796
South Korea	310	492	2	794	no data	684	773
Switzerland	587	689	19	921	6	498	758

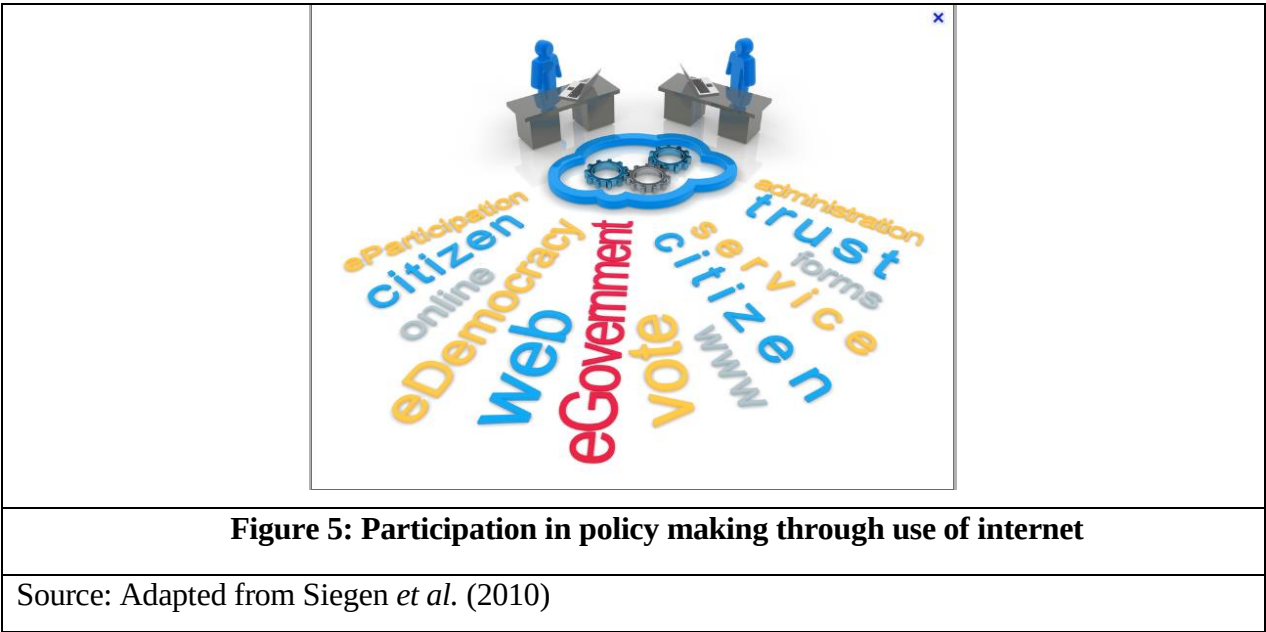
Table 1: The trends towards using and owning technology

Source: Siegen *et al.* (2010)

ELECTRONIC GOVERNMENT

E-government refers to government agencies' utilization of ICTs that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends, for example, better delivery of government services to

citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. Possible net benefits include less corruption, increased transparency, greater convenience, revenue growth, and/or cost. The public sector’s use of ICTs improve information and service delivery, encourages citizen participation in decision-making processes, and make governments more accountable, transparent and effective.



Government departments should be able to service people efficiently. Since they are the biggest service provider in a country, the government should ensure that all people, irrespective of race, religion and/or education, receive equal treatment, services, and access to information. The ICT tools used in e-government should, therefore, be able to reach all people, even in remote areas. ICT tools provide citizens with a platform to voice their complaints and concerns, even when they are not able to contact government offices directly. Citizens should, for example, have access to the telephone numbers of the various departments, and their e-mail addresses and cell phone numbers, so that they can communicate with civil servants at any time (Mait 2008).

According to Siegen *et al.* (2010) the vision for e-government should address three main domains:

- E-government : the application of IT intra-governmental operations (government to government or G2G);
- E-service : the application of IT to transform the delivery of public services (Government to citizens or G2C) and E-business: the application of IT to operations performed by government in the manner of G2B transactions (e.g. procurement).

E-GOVERNMENT APPLICATIONS

Al-Ghaith *et al.* (2010) define an e-government application as any interactive public service that is delivered electronically and offered either entirely or partly by public administration or with the authorisation of public administration for the mutual benefit of the end user (which may include citizens, legal persons and/or other administrations) and the public administration. Any form of electronic service, including stand-alone software, web applications, and proprietary interfaces offered locally (e.g. at a local office counter using an electronic device), can be considered to be an e-government application, provided that a certain degree of interactivity is involved. The authors posit that the following types of e-government applications can be found in any government structure in the country:

- electronic administration – strengthens government to government (G2G)
- interactions for more efficient internal processes;
- electronic services – strengthens the delivery of public services to citizens and the business community;
- electronic business – strengthens the business interactions between the government and the business community (G2B);
- electronic citizen – strengthens the interaction between the government and the citizens (G2C), thus permitting citizens more active participation in governance and democratic processes and
- electronic society – strengthens interaction between government and the civil Society, thus ensuring more efficient and effective partnerships in service delivery and democratic governance.

CHALLENGES AND OPPORTUNITIES

E-governance makes the possibility of at least ten major improvements in administrative and democratic processes. These improvements according to Monge & Desanctis (1999) include:

- Less costly and more effective information management and processing: the smooth transition of information across departments, agencies and different spheres of government;
- More professional administration, supported by standard, electronic decision-making systems;
- Equitable provision of services according to impersonal rules, as opposed to clients' arrangements;
- Transparency, especially in relation to the transactions of government services;
- Opportunities for the private sector to form partnerships with government for the modernization of governmental processes;
- Effective dissemination of information between government and the citizens;
- Strengthening of intermediary state institutions, such as parliament, local governments, civil society organizations, and the independent media; and
- Opportunities for a more direct participation of citizens in policy development.

VIRTUAL COMMUNITY

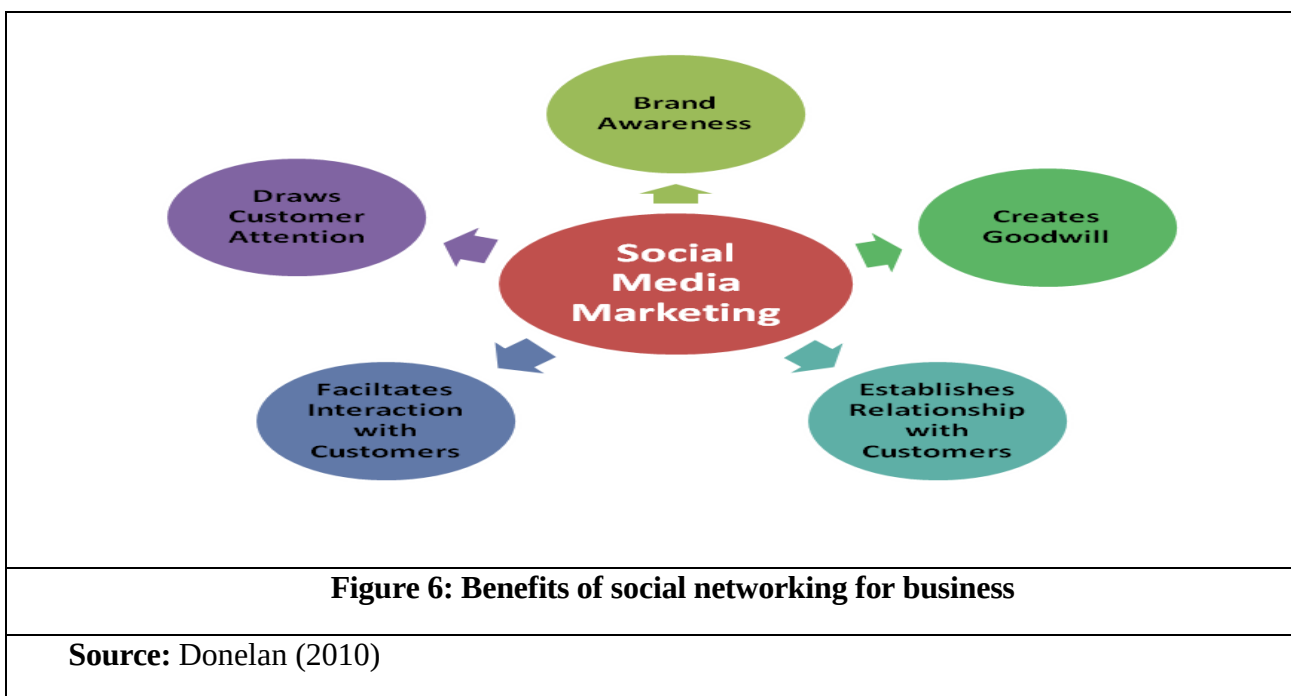
A virtual community is a group of people who share common interests, ideas, and feelings over the internet. A virtual community is composed of people who have no physical contact. Users take part in dialogue or communication about their shared interests in the virtual world (Smith & Kollock 1999).

Smith & Kollock (1999) take the theory further by postulating that the internet allows communities to create a range of new social environments to meet and interact with one another. In cyberspace, therefore, the process of interaction is not the same as that of a face-to-face communication. The authors note that in using network-interaction media such as e-mail, chat, and conferencing systems, online communities are forming thousands of groups to discuss a

variety of topics. Besides, cyber-people also play games; they engage in many forms of entertainment and run projects.

SOCIAL NETWORKING

Donelan (2010:258) postulates that social networks are the social structures that represent connections and the strength between people. Social networking simply means making and keeping connections and relationships with the people we know. This process is undoubtedly a fundamental part of our daily experiences.



Donelan (2010) maintains that our interactions with those we know, or meet, contribute greatly to our well-being, learning, as well as personal and professional development. Thus, these interactions have to be informative, supportive and broad. The internet provides online platforms for people to express their feelings and manage their social networks. The author further notes that sites such as MySpace, Facebook and Twitter allow millions of people to create their descriptive profiles, add photos, and also connect with other people on site. Social network sites have reportedly become a mainstream and popular means for communication and collaboration for a number of people.

DIGITAL LITERACY

According to Aho (2005), technical expertise is one component of a range of skills that will help in preparing students to live, learn, and work in the Information Age. The author emphasizes that embracing effective technology in schools can enable students at all levels to learn collaborative, problem-solving, and innovation skills. Aho states that when students learn to communicate effectively using online media, they do not only learn how to use tools such as Dreamweaver; they also learn how to run a project, understand their audience, as well as their message and its purpose. They learn to think critically from deciding on the most effective way to convey their message.

STUDENT USE OF TECHNOLOGY

Aho (2005) notes that modern communication landscape embraces all forms of media: audio/video, and rich-media presentations, interactive websites, DVDs, simulations, and virtual meeting environments. Whether they are struggling enterprises or global giants, all organizations nowadays use combination of different forms of media to attract and keep their audience. Aho also points out that knowledge of an appropriate medium for a message and using different means of communication can greatly assist students to achieve excellence during their schooling years and beyond. Many higher-learning centres have already realized this need, and have introduced digital communication skills for non-technology majors.

Digital communication is a very effective medium of interaction for the majority of students at all levels of learning.

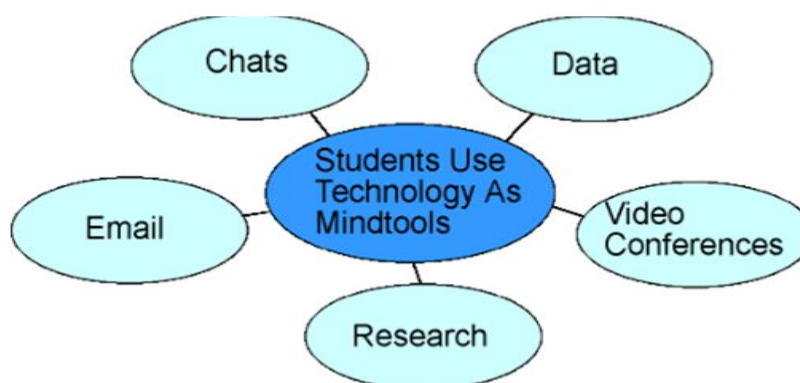


Figure 7: Students should be familiar with basic concepts of ICT

Source: Adapted from UNESCO (2002)

Some learners/students have difficulty in writing. However, they may find it easier to express themselves through images and video/audio recordings. Digital technology can play a major role in meeting the needs of students with some learning challenges. Using digital communication, a lot of learners are more comfortable to express themselves orally or through images, rather than in writing. Through the use of multimedia, students are not only encouraged but also get an opportunity to tell their stories more proficiently. Aho states that showing competence in academic concepts can be difficult to do with words alone. When a learner demonstrates the acquired skills using animated pictures with narration, the explanation, or presentation, can then be clearer. The more science knowledge students learn, the better their digital communication skills become (Aho 2005).

THE LANDSCAPE OF CYBERSPACE

Cyberspace has spontaneously developed a culture of its own and keeps evolving in line with networking.

Online messages

According to McGraw-Hill Companies (2000) there are many companies that render online services. Some of these services are Yahoo, Hotmail, Juno, Linux Free-mail, and Mail.com. These

services are generally free of charge, but the users have to pay a price to post advertisements on the websites. Making use of a free e-mail service, members of the virtual worlds can easily manage their communications from a mailbox that is dedicated to an e-mail address, which is assigned to an individual or a group.

Listserves

McGraw-Hill Companies (2000) explains that listservs enable an individual to send an e-mail to a group of recipients by entering only one address. McGraw-Hill Companies further points out that many listservs also offer an archiving feature as well as various options for extended functionality of listservs. A number of listservs are available at no cost for one's use. Cool List, eGroups, and Topic are some of the providers of listservs. Like free e-mail accounts, free listservs are also advertiser-dependent. Listservs have an advantage over discussion boards and chatrooms in that e-mail is delivered directly to members' electronic mailboxes. However, one shortcoming of listservs is that e-mail may get lost, or overlooked, in the midst of the large numbers of e-mails that group members receive.

Discussion Boards

A discussion board is an asynchronous web-based facility that allows an individual to post messages and also read other users' posts. Discussion boards give users a golden opportunity to think about what to write and then compose, reflect, and edit their messages. The posts can be read by other group members wherever they may be. One notable advantage of discussion boards is that it is easy to keep track of their discussion topics (threads) as opposed to e-mails. In addition, because discussion boards are asynchronous, group members do not have to participate at specific times. However, the facility has a downside that group members may not visit the discussion board regularly, if at all (McGraw-Hill Companies 2000).

Chat Rooms

Chat rooms are synchronised, internet-based systems which are more convenient for real-time dialogue. Users of chat rooms partake in text-based interaction that resembles the promptness of in-person, face-to-face communication. Many of these services offer other benefits such as free

e-mail, web pages, and discussion boards. Chatting on the internet requires participants to respond immediately to the message others send. The participants do not have much time to think about what to say, or how to say it. However, chat rooms are virtual places that allow their members to engage in real-time discussions without having to be in one geographical location (McGraw-Hill Companies 2000). Electronic bulletin boards in the form of newsgroups or Usenet allow subscribers to read and post messages in hundreds of organised, specialised areas of interest. These forums are organised by topic, and the participants post articles and comment on the topic of their choice. Those who contribute to the forums share their ideas by typing their comments and post the messages a newsgroup using automated software (McGraw-Hill Companies 2000).

USENET AND BBSs

Bulletin board systems (BBSs) are another form of asynchronous modes of communication. BBSs allow users to create topical groups in which messages that are similar to e-mail can be stored. Through Usenet and BBSs people in different locations and time zones are able to exchange messages and take part in discussions (Smith & Kollock 1999).

WORLD WIDE WEB SITES

Smith & Kollock (1999) are of the view that web sites can now support both asynchronous and synchronous communication. Through the use of various software tools, web sites can host asynchronous discussion groups as well as real-time text chat.

IDENTITY

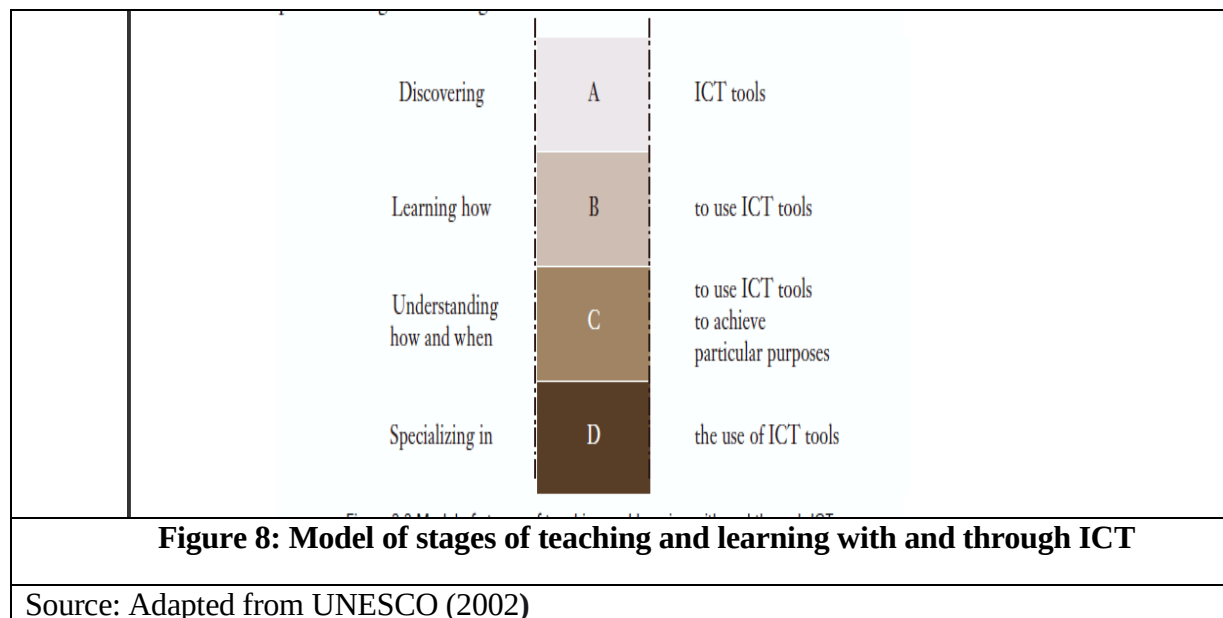
According to Nevil (2009) online interactions eliminate many of the expressions and signs that are part of face-to-face communication. This lack of signals is both a limitation and a resource in that it makes certain kinds of interaction more difficult, but it also provides room for one to vary one's identity.

ICT IN TRAINING

According to UNESCO (2002) ensuring that pupils receive sufficient training in the use of ICTs is an imperative. In an attempt to achieve this goal, the curriculum is structured in such a way that it gives learners a sound basic understanding of all currently available software applications. The curriculum is, therefore, carefully planned and delivered by prospective teachers, thus contributing significantly to teacher development. UNESCO states that the ICT Development Plan is aimed at bringing about a programme that is separate from any other school training and professional development.

A CURRICULUM AND PROGRAMME OF TEACHER DEVELOPMENT

Specializing and mastering the use of information and communication technologies is usually the last stage in the teacher curriculum development. The stage usually entails adequate appreciation and utilization of ICTs in education (UNESCO 2002). Figure 8 below illustrates this.



MODELLING ICT DEVELOPMENT

It is crucial to have a model for developing an ICT curriculum. Such a model is a combination of essential characteristics that provide a framework of ICT development. The framework itself

ensures the interrelationship of different components of the system by way of maintaining understanding amongst educational administrators and policy-makers (UNESCO 2002).

According to UNESCO (2002) two models are preferred to provide a framework for ICT development. The first model perceives ICT development as a continuum of approaches of an educational system, for example, a school can identify the approach that relates to the growth of ICT in their particular context. The second model views ICT development in terms of sequential stages of ICT usage by students and teachers, namely becoming aware of, learning about, understanding of, and specialising in the use of ICT tools. Thus, the two models present the framework for an ICT curriculum and one for the professional development of educators.

A CONTINUUM OF APPROACHES

For both developed and developing economies, research in ICT development has identified at least four broad approaches through which educational systems and individual schools can go about adopting and using ICTs. The four basic approaches are emerging, applying, infusing, and transforming (UNESCO 2000).

The emerging approach

This is the primary stage of ICT development where a school shows interest in the use of ICTs. At this stage, such a school begins to buy some, or acquire donated, computing equipment and software. In this initial phase, administrators and teachers are just starting to determine possibilities and outcomes of utilising ICTs for school management and including ICT subjects to the curriculum. Schools at this primary phase are firmly attached to the traditional, teacher-centred system. The curriculum reflects an increase in basic skills but there is also a rise in the awareness of the use of ICTs. This awareness allows for a smooth transition to the next level, if the school management so decides (UNESCO 2000).

The applying approach

Schools at this secondary phase amend the curriculum so that they can increase the use of ICTs in different subject areas. Administrators and teachers use ICTs for tasks already carried out in

school management and in their curricula roles. This stage is characterised by a learning environment that is dominated to a greater extent by teachers (UNESCO 2002).

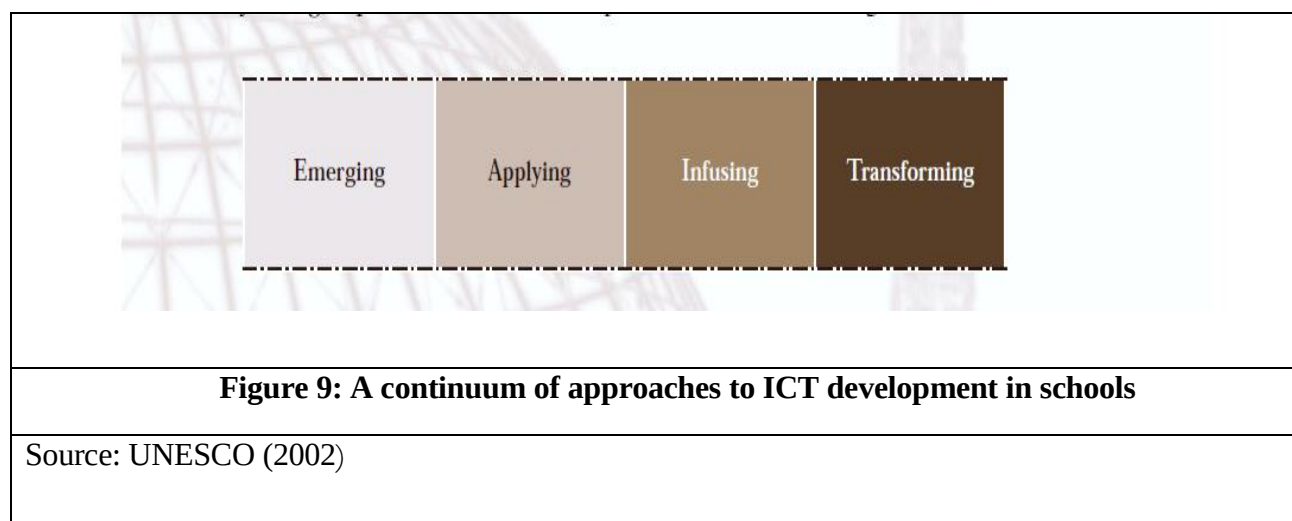
The infusing approach

The infusing approach as UNESCO (2002) further states, involves a holistic integration of ICTs in the curriculum. This is seen in those schools that currently have a wide range of computer-based technologies in laboratories, classrooms, and administrative offices. Teachers explore new ways in which ICTs can change their personal effectiveness and level of professionalism. The curriculum starts to merge subject areas that will ensure a comprehensive reflection of real-world applications.

The transforming approach

At this final stage, ICTs have become an essential though invisible part of everyday culture of personal and professional practice (UNESCO 2002). The focus of the curriculum is now completely learner-centred and integrates subject areas. ICT is taught as a separate subject at advanced level and is incorporated into all vocational areas. This is the stage where schools have ultimately become centres of ICT learning for their communities.

Figure 9 below provides a sequential illustration of the continuum of development approaches.



VIRTUAL ORGANISATIONS

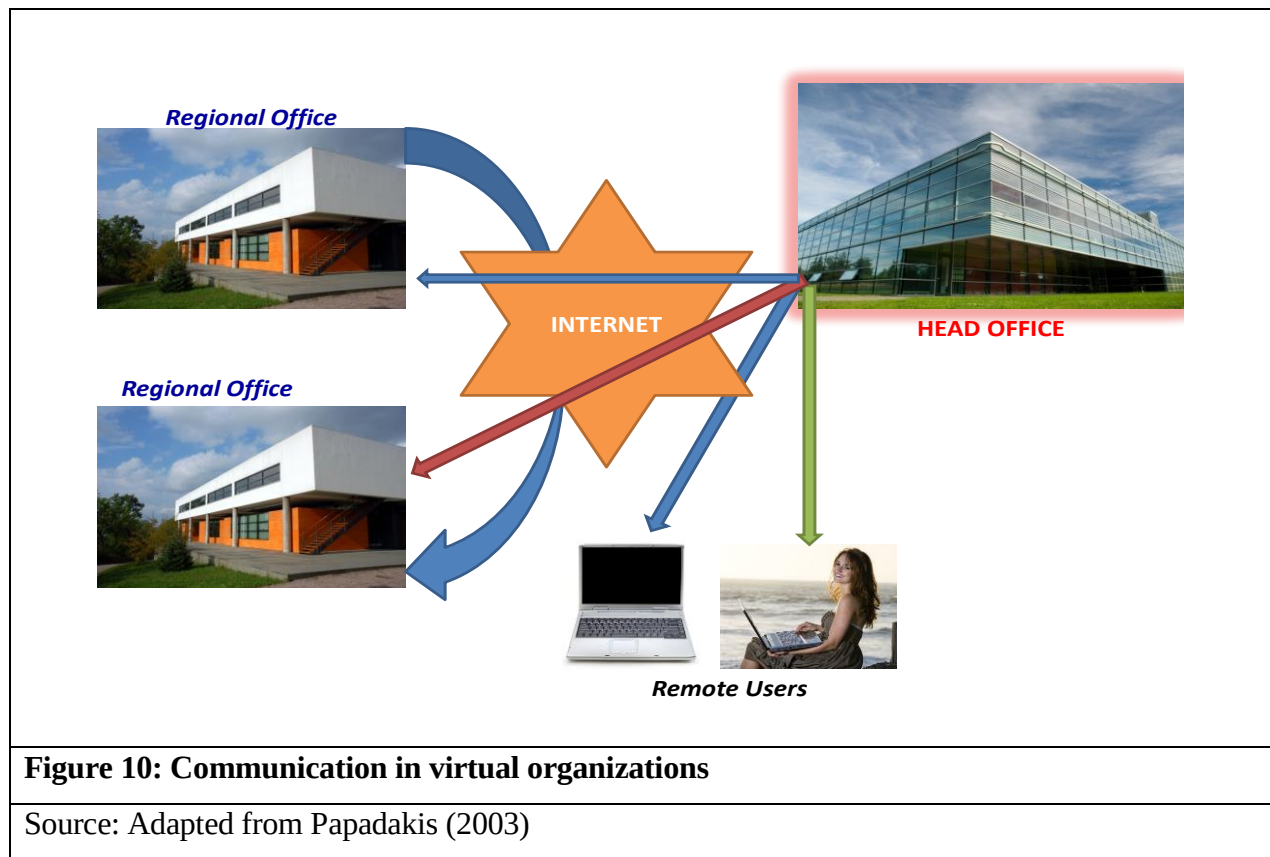
Monge & Desanctis (1999) argue that communication is central to the existence of any organisation, including virtual organisations. It is very important to note that virtual organisations are always associated with highly dynamic processes, contractual relationships among entities, edgeless, permeable boundaries, and variable structures. The authors note that relative to more traditional forms, the exchange of ideas in this context must be rapid, personalised, temporary, greater in volume, more formal, and more relationship-based. Thus, a virtual organisation is a collection of geographically separate, functionally and/or culturally diverse individuals, or groups, that communicate electronically and are co-ordinated by multilateral, dynamic relationships.

Monge & Desanctis (1999) state that although virtual organisations have a diffuse nature, they stick together because of the perception of common identity among members, customers, or other stakeholders. These forms of organizations are often described as ones that have numerous remote ties, consist of teams that are assembled and disassembled depending on need, are made of members who are geographically far from one another. The outcome of these is organisations whose members work as a collaborative network of colleagues, regardless of their locations.

COMMUNICATION IN VIRTUAL ORGANISATIONS

Communication has been described by some experts as the life-giving blood and the DNA of any organization and it is not surprising, therefore, that the nature and content of organisational communication has a remarkable influence on interpersonal relationships among all stakeholders. This, in turn, impacts on success factors such as commitment, motivation and even, in some cases, the upholding of core business values (Monge & Desanctis 1999).

In the absence of proper communication, it would not be easy for different virtual entities to work as a unit. Electronic communication makes this possible by linking the whole network of parties to across distance, time, culture, departments, and organizations, thereby providing alternatives to the traditional same-time, same-place, functionally centred, in-house means of organisational communication. Figure 10 depicts communication in virtual organisations.



Electronic communication eventually reduces the limits of distance and different organisational structures on communication. This, therefore, enables spatially or organisationally distant entities to communicate with one another. Moreover, electronic communication makes it a lot easier for entities to form connections that would otherwise be difficult or impossible to maintain (Monge & Desanctis 1999).

Monge & Desanctis (1999) go on to say that new exchanges between parties, or new relationships, can occur as a result of meaningful connections among entities. Certainly, one of the hopes for virtual organisations is that new connections among entities will lead to lateral spanning of boundaries and synergy of blended expertise. In this sense, the real power of virtual organisations is realised when electronically connected people or firms embark on new or qualitatively different collaborations that ensure product or process innovation.

IMPLICATION OF ELECTRONIC COMMUNICATION

Six areas of electronic communication research provide implications for the four pillars (processes, relationships, boundaries, and structure) of organisational design. These pillars are highly dynamic processes, contractual relationships among entities, edgeless, permeable boundaries, and reconfigurable structures (Monge & Desanctis 1999).

CONCLUSION

This chapter has articulated how access to and the use of Information and Communication Technologies (ICTs) affect the process of development. Therefore, there is an urgent need for communities in developing countries to adopt and understand the significance of ICTs, and learn how to use them. This requires raising awareness and mobilizing members of society. The chapter has also identified some challenges facing the use and adoption of ICTs by developing countries. The next chapter deals with communication strategies for development in Maseru, Lesotho.

CHAPTER 4

COMMUNICATION STRATEGIES FOR DEVELOPMENT

INTRODUCTION

This chapter deals with communication strategies that are ideal for the development of Maseru community, in Lesotho. Communication is seen as central to human progress. In order for a community to enjoy the benefits of communication, there must be a process to execute it. Technological advancements, in particular Information and Communication Technologies, and their role in communities are at the heart of any strategic development.

CONTEXT TO MASERU DEVELOPMENT

Maseru is the capital city of Lesotho, which is an independent country situated within the geopolitical border of South Africa and fully landlocked by it. Lesotho is a developing state with considerably limited and scarce resources. However, it has attained a real annual growth rate of 4.2% between 1980 and 2002 and the national economy in terms of the gross national product (GDP) is now M7.5 billion (UNESCO 2005).

UNESCO further states that at present, Lesotho's per capital gross national income averages around US\$488, while GDP per capita on average is around US\$389 per annum from 1998 to 2002. Historically, there has been a very key traditional trend of economic dependence on South Africa for jobs (particularly in the mining sector), goods and services. The country is mostly agrarian with pockets of fairly high urban density. Science and technology infrastructure for industry and commerce, especially outside the capital city, Maseru, and other urban centres is relatively poor (UNESCO 2005).

Although Lesotho has low economic activity as well as low income level, it however enjoys a number of attractions and unique features such as national parks as well as mountains. These provide great potential for value-added prospecting and can provide citizens with premium income and employment options. Value chain development is commercially promising in many

areas, including agriculture, tourism, water, and energy industry. Farming activities are the main means of livelihood for the majority of citizens. The integration of Information Technology would be particularly crucial to enhance and sustain such developments. The extensive highlands provide Lesotho with tremendous scope and opportunity to build vibrant eco-tourism projects and small export-oriented industries. Lesotho is the only state in the world that has its entire territory 1,000 metres above sea level. Its climate and terrain naturally support a variety of outdoor activities such as snow and water skiing, skydiving, ice-skating, trekking, horseback trailing, car racing and many other outdoor eco-tourism attractions (UNESCO 2005).

THE GOVERNMENT OF LESOTHO

Lesotho is a democratic state which gained independence from Britain in 1966. Since then, Basotho have matured their vision, and maintained a common native language (Sesotho) that reflects their culture, heritage and traditions, which link them with the indigenous peoples of Southern Africa. Lesotho's value system is premised on a functional democracy and a governance system that resembles the Westminster system, with a bicameral legislature, wherein the executive arm has a prime minister as head of government, and a king serves as head of state (UNESCO 2005).

As an open economy, Lesotho embraces free-market principles and recognises the pivotal role of private-sector initiatives for the country's sustainable development. Accordingly, Lesotho has high regard for human rights and the rule of law, and believes in having cordial relations with its regional neighbours. In terms of its long-term development, Lesotho sees the need for the science and technology (S&T) policy to be closely linked with both tradition and modernism. Science and technology development should therefore reflect this dualism and to add value to Lesotho's rich diversity, history, values, culture and community relationships (UNESCO 2005).

SOCIO-ECONOMIC CONSIDERATIONS

Lesotho is a member of a number of regional, economic and political structures, including SACU, SADC, NEPAD and AU, which together offer many opportunities for export and trade relations. Besides, there are concessional trade agreements with the European Union (under EU

and Application Communication Protocols (ACP) and with the United States of America (under AGOA), among others. Many of the above concessions are not fully exploited by Lesotho enterprises due to the country's low value-adding capacity, and poor infrastructure for science and technology, manufacturing, agro-industry and tourism (Perrings 2012). Lesotho is small compared to its SADC counterparts. The author further states that technology infrastructure and international comparators of science and technology performance measures such as telephone, cell phone, radio, TV, internet connectivity, road, rail, cargo port infrastructure, energy and communication networks show Lesotho is lagging behind most SADC states.

DEVELOPMENT CHALLENGES

Lesotho's development challenges are many and the solutions require firm, innovative leadership, well-coordinated science and technology structures, and an effective technical human resource recruitment strategy. Perrings (2012) maintains that some immediate hurdles facing Lesotho's science and technology efforts include the following: the high rate of unemployment, raising poverty levels; HIV & AIDS; persistent gap in demand and supply of science and technology trained manpower; as well as soil erosion, poor land use, inadequate drainage, obsolete agricultural practices and technologies, all of which contribute to undue pressure on the country's limited arable land.

DEGREE OF TECHNOLOGICAL DEVELOPMENT

According to UNESCO (2005) Lesotho's infrastructure is built essentially for trade with South Africa and, as such, science and technology facilities are quite limited, in terms of industries and research facilities. The author postulates that Lesotho is lagging behind its SACU and SADC counterparts in science, technical education, research, and manufacturing capacity, and this is shown by Lesotho's low per capita GDP. UNESCO also notes that the supply and availability of science and technology graduates have consistently been shown to be inadequate over the years, and worst of all, it has been dwindling annually due to outward migration, particularly to South Africa.

TECHNOLOGICAL DETERMINISM

The technology determinism approach focuses on how the use of technology in communication affects mass communication and its role in society. The basic claim of determinism is that all other aspects of life result from a single factor. Economic determinism on the other hand believes that the economy determines all social and cultural processes. In a nutshell, technological determinism claims that technological advancement and innovation are drivers of social change, culture, economics and politics (Fourier 2007: 151). Castells (1996: 5) maintains that technology is society, and it is nearly impossible to understand society without the knowledge of its technological tools.

According to Wood (2000:249) technological determinism usually causes much of the hype associated with new communication technological developments, such as the internet and its information super-highway, mobile telephones, convergence of different media technologies, and how all these affect educational and socio-economic development.

THE NEW MEDIA TECHNOLOGY

Croteau & Hoynes (2003: 322) describe new media as the amalgamation of traditional media and the communication technologies that give these media more powerful interactive capabilities. This phenomenon, according to the authors, makes possible an instant access to information, on many different digital devices. The authors state that the new media have inevitably emerged as a great promise in information revolution. This promise entails the possibility of using the new media content give user feedback, and to allow creative participation and community formation.

Crotea & Hoynes (2003) make a distinction between traditional media and new media. The authors point out that the dynamic nature of the new media as well as their interactive relationship with the consumer of their content distinguishes them from traditional media. The authors also state that another great promise that the new media holds is the democratisation of the production, publishing, distribution and consumption of the media content. Crotea and Hoynes stress that new media technologies are networkable, dense, compressible, interactive and

impartial. New media therefore include technologies like the internet, websites, smart phones and many more

At a glance, the new media has emerged as a powerful tool for transformation and development. This phenomenon has made globalisation a reality by enabling people from different parts of the world to interact in real time. Through new media, connections between a physical place and a social place have been radically broken. Therefore, a physical location has become far less relevant for our social networking (Castells 1996: 311). Castells maintains that new media, particularly the internet, bring about the potential for a democratic, post-modern public space. In this case, citizens will be able to participate in a well-informed, non-hierarchical debate concerning their social issues.

According to Croteau & Hoynes (2003: 91) cyberspace communities are being established online. These virtual communities engage in a number of activities which resemble what we do in face-to-face situations. The members of cyberspace communities share data, resources and knowledge in different ways. These among many involve intellectual discourse, electronic commerce, planning, brainstorming, love affairs, and a little high art (Rheingold 2000: 92). The new media, thus, has the power to connect like-minded people on a global level. Not only is this phenomenon dominating the affairs of the information society, but it also remains the real preoccupation of the modern time.

Of communication process in the media technology, Social networking according to Baldauf & Stair (2009: 24) has tens of thousands of participants on the web. The users meet with others to converse and share information on the social networks. According to Baldauf & Stair, MySpace and Facebook are examples of social networks where members create web profiles that include all types of information about themselves and their interests. Critical importance is also noting that the new media has enhanced social movements.

FUNCTIONS OF NEW MEDIA TECHNOLOGIES

New technologies can be mapped by their primary technical functions: production, distribution, display, and storage (Pavlik 1998: 2). Marsham & Skinner (2001:9) note that the impact of

electronics upon our ways of creating, storing and disseminating information depends on our culture. These authors say that the impact of digital technology is truly evident in all forms of human communication. Marsham and Skinner hold that the new media landscape is as diverse as it is fast-changing. In a nutshell, these new technologies are radically transforming every aspect of how and with whom we communicate, what we can communicate, the manner in which we socialise with one another as well as how we do our jobs and take care of our health.

Production

Production has been cited as one of the primary technical functions of the new media technologies. According to Marsham & Skinner (2001:10) production technologies are those that are used in gathering and processing information. The processed information thus, eventually becomes knowledge, hence knowledge is power. Marsham & Skinner are of the view that besides providing new ways to collect and interpret information, electronic production technologies have also allowed us to collate new kinds of information. These technologies have also improved our ability to give rapid and efficient solutions for different problems.

Distribution

Distribution technologies are those that are used in the transmission or dissemination of information. There are five basic distribution technology systems, namely over-the-air broadcasting, land-based telecommunications, coaxial cable, wireless transmission and electrical power lines (Marsham & Skinner 2001:11). Although these technologies have their pros and cons, the positive cultural and commercial consequences apparently outweigh the negative impact by far. For example, these technologies have made information to be rapidly available all across the globe. Besides, they have made telecommunication more practical than any other technology before them. Moreover, the technologies have made video-on-demand a practical reality (Marsham & Skinner 2001: 11).

Display

Pavlik (1998: 8) states that display devices include those that present information to the end-user, audience member or information consumer. He explains that these devices display electronic

information in either one or any combination of the following forms: video, audio, text, and images. Pavlik adds rigour to his statement by arguing that some of these display technologies even present information in three-dimensional or touch-sensitive format. However, Pavlik also notes that these technologies are dependent on or interconnected with the technologies of distribution, production and storage.

Storage

This category refers to the function of storing information in electronic form. Storage media are transforming from a largely magnetic to an optical format. Some of the common storage devices are magnetic floppy disks, magnetic hard drives, optical compact discs (CDs), and optical compact disk-read only memory (CD-ROM) as well as optical digital versatile disks (DVDs) (Marshall & Skinner 2001:14-15).

THE DIGITAL DIVIDE

At a glance, technological revolution, led by advances in Information and Communication Technologies (ICTs), continuously changes the socio-economic conditions of countries and communities that use these technologies. The term ‘digital divide’ has become central to ICT revolution. Digital divide according to Lesame (2005:3) refers to the difference in access to the internet and other ICTs by individuals, households, organisations, countries and regions at different socio-economic levels. Thus, the digital divide does not only refer to the difference in access between the wealthy, urban “haves” and the poor, rural “have-nots”, but also to the digital and ICT disparities between the developing countries and the developed economies.

Developed countries have become knowledge societies as a result of the technological revolution while developing economies aspire to reach that level - through the use of ICTs. Most people in developing countries still do not use ICTs, either because they are inaccessible to where people reside or people cannot afford the cost of using them. The availability, usage and distribution of ICTs vary remarkably from rural to urban areas, and these may be influenced by level of education, age, and gender. In order to address these inequalities, strong and solid technological infrastructure needs to be in place. There should also be consideration of how such technology is

used. While much has already been done, governments, industry and civil society need to invest greater efforts to ensure that everybody capitalises on the use of ICTs (Baldauf & Stair 2009:72).

The new information and communication advancements continue to make a considerable impact on individuals' lives, both in developing and developed societies. Lesame (2005: 3) points out that although ICTs have begun filtering through Africa, the continent has only taken its first few steps on the path towards becoming an information society in the recent past. Thus, Africa still lags far behind western countries. Most people in the developing countries according to Hafkin & Menou (1995) cannot afford access to ICT and do not therefore have access to modern communication and information tools. This situation is therefore not ideal since many people in these societies miss out crucial content that could eventually contribute towards social and economic development. Hafkin & Menou note that communication and information provide knowledge and that knowledge leads to positive development of a society. It is therefore imperative, according to Hafkin & Menou, that ICTs be spread throughout Africa and that access to it should be affordable.

Lesame (2005: 3) takes the concept further by pointing out that inhabitants residing in the urban zones in developed countries normally have easy access to computers, facsimile machines, telephone services and the internet. Lesame also notes that this category of people have access to ICT training relevant for job hunting and for tracking a wealth of information from the internet. In civilized information societies, most people have internet in their homes. By contrast, the overwhelming numbers of people in Africa still cannot afford to use internet, even those who live in urban areas with access to internet at work. Benjamin & Dahms (1999) point out that community access points like post offices, tele-centres, schools, public libraries, public information terminals provide community access to ICTs but alarming numbers of people in developing countries do not have any access.

Internet users by regions, Nov 2000

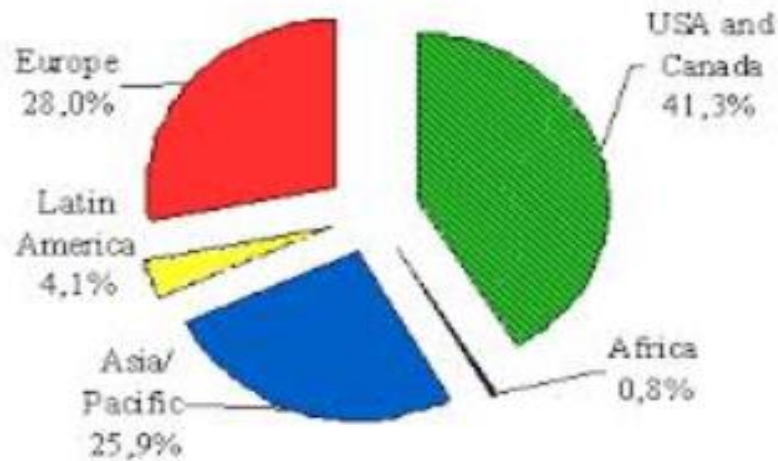


Figure 11: The global digital divide

Source: Aho (2005)

BRIDGING THE DIGITAL DIVIDE

ICTs according to Lesame (2005: 17) remain central to socio-economic development across Africa. The South African government works to create telecommunications and ICT regulatory policy frameworks in order to develop the telecommunications and ICT infrastructure. The following are various ways in which the digital divide could be effectively managed:

The i-community

This is a unique private-public sector ICT training cooperative. The i-community comprises a business resource centre, an e-government gateway, a personal computer refurbishment centre, a call centre and IT training facilities (Lesame 2005:24). This sector makes it possible for locals to send e-mail to friends and family in urban areas. The i-community serves as an IT project aimed not only at ICT skills development but also at stimulating social and economic development.

Telecentres

Telecentres have made possible the provision of ICT access in rural areas. These centres ensure that community members have shared access to ICT tools like telephones, printers, facsimile, photocopy facilities, and the internet (Wessie 2001). These are ICT centre are located in either a large building or specially designed containers that provide community members with much affordable access to ICTs. Wessie notes that telecentres are capable of linking local, rural clinics and schools to existing national health centres in urban areas and other educational institutions. Telecentres are basically telecommunication access points deployed in under-serviced areas. Lesame (2005: 167) maintains that by the very nature of their service, tele-centres are tools for development informatics, which is a study of the contribution of ICTs to community development

Digital villages

According to Wessie (2001) digital villages are computer resource centres under the management of individuals who have the expertise in IT and management skills. Wessie also makes a distinction between digital villages and telecentres. The author describes digital villages to be mostly backed by private sector as opposed to telecentres. Digital villages also have ICT resources and offer ICT skills training. They have electricity and well-secured buildings.

Multipurpose community centres

Multipurpose community centres (MPCCs) are a type of telecentres, and, in South Africa, are established by the Government Communication and Information System (GCIS). However, the unavailability of electricity is sometimes a problem. The GCIS telecentres are operating successfully and most of them provide services such as tele-health and electronic government (Lesame 2005: 26).

E-learning centres

Electronic learning (e-learning) centres are similar to digital villages in that they are a private sector initiative. At the Cisco e-learning academy in the DRC, according to Lesame (2005:26)

students do not use books and the entire learning process takes place online. Thus, tests are sent to markers in other continents at the click of a mouse.



Figure 12: E-learning centres as a means to overcome the digital divide

Source: Andrew (2010)

Satellite television

Digital satellite television in response to the hunger for ICTs, particularly in schools, brought a new multimedia channel. This channel is educational television using ICTs to educate school children. This resource targets under-resourced secondary schools and teaches ICT skills, multimedia and various subjects at member schools (Wessie 2001). Thai (2009) maintains that the majority of the people in Lesotho still do not have access to the internet and there are initiatives whose objective is to promote the use of digital technology.

NEW ECONOMY

The United States according to Jorgenson & Stiroh (2000) has transformed to a new economy that is characterised by the rapid deployment and broad use of new Information and

Communication Technologies and improved computing and information management. These developments and innovations lead to a rapid structural increase in labour productivity, which in turn raises output growth. Jorgenson & Stiroh view the term ‘new economy’ to be intended to emphasise the significant contribution of new technologies to the sustainable economic growth and consistently high employment rate. Together with the drastic growth of internet penetration, the rapid growth rate of innovation in ICTs is seen to be the main contributor to labour benefits. Online & Sichel (2000) are in complete agreement with this as they note that these benefits result from more efficient production of computers and from the widespread use ICTs. The reconfiguration of computer networks and business trends which was caused by innovations in ICTs have also contributed to the labour benefits.

The provision of ICTs, especially the internet, to the least-developed countries leads to rapid technological developments that are conducive for macroeconomic growth (Panagariya 2000). Panagariya maintains that modern practices such as e-commerce in the form of online business-to-business transactions and internet retailing are changing the way firms and individuals interact, thereby increasing efficiency in purchasing, production processes, and inventory management. Therefore, developing countries such as Lesotho must broadly embrace ICTs in order to be competitive participants in the new economy. It is of critical importance to also note that the same new economy is the source of many advantageous opportunities.

INFORMATION AND COMMUNICATION TECHNOLOGIES IN LESOTHO

Lesotho’s Information and Communication Technology (ICT) sector is made up of fixed and mobile telecommunications, broadcasting, multimedia technology and the internet, which support key industries such as postal services, banking and e-commerce (Thai 2009).

The country’s ICT infrastructure is currently of lower quality than what is needed for competitive participation in the world, with an estimated number of 6.1 main telephone lines per 100 people. Personal computers are mainly limited to urban areas and were estimated to be less than 30 000 in the year 2000 (Thai 2009). The rate at which Basotho partake in computer training, programming and systems literacy programmes will determine when they start to benefit from these consistently evolving technologies. For us to be on a par with our regional and

international trade partners, ICTs have to be made top priority with urgent financial injection for their installation in our schools, training and research institutions as well as for businesses and government institutions (Lesotho Communications Authority 2000).

Lesotho Communications Authority (LCA) further states that ICT sector contains one of the fastest growing industries both within Lesotho and the wider global arena. The country's telecommunications and information sector, therefore, promises plenty of opportunities for Basotho, in addition to fostering local and global interactions. These opportunities include a variety of applications for tourism, agriculture, medicine, commerce, travel, information, entertainment, education, as well as news and broadcasting.

The past few years have seen increased liberalisation diversification and private sector participation in the ICT industry, resulting in robust competition and a wider range of services rendered by different providers. The sector is also an important part of Lesotho's poverty reduction strategy, the main focus of which is wealth creation, promotion of global access to different opportunities, effective regulatory systems and the expansion of human resources capacity. Accelerating progress in service delivery, particularly to the rural areas, is a top priority. Efforts are being made to improve the capacity and quality of the communications network and to gradually expand coverage to the rural areas for essential and value-added services, such as e-mail, voice-mail, and postal services. Internet connectivity has seen more expansion, while mobile telephone coverage has grown convincingly since it was included in the Communications Policy of 2008 and the Communications Bill of 2009 (Lesotho Communication Authority 2000).

TELECOMMUNICATIONS IN LESOTHO

According to Thai (2009:19) the telecommunications network of Lesotho has steadily transformed from a state-owned monopoly to a national operator that is mainly owned by private entities. A more liberal industry is being pursued to stimulate competition and improve service delivery. The author is of the view that international networks have been better integrated through a submarine cable (the SAT-3/WASC/SAFE), which is a 28 000-kilometre-long optical fibre cable that makes satellite and terrestrial connections to Europe and Asia. This initiative is a

very significant technological achievement to Africa, as it provides faster, more efficient trading channels between the continent and international markets, with the potential market size estimated at about 70 percent of the population of the continent.

TELEPHONY

The advent of mobile telephony has considerably increased teledensity, after the number of mobile phones overtook that of fixed lines in 2001. During 2008, the number of fixed network subscribers dropped from 47 059 to 41 858, with fixed line teledensity at 2 percent. At the same time, the mobile subscriber base increased from 482 455 to 565 682, representing mobile penetration of over 30 percent. Overall teledensity presently stands at 34 percent (Hafkin & Menou 1995).

THE INTERNET IN LESOTHO

According to Dwyer (2010: 23) in Lesotho, only 3.4 percent of the people have access to the internet, from a total of just above 2 000 internet connections. The whole country is connected by six Internet Service Providers (ISPs) and has over 28 internet cafés. In spite of the dismally low connectivity, there is a rapid increase in internet penetration as a result of the use of new fixed and mobile technologies. Thai (2009) also highlights that the Forget-me-not Africa's Message Optimiser service launched by Econet Telecom Lesotho in 2009 should be used to increase the population's access to mobile e-mail, which amounts to more than doubling the people's access to e-mail. This service enables all Econet Telecom's users to send and receive e-mail using affordable, entry-level mobile phones, without a need for any device upgrades and and/or internet access.

THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN LESOTHO

According to Nevil (2009) the internet still plays a fundamental role in converging technologies such as audio/video, broadcasting, text and telephony. The internet allows millions of Basotho researchers to conduct online research. The author further notes that internet users can also shop and order videos or books on line (electronic shopping or e-shopping). The internet has indeed

become the dominant phenomenon in the knowledge society. The diffusion of digital technology thus has led to a spectacular technological revolution.

The internet has taken the way of living in societies to an unprecedented human development level. The internet allows us to sell our products or wares online (electronic marketing or e-marketing) and conduct personal correspondence electronically instead of using the postal system. Governments and political parties also use the internet for various reasons, such as delivering some services, electioneering and displaying election results. This internet usage by governments and political parties constitutes e-governance and electronic democracy, respectively (Lesame 2005: 7). It is very important that people all over the world have access to the internet. Digital divides between rural and urban people as well as between countries are a serious challenge. Lesame (2005) further stresses that government agencies, departments and the private sector need to come together to find solutions to this woe through strategic alliance.

INFORMATION COMMUNICATION TECHNOLOGIES AND YOUTH

Youth and new technology are inseparable terms in discussions about the nature of modern socio-economic development. This is precisely due to the fact that both youth and technology are associated with similar teleological beliefs about growth, progression and development. Both of them inevitably form the basis of modern society (Scott 1995:231). The youth of Maseru constitute a core segment of the society. They should therefore be strategically positioned to impact positively on the economy of the community. Increasing the accessibility of ICTs to the youth is central to the country's economic development and its position in the global information-based, political economy.

According to the Youth Development Trust (2003) even in the poorest communities, many families' recognised that ICTs are really important for community development. For instance, parents in Lesotho have responded positively to the government's initiative of digital literacy training for pupils. Consequently, these families decided to pool their meagre financial resources to enroll their youth on an ICT training course. The trust notes that the use of ICTs is likely to become prevalent among previous and current generations. Much of this debate centres on the skills shortage problem which is a typical phenomenon in most of the developing countries. The

Youth Development Trust observes that the ICT sector will eventually solve the woes of increasing unemployment of young citizens in developing countries.

Solange & Momo (2005) further points out those academic institutions which offer ICT training have realised the importance of this to the youth market. ICT training services are being offered by a range of private and public sector institutions, and the youth market is clearly one of their most-targeted markets. Much of the literature dealing with similar subjects indicates that computer skills and information technology rank highest on the list of areas in which the majority of the youth in developing countries will like to receive training.

In developing countries such as Lesotho, it is not only in terms of employment creation that the ICTs are prioritised in the youth market. Advertisers are also advised by researchers to take advantage of ICT use by local youth (Lesame 2005:152). A growing debate has culminated in two opposite view points: whether ICTs impact negatively or positively on the youth. However, the optimists, according to Lesame, see new opportunities where young people, through the use of ICTs, are able to forge new cultural identities. The author is of the view that the use of ICTs offers opportunities where the youth engage in political debates and democratic processes such as voting. The use of ICTs by young people exposes them to an abundance of information sources, which will eventually make them knowledgeable citizens.

CONVERGENCE

Convergence refers the combination of Information and Communication Technologies (ICTs), especially telecommunications and traditional media, which is a new way of finding knowledge, information, and entertainment from one device. With convergence there are fewer definite boundaries between traditional media and telecommunication technologies (Mansell & When 1998:13). The authors realise that the telecommunications network provides the electronic means for the development of new innovations in information and communication technologies. Included in these innovations are multimedia, databases, the internet, pay television, and high definition television. All this, according to Mansell & Wehn (1998) is attributed to the modern, digitized information and media content, and the advent of various interactive technologies. Convergence thus plays a central role in the digitally networked societies.

According to Pavlik (1998:36) technological convergence makes the boundaries between ICT networks to technically fade, for example, personal computers and television have become more similar as a result of convergence caused by telematics. Many previously individualistic networks are becoming more and more interlinked to render services of the same nature. Fourier (2007) also notes that in convergence, multimedia integrate text, audio and video. He points out that along the lines of technological convergence, there is also economic convergence. Economic convergence, thus, means taking advantage of the convergence of computing and communications network content for economic gain.

A broader understanding of convergence focuses on hybridisation, intersexuality, intermediality and multimodality, an important discourse that expands understanding of the media culture (Briggs & Burke 2002). Convergence is reported to affect much more than the mutual functionality of different media, it is particularly about legitimizing the media's social and political responsibility. Briggs and Burke stress that convergence enables new combinations of different technologies for the provision of content and services.

Dwyer (2010:6) argues that the rapid adoption of digital media has made substantial changes in the nature and structure of modern mediated communication. The author goes on to say that access to new media, especially to mobile and online media, means that people are able to organise their daily contacts as well as personal, leisure and work-related activities while on the move. Thus, media audience is experiencing media convergence in the situation in which they find themselves when connecting network infrastructure.

THE DAWN OF THE INTERNET REVOLUTION

The internet is an international 'network of networks'. It enables multitudes of computers and many other electronic devices (cell-phones, pagers, video cameras, etc.) around the world to communicate with one another through telephone lines and satellites in an affordable, user-friendly manner (Mersham & Skinner 1999:188). The internet allows its users to send and receive electronic mail (e-mail). Besides this, websites (multiple pages of information) on the World Wide Web can be accessed and searched for using keywords on a search engine. The latter is a good example of interactive (two way) communication.

The internet as Mersham & Skinner (1999) state is a single-medium communication that can exchange any kind of media between organisations, or between individuals, without regards to their physical location. Mersham & Skinner also note that its ability to connect people and facilitate the sharing and storage of information makes the internet very powerful. Thus, the internet has emerged as one of the greatest communication media (Mersham & Skinner 1999: 188).

HISTORICAL BACKGROUND

The internet was discovered in 1969 as a result of an experiment by the US (United States) Department of Defence (DOD) (Mersham & Skinner 1999). The experiment was aimed at testing the possibility of forming a wide area (long distance) computer network for the purpose of exchanging messages and data between scientists and the military personnel. The US was involved in the Cold War, so the military added the requirement that the network would be able to function with partial shutdowns in times of national emergency, in case one or more computers in the network were to be down.

Grauer & Barber (2002) state that the experiment was a great success. The original four-computer network, called the Advanced Research Projects Agency Network (ARPANet), later grew to link tens of millions of computers. As an international network, the internet has information storage and global communication as its basic capabilities.

The historic event in the history of the internet was when the World Wide Web (WWW or simply the web) was introduced in 1991. According to Grauer & Barber (2002:3) the World Wide Web is a large part of the internet that stores documents with hyperlinks to one another. This means that each document contains an active link to another, which may be on the same computer or any other computer on the network. Hyperlinks may refer to graphic, sound, text or video files.

THE ECONOMICS OF THE NET

The internet or otherwise the net is changing the ways in which the world does business. These changes that take place due to internet presence involve employment patterns, revenue, and costs associated with the internet (Rodman 2009: 311).

Employment Patterns

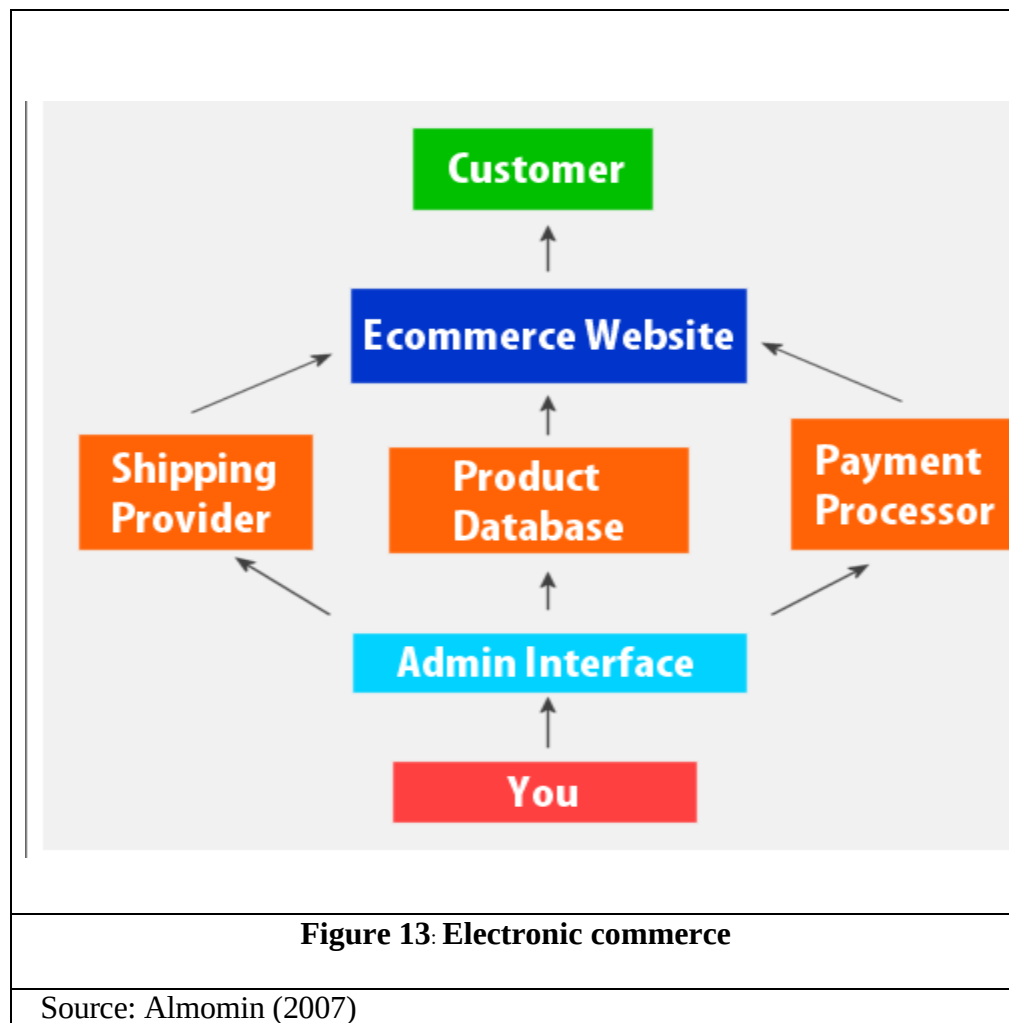
Internet properties have two types of owners. These are entrepreneurs and corporations. Internet thus has potential for entrepreneurs. Today, those who work the entrepreneurs and corporations might be located anywhere, as both firms and individuals take advantage of their ability to work from any location. Therefore, workers within the new medium are making up entirely new employment categories. The categories include network engineers, network managers, and webmasters and knowledge workers (Rodman 2009 312).

Revenue Sources

Basically, three revenue sources are offered on the internet. These include online product sales, online advertising sales, and online sales of information (Rodman 2009: 211).

E-Commerce

E-commerce refers to the selling of goods and rendering of services online. To date, the websites that profit the most from this are the ones that sell tangible products online. Almost any product can be sold on the internet - a very affordable means for most businesses to have their share in the market (Rodman 2009: 312-313). Figure 13 below depicts how e-commerce works.



Advertising

A large number of advertisements appear on popular webpages to allow internet surfers to access advertisers' websites by just clicking a mouse. Advertisers find this an effective form of customer communication because only prospective customers would visit a website for detailed information about the advertiser's products. Generally, advertisers pay a flat rate to get their advert on the web, and once the adverts are established they are charged "per hit", that is, each time the advert is accessed by a user (Rodman 2009:314).

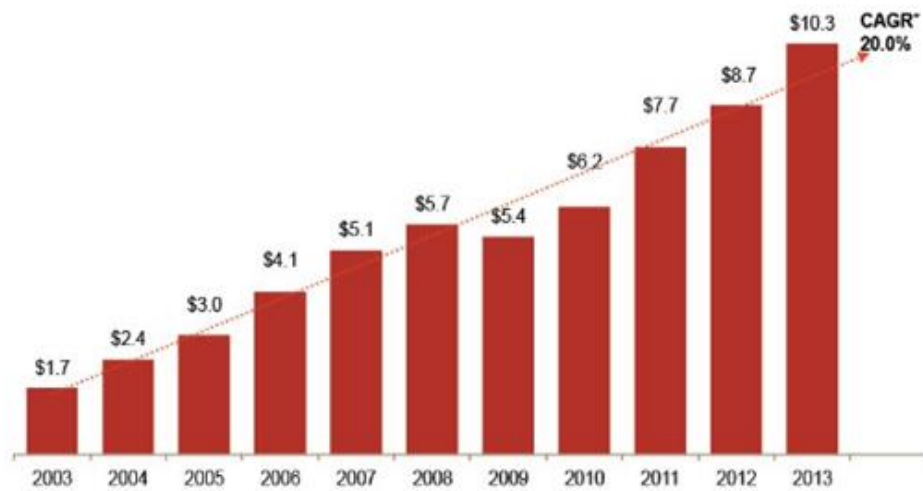


Figure 14: Advertising in the US for a decade

Source: Almomini (2007)

Paid Content

One way to make money online, and so far the least successful, is to produce content for whose access interested people pay. The provision of online pornography is one example of services that make successful money-making opportunities. Another service that people appear willing to pay for is online education or distance learning. Students who cannot make it to a traditional classroom can take advantage of courses offered on the internet (Rodman 2009: 315). Thus, the internet has become an alternative for access to education by all.

Online Costs

Due to the popularity of the web, and the fact that a lot of people have already shown willingness to spend money to use it, its commercial potential is thought to be quite big. Nonetheless, start-up costs are relatively high but profits are soon realized in the long run (Rodman, 2009: 316).

COMMUNITY DEVELOPMENT AND THE INTERNET

The majority of citizens are quite aware that income inequality has increased in the last 30 years. Less well known is that income instability—how much families' incomes fluctuate up and down over time—has also grown substantially. These changes create new opportunities while at the same time posing equally draining challenges. This digital revolution is likely to transform production processes, commerce, governance, education, citizen participation, and all other aspects of human lives. The revolution can lead to significant new means of socio-economic growth and development (DotForce 2001). Therefore, access to and effective utilisation of the resources of the new world economy and the innovations for which they allow are crucial to poverty alleviation, increased social cohesion and the creation of a better life for all.

The attribution of community development to ICTs is a concept that has been well argued by some scholars to suggest that the two phenomena are inseparable. Carpentier & Servaes (2003) argue that there are two explanations for the association of ICTs with community development. Firstly, community is generally characterised with networking. Interaction between people is central to many definitions of the concept of community and community development. Therefore, ICTs, especially the internet, offer new forms of interactive communication for communities to network. Secondly, community is the main focus of many development initiatives. Moreover, after globalisation versus localisation debates, localisation plans are often implemented by focusing on community development (Carpentier & Servaes 2003).

ADVANTAGES OF THE INTERNET

Community development programmes now capitalise on the benefits offered by new ICTs, particularly the internet. These programmes speed up service delivery by incorporating the

internet and other ICTs in their operations. Lesame (2005:122) states that internet is central to any community development as it brings about at least the following four advantages:

Increase in speed

Information is disseminated much faster and is easier to share on the internet (including e-mail) as opposed to conventional mail (“snail mail”) (Lesame 2005).

The decrease in costs

The point here is that the cost of communication is reduced for the end-user. This cost depends on some conditions being met, for example, availability of infrastructure and the cost of access to technology centres (Lesame 2005).

Possible integration and convergence of different media forms

The idea here is that the internet technology allows for the integration and converging of media forms such as text, audio/visuals and movies. The internet now converges with the regular radio, television and telephone, as Lesame (2005) predicted.

Possibility of interactivity and especially the consultation of information

The internet is always associated with the concept of interactivity. This is significant for community development. The World Wide Web has more to do with consultation than with interactivity. This, therefore, means that information can be found from different sources all over the world (Lesame 2005).

COMMUNITIES IN THE CYBERSPACE

According to Van Dijk (1998) new communities develop and the existing ones expand as a result of new possibilities of digital networking. Therefore, the so-called virtual communities or digital networks make use of the internet for communication, and are often compared with traditional communities. Van Dijk (1988) defines virtual communities as “geographically dispersed, internet-based communities of interest”. These communities are different from traditional communities, which are based on face-to-face interactions between members.



Figure 15: Cyber communities

Source: Adapted from Van Dijk (1998)

Van Dijk concludes by referring to these internet-based communities as “cyberspace-based communities” (Van Dijk 1998).

ECOMOMIC AND SOCIAL USES OF THE INTERNET

The internet is used in organisations to improve the flow of information from communicators to message receivers. Many newspapers on the African continent are now available on the internet for news consumers. A lot of these newspapers were only available in print before new media like the internet came into existence (Lesame 2005:208).

Bonjawo (2001) points out that through the use of ICTs, we are able to improve telehealth or telemedicine facilities. Therefore, clinics in remote areas can enable nurses to consult with doctors and other medical professionals in the city hospitals using the ICTs. For instance, the nurses can use the technologies to get other medical facilities they require and dispense health care over a phone call. They can also utilise ICTs available to have unusual cases diagnosed.

Moreover, the ICTs can minimise distance and time obstacles between communicators far from each other. The best way in which telecommunications can foster economic growth is when they are used as media for cost-effective information transfer. This could be done in conjunction with the elimination of the obstacles of distance and time between urban and rural areas as well as developing and developed countries. ICTs offer convenient transfer of information, and therefore play a vital role as sources of knowledge, education and human capital for business and economic development. New information contributes to general knowledge that improves national productivity; hence, a knowledgeable worker is a productive worker (Bonjawo 2001).

Besides, Lesame (2005:208) is also of the view that new jobs are created through the use of ICTs. Thus, the majority of people around the globe now have jobs as a result of the creation of telecentres or centres where local people can access ICTs. Even online companies have also created work for some people.

Organisations use information technology, especially the internet, to automate many of their operations in order to cut labour costs. Such organisations use ICTs to ensure the provision of relevant information to the people who need it to make better decisions. Thus, the use of ICTs enables organisations to be more competitive by serving their customers better (McKeown 2001: 23).

Amant & Zemliansky (2005:42) postulate that distanced leadership-leading others who are not co-located with one- can be more complicated than leadership in co-located settings. Proximate settings normally allow organisational members and leaders to communicate frequently and spontaneously. This provides opportunities for leaders and members to interact. Amant & Zemliansky (2005:43), therefore, suggest that geographically dispersed employees may feel isolated from other organisational members due to physical distance. The authors maintain that mediated communication is central to these distanced work arrangements, and may add another challenge to effective leadership.

Duarte & Snyder (1999:19) argue that there is no question that technologically mediated interaction has become more popular; text-based communication is becoming an even more primary means for sharing information in organisations. This practice is now more popular than

any time before and its importance and functionality hardly ends there. Duarte & Snyder note that internet communication is central to implementing team projects, providing formative and ongoing leadership. Thus, this is crucial in forming and maintaining relationships, and establishing and managing one's communities of practice and personal identity.

Computing and digital technologies are diffused in almost every environment, thus impacting greatly on the world. The internet is a source of knowledge. People in developing countries get various types of information, ranging from information about jobs to travel information and information about local development projects and health issues, from the internet (Bonjawo 2001).

Lesame (2005:211) is of the view that the internet can also be used as a global communication tool, to promote local causes aimed at getting global support so as to address local socio-economic challenges, for instance, internet can assist one to acquire financial help for an HIV/AIDS support project. There are many websites that can be used to establish and maintain friendships. Lesame further states that the internet is commonly used for political purposes by many governments, political organisations and potential politicians to promote their ideals and policies. The internet can play an extremely critical role in the dissemination of official laws, policies, political speeches, state of the nation addresses and other essential information.

EDUCATIONAL USE OF THE INTERNET

Individual teachers' instructional styles and philosophies about technology integration are critical factors in the successful implementation of technology-supported instruction. It is therefore crucial that each teacher thinks about how he/she provides instructions and how technology supports such instructional methods. Teachers who have lab activities associated with their content will have different technological needs than those who do not. The same applies to teachers who require students to conduct research; they will also have specific configuration needs for both classroom and the library or media centre (Young 2006: 111). Thus, technology is vital in supporting e-learning and e-teaching.

According to Bonjawo (2001) through the use of ICTS, there is a possibility of the expansion of educational links, across national and international borders, and provision of distance education. An underlying reality is the possibility of today's students of all ages and from all walks of life to study with an instructor anywhere in the world through internet-connected computers. Bonjawo further says that students in several West African states study through the use of ICTs at the African Virtual University based in Washington DC in America.

Classroom environments benefit greatly from asynchronous computer-mediated communication such as online discussion groups, for they can enhance instruction. According to Amant & Zemliansky (2005), creating the realism of the workplace in an academic environment is a critical educational goal in communication for the purpose of education. Therefore, experiential learning, especially instructional simulations, can be a powerful vehicle for this purpose. Amant & Zemliansky stress that when properly designed and implemented, experience-based instruction, including simulations, games, and other structured activities, represents an attractive alternative to traditional classroom approaches.



Figure 16: Technology in education

Source: Nevil (2009)

Traditional classroom environments benefit from using asynchronous computer-mediated communication such as an online discussion group. An online discussion group can expand the classroom in a number of ways. Such ways include allowing for students and instructor interaction throughout the week at times convenient to all participants, shifting learning from a teacher-oriented to a network-oriented practice (Amant & Zemliansky 2005:68).

Carpentier & Servaes (2003) take the discussion further by saying that it is easy for teachers to become enamoured with technology, especially one that is popular with their students and seems to facilitate learning. The authors further note that students are freed from the authoritative presence of the teacher. Normally, students examine the texts of other writers, they are often more likely to express their opinions, worry less about offending a classmate, and resist a tendency toward silence.

Young (2006: 78) postulates that using an online digital video library considerably addresses a number of teaching and learning challenges. This reality is visible when thousands of videos and short clips that have been reviewed to ensure alignment to content and curriculum standards are provided for students' learning. Young notes that using a searchable database makes it possible to browse the collection and filter the relevant videos and clips by content or study area. Young states that once the relevant content has been identified, teachers can then view the actual videos immediately, or at a more convenient time. This then allows teachers and students to select the best content, being sure of the availability of information from a reliable single source. It is, therefore, possible to review and download learning/teaching guides and lesson plans from the online digital library.

THE PROMISES OF ICTS IN TERTIARY EDUCATION

According to Larsen & Lancrin (2009) the promises of the use of ICTs in the transformation of higher learning and teaching have always had the following three aspects: expanding and widening access to education; enhancing the quality of content; and ultimately reducing the costs of education.

ICTs can reduce or eliminate space and time constraints, and thereby allow more people to take part in a more flexible environment of tertiary education than that of the traditional face-to-face approach. This eventually gives access to education regardless of geographical location. Online learning environments allow an extremely large number of learners to have access to a class. ICTs also allow for an affordable reproduction and distribution of a lesson through different means, like the digital recordings and their compatibility with TV, radio, and the internet. Moreover, ICTs hold the promise to bring about higher-quality tertiary education and more effective learning (Larsen & Lancrin 2009).

INFORMATION TECHNOLOGY IN LESOTHO LIBRARIES

Information technology (IT) is used in libraries to automate activities such as acquisition, cataloguing, circulation and serial controls, production of management information, and provision of computerised information storage and retrieval services. This technology is used in libraries to enhance and improve efficiency in the provision of essential library services. However, information technology is being introduced in Lesotho libraries at a considerably slow pace. This situation can be attributed to factors such as financial constraints and the general lack of the desired skills among most library staff members (Scott 1995). Amundsen & Mcalpine (2009) maintain that at a glance, Lesotho's information technology infrastructure is extremely backward and therefore very little can be executed.

THE INTERNET IN EDUTAINMENT

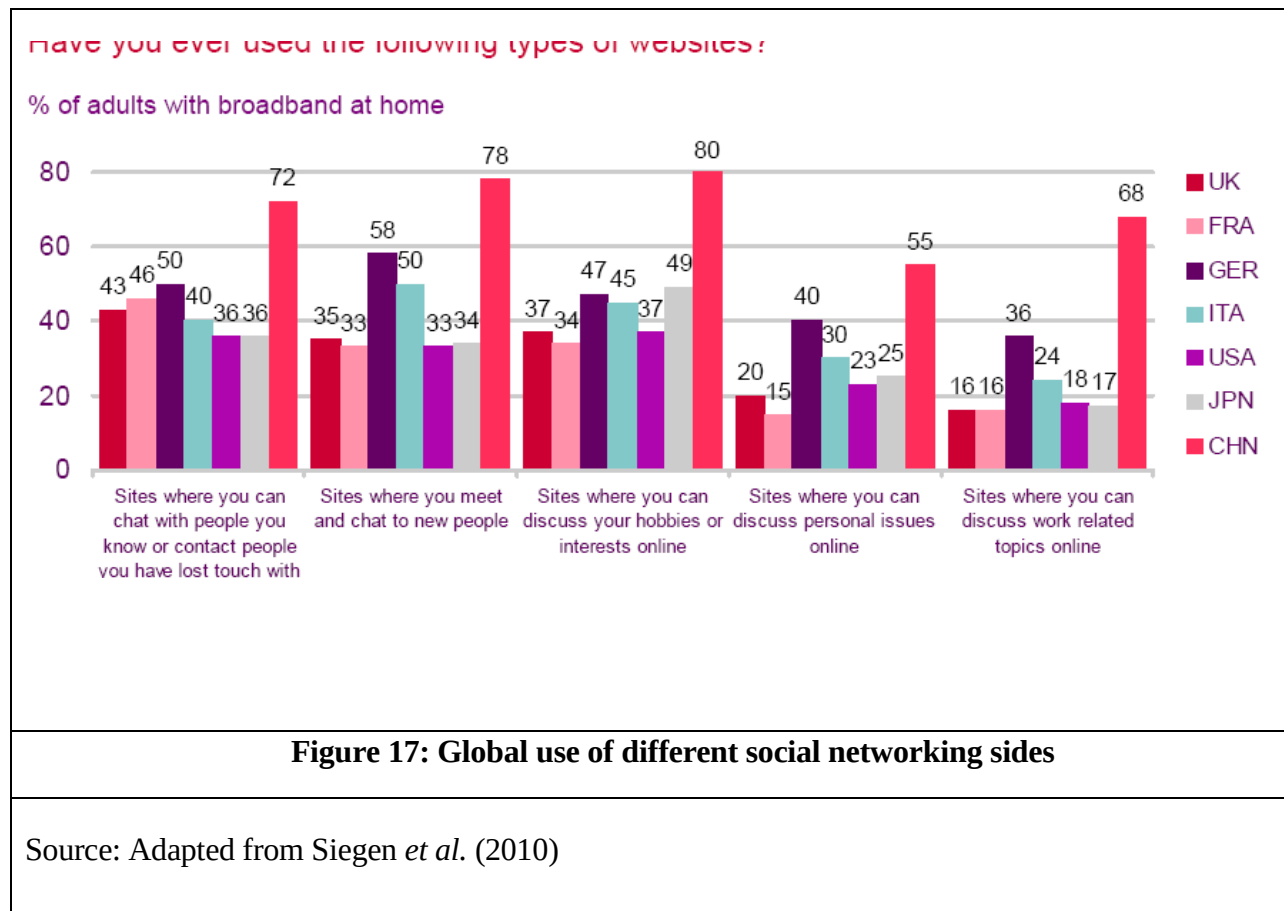
According to Baldauf & Stair (2009:41) a new market in media management software is emerging to assist individuals with managing personal digital photos, music collections, and videos. Internet connections and advances in streaming technology have brought a wide range of media and gaming applications to the web. Baldauf & Stair (2009: 237) point out that the web has had a dramatic impact on the music and motion picture industries. This has therefore caused an unprecedented evolution of marketing and distribution approaches. Compressed music formats like MP3 have made music swapping over the internet a convenient and popular activity. In some cases, people decide to listen to radio on the internet.

THE INTERNET IN TRAVEL

The web has a profound effect on the travel industry and the way we plan and prepare for our trips (Baldauf & Stair 2009:235). From getting assistance with short trips across town to planning summer long holidays abroad, travellers are now turning to the web to save time and money, and reduce much of the risk involved in visiting unknown places.

GLOBAL SOCIAL NETWORKING

The digital era has brought about a revolution where web resources allow users to collaborate and contribute to the web content (Baldauf & Stair 2009:226). Social networking sites allow members to exchange messages and comment on each other's pages. Therefore, members accumulate friends through an online invitation process.



Baldauf and Stair mention Twitter as one of social networking sites where participants can report on what they are doing on a particular day, thus providing essential information for those interested in their daily activities.

CONCLUSION

This chapter has dealt with the importance of information and communication technologies in addressing numerous socio-economic challenges in poor communities, such as those in Maseru, Lesotho. To a greater extent, the chapter has attempted to delve into the problem of poor information technology infrastructure. The digital divide has been defined as the inevitable information and communication technology gap among societies. The chapter has further explored the role of media technologies. These technologies are viewed as vital in transforming societies.

CHAPTER 5

RURAL DEVELOPMENT

INTRODUCTION

This chapter will examine various circumstances of rural communities. The largely rural Maseru is recognisably underdeveloped and is facing the same challenges as other rural areas. Consequently, the introduction of new technologies, especially Information Communication Technologies (ICTs), has been seen as an appropriate strategy in responding to these numerous challenges. This chapter will determine the needs for ICT and e-services of people in rural areas, such as health, educational, agricultural, social welfare, entertainment, and commercial needs. The chapter will also establish the relationship between information needs and the attitude of people in rural areas. Development is central to socio-economic circumstances and needs of the people in these areas. This chapter therefore attempts to evaluate how ICTs can be used as a platform for rural community development in Maseru

RURAL PEOPLE

Donge (2009) maintains that rural population is at a disadvantage because it is not served well with regard to communication and infrastructure development. The people are sparsely distributed and generally poor. The writer is of the view that use of correspondence makes them spend less of their income. In the most underdeveloped economies, such as Lesotho, about 70% of the population depends on primary industries, mainly agriculture, for their livelihood.

Donge further states that education plays a vital role in alleviating poverty and improving agriculture and the lives of rural communities. He also notes that education is one of the basic human rights. Despite this, the number of children who have access to education in rural areas is less than that in urban areas. High adult illiteracy and poor quality of education are common in a typical rural area. Technology has always made a significant contribution to addressing most rural challenges. Over the years, it has been an important part of economic development and a central tool for people development.

DEVELOPMENT

Development has different definitions by various academics based on the context in which the term is used. It has been said to refer to the transformation of people's lifestyles. Development involves transforming people's mentality for the better. It is also said to entail a specific level of growth or advancement. This means that development is a positive change in people's lifestyles, attitude, and behaviour, among others, because they have access to relevant, adequate and timely information sources (both formal and informal) available through digital technologies (Abidi 1991). The author is of the view that the concept of knowledge is closely associated with development. Abidi states that knowledge entails wisdom, information, or skills as seen from different decisions made and values upheld by different people. Libraries, archives, and registries, among others, are the sources where such knowledge can be stored to support people's development efforts. Noteworthy is the fact that information, communication and development are inseparable constituents of sustainable development.

THE DEVELOPMENT TRINITY

Knowledge, communication and development are a trinity of factors that must be properly combined for effective development to take place (Abidi 1991). None of these factors can have a clear meaning without a mention of the other two in its definition.

Abidi (1991) maintains that for development to take place, the importance of access to the required information, timeously and in the right form, should not be underestimated. In order for people's way of living be transformed, that is, improved living conditions, quality education, good governance, and peaceful co-existence, among others, people must be knowledgeable due to access to sufficient information. It is worth noting that such information is found in resources like libraries, resource centres, registries, and archives, where it is kept in both electronic and other non-print materials.

SOCIAL DEVELOPMENT

The process of social development involves pattern or process of alteration exhibited by human beings resulting from their interaction with other humans, social institutions, social customs and

many more. The process entails organising human energy and activities at maximum level to attain greater outcomes. The process of social development increases the utilisation of human potential (Donge 2009).

Social development has a massive potential to improve and speed up the expansion and development of people's skills in any societal endeavor. This then results in new discoveries and a capacity for improved existing activities as well as better results. Advances of this nature can therefore enhance human success rate. The emergence of a sound discourse for social development could provide the desired knowledge to achieve these milestones. This may eventually lead to the greatest breakthrough of all – the unlimited creative capacity of mankind (Donge 2009).

COMMUNITY DEVELOPMENT

Community development can mean a global dynamic, endless and interactive process that attempts to meet people's basic needs. These needs include access to education and health care, employment and entrepreneurship opportunities, natural resource management, and governance. However, the potential impact of technology on various sectors of society is usually underestimated in many developing communities. For example, feminist studies found that women were often excluded from the science and technology sector (Abidi 1999: 20).

SUSTAINABLE DEVELOPMENT

There are various definitions of the term 'sustainable development. Meena (2006:1) defines sustainable development as a process of increasing people's ability to create and maintain or grow wealth. The author also mentions that for sustainable development to happen, the socio-economic, political, and cultural environment must enable people to initiate and sustain the process. On the other hand, Badri (2006:2-4) advises that sustainable development is not a one-dimensional concept, but rather composed of seven parts, which are social development, economic development, environmental development, political development, intellectual development, women's development and international development. Badri notes that each of

these parts can be divided into other variables. For instance, social development is comprised of aspects like education, health, shelter, employment, transport, energy and water.

Central to sustainable development is also the process of empowerment through knowledge; hence, knowledge is power. Badri (2006:6) is entirely in agreement with this view point. He points out that social development of a nation can be improved through education. This can be achieved by eradicating illiteracy, enrolling all children of school-going age and improving the quality of education by reducing student-teacher ratio. It can be improved when administrators ensure training is provided in a variety of skills and various affordable learning opportunities are made available for those outside the schooling system. Similarly, a healthy, growing population can result from increased life expectancy due to decreasing infant and maternal mortality rates and successful prevention of fatal diseases in adults. The aspect of shelter could entail the availability of potable water and sanitation, cooking facilities and alternative energy for cooking and heating, and the number of people in a household.

On the social part of sustainable development, Badri (2006) stresses that people have rights of life, movement, speech and decision-making. The author also highlights importance of intellectual rights of people. He emphasizes that people have a right to transparency and accountability from their leaders. There are four economic indicators of sustainable development, namely, food security, increase in the Gross National Product (GNP), per capita income growth, and standards of living for all. The author states that environmental development has influenced how much people actively participate in the conservation of forests, water resources and bio-diversity. The sixth part - women's development –entails gender awareness and its manifestation in all programmes and projects. Lastly, the international development variables include a country's regulation and enforcement of its border rules, level of democracy and compliance with international laws and regulations.

ICTs IN RURAL DEVELOPMENT

The advantages of using ICTs are difficult to see in most African countries, especially because they are stricken with poverty, hunger and disease. UNESCO (2002) acknowledges the plight of

these countries, but warns it might deteriorate if ICT strategies are not prioritised. UNESCO, however, emphasizes that ICTs are not a panacea for socio-economic difficulties, and this may cause policymakers not to realise a need to make the development of effective national ICT strategies their top priority. Besides this, experience tells that the risks of failing to adopt the ICT revolution are too high. Failure to prioritise plans for developing countries and transitional economies to use ICTs for their national infrastructure development and be part of the GII (Global Information Infrastructure) will widen the gap between the rich and the poor. It is increasingly necessary to measure the socio-economic benefits of ICTs and provide a platform for capacity building that will ensure their beneficial adoption by different nations and civil society (UNESCO 2002).

It is, therefore, very important to find out whether ICTs can really reduce poverty and improve people's living circumstances, particularly within the rural communities in Africa. As one would expect, opinions on the importance of ICTs in African development programmes diverge and are sometimes contradictory. For example, Kenny (1995) maintains that access to ICTs depends on education and income levels. Moyo (1996), on the other hand, puts an emphasis on the inevitable rapid spread of IT in all economic sectors. Chowdhury (2002:1) is of the view that "the poor cannot eat high-speed internet", while Barlow (2002:1) maintains that "Africa should skip industrialism entirely and leap directly into the Information era."

Generally, view points on the use of ICTs in rural development fall into the following four major categories: political, economic, social and technological (PEST).

ECONOMIC IMPLICATIONS

The economic category is mainly concerned with the impact of science and technology on development (Basson 1996). Basson emphasizes the need for African countries to employ science and technology in order to be highly competitive at global level. This can counter Africa's major challenges that Rathgeber (2000) identifies to be sub-standard infrastructure, including telecommunications infrastructure, and shortage of skilled people. Rathgeber observes that newly industrialised Asian economies dealt with these challenges by providing their needy foreign investors with both required skills and world-class infrastructure.

In 1995, over 25% of the total exports from East Asian countries were initiated through the use of ICTs (Mansell & Whelm 1998:3). In the same vein, the World Bank (1999:20) notes that the capacity for production through ICTs has made an immense contribution to the economic growth of East Asia. The World Bank also states that illiteracy contributes to poverty in many developing countries. According to its report, the use of ICTs is a best way to bridge the knowledge gap. Owing to their ability to prepare electronic information repositories from physical sources, ICTs are an ideal communication channel. This view is shared by Bedi (1999: 4), who argues that this delocalisation virtue is “revolutionary”, as large amounts of information can be used by many people, regardless of time and location. Bedi (1999) adds that the existence of ICT networks allows access to e-mail by a large number of users.

The internet is one of the most innovative advances of the twentieth century, and its benefits continue to change how, together with traditional technologies, wireless technologies are used. According to Bedi (1999), the internet significantly reduces the effective cost of sharing information and knowledge with others via global resources. The author further adds that advanced technologies such as satellites have made way for new developments, for example, current innovations in hand-held devices, mobile telephones, and satellite communications have resulted in state-of-the-art information and communication products that are most relevant for meeting the needs of the poor. In some developing countries, rural health care workers now use small hand-held devices to examine clients’ health conditions.

SOCIAL IMPLICATIONS

The implications of ICTs also determine the status of social development. Marker *et al.* (2002: 2-13) display a positive attitude towards the impact of ICTs on development; they maintain that ICTs actually affect the quality of life and poverty reduction in different community classes. Case studies that epitomize where the poor rural Africans access ICTs to meet their information needs are primarily drawn from various programmes in the health, agriculture, community mobilisation, and education and training sectors.



Figure 18: Telecentres through ICT.

Source: OSISA (2009)

POLITICAL IMPLICATIONS

When citing political implications, a narrative by Mudhai (2004:2-4) in the World Summit on Information Society held in Geneva, Switzerland, underscores the importance of ICTs in uniting African countries in the development process. Mudhai reflects on the latest developments initiated by African governments to leap into the ‘Information Age’ and gives examples of achievements in Nigeria, where there is an increase in fixed telephone lines from 300.000 to 720.000, and a rise in mobile phone subscribers from 500.000 to 2.5 million over the last two years. Other examples, provided by Mudhai, are: Egypt, which stresses the importance of the East-Africa connection project with NEPAD.

Mozambique’s and Rwanda’s Heads of State reiterate that Africans have now passed the stage of indecision about prioritising between ICTs and other areas of development (Mudhai 2004:5). Mozambique has established a high-level multi-disciplinary task team for ICTs, whereas Rwanda has an ambitious ICT programme ready to make it East Africa’s technological powerhouse, with

broadband and wireless internet connection to all schools within three years. Equally determined is Botswana, which has decided to invest a proposed US\$300 million in East African Submarine Cable System (EASSy) after making investment in ICTs one of the country's imperatives. This cable system's connecting points are situated in Kenya, Tanzania, Uganda, Mozambique, Madagascar, Djibouti and South Africa. All these initiatives are undoubtedly a step in the right direction for Africa, as ICTs provide new opportunities for Africa to exacerbate and sustain human development, which would in turn benefit rural communities, especially women (Mudhai 2004).

ICT CHALLENGES

According to the United Nations Development Programme (UNDP 2001:3-16) there are about six obstacles that have disrupted the design, implementation and outcome of information, communication and technology development (ICTD) programmes, awareness being the first one. The UNDP asserts that there must be thorough awareness raising and constituency building in all levels of society for ICTs to be effectively used for human development. As the UNDP maintains, the link between ICT awareness and development challenges is not always evident, especially in countries with generally low levels of education and poor infrastructure.

Another obstacle is the political challenge. The UNDP notes that ICT initiatives are political in nature as their effectiveness can be sabotaged or boosted by national or local power relations. Some sources of political influence are state-controlled newspapers, radio stations and television channels.

The third challenge is access to ICTs, which entails limitations due to telecommunications and computing infrastructure and those imposed by educational and socio-cultural barriers (for example, technophobia) for individuals (UNDP 2001). Relevance and meaningful use is the fourth issue, and it depends on three interrelated factors.

Sustainability is another one of the six obstacles. UNDP warns that ICTs are compromised by unfeasible timeframes, inadequate training and unsuitable technology. Finally, the UNDP cites

coordination as another challenge, and stresses that poor coordination can result in unnecessarily duplicated efforts and incompatible ICT solutions.

ICT CHALLENGES TO LESOTHO

There are many challenges and obstacles that Lesotho as country is facing in the implementation of ICT policies and strategies. The key among these obstacles has been identified in various ICT professional reports as the lack of a unified approach through the entire Government ministries, agencies and public sectors. Lesotho Government has been identified as the key driver of these policies and strategies by actively engaging the public in the process. Lesotho has pronounced its dream which is to be fully incorporated member of the Information Society (UNDP 2001).

WOMEN IN RURAL DEVELOPMENT

It is crucial that African women are active participants in rural development, considering that they account for slightly more than 50% of the continent's population (Solange & Momo 2005). It is, however, regrettable that although these women are custodians of production, growth and change, most of them live in poverty and are economically marginalised (Solange & Momo 2005: 2). Huyer (1997) attributes this to colonialism, and suggests post-colonial focus on economically deprived women, whose role in reproduction, subsistence production, and community management are not regarded as sufficiently valuable.

HIV/AIDS and other diseases continue to affect many African countries with negative long-run effects on productivity. The Department for International Development (DFID) (2006:1) reports that women account for 55% of adult infections recorded in Sub-Saharan Africa. This report finds Lesotho to be one of the countries with the highest of HIV/AIDS infections globally.

Lack of focus on education as a developmental tool has contributed to the inequalities that women grapple with in society. These regrettable circumstances are results of inadequate educational facilities, resources and labour force; these are, however, less prominent in rural communities. Huyer (1997) supports this view by stating in traditional African societies, education for boys was given first priority, especially when families could not afford increased costs of education. Solange & Momo (2005) also voice concerns that though women are leading

most economic activities, their contribution still goes unnoticed. The above-mentioned authors agree that more focus must be put on educating young females, as there is a strong relationship between the education of future mothers and reduction in infant mortality and malnutrition.

As a result of Lesotho government's free primary education policy that has been of great benefit for young boys and girls, the imbalance in the number of men and women who enroll for various educational programmes has been steadily reduced over the last few years. One of the primary goals has to be ensuring that girls' secondary schools are provided with all the required learning aids for subjects in science and technology. Adediji & Morrison (1990:173) also note that political participation is an important issue for women for it does not only determine their recognition but also serves as a means to improve their position in a society.

THE SOCIAL INFORMATICS

A generally accepted definition of social informatics (SI) is that offered by Kling at a workshop held in the Indiana University in 1997 (Kling 1999) referring to social informatics as "the interdisciplinary study of the design, uses and consequences of ICTs that takes into account their interaction with institutional and cultural contexts". It can, therefore, be deduced that according to Kling, SI is perceived as the study of the impact of computers, telecommunications and other related technologies on society.

Kling (1999) understands SI to be the study that looks at how information technology affects changes in society and organisations, and vice versa. This includes ways in which ICT evolution is influenced by new social needs and developments. At a Social Informatics Seminar in Indiana, SI was defined as the study of how social systems and ICTs influence each other (Kling 1999).

Kling (1999) is of the view that ICTs are developed based on the situations and needs of all cultures and institutions involved, taking into account their consequences for organisations and other stakeholders. In this light, ICTs can be understandably termed "socio-technical systems", meaning that they are made of an interdependently related mix of society, its general use of hardware and software, and the support and maintenance systems that aid the users and ensure that the ICTs are always operational.

According to Kling, (1999) ICTs are at times termed “technologies of freedom”, because the manner in which they increase the productivity of both individuals and organisations. Many accounts of new ICTs usually explain the ways in which the technologies enable new activities or functions that were more expensive, difficult or impossible prior to their invention or innovation, e.g. ability to store more data, two-way communication, etc. Organisational Informatics researchers have realised that ICTs can change work environments through many ways in which they affect the lives of their users on a daily basis. ICTs help with the reduction of some communication restrictions that are caused by space and time constraints, in ways that have never been imagined before.

CONCEPTION OF INFORMATION

Due to its intangible nature, the term ‘information’ has been given a number of definitions by different scholars. The majority of dictionaries refer to information as knowledge, intelligence, facts or data. Another school of thought is that information refers to all the facts that are available to people in general. Katz (1997: 14) defines information as knowledge that determines the choices one makes from a number of options in different situations. Information can therefore predict how unexpected an outcome will be. The outcome may be computer printouts, punched cards and blips on the screens of a cathode ray tube, and so forth. Katz further notes that experience, observation, interaction with others, and reading determine the information a person possesses.

Lucey (1987:13) states that information is data that is understood by its recipient after the recipient’s interpretation and analysis. The author feels strongly about the roles played by both the producer and recipient as they determine what a message contains, that is, information or just processed data. In this regard, the recipient is responsible for the timely conversion of data into relevant information. Lucey further suggests that the value of information is determined by subtracting the cost of its production from the benefits of the changes in decision or behaviour caused by information. The author also declares that it is important for the users to receive information that shows that the producers considered their requirements, level of education, position in the community and language when preparing the information. Moreover, Lucey

argues that the development of computers expanded the understanding of information to more than the contents of traditional libraries and documents.

Heskett (2000:1) makes a remark that information can be expanded without any obvious limit, as opposed to goods. Information can be compressed for easier storage and transferred in an instant. Information can also be exchanged for capital, labour, or physical products. Heskett, therefore, emphasizes the fact that information is a resource that has a great potential for influencing how businesses and organizations operate.

INFORMATION NEEDS

Julien (1995:1) defines information needs and uses as a broad combination of information searching and understanding of users' needs and uses for information. Julien (1995) argues that needs arise from one or a combination of the following kinds of motives:

- Physiological motives, for example, hunger and thirst;
- Unlearned motives, including curiosity and sensory stimulation; and
- Social motives: the desire for affiliation, approval, status. or aggression

In this regard, Julien provides a clue as to why people in rural areas seek certain information and the role the environment plays in their choice for and access to information. Rural communities in Lesotho, for example, need access to social welfare information such as music, religious gatherings, travel, community projects, pension, and shopping. Among the reasons for this demand are recreational activities, spirituality and improved quality of lives. Clearly, these activities are holistic, as they include physiological, effective, and cognitive aspects.

The findings of a study by Mooko (2002) on information needs reveals that physiological information (i.e. sickness, food and clothing) - mainly found through personal and interpersonal networks - needs see the highest demand by rural people. Mooko argues that most of the Africans in rural areas prefer oral means of communication because they have low levels of education.

INFORMATION SEEKING BEHAVIOUR

According to Wilson (1999) information-seeking behaviour arises from a need by an information user. The author postulates that information-seeking behaviour may be in a way of accessing information through formal sources, such libraries, online resources or information centres, estate agents, car sales agencies, and so on. He is of the view that access to information is normally limited by political, economic and technological restrictions. Rural parts of Lesotho of Lesotho are not clearly prone to these barriers. The most common factors that discourage the information-seeking behaviour of the residents of rural Maseru, in Lesotho, are high prices, time constraints, computer illiteracy, poor roads and cultural barriers.

INFORMATION USE

Wilson (1999:3-5) argues that information use is determines all other information behaviours, since it is the main reason for which information is sought and gathered. Therefore, one of the common questions that are asked during interviews - aimed at determining users' needs –is how information will be used.

INFO-MOBILISATION

According to Harris (2004) info-mobilisation is a multilateral process of change in which many groups collaborate to discover and analyse problems, and solve them together. Harris explains info-mobilisation to be a kind of interactive development that allows for collaborative learning, guided by the ever-changing needs of a community. The author then explains that info-mobilisation is about adaptive community learning and the alignment of socio-technological systems, participative values, and all stakeholder groups in society.

Of critical importance is that Harris (2004) argues that the practicality of an all-inclusive approach to information systems depends on the ability of society to view ICTs as intellectual, rather than industrial, technologies. Harris's overall view is that developing communities must focus on the corporate side of field to effectively determine the progress they have made in adopting ICTs. According to the author, "it is the programme that must be developed and ICT

placed within context, rather than the familiar idea of ‘build it and the applications will naturally flow’; or, ‘build it and let’s see what evolves serendipitously’”.

Harris (2004:38) points out three opinions about info-mobilisation. These three are as follows:

1. Info-mobilisation deals with the information needs of communities. It covers the design, transfer and applications of community information systems.
2. ICTs can only have the best possible benefits for rural community members if they are part of other community development programmes.
3. The use of ICTs in rural development sees more success when social, political and economic factors, and different communication methods, are considered in the development plan, and included in the implementation

CONCLUSION

This chapter reveals that access to, adoption and utilisation of ICTs is in direct correlation with socio-economic development. Nonetheless, most of rural people, particularly rural women, earn less income and have lower levels of education. Some of these communities are further restricted by religious or cultural barriers, which limit or forbid their access to and use of technology. It is, therefore, imperative to ensure that the residents of rural areas in developing countries are well aware of the importance of information and communication technologies, and how to use them. This raises the need for awareness raising and constituency building throughout society.

CHAPTER 6

CONCEPTUAL FRAME WORK

INTRODUCTION

This chapter associates the concepts and models of communication that are connected to the positioning of online encounters within the new media environment. The models will provide an insight into how communication occurs with regard to the new communication technologies and human development. The chapter attempts to develop a conceptual model for online communication and its application to social and economic development in Maseru. Subsequently, uses and gratifications as well as technology acceptance models will be used to demonstrate how interferences (distortions) of messages can eventually be eliminated. .

A MODEL

A model is a thought representation of an object or situation in an ideal form. Models are usually arbitrary in nature. The abstract nature means some details are overlooked to focus on essential characteristics. The key to the usefulness of a model is the extent to which it corresponds in point by point to the underpinning factors of standard communication. Communication models only present pictures; they are likely to even distort the pictures, because they stop or freeze an essentially dynamic/moving interactive or trans-active process into a static image. Models are actually metaphors, as they allow the real thing in terms of the ideal one.

THE ADVANTAGES OF MODELS

Models prompt one to question things. Thus, a model is handy when it presents a general perspective together with a frame of reference for interpreting raw data and produce meaningful information. Although models can be manipulated, they serve as strategic guidelines to unknown territories.

Models also help to demystify complicated events or issues. They do this, as (Steinberg (1995:19) states, by breaking down complex terms into simpler, more familiar ones. Thus, the

aim of a model is not to avoid complexity, but rather to give it order and a clear, coherent meaning. It is worth noting that, especially in the third world countries, conceptual procedures must be as simple as possible for ease of application in complex situations

LIMITATIONS OF MODELS

At times, models can oversimplify situations or events. This is the ideology that causes most of the work in communication model design to state that it is unnecessary to give serious consideration to anything in human affairs that can be modelled.

SHANNON AND WEAVER'S MODEL OF COMMUNICATION

In explaining how the model works, Steinberg (1995:29) explains that Shannon and Weaver were in the employment of the Bell Telephone Laboratory in the United States. Their primary interest was finding engineering solutions to signal transmission problems. He further explains that Shannon and Weaver concentrated on finding the most efficient use of communication channels, that is, how to send the largest amount of information along a given channel/cable, while also thinking about a model in terms of how a telephone message is transported.

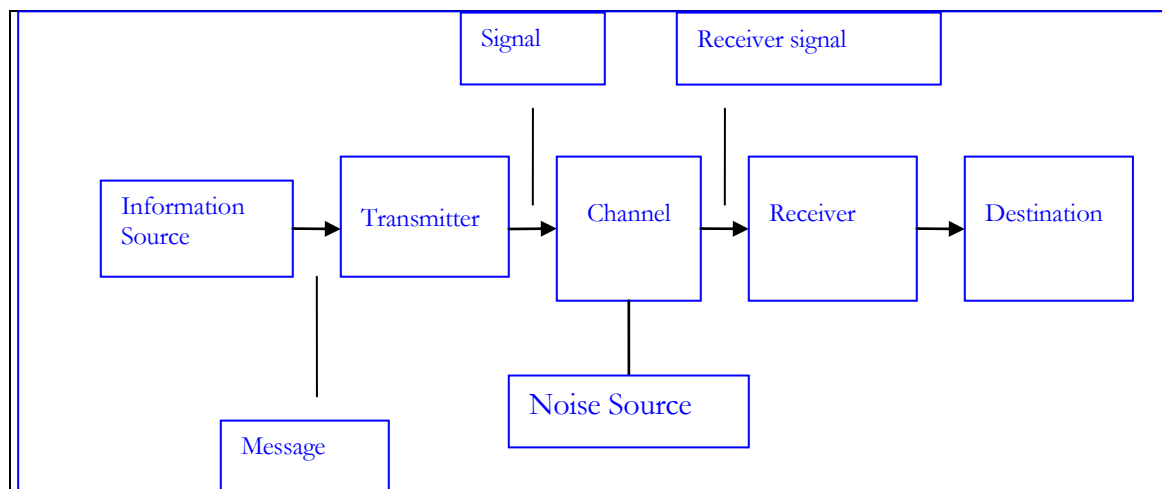


Figure 19: Shannon & Weaver model of communication

Source: Steinberg (1995:29)

INTERPRETATION OF SHANNON AND WEAVER

Steinberg (1995: 29) states that in Shannon and Weaver's model, an information source means a communicator creates a message, which is converted by a transmitter (telephone) into a signal that is relayed via a channel (telephone line) to the receiver, which is eventually converted to the original message for recipients on the other end (destination). Steinberg also adds that the model describes mass communication in radio broadcasting; for example, an announcer (an information source) utters words (a message) that are transmitted in the form of radio waves (signal) to a radio receiver, which in turn would convert the signal into the words (message) that are meant for listeners (the recipients). In addition, the author views Shannon and Weaver's model as drawing people's attention to the quality of the message, i.e. the impact of noise on the reception and comprehension of the message by the recipient, because Shannon and Weaver's main concern is the efficiency of information transmission and clarity of the message from the source to the recipient.

COMMENTS ON SHANNON AND WEAVER'S MODEL OF COMMUNICATION

Steinberg (1995: 29) observes that Shannon and Weaver's model is also known as "Transmission or Technical Model". He further notes that theorists have maintained that the transmission process is the most important part of communication because if the distortion of the message from the communicator to the recipient cannot be avoided, then only limited communication can occur between them. Steinberg (1995: 30) adds that the theorists who favour a technical approach of communication focus on improving the transmission-process tools and methods that will bring about more efficient communication. Eunson (2005: 8) is also of the view that Shannon and Weaver's model simplifies the complexity of communication, thereby enabling analyses of communication processes to determine where communication breakdowns might occur and to eliminate communication barriers to ensure that successful communication takes place. The author also observes that the model has had a great influence in the field of communication.

NEGATIVE SIDE OF SHANNON AND WEAVER'S MODEL OF COMMUNICATION

Eunson (2005: 8) criticizes Shannon and Weaver's model based on the following arguments:

- The model views communication as a one-way process in which the receiver is passive, whereas communication usually occurs in both directions; a response or feedback comes from the receiver, who then becomes a sender while the original sender becomes a receiver.
- The model assumes that communication is always intentional and transparent, but communication is sometimes unintentional (such as body language that contradicts spoken words) and non-transparent (cryptic); gender differences and other factors can potentially change the meaning of a message.
- The model does not consider the medium through which the message is transmitted. Different media are used in different ways depending on their well-known different capabilities.

The model embodies a bad metaphor - that of information as a packet or container being transported; as if the meaning were neutral rather than constructed and liable to subjective reading or decoding. In reality, different individuals will interpret the same information in different ways (Eunson 2005:12).

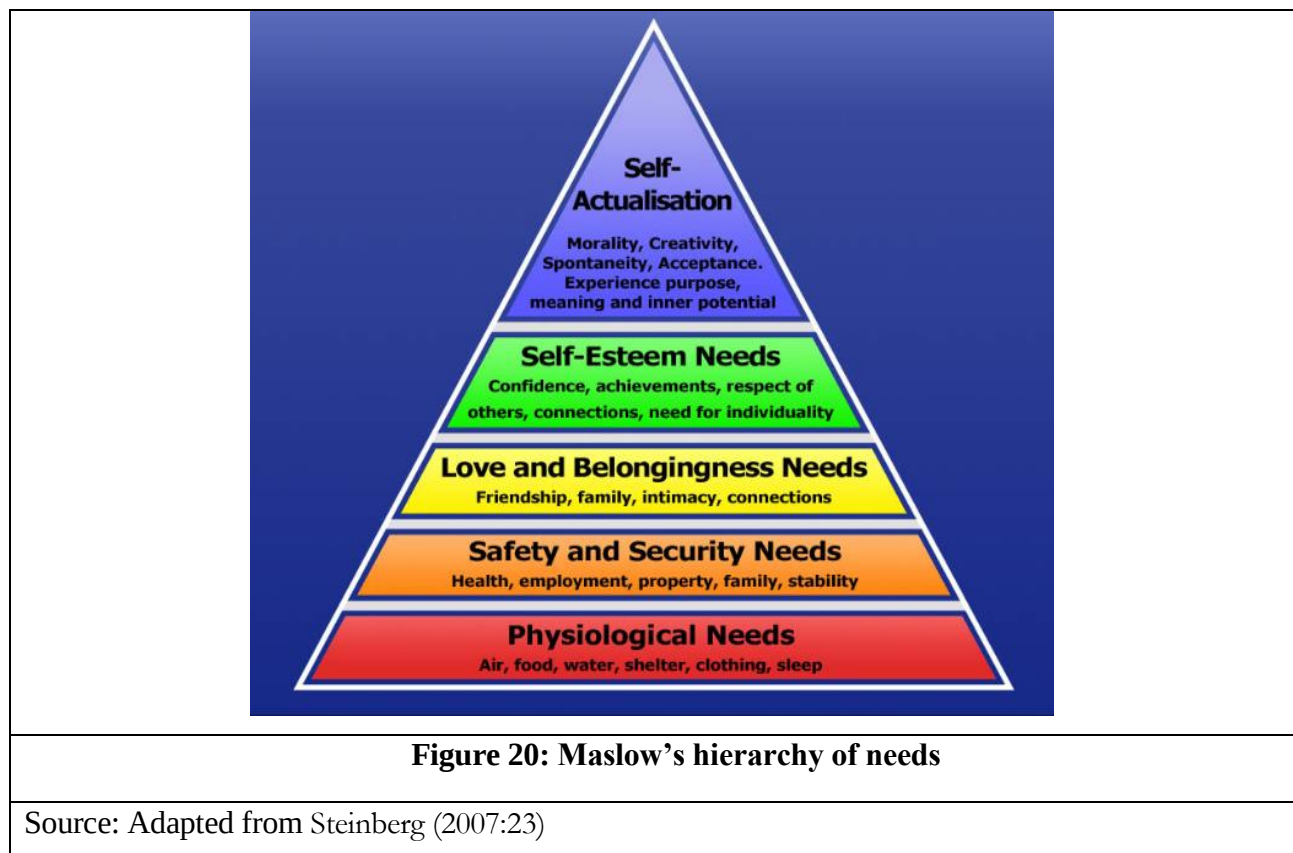
RELEVANCE OF SHANNON AND WEAVER TO THE STUDY

The relevance of this model to the study rests upon the distortion of transmitted messages in the online communication. When applying the Shannon and Weaver's model of communication to understand the area of distortion of communicated information, the primary node of distortion would occur when messages are encoded at a specific terminal and transmitted to the recipient; the distortion is sometimes heterogeneous, as in the case of social networking. Of critical importance is to acknowledge that virtual communities in Maseru and around the globe are diverse and, therefore, inherit different cultural backgrounds. Inevitably, their ways of communicating via messages might not be easily decoded by others elsewhere. The virtual groups within Maseru may vary according to variables such as race, education, and many more. Besides, messages sometimes tend to confuse due to ambiguity, forcing recipients to miss valuable communication. Online messages transmitted via cell phone or computer networks are meant for basic reading and comprehension. However, an essential general understanding is not

always attained on the side of the decoder due to factors such as education level, clarity and style of the text or the medium.

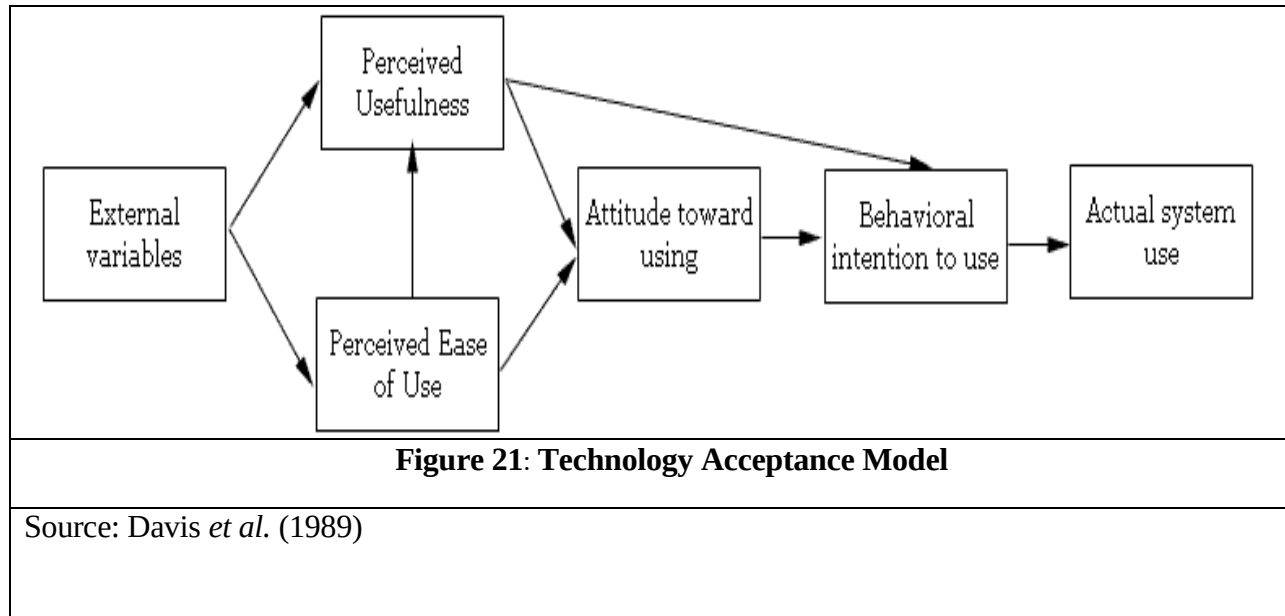
USES AND GRATIFICATION THEORY

Proposed by Katzman in 1970, this theory explains how people use media to satisfy their needs. The theory is related to the hierarchy of needs according to Maslow. Maslow's hierarchy of needs is a model that explains what motivates a certain behavior. Thus, in accordance with Maslow's hierarchy of needs, people determine the content they want to consume, and different media compete to be each individual's preferred source of information (Suresh 2003). Suresh further explains that the hierarchy of needs is presented as a five-level pyramid, with basic needs such as food and clothing at the bottom and secondary needs higher up in the pyramid. The fulfillment of each of an individual's lower-level needs is followed by the pursuit of other needs, until the ultimate needs are met.



TECHNOLOGY ACCEPTANCE MODEL

According to Adams *et al.* (1992: 227) the Technology Acceptance Model (TAM) is an information system, that is, a system connecting all communication channels of an organisation. This model shows what convinces users to accept and use the available technologies. The model indicates that a number of factors influence users' decision to use a new software package (Adams *et al.* 1992: 227-247). These factors include perceived usefulness and perceived ease of use (PEOU). The authors define this as the degree to which the use of a particular system appears to be effortless to its potential user. They further note that TAM is an information systems' version of the Theory of Reasoned Action (TRA). The theory postulates that the aforementioned have great influence on an individual's desire to use a technological system.



Perceived usefulness is generally viewed as being directly influenced by perceived ease of use. The TAM is now simplified as many researchers have removed the 'attitude' factor found in the TRA.

THE PROPOSED MODELS

Uses and Gratifications theory as well as Technology Acceptance Models serve as ideal models that assist in overcoming the shortcomings of Shannon and Weaver's approach to communication; thus, they are ideal approaches for this study. Uses and Gratification Theory

sees each individual as a potentially selective and controlling media user. This theory suggests that basic human needs encourage individuals to choose certain mass media and use this media information for their specific needs. Therefore, a certain set of messages from one medium, such as a cell phone, could satisfy very different needs for different users, depending on their needs and interests. The application of the Uses and Gratification Theory has resulted in the grouping of basic needs into categories whose satisfaction is associated with specific media choices. The basic need categories are cognitive, affective, personal integrative, social integrative and escapist needs (Hunt & Ruben 1993: 269-270).

The application of the Uses and Gratification Theory helps with the understanding of ‘interference reduction’. As explained in the previous chapter, people have a tendency to be attracted towards information which has direct relevance to their existence. This means that the Maseru community would appreciate (and use) online messages which have a direct bearing on their lives. They would obtain gratification by gaining knowledge which empowers them at local and international levels. The computer online communication will fulfill this need at a greater level than other forms of communication. For instance, cyber communities in Maseru will resort to using and appreciating online messages for collaborations than the times before. Besides, computers and computing skills involve user-friendliness, since computer skills are easy to learn and apply. Moreover, technological data communication has inevitably become an imperative need in modern information society. Similarly, the city community would possibly need and utilize internet communication services for their vital personal and business purposes, and this will require a little effort at the end of the day.

The Shannon & Weaver Communication model	Electronic messages (e-mail)	Uses & Gratification theory	Technology Acceptance Model
Source	An electronic device such as a computer/cell phone	Used to supply information for a heterogeneous audience	Used to transmit electronic data to a dispersed and heterogeneous multi-cultural audience
Encoder	The encoder is an online	The information in the	The electronic data is

	member who brainstorms ideas from the point of view or the cyber environment	form of text and is encoded to address the needs of a virtual community.	in the form of text and pictures and is encoded to address communities in the cyberspace
Channel	The channel is the computer network which allows transmission of the then formulated messages	Used by members who normally want to know what is happening in and around the like minded virtual teams	Used by cyberspace community members who intent to influence other community members elsewhere
Message	The information quantity and quality may vary depending on the purpose and background	The quantity and quality of information will vary depending on the context and purpose	The amount and nature of electronic data will vary depending on the context and purpose
Decoder	Interference or distortion normally occurs at this point. Generally, text is perceived differently by various virtual groups and may be decoded differently by various groups and individuals	Information is personal quite often and there is an immediate gratification.	Electronic data is personal and extremely vital while at the same time is very easy to retrieve and utilize
Receiver	The receivers are not always necessarily readers of the same cultural orientation.	The recipient uses the information to gain knowledge about his needs and the situation of cyber fraternity	The recipients use the electronic data for various purposes

SUMMARY

The association of the components of Shannon and Weaver's Model, the Uses and Gratification theory, and Technology Acceptance Model is important to this study, as it identifies key areas within the realm of communication that have encouraged the preference of computer online communication. Below is an overview of different aspects of these models of communication.

The Source: The electronic messages disseminated through computer networks have a far more general significance as they target diverse cyber communities. The differences among these

diverse communities rest predominantly with their cultural beliefs, languages and geographical locations. The usage of electronic messages serves the virtual communities' varied needs.

The Encoder: Individuals who are like-minded try to feed the needs of their counterparts by ensuring a constant supply of information. This is achieved by ensuring that information from the immediate surroundings of the members is stored to feed the needs of other members elsewhere.

The Channel: Computer networks make it possible for transmission of electronic messages, and the amounts of data vary significantly.

The Message: The information that forms the make-up of a particular message varies. Some electronic messages will be dealing with issues such as business, economy news, entertainment, tips of healthy living, beauty, and many more. It is also at this point that the interference that Shannon and Weaver mention in their model comes to the fore. However, the interference is not technical, but lies within the content of the message.

The Decoder: The audiences of all online communities decode or interpret the electronic mails on the basis of culture, language, education and other factors. Once again, the decoder will decode news that will satisfy or appease a certain need that needs to be gratified. Interference occurs at a greater rate in the decoding process for the reasons listed above. Information or news that is regarded as irrelevant will be ignored, irrespective of its importance to the community or region.

The Receivers: The diversity of the audience, especially with computer mediated communication, is the deciding factor on the type of content that is disseminated to the recipient. It is at this point that receivers utilize the information to gratify a variety of needs.

CONCLUSION

Indeed, these three models, namely Shannon and Weaver, Uses and Gratification, and Technology Acceptance, are relevant to this study because they show how communication flows.

This also shows the relevance of the academic models in the day-to-day activities of every person. The next chapter deals with research methodology.

CHAPTER 7

RESEARCH METHODOLOGY AND DESIGN

INTRODUCTION

This chapter mainly focuses on how the research was conducted. The research study investigated the role of online communication on social and economic development in Maseru. The chapter, therefore, lays out the research methodology, the target population, the sampling process and sample size, research instruments, method of data collection, data analysis, and problems experienced during the study.

RESEARCH METHODOLOGY

According to Leedy (1989: 5) research is a procedure by which we attempt to find systematically, and with the support of demonstrable fact, the answer to a question or the resolution of a problem. Kerlinger (2002: 8) further defines research as the systematic, controlled, empirical and critical investigation of hypothetical propositions about presumed relations among natural phenomena.

Kerlinger (2002:118) subsequently defines research methodology as a set of guiding principles on how a study should be conducted. These principles include the postulates and beliefs that serve as a basis of the study and standards the study should use for data interpretation and drawing conclusions. In a nutshell, research methodology is a researcher's approach to the research process in its entirety. Closely related to the research methodology is the research design. Barbie (1992: 89) defines research design as the planning of any research from the first step to the last. He further states that the research design addresses the planning of scientific enquiry. Thus, research design is part of the entire process of the methodology.

According to Williams (2007: 201) the research approach determines which data one considers to be valuable. Williams further notes that the two major types of research approach are quantitative and qualitative research. Williams (2007: 202) is of the view that quantitative

research is typically in a form of social surveys and experimental investigations, while qualitative research is usually associated with respondent observations and in-depth, unstructured interviews. This study takes a combination of quantitative and qualitative approaches. In the qualitative phase of the study, a reasonably large sample of Maseru residents was interviewed in a face-to-face encounter. The quantitative phase did a survey on the population of Maseru community. Thus, a sample was made to answer questionnaires, and findings were analysed using the MoonStats program. This dualistic approach provided accurate results from adequate information captured from the respondents.

STUDY PARADIGMS

A qualitative research method was first used in this study. This method has words and images from documents, observations and transcripts as its data sources. According to Neuman (2006: 151) qualitative studies are dependent on interpretative or critical social science. Qualitative research applies practical logic (logic guided by how research is actually carried out) and follows an ever-changing research path. Qualitative researchers use various case studies and contexts to interpret different phenomena. Their emphasis is on carrying out detailed investigations of cases that exist in an uninterrupted flow of social life. They try to make fair, sensitive interpretations of social and historical contexts. Dooley (1995: 259) defines qualitative research as non-statistical research that is based on observations in society. It is virtually completely open and flexible, primarily because the research process is determined by the participants. During qualitative research, the researcher is in direct or close contact with the respondent, and a dynamic approach is used to investigate phenomena. Qualitative research is a holistic study that mainly focuses on finding similarities in the phenomena of interest (Sarantakos 2007: 55).

This study also has a quantitative component. In this method, data is presented as values collected from precise measurements or calculations. The majority of quantitative researchers take a positivist approach to social science. They share reconstructed logic, that is, the logic of doing research that is highly refined in an ideal, formal, and organised language), and prefer a non-linear path of research. Quantitative researchers measure and use variables to test hypotheses that are linked to general cause-and-effect scenarios (Neuman 2006: 151). According

to Sarantakos (2007: 55) quantitative research focuses on explaining social life. It is nomothetic (establishes general statements, causes, consequences, etc.) and its main function is to test theoretical statements. Quantitative applies an objective approach and is etiological (finds causes of things) and historical (explains events in chronological order). It is a closed, i.e. strictly planned, approach and the research process is determined well in advance. In quantitative research, the researcher keeps the respondent at arm's length. The approach is static and its process is rigid. In this case, much emphasis is put on spotting differences (Sarantakos 2007: 55).

CONTENT ANALYSIS

Content analysis is a thorough examination of a particular data set so as to find patterns, themes or trends (Leedy & Ormrod 2005: 142) Neuman (2006: 322) notes that content is typically analysed in human means of communication such as books, television, music, transcripts of conversations (Leedy & Ormrod 2005: 142). According to Neuman (2006: 323) content analysis is proactive because the content is created without the knowledge of whether or not it will be analysed. The author believes that content analysis enables a researcher to notice and report on specific features of the data set that could have otherwise gone unnoticed.

Payne (2004: 51) argues that content analysis was initially a quantitative way used to evaluate written information. The author explains that this evaluation method steadily expanded to include literature, autobiographies and other, and its emphasis shifted to qualitative practices such as interpretation and subjective meaning. As it stands, Neuman (2006: 323) acknowledges that there are now quantitative and qualitative aspects of analysing data. He states that in quantitative analysis, a researcher uses objective and systematic methods of counting and recording content to produce a numerical meaning of the representative content in text form. This may include determining the frequency of appearance of certain words in a text. A researcher who uses quantitative content analysis performs objective and systematic coding, counting and recording to appropriately describe the content.

RESEARCH METHOD AND DESIGN

Methods are instruments used to generate and analyse data. In fact, they are the main tools in social science and are selected based on criteria associated with, or even dictated by, the major components of the methodology they comprise, such as perceived reality, definition of science, perceptions of human beings, objective of research, and type of research units (Sarantakos 2007: 34).

This study employed both the qualitative and quantitative methods and a survey as a research tool. Survey research targets a sample of participants who have to individually answer the same set of questions. Using a survey, researchers can determine a variety of variables, test multiples of hypotheses, and conclude on chronological order from responses on historical behaviour, experiences, or characteristics (Neuman 2003: 276).

The two research methods were combined because the researcher wanted to do a thorough investigation of respondents' viewpoints. The researcher anticipated that the qualitative method would gather detailed data which is relevant to understanding various views from participants, while the quantitative method could solicit responses that might have not been covered by the other method. Besides, using both approaches would ensure that the two methods complement each other in terms of confirming the findings.

According to Neuman (2003: 276) survey research allows a researcher to collect information about a population of interest without analysing the entire people. This study took followed same procedure; only a small part of the population – a sample - was investigated and the results from the sample were viewed as representing the whole population. Neuman goes on to define a survey as a tool used to collect data on identical objects that are evenly distributed across space through the observation of their responses to a series of probing questions, to such a degree that the responses are consolidated to form a collective view that represents each object. Neuman states that a survey research conducted through questions in a form of either a questionnaire (mailed or handed out to respondents) or a one-on-one interview, after which respondents' answers are recorded. The researcher cannot influence the results - unlike an experiment – as

people simply answer questions. A survey researcher usually selects a sample from a population of interest and subsequently reports the findings to be representative of the larger population.

POPULATION

Neuman (2006: 224) says a population is a large number of cases or units, such as people, organisations, or even the social circumstances being investigated. The author further defines this concept as generalised idea of a large collection of cases with which a researcher associates results of a sample that has been drawn from it. In essence, the word ‘universe’ is at times used interchangeably with ‘population’ (Neuman 2006: 224). Dooley (1995: 133) describes a population as a process whereby a researcher links the whole collection of elements to the findings from their sample. The population under study is a specified group of multiple cases out of which a sample is drawn and which is represented by findings from a sample (Neuman 2006: 224).

This study targeted the community members of Maseru, the capital city of Lesotho. The target group was the youth, organizations and communication practitioners who in different ways, contribute to development communication.

COUNTRY OVERVIEW

The Kingdom of Lesotho is a small landlocked country of 30,355 square kilometres, and is surrounded by the Republic of South Africa. It is aligned with the higher part of the Drakensberg escarpment, which is on the eastern end of the South African plateau. Lesotho is divided into 10 administrative districts that have a population of 1, 8 million people (BoS) (2006). About 80 per cent of the population lives in rural areas. According to the 2002/2003 Bureau of Statistics household survey, life expectancy is estimated at 44.6 years of age (BoS 2006).



Figure 22: Map of Lesotho

Source: Adapted from Bos (2006)

The GDP per person was estimated at one US dollars per month in 2005 and more than 50 per cent of the population was estimated to be living below the poverty line of one hundred and forty nine Maluti and ninety one cents (M149.91) per month (BoS 2006). There are two official languages in Lesotho: Sesotho and English. However, the usage of English is restricted to urban centres and official use in schools and in businesses.

SAMPLE SIZE

As this study was aimed at the generalizability of the findings, the sample drawn had to be representative of the population of Maseru. Du Plooy (2002: 231) notes that if a researcher does not aim at generalizability, there are no set rules for choosing a sample size as this is dependent on the research objective; a large sample would be advisable in some cases, while a single case that is information-rich may suffice. Welman *et al.* (2005: 72) affirm that much larger samples are normally used in large-scale surveys than in experimental research. The sample size was

selected in accordance with the considerations set out by Gay (1996: 125). The following are Gay's guidelines of determining sample size:

A larger population is usually represented by a smaller percentage of the population, as opposed to a smaller population; (ii) sampling is not really necessary for very small populations ($N < 100$); (iii) about 20% of the population should be sampled if the population size is around 1500; and (iv) for any population beyond 5000, a sample size of 400 is enough.

SAMPLING

Bless & Higson-Smith (2000: 84) state that sampling is a method of drawing a sample from a population. They further state that a sample is a portion of the population that a researcher studies; they add that the characteristics of the sample will generally be a reflection of the entire population. According to Leedy & Ormrod (2005: 199) the sampling approach can be classified into two categories, that is, probability and non-probability.

Leedy & Ormrod (2005: 199) define probability or random selection as a technique of choosing a sample in such a way that each element of the population is equally likely to be selected. There are three types of probability sampling methods: simple random, stratified random, and cluster and systematic random. Leedy & Ormrod (2005: 206) state that in non-probability sampling, the sample's representation of each element of the population cannot be forecast or guaranteed. Non-probability sampling methods are the following: quota, purposive, sequential and snowball.

In this study, probability sampling by way of random and stratified random sampling was applied. Probability sampling is chosen because it has the advantage of eliminating bias and can also reduce errors that can affect the validity of the results. According to Neuman (2006: 227) in simple random sampling a researcher decides on a population to study and uses a completely random procedure to select a sample so that each element in the population has an equal chance of being part of the sample. In this study, the sample was drawn from individuals - in government as well as private organisations – who are users of the online communication technologies in Maseru.

THE SAMPLING FRAME AND THE SAMPLING SIZE

POPULATION SIZE	SAMPLE SIZE
INFINITY	384
500 000	384
100 000	383
50 000	381
10 000	370
5 000	357
3 000	341
2 000	322
1 000	278

Table 2: Simple random sample size at 95 percent confidence level.

Source: DuPlooy (2001:104)

DATA COLLECTION INSTRUMENTS

Data collection is the collection of data required to achieve the research objectives. It is a systematic process that enables statistical analysis. Various research instruments are used to collect desired data. These techniques include tools like questionnaires, interviews, observation, and record reviews. Marshall & Rosen (1995: 104) state that the key principle of collecting research data is that the instrument used for this purpose must be appropriate for the type of information to be collected. The research techniques must be efficient, practical, feasible and ethical. They have to enable the researcher to conduct a detailed, in-depth study. As alluded to previously, the survey research method was chosen to collect data through questionnaires.

QUESTIONNAIRE

The most convenient method of collecting both quantitative and qualitative information from respondents is asking questions. A questionnaire is a very flexible method of collecting research data. However, it may not achieve the goals of a particular research study if not used properly (William 2007: 236). For instance, respondents may not feel comfortable to disclose sensitive or confidential information. According to Aina (2002:63) a questionnaire is a research tool that is comprised that uses serial questioning and other data requests to gather information about the

participants. The author adds that questionnaires are generally categorised into close-ended and open-ended types. The questionnaire for this study consisted of both open-ended and close-ended questions to obtain qualitative and quantitative data from the respondents, and it had the following sections:

The questionnaire for respondents consisted of the following sections:

Section A: requested a permission to use responses for academic research

Section B: Asked how electronic communication is utilized in the community and if there is any importance to enhance ICT infrastructure in the community.

INTERVIEWS

The general objective of most survey research interviews is to collect accurate information about people. An interview is defined as a secondary, short-term social conversation between two people – usually strangers - in which one (the interviewer) is clearly interested in obtaining certain information from the other (the interviewee) (Neuman, 2006: 304). The main advantage of the interview schedule of this study is that the 57 participants get an opportunity time to meet the researcher, and therefore more reliable information is likely to be collected.

In a survey interview, the interviewee answers questions asked by the interviewer. The participants express their feelings and viewpoints to the interviewer. The interviewer does not judge the respondents nor try to influence the respondent's responses to questions, thereby trying to ensure honest personal responses. Almost all the information is deduced from the respondent's answers. The interviewer leads the topic, direction, and pace by ensuring that there is always focus and avoidance of unnecessary digression. The interviewer always tries to maintain a friendly but serious approach to control the interaction. Participants must provide truthful and thoughtful answers to all questions (Neuman, 2006: 305). There are three well-known types of interviews: face-to-face/personal, telephone or email (Neuman 2006: 300).

For the purpose of this study, interviews were conducted with local traders and heads of departments in both government and private organisations. Interviews' times and dates were

communicated in advance to the interviewees. According to Neuman (2006: 140) the personal interview method has a number of advantages over mail surveys or telephone interviews. The benefits of this method include the following:

For the purpose of this study, interviews were conducted with local traders and heads of departments in both government and private organisations. Interviews' times and dates were communicated in advance to the interviewees. According to Neuman (2006: 140) the personal interview method has a number of advantages over mail surveys or telephone interviews. The benefits of this method include the following:

- It has more accurate respondents' views
- It generates the highest amounts of data
- It is the most flexible method, as the interview is controlled by a respondent's responses.
- The interviewer has full control of respondents attention
- Unlike questionnaires, all respondents are almost guaranteed to air their views

PILOT STUDY

According to Williman (2001: 238) a questionnaire study must be conducted on a test sample before the actual study begins. Williman maintains that it is advisable to test a questionnaire on a sample that has similarities to the population of interest, in order to be aware of any problems or challenges that may arise during the study. Therefore, a pilot study was undertaken to find out if there were any difficulties or confusion that the respondents of this study were likely to face.

DATA ANALYSIS AND PRESENTATION

After data collection it is vital that the data is organised into meaningful information from which conclusions can be drawn. According to Sarantakos (2007: 313) the conversion of raw data to understandable statements is referred to as data analysis and interpretation. Neuman (2003: 156)

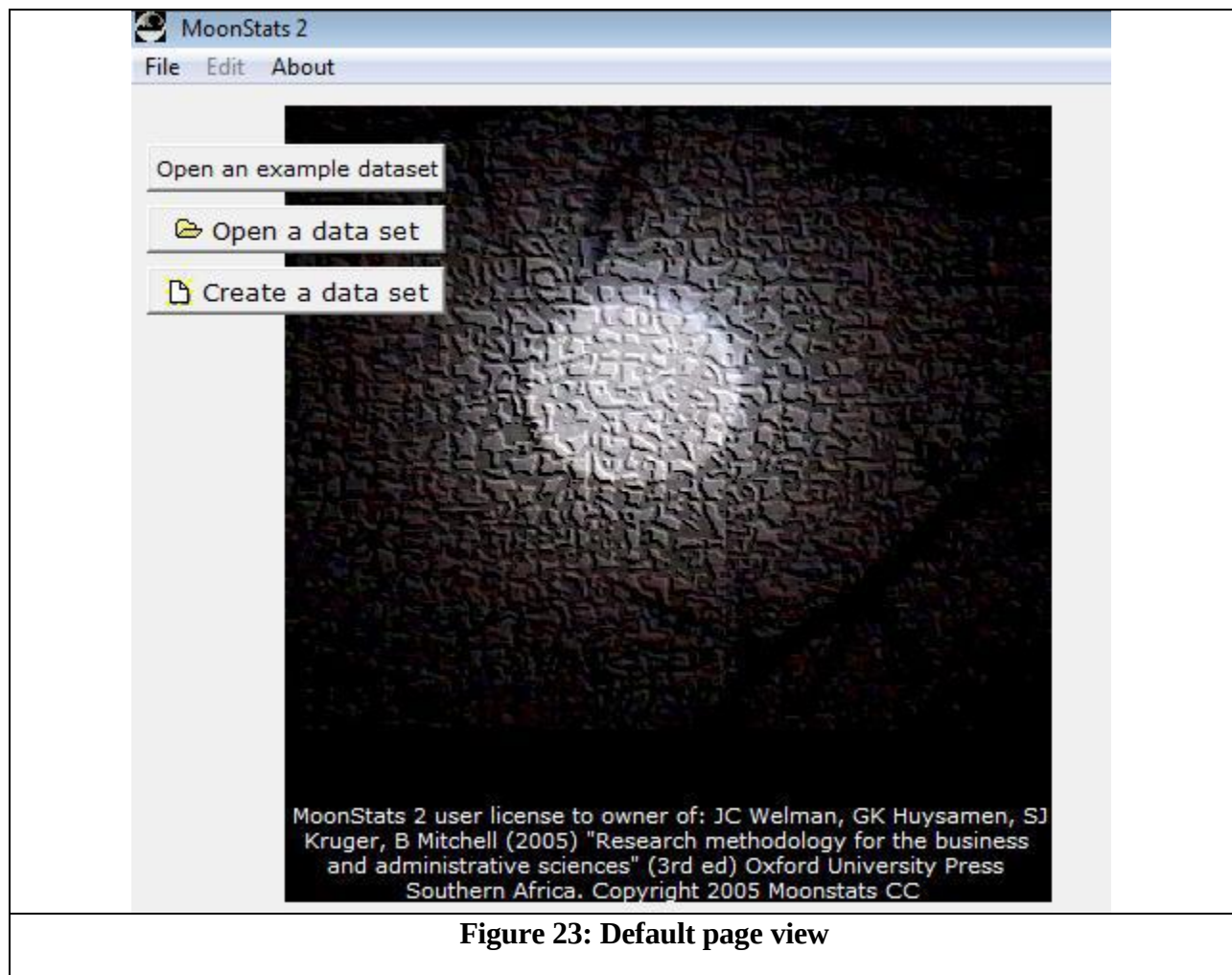
defines data analysis as a method used to gather and analyse the content of text. Content entails words, meanings and pictures, symbols, ideas, themes, or messages that can be use for communication. The MoonStats programme was employed to analyse quantitative data in this research study. The content analysis was used to analyse qualitative responses.

MOONSTATS

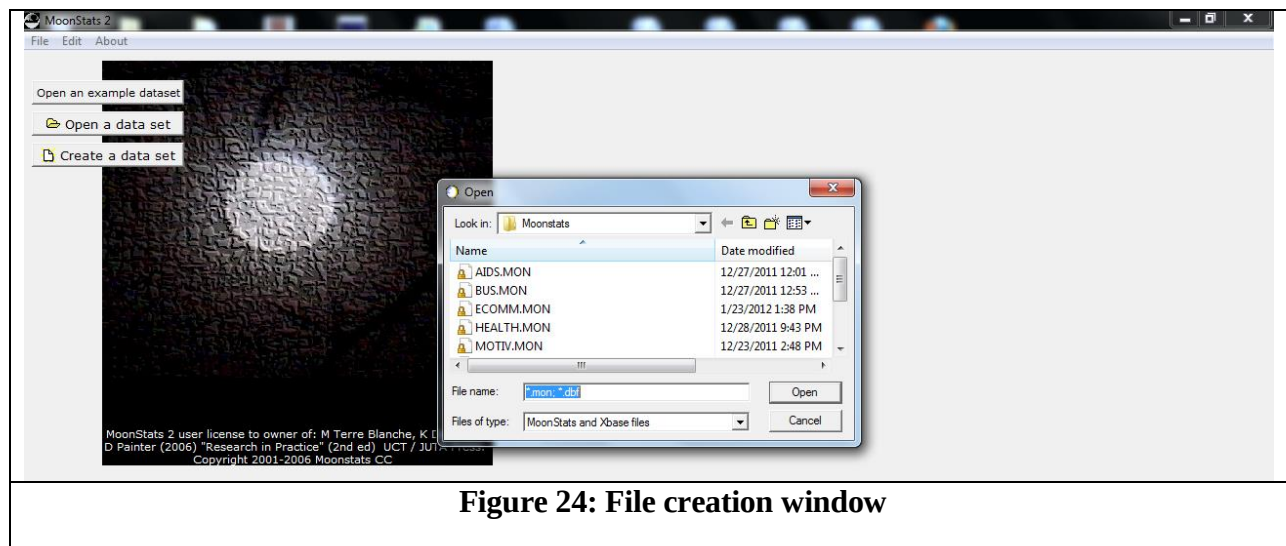
MoonStats is a stand-alone statistical program that is compatible with Windows 95 and higher versions of the operating system. It was designed for all computer users – novice to advance - and provide the statistical tools for the descriptive analysis of data. MoonStats allows for entry of numeric data values into a sheet of up to 100 variables and 1000 cases (units of analysis) (Welman *et al.* 2005: 319).

SETTING UP THE CODING PARAMETERS IN MOONSTATS

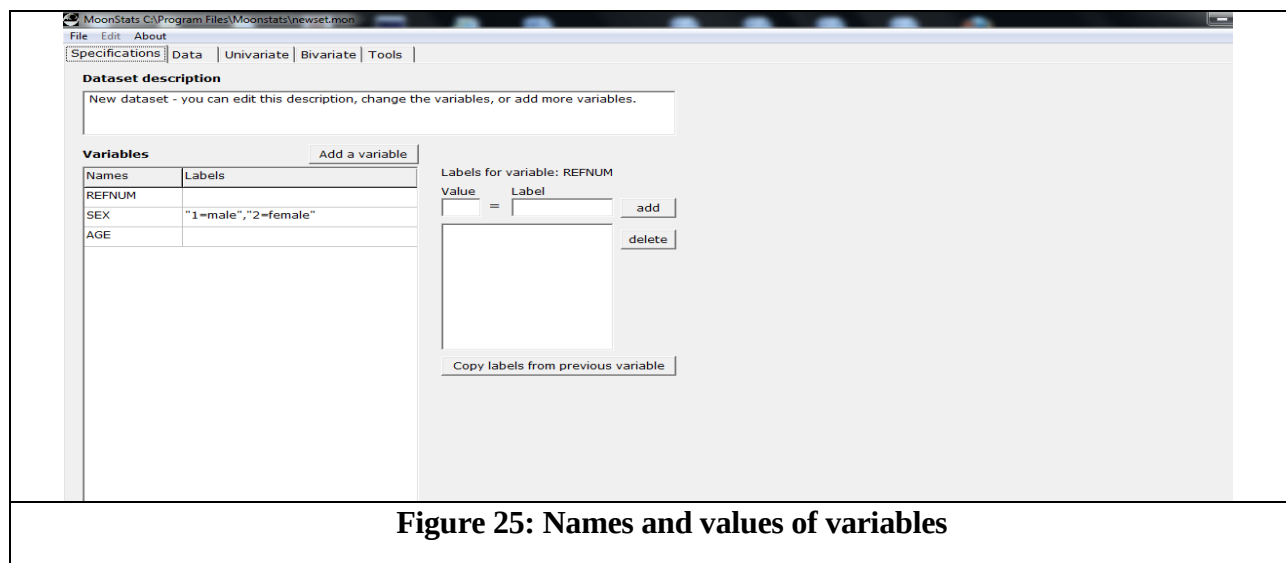
When the MoonStats programme is launched, it immediately opens a default page. The researcher then selects the “create a data set” option to create a new data set wherein the responses could be captured.



The program then prompts the user to save the file in his/her preferred location. Figure 24 below is a snapshot that illustrates this stage.



The new window immediately pops up after the file has been saved. This stage enables the researcher to code and enter data from the questionnaire. This is done by giving fields names for details that the respondents will provide when answering. Figure 25 below gives an illustration.



The next step is to give the full names and values of the all variables as Figure 26 shows below.

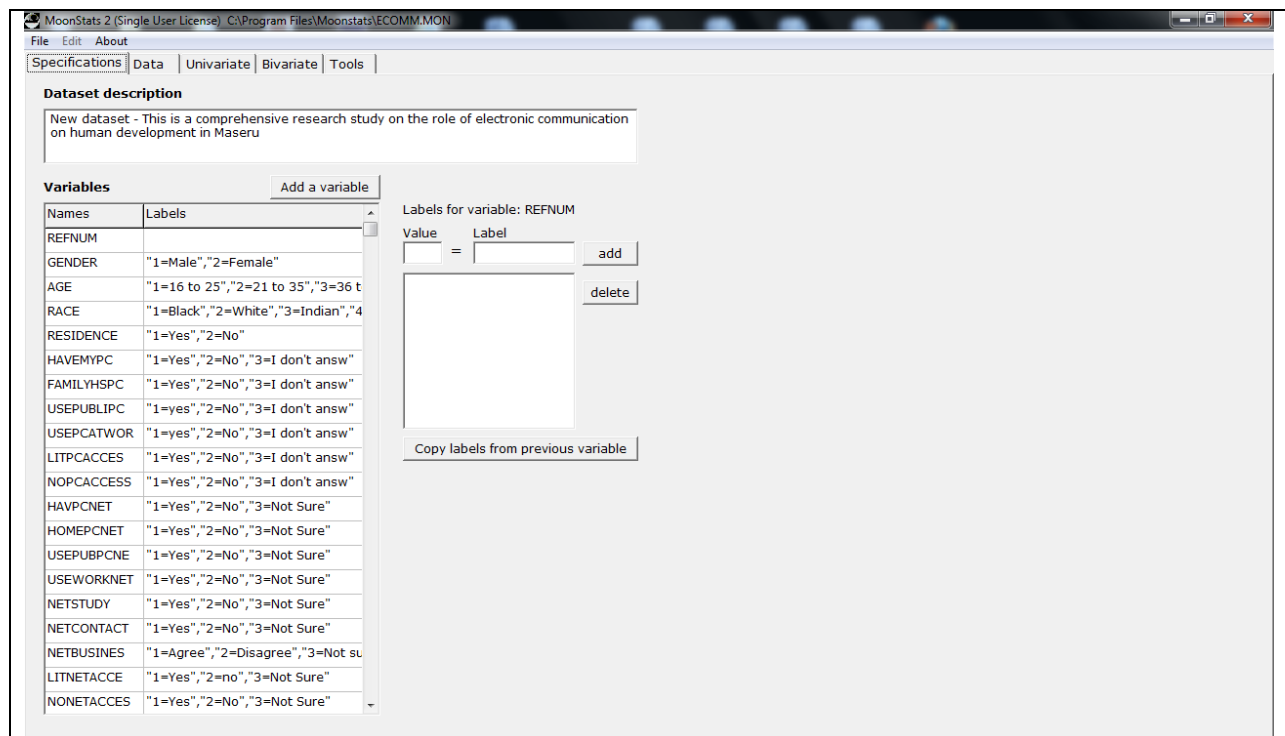


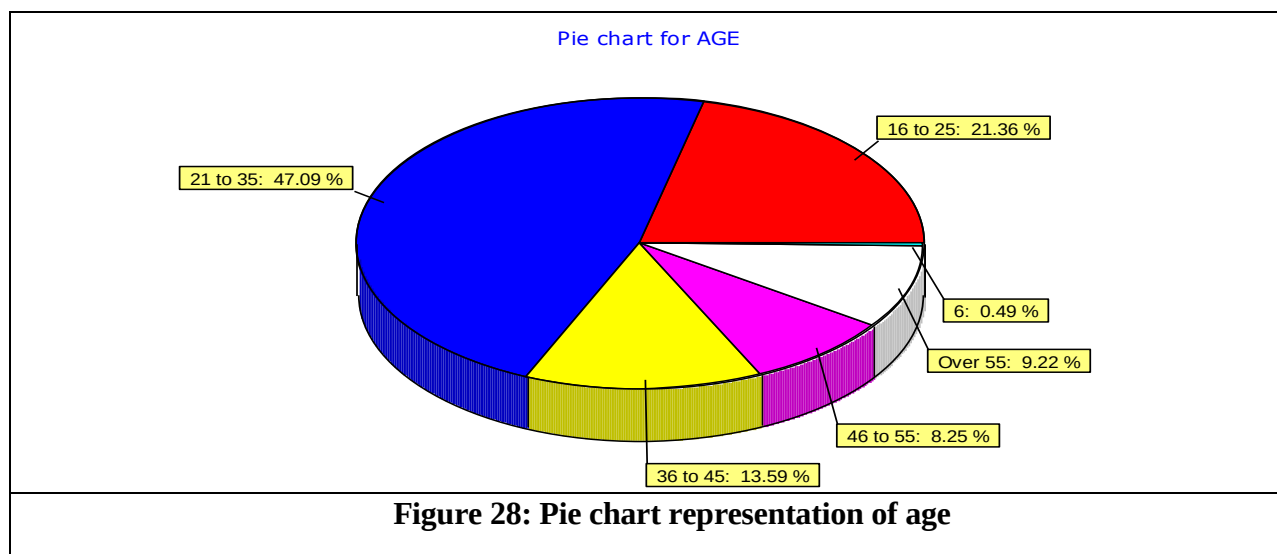
Figure 26: Inserted Data

After the data has been inserted on the data sheet, the worksheet is saved. This stage therefore allows the researcher to go to data sheet view where it is possible cross-check information and make editions accordingly. Figure 27 below demonstrates the data view sheet.

MoonStats C:\Program Files\Moonstats\ECOMM.MON														
File Edit About														
Specifications Data Univariate Bivariate Tools														
REFNUM	GENDER	AGE	RACE	RESIDENCE	HAVEMYPC	FAMILYHSPC	USEPUBLIPC	USEPCATWOR	LITPCACCES	NOPCACCES	HAVPCNET	HOMEPCNET	USEI	
1	2	2	1	1	1	1	2	1	2	2	1	2	2	
2	2	2	1	1	1	2	2	2	2	2	1	2	1	
3	1	2	1	1	1	1	1	2	2	2	2	2	1	
4	2	2	1	1	1	2	2	1	2	2	1	2	2	
5	2	2	1	1	1	2	1	1	2	2	2	2	2	
6	1	2	1	1	1	2	1	1	2	2	1	2	2	
7	1	2	1	1	1	1	2	1	2	2	2	2	2	
8	2	2	1	1	1	1	2	1	2	2	2	2	2	
9	2	2	1	1	1	1	2	1	2	2	1	2	2	
10	2	2	1	1	1	1	2	1	2	2	2	2	2	
11	1	2	1	1	1	1	1	1	2	2	1	2	1	
12	1	2	1	1	1	2	2	2	1	2	2	2	1	
13	2	2	1	1	1	1	2	1	2	2	1	2	2	
14	2	2	1	1	1	1	1	2	2	2	1	1	1	
15	2	2	1	1	1	2	1	2	2	2	1	2	1	
16	1	1	1	1	1	1	1	2	2	2	1	1	1	
17	2	2	1	1	1	1	1	1	2	2	1	1	1	
18	2	2	1	1	1	1	2	1	2	2	1	2	2	
19	1	2	1	1	2	1	1	2	1	2	2	2	1	
20	2	2	6	1	1	1	1	1	2	2	1	2	2	
21	2	2	1	1	2	2	1	1	2	1	2	2	2	
22	2	2	1	1	1	1	1	1	2	2	2	2	1	
23	2	2	1	1	2	2	1	1	1	2	1	2	1	
24	1	6	1	1	1	2	1	1	2	2	2	2	1	
25	1	2	1	1	1	2	2	1	2	2	1	2	2	
26	2	2	1	1	1	2	2	2	1	2	2	2	1	
27	1	3	1	1	1	1	1	2	2	2	2	2	1	
28	1	3	1	1	2	2	1	2	1	2	2	2	1	
29	2	3	1	1	1	1	2	2	2	2	2	2	2	
30	2	2	1	1	2	2	2	2	1	2	2	2	1	

Figure 27: Data sheet view

From the data view sheet, the researcher can click on other tabs to execute any command so that a computer produces graphical presentation of any statistical information. The presentation of information can in a form of a table, graph, or pie chart.



CONSTRAINTS

The chosen research method achieved the desired results. However, the researcher encountered some challenges in the process. Prior to going to the field, the researcher was required – for ethical considerations - to seek permission to undertake the study at the targeted departments (Education and Health ministries), and this step alone took over two months to finalise.

The researcher also faced some difficulties during the field study. Firstly, some respondents did not honour their appointments when the researcher set out to receive questionnaires or provide clarity on some sections of the questionnaire that they could not understand. The researcher would arrive on time for scheduled appointments, and find that there was a meeting at the same time as that of the appointments, or some of the respondents were absent from work without informing the researcher. Secondly, the researcher had to repeatedly print and distribute questionnaires because some respondents had lost their questionnaires. Other respondents forgot to answer the questionnaires although they were given plenty of time. A considerable number of respondents either lost or did not answer the questionnaire.

CONCLUSION

This chapter has discussed the data collection methods employed in the study. The targeted population this study was comprised of individuals, government and private organizations (Education and Health departments as well as networking companies) from the city of Maseru. The study used both simple and stratified random sampling methods to select the respondents from this population. Interviews were also scheduled for managers and a few clients who were operating within the premises of the departments of interest, and stratified sampling was used to select the interviewees. The next chapter deals with the analysis and interpretation of findings.

CHAPTER 8

DATA ANALYSIS AND INTERPRETATION

INTRODUCTION

The previous chapter discussed the methods used to conduct the research, and how to set up the MoonStats programme in order to capture and analyse the data. This chapter presents the analysis and interpretation of data from the target population. The aim of the chapter is to analyse and interpret the responses in order to make the data meaningful. The Study aimed to investigate the role of online communication on social and economic development in Maseru, Lesotho. Data analysis does not provide entire answers to research questions but it is data interpretation that clearly outlines the achievement of objectives set and provides useful answers. The study targeted the community of Maseru. Statistical and graphical techniques were used in order to make captured data more understandable.

GENDER

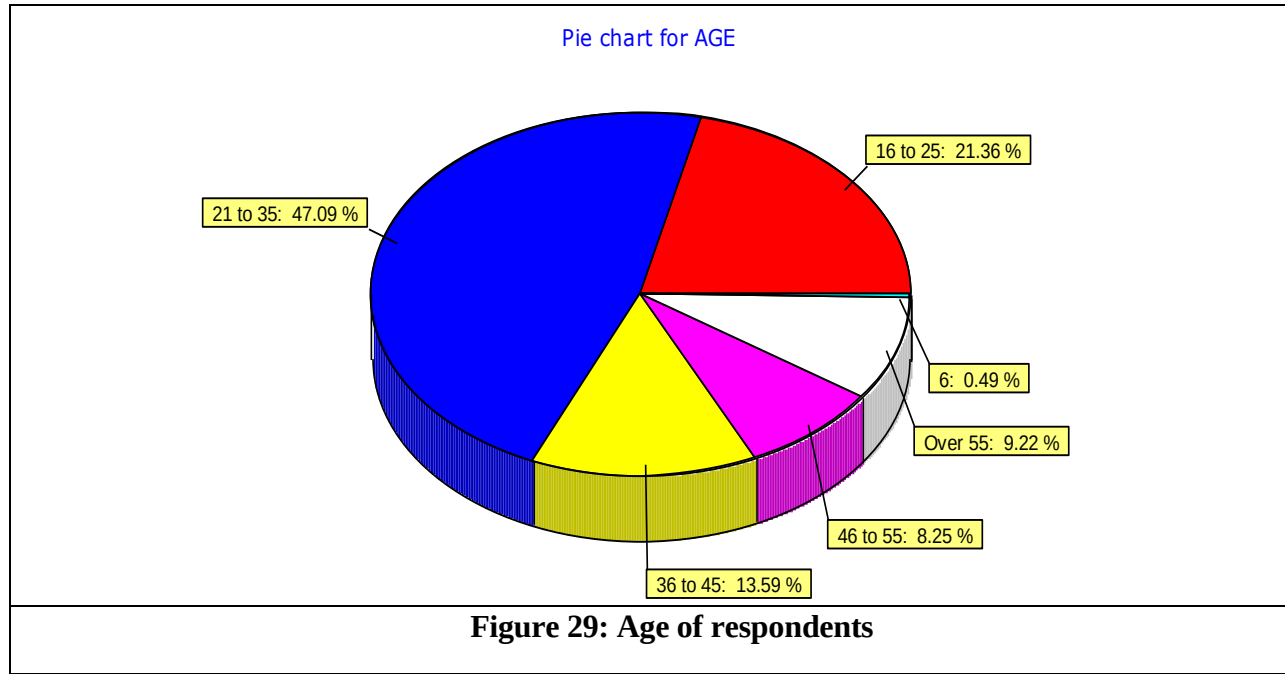
Table 3 below shows that the survey included both male and female respondents. They were selected randomly and therefore their participation rate varied in terms of percentage.

Value	N	%	Cum. %
Male	166	43.20	43.20
Female	214	55.83	99.03
3	1	0.49	99.51
5	1	0.49	100.00
TOTAL	382	98.00---	
Table 3: Gender of respondents			

According to table 3 above, 166 males and 214 females participated and revealed their sex status in the survey. This was achieved through a simple random sampling technique.

AGE

Figure 29 below illustrates the various age categories of respondents.



Respondents in the age categories 21- 35 made the greatest number of percentage (47.09%) in the survey. Respondents in the age categories 16 to 25 followed behind with 21.36% of overall participation. A portion of (13.59%) comprised subjects between the ages of 36 and 45 respectively. Respondents above 55 years old made up an overall participation in the study. This was followed by people in the ages between 46 and 45 who constituted (8.25 %).

RACE GROUP

Figure 30 below assessed the respondents' race group. They were asked to indicate their race group.

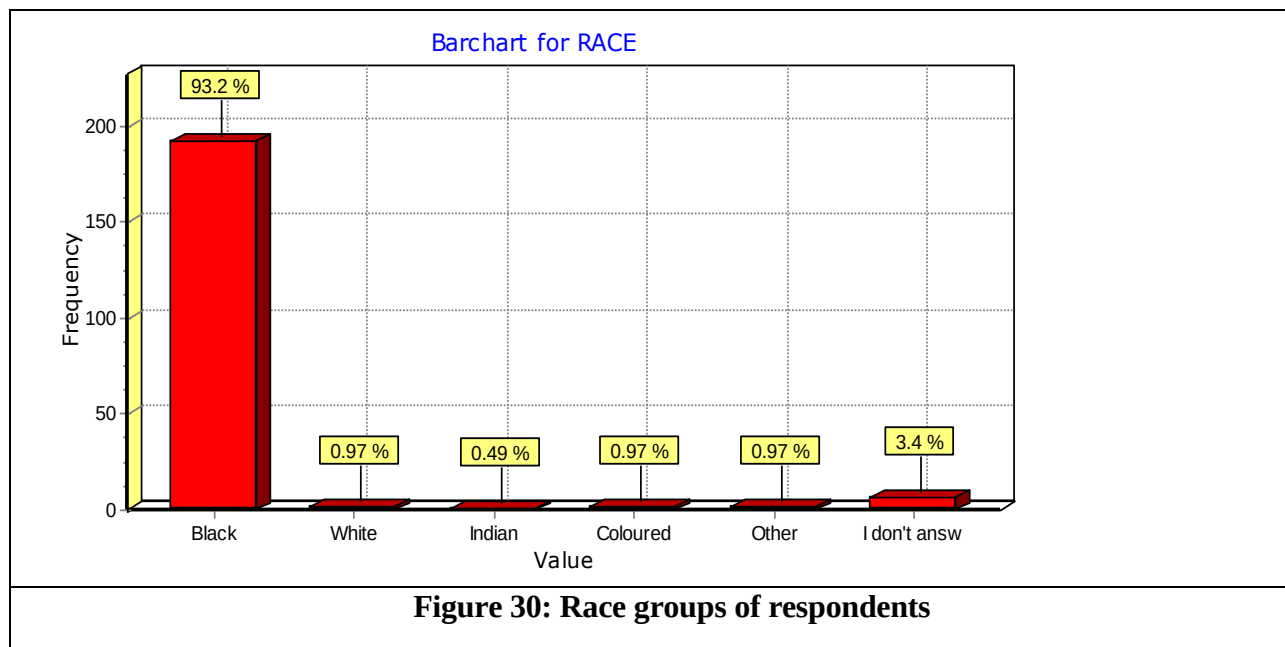


Figure 30 above indicates that there is a considerable imbalance in the distribution of racial groups. Of great importance is also to note that the study was conducted in a non-multi-racial society. The survey involved (93.2%) blacks, (0.97%) whites, coloureds and other races. The survey also included about (0.49%) participation of Indians. A percentage of about 3.4 % sample chose not to reveal their race group.

RESIDENCE

Frequency table for RESIDENCE			
Value	N	%	Cum. %
Yes	377	98.06	98.06
No	7	1.94	100.00
TOTAL	384	100.00	

Table 4: Residence of respondents

This study primarily targeted the community of Maseru, the capital of Lesotho, and therefore used them as subjects. Consequently, according to table 4, 98.06% of respondents indicated that

they are residents of Maseru while only 1.94% responses were obtained from non-Maseru residents. The study used random samples which are not selective in nature.

HAVING COMPUTER

Figure 31 below assessed if the participants had their personal computers. They were asked state whether they have personal computers or not, or if they were unsure.

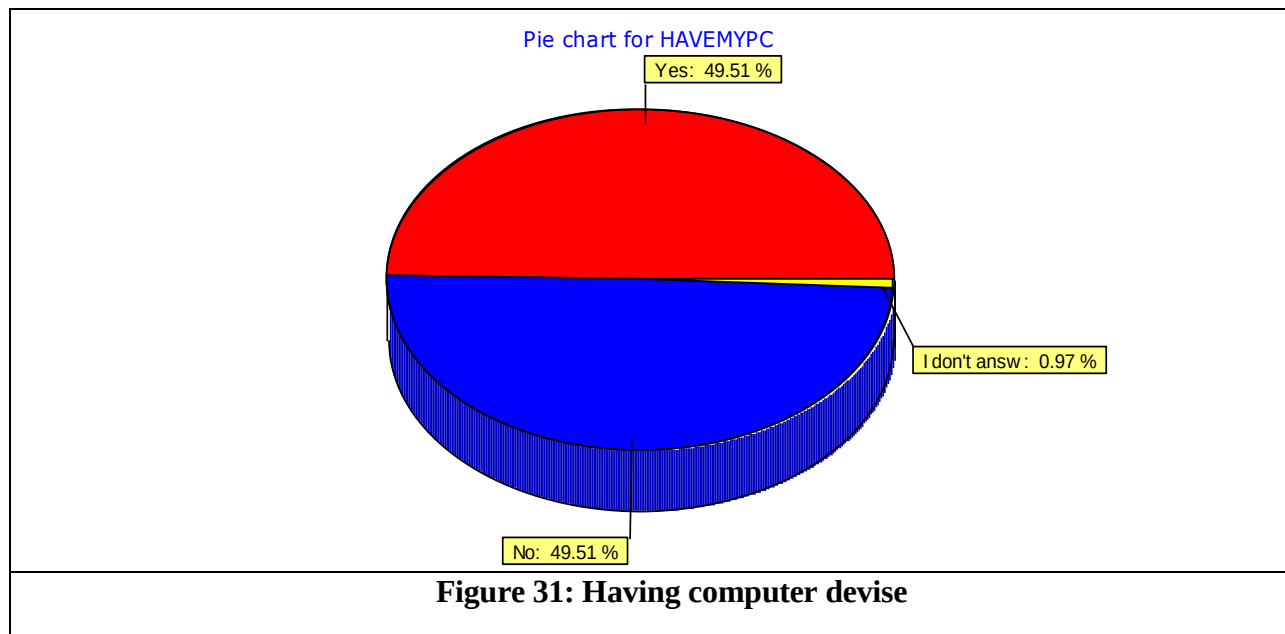
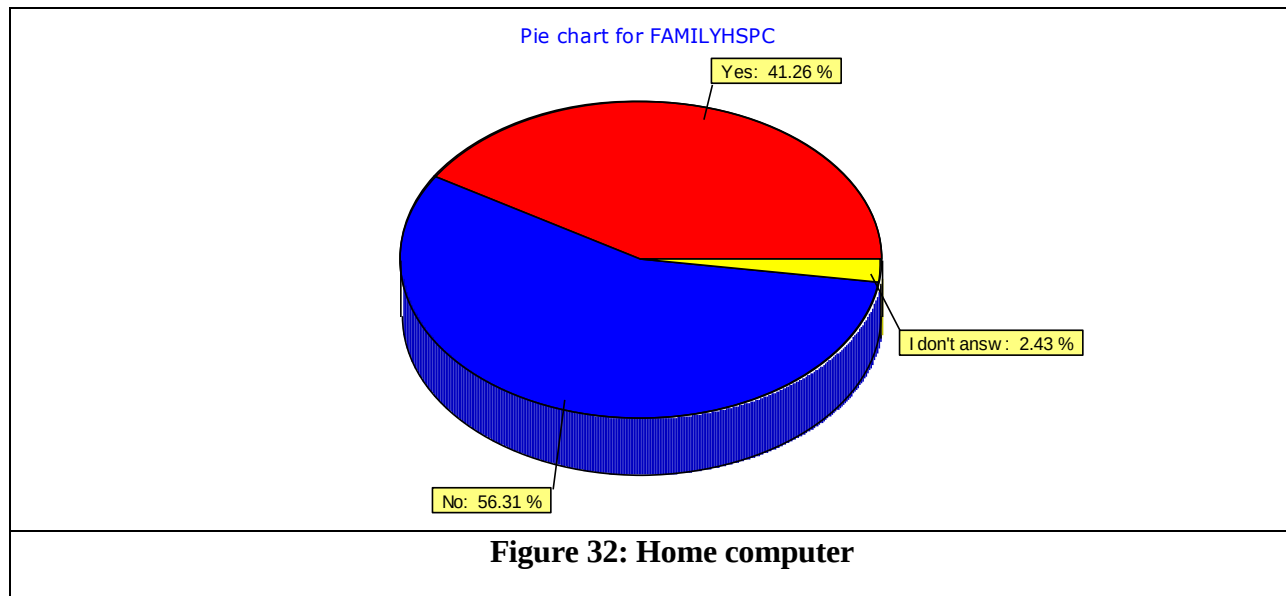


Figure 31 illustrates respondent's reactions to whether one has a computer devise or not. The results revealed that both categories of those who possess and without a computer totalled to 49.51%. Respondents who decided not to respond to this question were 0.97%.

HOME COMPUTER

According to figure 32 below, respondents were asked to indicate if there was a computer in their homes. They were expected to state if their families had a computer or not.



According to Figure 32 above, respondents were asked to indicate whether their homes have computers or not. Responding to this, results showed that only the minority of families (41.26%) have a computer in their homes while the majority of families (56.31) have no computer in their homes. The least number of respondents (2.43%) did not respond to this question.

PUBLIC COMPUTER

According to the figure below, respondents were asked to indicate the place where they access computer.

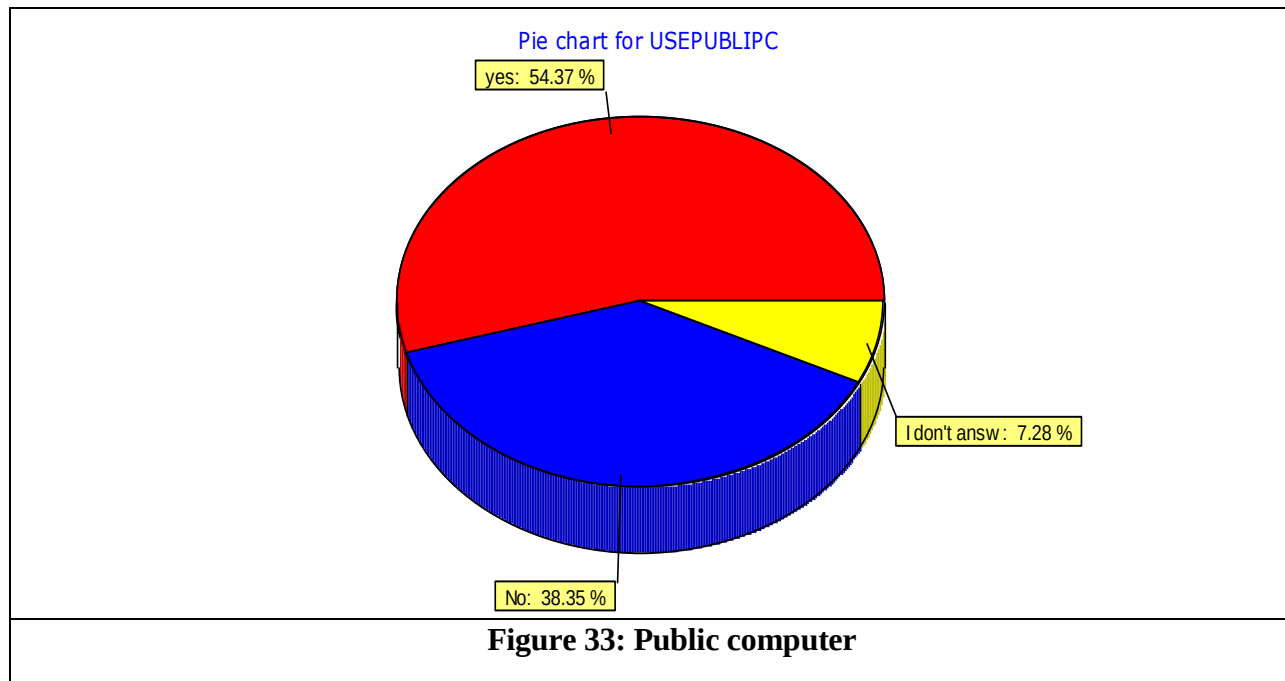
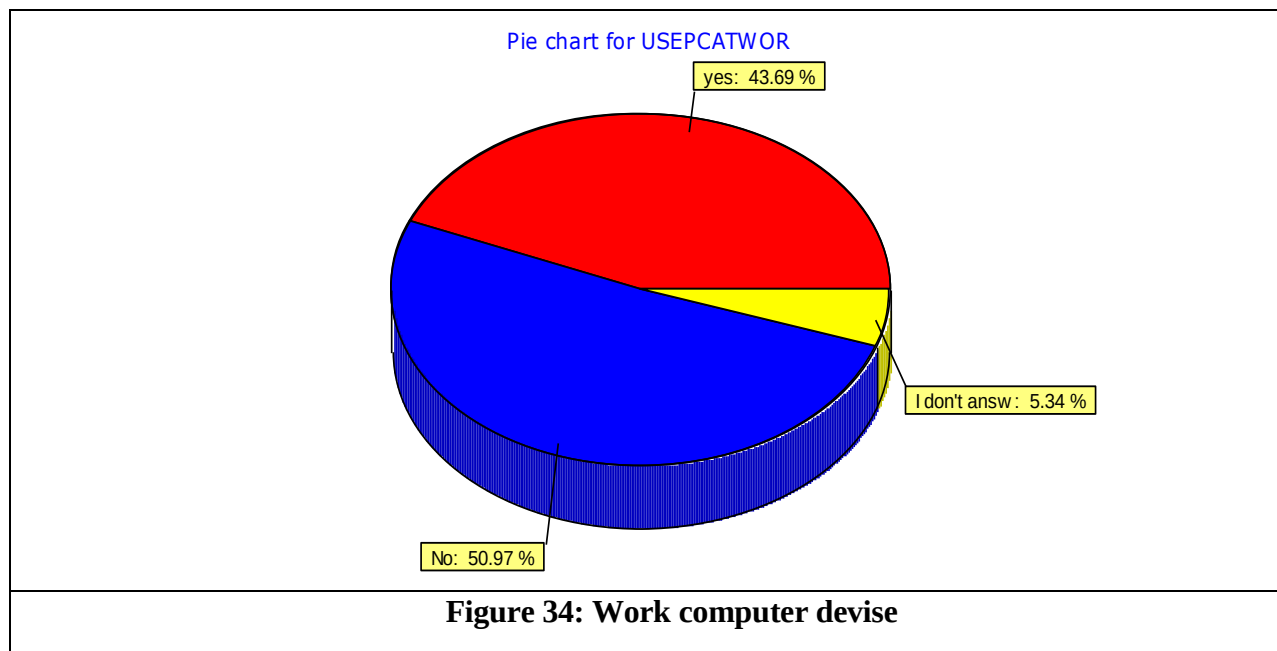


Figure 33 represents views of respondents with regard to whether they use public (library/school or internet café to access computer or not. The findings revealed that many people in Maseru (54.37%) use public computer for access as opposed to less people (36.36%) who do not need to access computer via a public centre. However, a considerable number of (7.28%) chose not to respond.

WORK COMPUTER

Figure 34 below specifically asked the participants to state if they have computer access at their respective job places.



As indicated by figure 34 above, the majority of people in Maseru (50.97%) cannot access computer due to work advantage. Slightly falling below half category of people (43.69%) in Maseru is able to access computer due to work process. Nonetheless, a percentage of 5.34% did not attempt to this question.

COMPUTER ACCESSIBILITY

Figure 35 below evaluated the chances of respondents' access to computer. They rated chances.

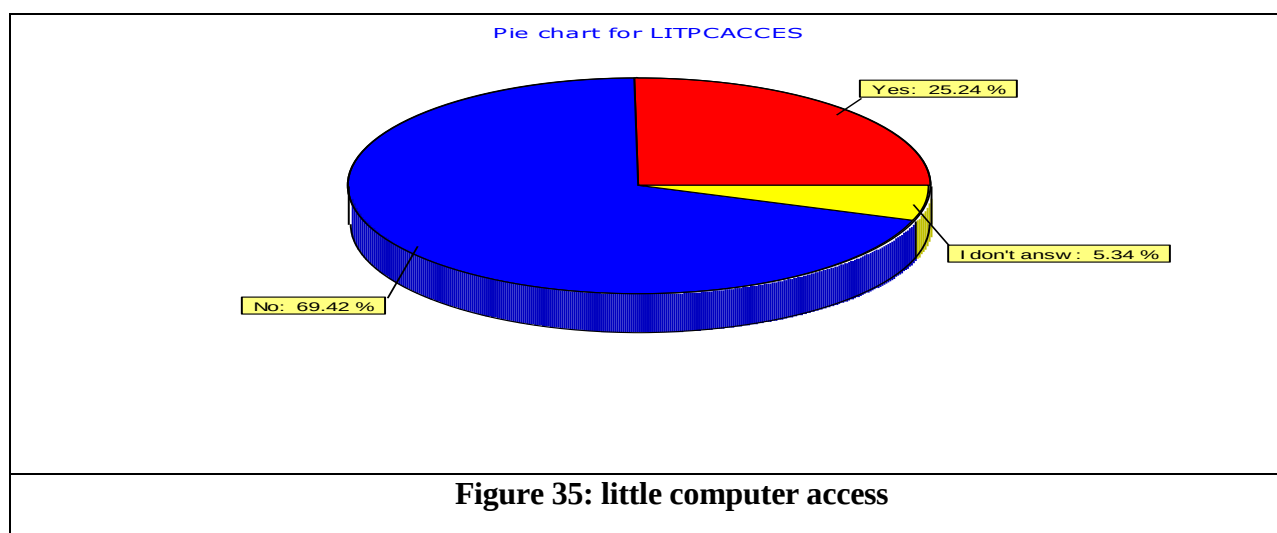


Figure 35 above illustrates responses to the question whether individuals have little access to a computer. In responding to this, 69.42% responses indicated that they do not have little access to a computer device. Another group of people (25.24%) agreed that they do have little access to computer. Moreover, a group of people (5.34%) did not answer the question.

NO COMPUTER ACCESS

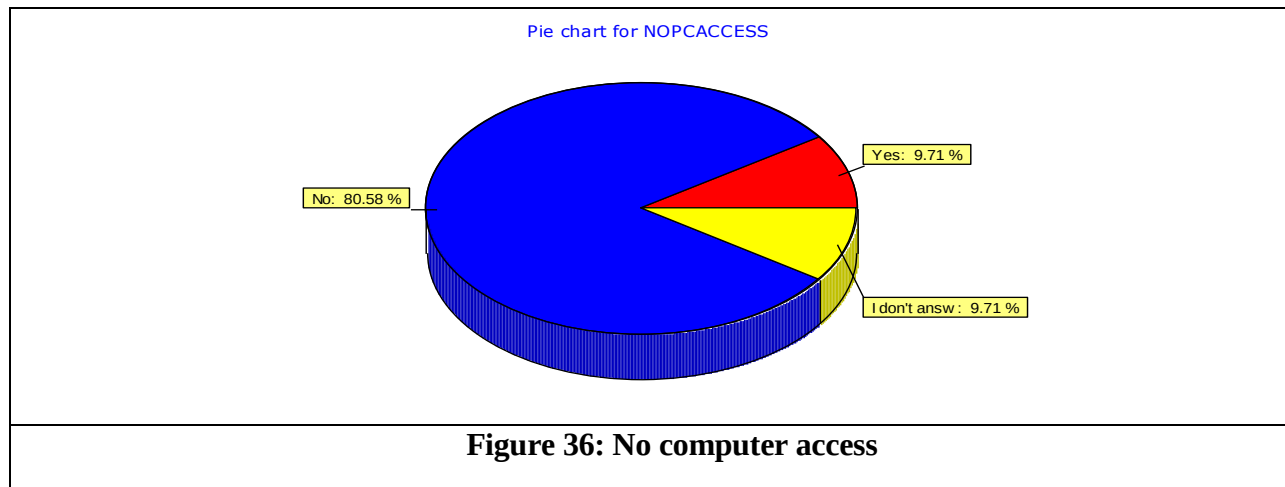


Figure 36 provides graphical representation of responses to the question whether individuals have no access to a computer. Results revealed that 80.58% said no, thus, they do have. About 9.71% respondents said yes, which means they have no means of computer access. Another group of individuals (9.71%) chose not to reveal their accessibility.

INTERNET ACCESS

According to the table below, respondents were asked to indicate if they do have access to internet or not. The purpose of the question was to determine the chances available for internet access by the inhabitants.

<table> <tr> <th>Value</th><th>N</th><th>%</th><th>Cum. %</th></tr> <tr> <td>Yes</td><td>136</td><td>35.44</td><td>35.44</td></tr> <tr> <td>No</td><td>242</td><td>63.11</td><td>98.54</td></tr> <tr> <td>Not Sure</td><td>5</td><td>1.46</td><td>100.00</td></tr> <tr> <td>TOTAL</td><td>383</td><td>99.00</td><td></td></tr> <tr> <td colspan="4">Missing cases: 0</td></tr> </table>	Value	N	%	Cum. %	Yes	136	35.44	35.44	No	242	63.11	98.54	Not Sure	5	1.46	100.00	TOTAL	383	99.00		Missing cases: 0				Table 5: Internet access of respondents		
Value	N	%	Cum. %																								
Yes	136	35.44	35.44																								
No	242	63.11	98.54																								
Not Sure	5	1.46	100.00																								
TOTAL	383	99.00																									
Missing cases: 0																											

According to data captured, table 5 illustrates that a considerable number of individuals (63.11%) cannot access internet on their computer machines, while just 35.44% are able to access computers with internet connections. An important point to note is also that one of the study assumptions is that ICTs infrastructure is inadequate in most of organisations in Africa. Respondents constituting 1.46% said that they were unsure as to whether they have computers with internet or not.

HOME COMPUTER HAVING INTERNET

Frequency table for HOMEPCNET			
Value	N	%	Cum. %
Yes	71	18.45	18.45
No	308	80.10	98.54
Not Sure	5	1.46	100.00
TOTAL	384	100.00	
Table 6: Home computer having internet			

Table 6 above depicts that an overwhelming majority of respondent's homes (80.10%) indeed have no computers with internet connections. Only a small number (18.45%) of Maseru community are able to access internet on their home computers. For reasons not known, 1.46% was not sure of their situation.

PLACE FOR INTERNET ACCESS

According to the table below, subjects were asked to specify the place where they access internet. Such places involved public cafe, schools and libraries.

	Frequency table for USEPUBPCNE <table><tr><td>Value</td><td>N</td><td>%</td><td>Cum. %</td></tr><tr><td>Yes</td><td>211</td><td>54.85</td><td>54.85</td></tr><tr><td>No</td><td>155</td><td>40.29</td><td>95.15</td></tr><tr><td>Not Sure</td><td>18</td><td>4.85</td><td>100.00</td></tr><tr><td colspan="4"></td></tr><tr><td>TOTAL</td><td>384</td><td>100.00</td><td></td></tr></table>	Value	N	%	Cum. %	Yes	211	54.85	54.85	No	155	40.29	95.15	Not Sure	18	4.85	100.00					TOTAL	384	100.00		
Value	N	%	Cum. %																							
Yes	211	54.85	54.85																							
No	155	40.29	95.15																							
Not Sure	18	4.85	100.00																							
TOTAL	384	100.00																								
Table 7: Public computer having internet																										

According to the above table, subjects had to state if they use a public places such as library, school, university or internet café to access internet on a computer. The responses indicated that the greater number of people (54.85) exceeding half, agreed that they use such places in order to communicate online. Besides, a considerably less number of respondents (40.29%) said no. Thus, they do not need a public establishment to access the internet but rather have other means, including having their personal internet connection. Again, about 4.85 respondents were not sure about themselves.

INTERNET AT WORK

Frequency table for USEWORKNET			
Value	N	%	Cum. %
Yes	157	40.78	40.78
No	209	54.37	95.15
Not Sure	18	4.85	100.00
TOTAL	384	100.00	
Table 8: Internet at work			

Table 8 above is an illustration of responses to the question whether respondents use internet at work. Data therefore reveals that an extremely considerable number of responses (54.37%) indicated no, thus, a lot of people cannot access the internet at work. On the other hand, the significantly lesser (40.78%) numbers are the ones having internet at work. Nevertheless, there were also responses indicating to be unsure about this phenomenon.

INTERNET FOR STUDYING

Frequency table for NETSTUDY			
Value	N	%	Cum. %
Yes	235	61.17	61.17
No	86	22.33	83.50
Not Sure	63	16.50	100.00
TOTAL	384	100.00	

Table 9: Internet for studying

Furthermore, respondents were asked to indicate whether many people use internet for studying in Lesotho. Table 9 reveals the findings. The responses showed that a lot of people (61.17%) believe that a lot of Basotho use internet for learning purposes. Another category of respondents (22.33%) were of the view that many people do not utilize internet for studying in Lesotho. On the other side, others (16.50%) are unsure as to whether people make use of internet or not for study purposes.

INTERNET FOR CONTACTS

Frequency table for NETCONTACT			
Value	N	%	Cum. %
Yes	272	70.87	70.87
No	52	13.59	84.47
Not Sure	60	15.53	100.00
TOTAL	384	100.00	

Table 10: Internet for contacts

The table above is a revelation of whether people use internet for making friends or at least contacts in Lesotho. Results display that a 70.87% believed that people use the net for contacts. However, 13.59% noted that people are not using the internet to communicate friendship in Maseru, Lesotho. Besides, a 15.53% was not sure if this happens or not.

INTERNET FOR BUSINESS

Frequency table for NETBUSINES			
Value	N	%	Cum. %
Agree	216	56.31	56.31
Disagree	88	22.82	79.13
Not sure	80	20.87	100.00
TOTAL	384	100.00	

Table 11:Internet for business

Table 11 shows that respondents were asked to say if many people use internet to conduct business in Maseru. In responding to this question, a considerable number making 56.31% said

yes, another number constituting 22.82% did not agree with this, and finally, the least number of about 20.87% was not sure about any of these opinions.

LITTLE ACCESS TO INTERNET

Frequency table for LITNETACCE			
Value	N	%	Cum. %
Yes	134	34.95	34.95
no	222	57.77	92.72
Not Sure	28	7.28	100.00
TOTAL	384	100.00	
Table 12: Little access to internet			

According to table 12 above, respondents were asked to comment on the issue of internet access with regard to their experiences. Table 12 is a depiction of data obtained. It has therefore emerged that access to internet is not common in Maseru, whereby about 57.77% of people do not commonly and easily access the web. On the other side, just a 34.95% are able to have sufficient access to the web. A category of about 7.28% indicated that they were not even sure about their chances.

NO INTERNET ACCESS

Frequency table for NONETACCES			
Value	N	%	Cum. %
Yes	56	14.56	14.56
No	304	79.13	93.69
Not Sure	24	6.31	100.00
TOTAL	384	100.00	
Table 13: No internet access			

The study further investigated the issue of overall internet access in the community. Respondents therefore were asked to indicate if ever they have no internet access at all. Responding to this question, a considerable number (79.13%) responded by saying no, they do have access to internet in one way or the other. But still another category constituting 14.56% showed that they have no access to internet at all. Besides, a 6.31% is unsure about their situation.

INTERNET IMPORTANCE

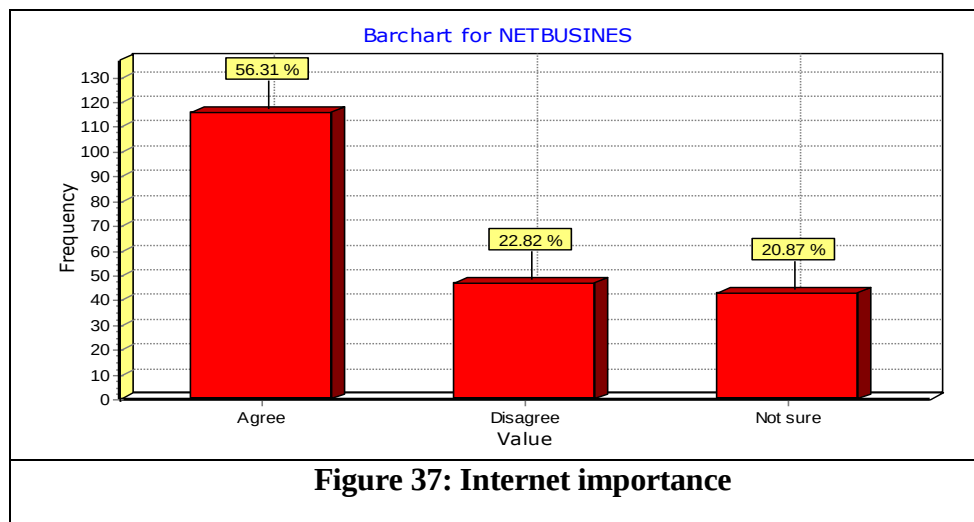


Figure 37 represents responses opinions about internet perception by local inhabitants living in the city. They were expected to command on whether internet has any importance to do business or at least to enhance it. All participants responded to this question by revealing their thoughts. Out of the total responses, 56.31% agreed with this statement while about 22.82% did not agree with the statement. In addition to that, 20.87% responded that they are not sure if internet has any improvement on the enterprise.

INTERNET WITH OTHERS

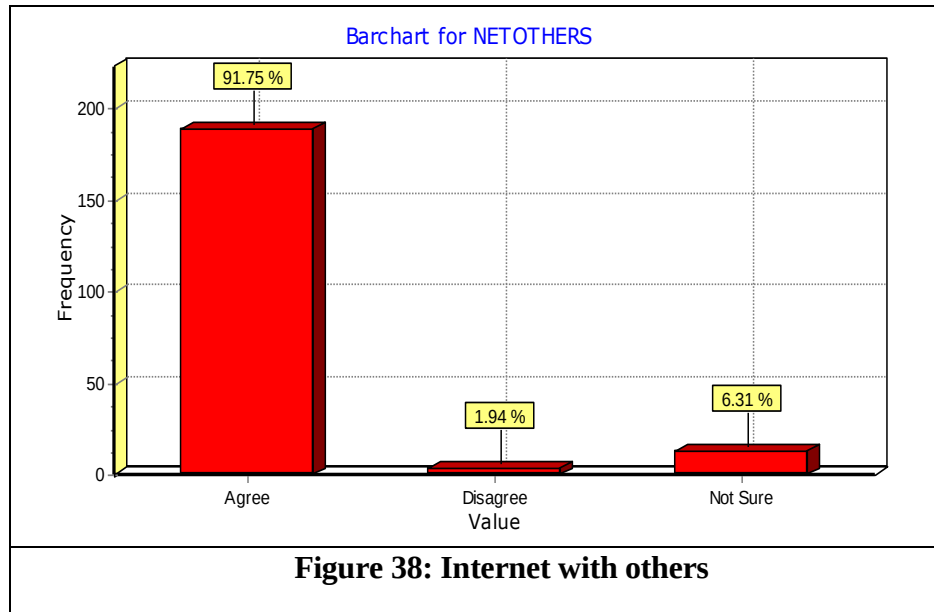
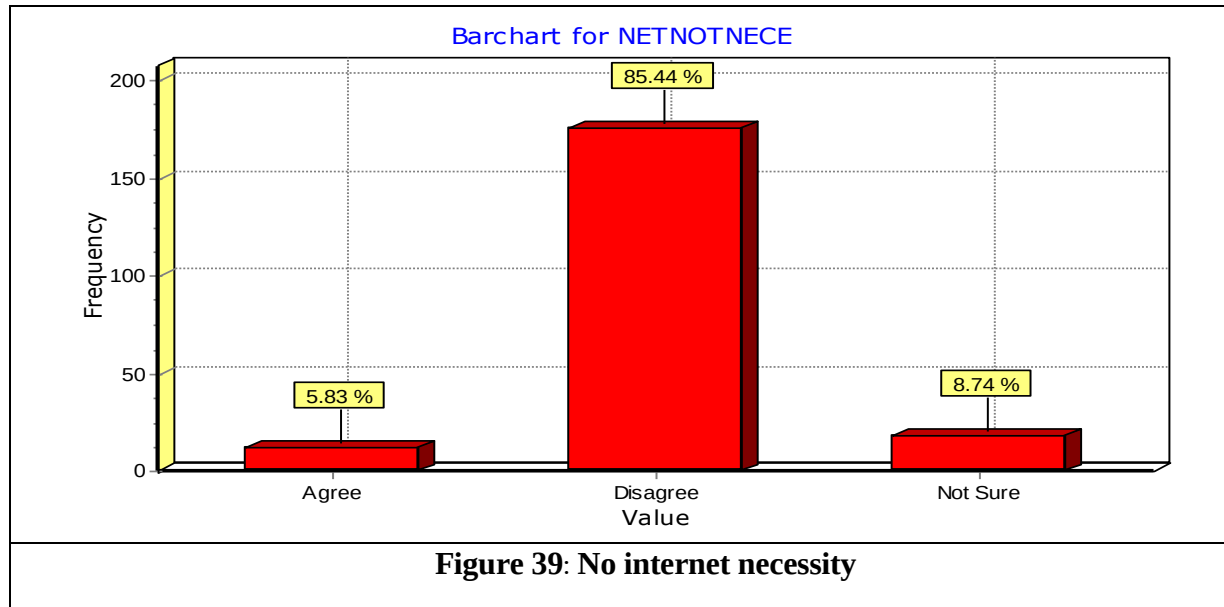


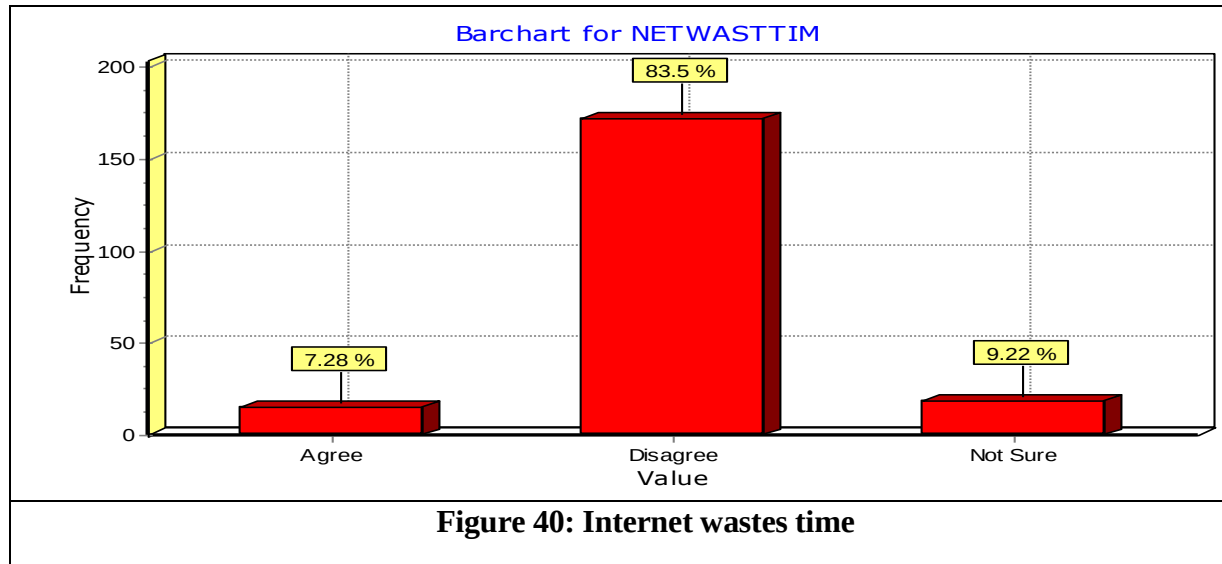
Figure 38 above shows responses pertaining to people's opinions about internet and international trade. Respondents were asked to state whether a person having a computer with internet access has any chance to do business with others and improve his business in Lesotho. Figure 38 depicts that many of the local inhabitants (91.75%) agreed while a considerably less number of people (1.94%) respondents did not agree with this idea. An amazingly noticeable number (6.31%) of responses are not even sure.

NO INTERNET NECESSITY



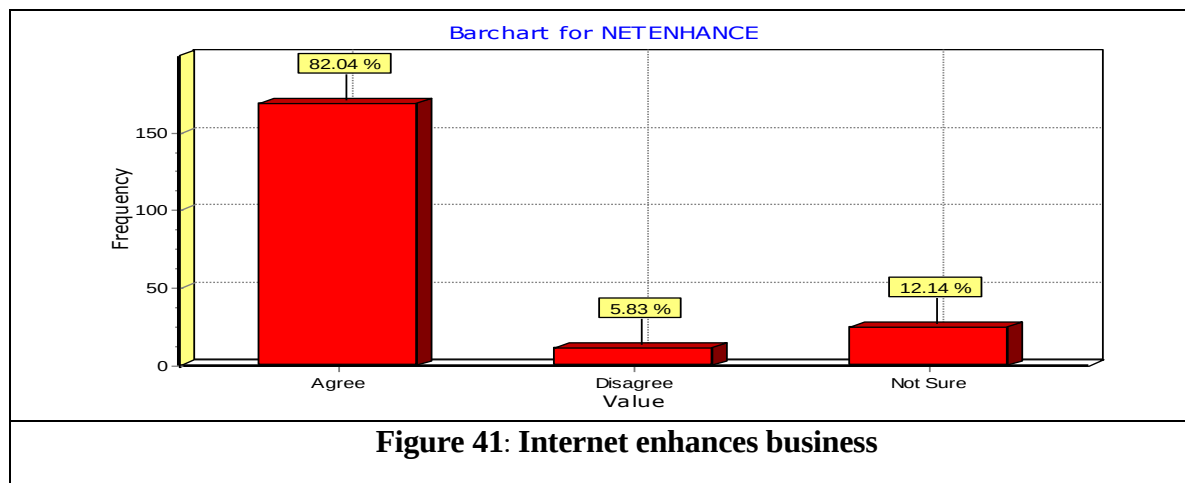
Respondents according to the figure above were asked to state if there is no necessity to install internet in order to improve business in Maseru. Responding to this question, about 85.44% response rate did not agree that internet is not necessary to improve business in Maseru. Apart from that, 5.83% agreed with the statement that internet is not necessary to improve a business. A category of 8.74% was unsure; they neither agreed nor disagreed with this statement.

INTERNET WASTES TIME



As figure 40 illustrates, respondents were asked to agree or disagree or indicate if not sure with the statement that said: installing internet cabling in Maseru is a waste of time. The minority (7.28%) indicated agree. The majority of respondents (83.5) indicated disagree. Another category of people (9.22%) indicated not sure about this. Of great concern here is the fact that there are more people who are not sure as opposed to those who are sure.

INTERNET ENHANCES BUSINESS



According to Figure 41 above, 82.04% responses are of the opinion that using internet enhances business efficiency. Besides, 5.83% responses are of the view that internet does not enhance business efficiency. About 12.14% response rate indicated not sure about the relationship between internet and business efficiency.

USE OF INTERNET BY LEARNERS

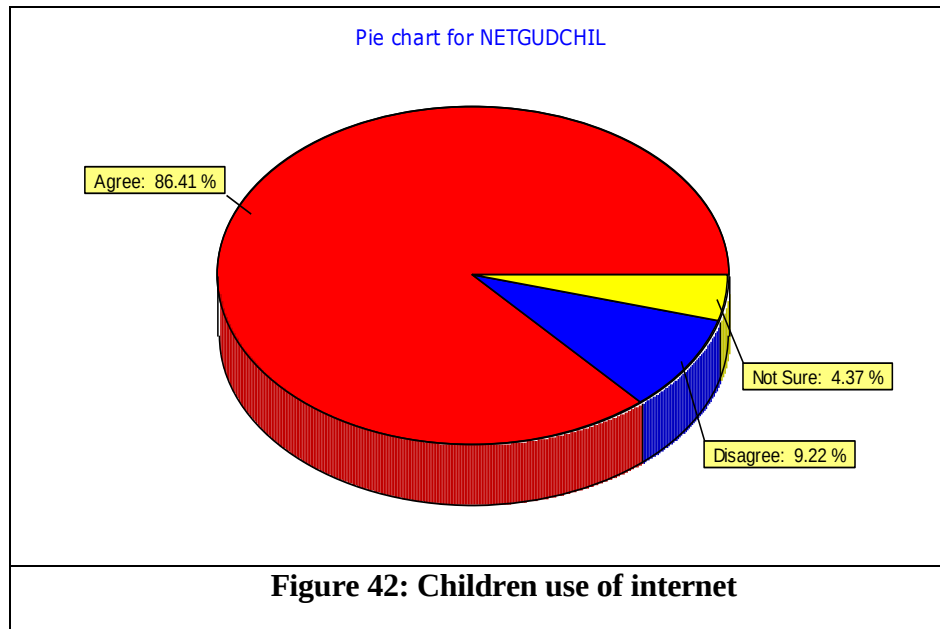
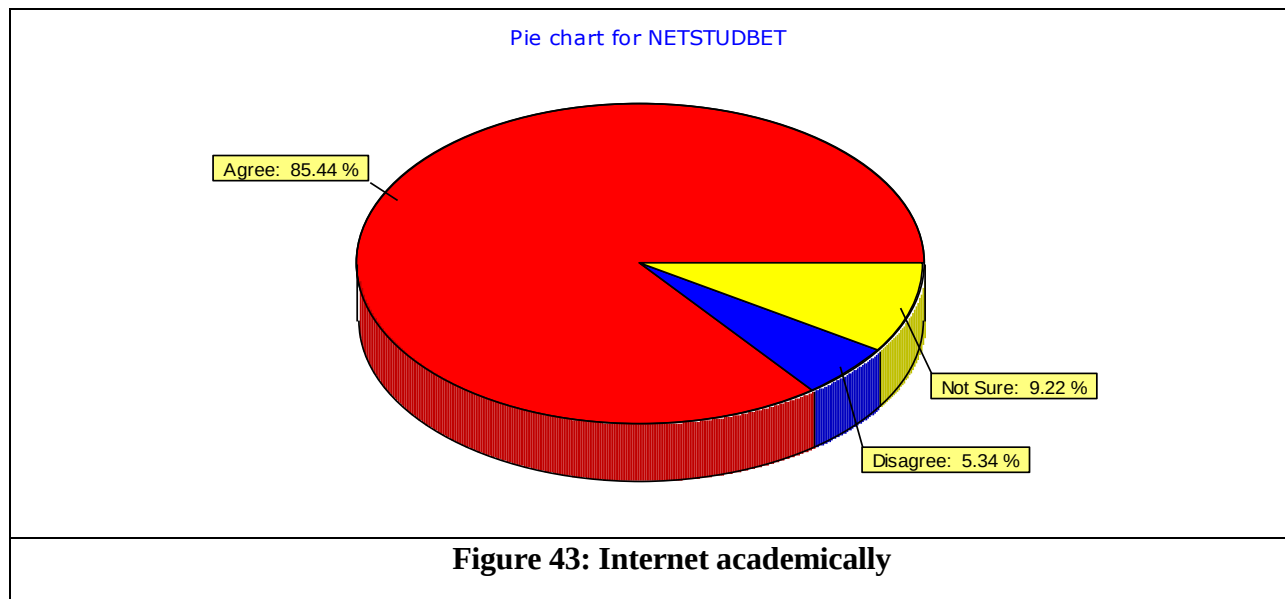


Figure 42 reveals findings with regard to opinions responding to the statement if ever it is good thing for children to use the internet to complete home work. The results show that great numbers of responses (86.41%) agreed, few responses (9.22%) disagreed, while the least responses (4.37%) indicated not sure.

STUDY BENEFITS OF INTERNET

This question focused on determining whether the candidates believed that the use of internet is beneficial to academic study.



The survey asked respondents to agree or disagree with the view point that pupils who use internet to study perform better than those without internet in school. Responses to this indicate that many inhabitants (85.44%) agreed that the internet can assist in boosting academic performance. Very few of them (5.34%) disagreed with this, while about 9.22%, more than those disagreeing, were not sure.

INTERNET IN TEACHING LEARNING

The survey asked respondents to agree or disagree with the view point that the web facilitates teaching and learning for the learners benefit.

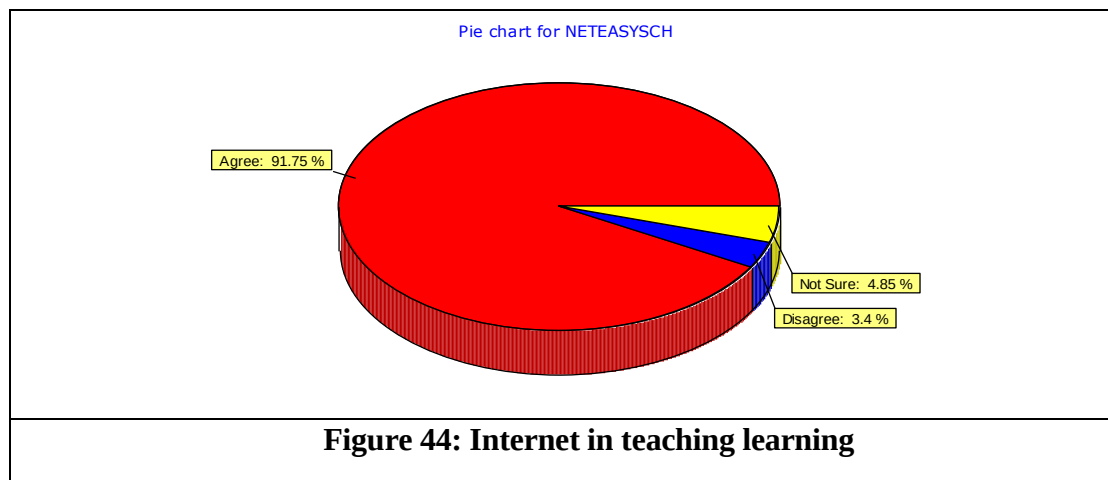
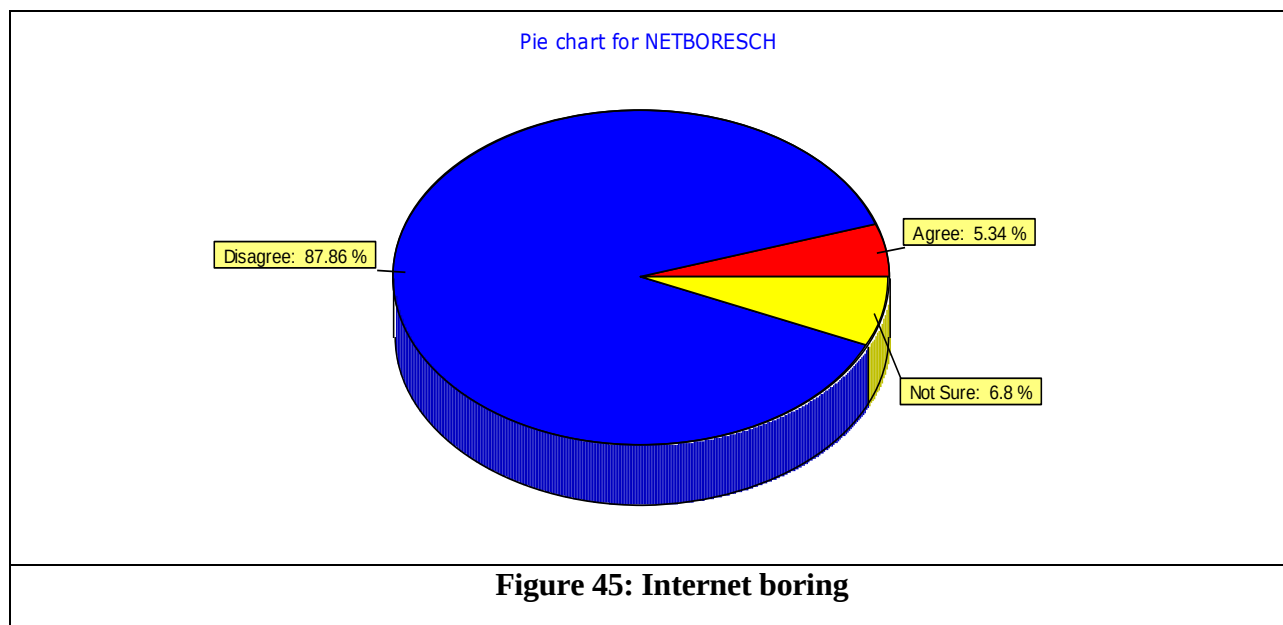


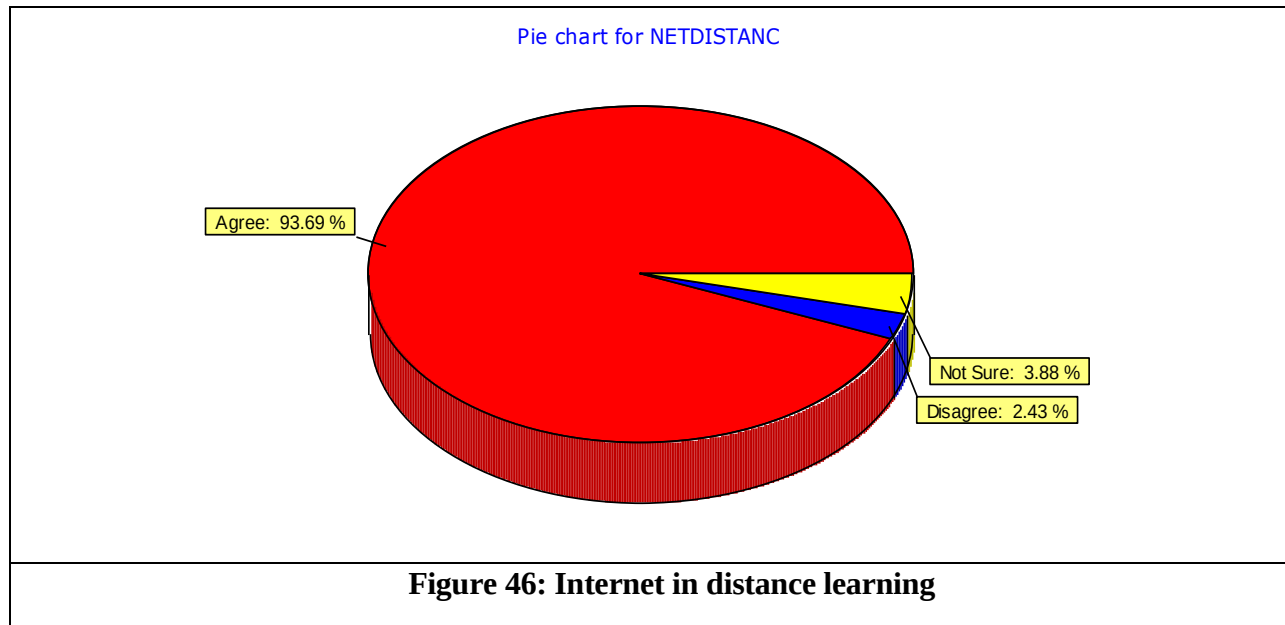
Figure 44 above represents opinions on community's perception of internet and academic affairs. Respondents were asked to indicate if they agree or disagree with the view that the web makes learning easier. Responding here, 91.75% agreed with this view while only 3.4% responses did not agree. There was also 4.85% response rate which was not sure. Once again, respondents not sure are exceeding those who are sure.

INTERNET AND BOREDOM



Respondents were asked to state if ever internet is boring or is not. Figure 45 depicts that many of the city people (87.86%) disagreed with the view that internet bores. Another category of people (5.34%) agreed that internet bores. A category of responses outnumbering those agreeing (6.8%) were not sure.

INTERNET IN DISTANCE LEARNING



According to figure 46, the subjects were asked to indicate whether distance learning can be enhanced by use of internet. Responses constituting 93.69% agreed. Other responses making up just 2.43% disagreed. The third category of responses of about 3.88% neither agree nor disagree. They chose not sure.

INTERNET FOR ACCESS TO LEARNING

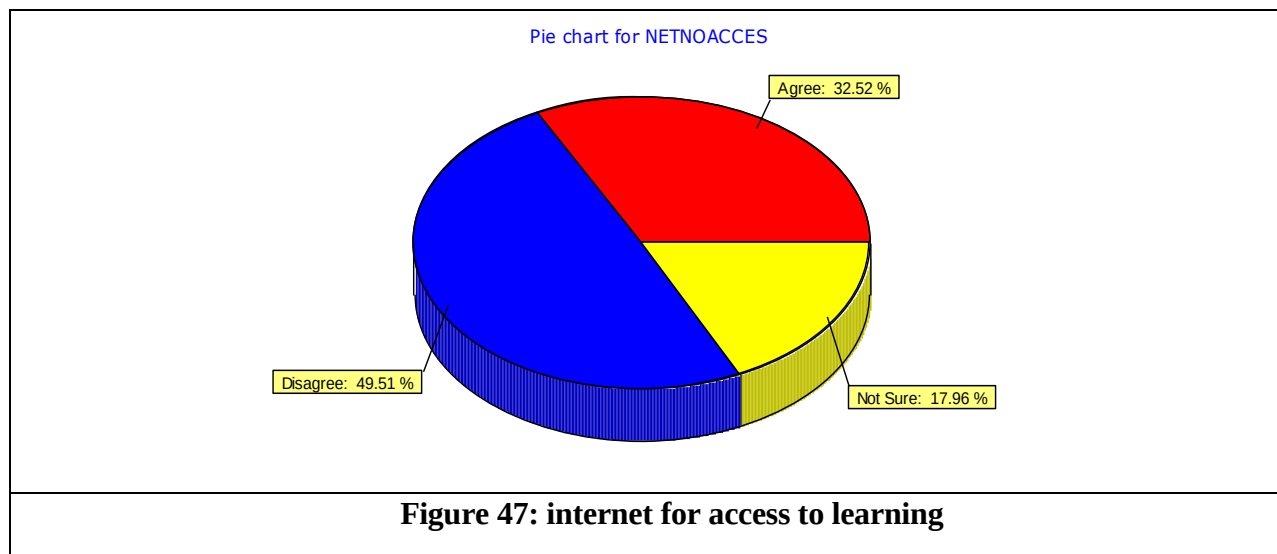


Figure 47 illustrates responses to the statement that internet does not make learning accessible to all. Data obtained indicated that 49.51% disagreed with the statement while 32.52% of the total responses agreed. Responses not sure were at 17.96%.

INTERNET VERSUS BOOKS

Frequency table for BOOKREPLAC			
Value	N	%	Cum. %
Agree	112	29.13	29.13
Disagree	239	62.14	91.26
Not Sure	33	8.74	100.00
TOTAL	384	100.00	

Table 14: Internet replacing books

Table 14 illustrates responses to the statement that text books be replaced by use of the web. Responding to this, table 14 depicts that there are more people (62.14%) who disagree with this.

There are less people (29.13%) agreeing that text books be replaced by use of the internet. There is also a group of respondents (8.74%) which is unsure about their opinions.

INTERNET COMPLIMENTING BOOKS

Frequency table for NETCOMPLIM			
Value	N	%	Cum. %
Agree	285	74.27	74.27
Disagree	62	16.02	90.29
Not Sure	37	9.71	100.00
TOTAL	384	100.00	

Table 15: Internet complimenting books

The purpose of the question was to evaluate what percentage of people favoured the internet as a complimentary means of learning. According to the findings, the overwhelming majority of respondents (74.27%) favoured internet as a complementary means of learning. The minority respondents (16.02%) did not favour internet as a complementary means. The least respondents (9.71%) on the other hand were not sure about their stance.

BOOKS ENOUGH

Frequency table for BOOKENOUGH			
Value	N	%	Cum. %
Agree	54	14.15	14.15
Disagree	288	75.12	89.27
Not Sure	41	10.73	100.00
TOTAL	383	100.00	

Table 16: Books enough

According to the above table, respondents were asked if textbooks are good enough for student's learning. Most responses (75.12%) reflected that books alone are not good enough. Thus, internet must also be used. The category of respondents constituting a 14.15% reflected that

books are sufficient; money must not be wasted on internet. A 10.73% response rate reflected not sure.

BOOKS PROVIDE UPDATED INFORMATION

Frequency table for BOOKINFOUP				
Value	N	%	Cum. %	
Agree	28	7.28	7.28	
Disagree	289	75.24	82.52	
Not Sure	67	17.48	100.00	
TOTAL	384	100.00		

Table 17: Books updated

Table 17 illustrates frequency table of scores. The survey investigated whether books provide more updated information according to the subjects. The table above depicts responses. The findings reveal that a huge proportion (75.24%) did not agree that books information is more updated than the internet. A 7.28% response rate represents respondents who were of the view that books contain more updated information than the internet. Thus, they will waste no money on internet.

SOCIAL NETWORKING

Frequency table for KNOWNOTSOC			
Value	N	%	Cum. %
Agree	76	19.90	19.90
Disagree	278	72.33	92.23
Not Sure	30	7.77	100.00
TOTAL	384	100.00	

Table 18: Social networking

The study according to table 18 investigated whether people of the city know what social networking is. The data captured shows that the greater numbers of people (72.33%) knew about social networks. Few respondents (19.90%) indeed did not know about social networks, while 7.77% was not sure whether they know about social networks or not.

FACEBOOK

Frequency table for USENOSOCIA			
Value	N	%	Cum. %
Agree	145	37.86	37.86
Disagree	218	56.80	94.66
Not Sure	21	5.34	100.00
TOTAL	384	100.00	
Table 19: Facebook			

The survey further investigated if respondents use any social media network like Facebook. Table 19 above depicts the results of obtained data. It has emerged that 56.80% response rate used social media while 37.86% did not use any social media network. A 5.34% was not sure if ever they use social media or not.

SOCIAL NETWORKING IN BUSINESS

Frequency table for SOCIALGUDB			
Value	N	%	Cum. %
Agree	255	66.50	66.50
Disagree	41	10.68	77.18
Not Sure	88	22.82	100.00
TOTAL	384	100.00	
Table 20: Social networking in business			

Table 20 above illustrates that 66.50% of respondents agreed that social networking is good for business. An approximately 10.68% of respondents did not agree that social networking can

enhance business. Another noticeable proportion (22.82%), outnumbering those who did not agree, was not sure about business and social networking relationships.

SOCIAL NETWORK WAISTS

Frequency table for SOCIALWAST			
Value	N	%	Cum. %
Agree	17	4.37	4.37
Disagree	313	81.55	85.92
Not Sure	54	14.08	100.00
TOTAL	384	100.00	
Table 21: Social networking wastes time			

Table 21 is a depiction of respondent's view of social networking. Respondents were asked to state whether social media is of any value or worthless. About 4.37% responses agreed that social networking is a waste of time in as far as conducting business is concerned. An approximately 81.55% of responses was in agreement that social networking is not time wasting but rather contributes positively towards enhancing business. Another category of responses (14.08%) was not sure about their view points.

SOCIAL NETWORK FOR HUMANS

Frequency table for SOCIALGUD			
Value	N	%	Cum. %
Agree	283	73.79	73.79
Disagree	39	10.19	83.98
Not Sure	62	16.02	100.00
TOTAL	384	100.00	
Table 22: Social networking for human relation			

Table 22 is an illustration that about 73.79 respondents were of the view that social networking is good for human relationships. The 10.19% respondents disagreed with this while 16.02%

remained unsure. Thus, the majority of the people of Maseru believe that social media does enhance human relationships in a number of positive ways.

SOCIAL NETWORK FOR PLEASURE

Frequency table for SOCIAPLEAS			
Value	N	%	Cum. %
Agree	302	78.64	78.64
Disagree	37	9.71	88.35
Not Sure	45	11.65	100.00
TOTAL	384		100.00

Table 23: Social networking for pleasure

According to table 23 above, respondents were asked to comment on whether social networking provides any pleasure. Responding to this, a 78.64% agreed that social networking is good for pleasure. Another category, 9.71% disagreed that social networks provide pleasure. An 11.65%, exceeding those disagreeing, showed that they were unsure. Thus, they neither agree nor disagree.

GOOD AT COMPUTER

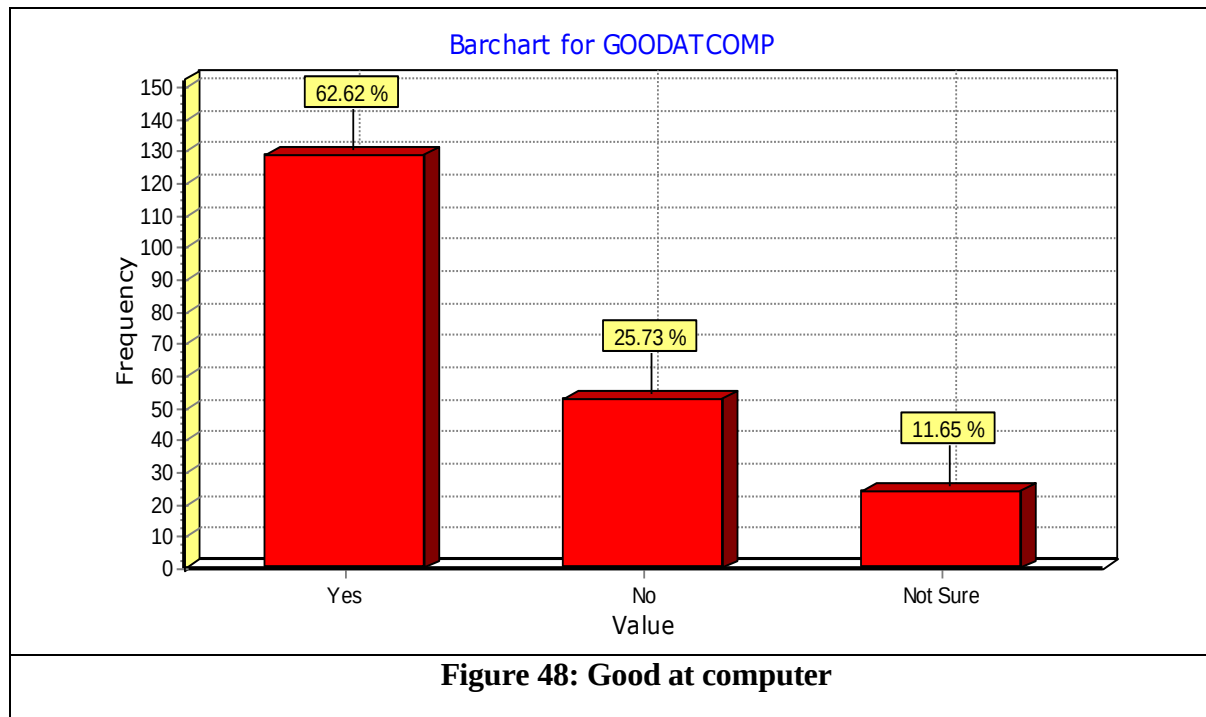


Figure 48 rates the computer skills of respondents. Respondents were asked to indicate whether they are proficient at using a computer. It therefore appeared that a large number of respondents (62.62%) were proficient at using a computer while a 25.73% response rate was not proficient at using a computer. A computer has become a common work device in present day information society. However, findings in relation to this question revealed that 11.65% was not even sure about their computer skills. Of critical importance is also to note that the study primarily focussed on internet based computing.

COMPUTER SKILLS

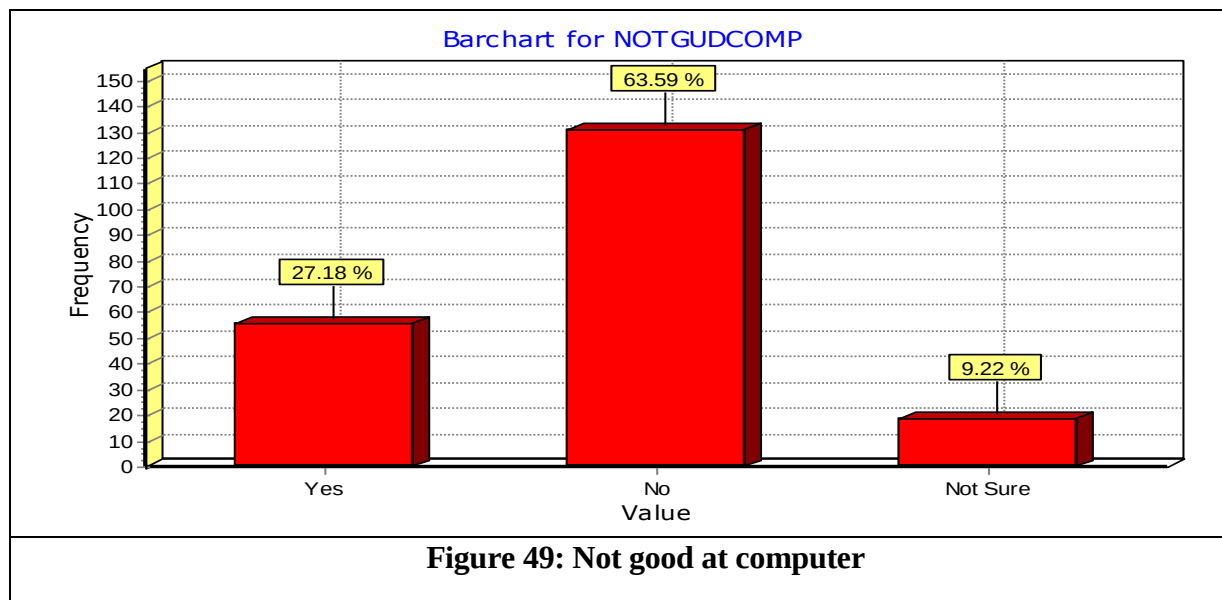


Figure 49 is further an illustration that more people than few have acquired some essential computer literacy skills. They were asked to respond by indicating whether they are not good at using a computer. Figure 49 depicts that 63.59% was not poor at computer but rather opposite of that. Only 27.18% said they were not good at computer, while 9.22% indicated not sure about their computer skills.

GOOD AT INTERNET

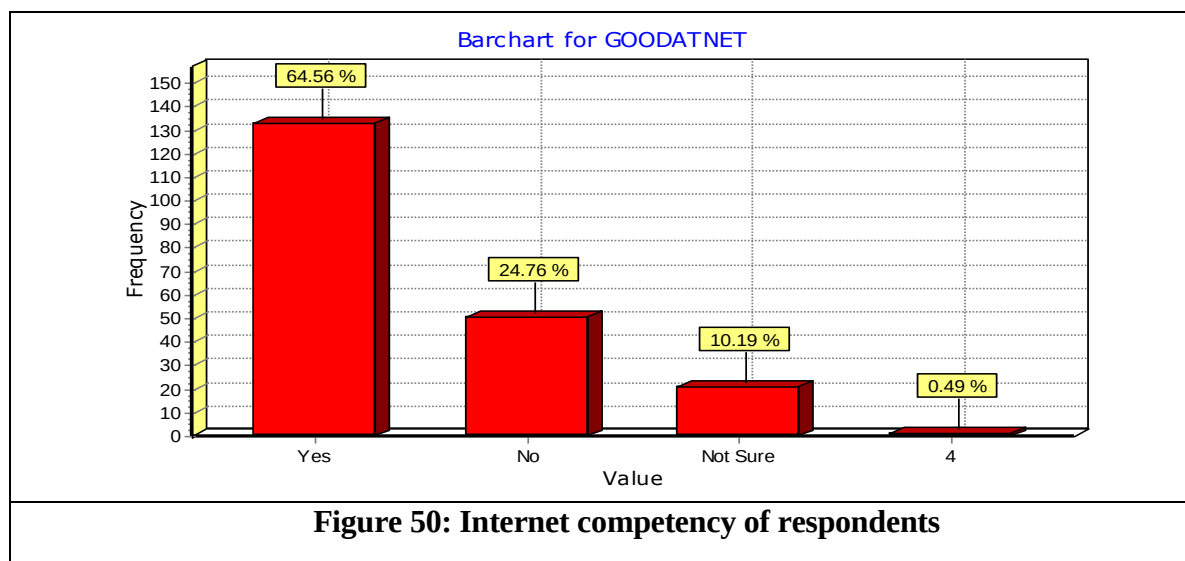
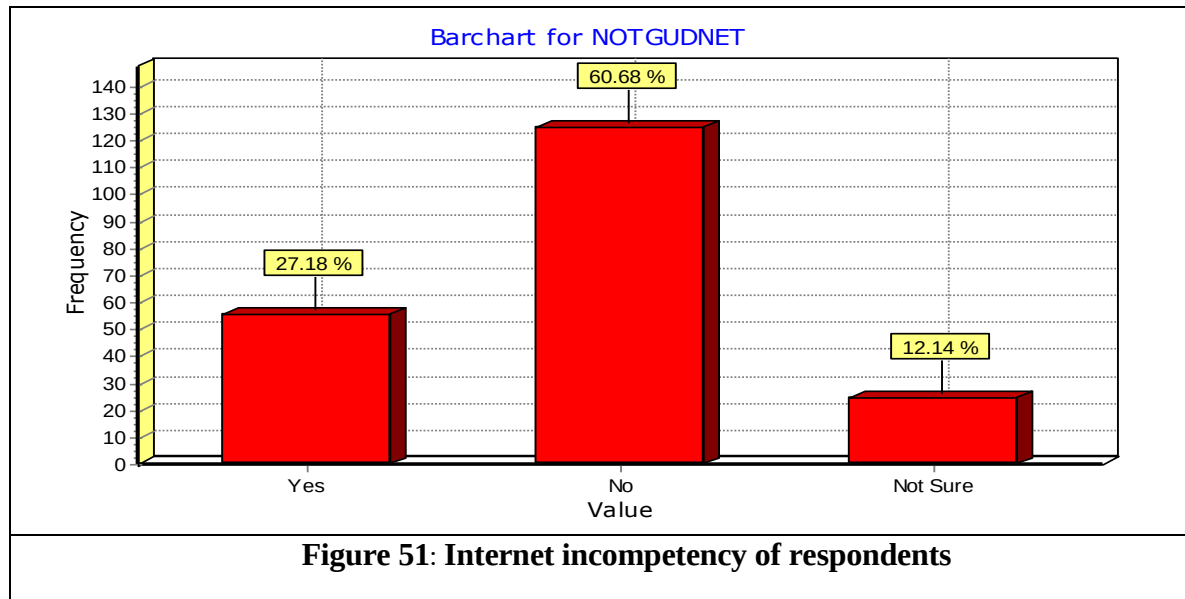


Figure 50 above illustrates that respondents were asked to rate their internet usage. Here are the results: 64.56% indicated that that they were good at using the internet; 24.76% said that they

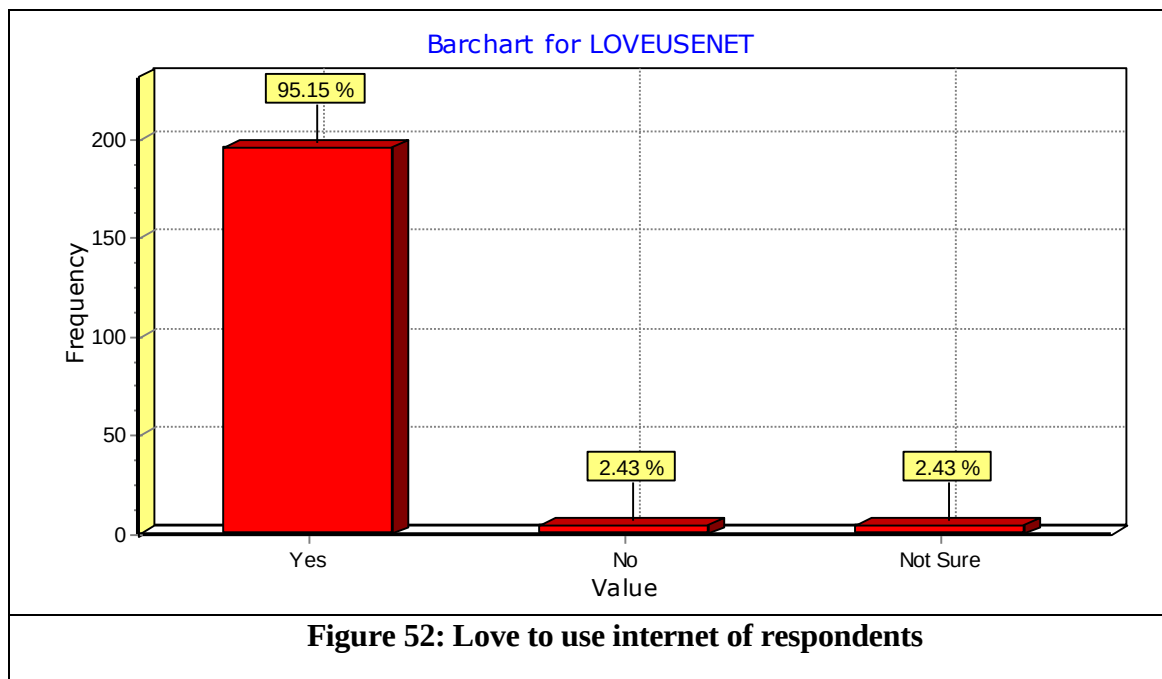
were not good and just 0.49% said they were not sure. Internet according to numerous authors is said to be one of the most important breakthroughs of the 21st century.

NOT GOOD AT INTERNET



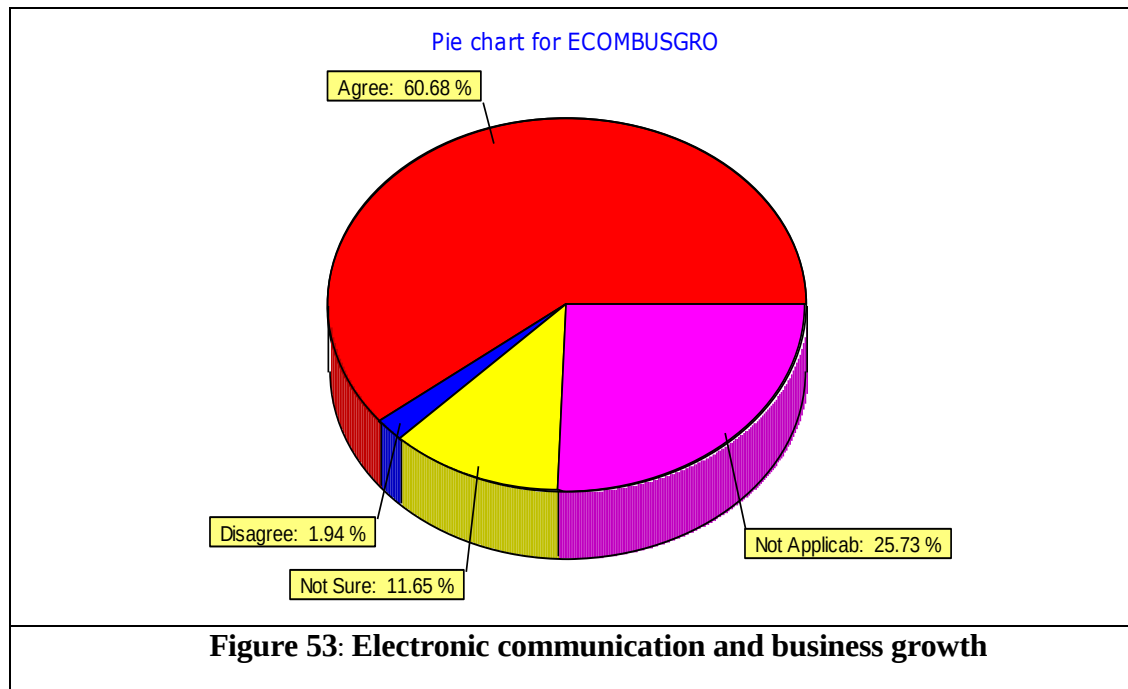
According to the figure above, the researcher asked subjects to react by indicating if they are not good at using the internet. Figure 51 depicts that a greater number of people said no, thus, they are not weak at using the net. Moreover, a lesser number said yes, thus, they are indeed not good at using the internet. Finally, only the least group of responses were not even sure about themselves.

LOVE TO USE INTERNET



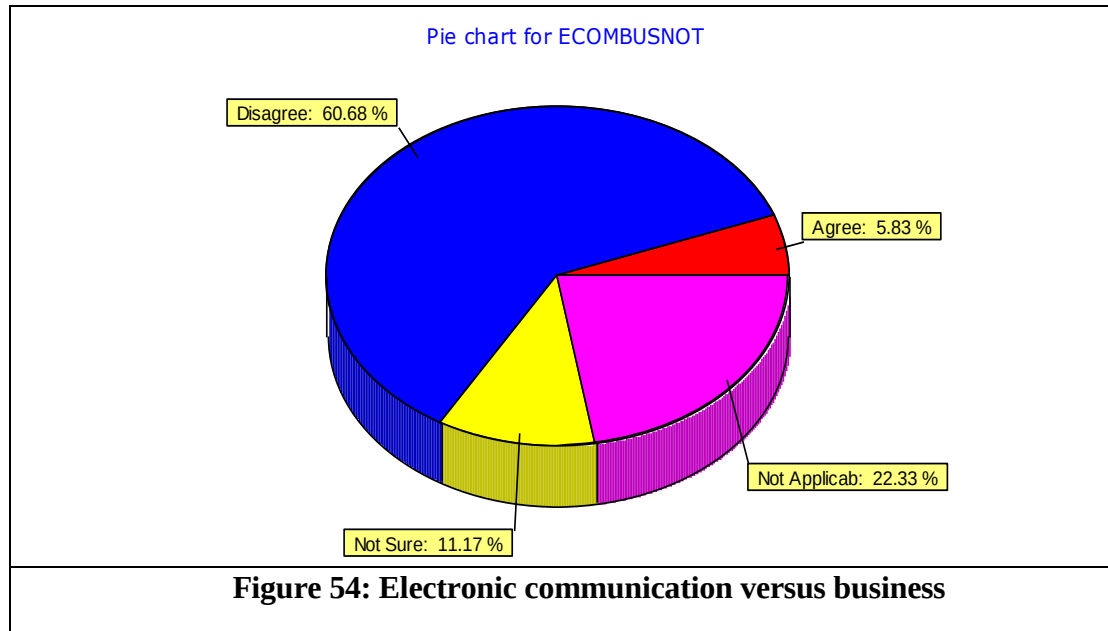
Respondents were asked to comment on whether they would love to use internet if circumstances allow. In responding to this, figure 52 reveals that the overwhelming numbers (95.15) said yes, they would love to. An equal response rate (2.43%) came from those who either said no or were not sure about the desire to use internet.

ELECTRONIC COMMUNICATION AND BUSINESS GROWTH



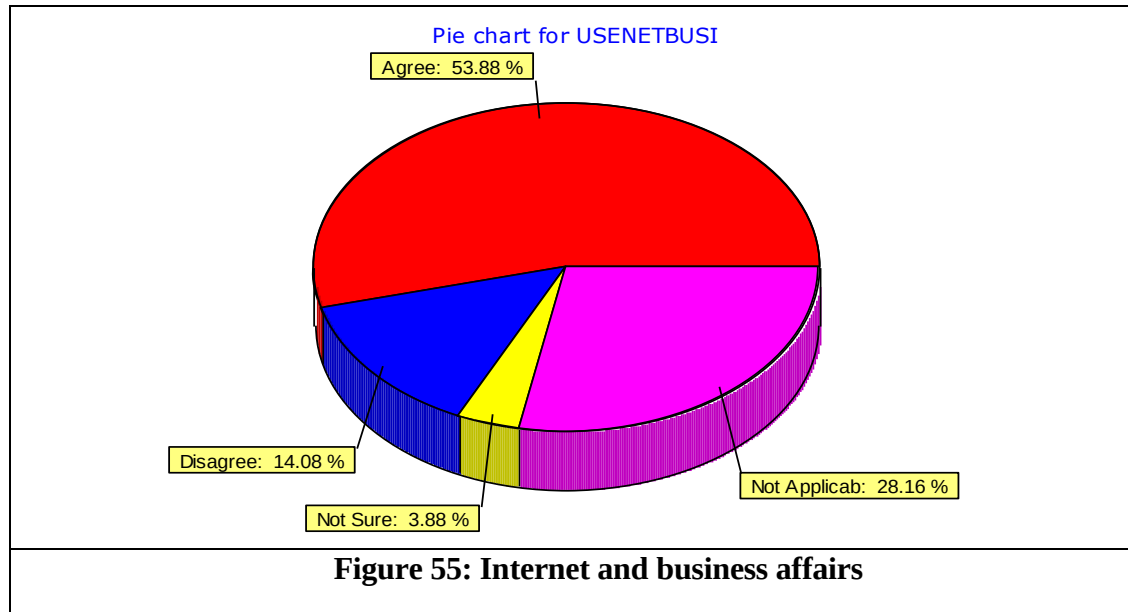
The study also investigated people's opinions with regard to electronic communication and business growth. Figure 53 shows that respondents were asked to state their opinions in relation to electronic communication and business growth. A 60.65% response rate said that electronic communication makes business grow while 1.94% response did not agree with this. In addition, there was a category of 11.65% which was not sure whether or not electronic communication has any impact on their enterprises. There is also a 25.73% which indicated that this situation is not applicable to them due to the fact that they did not own any business.

ELECTRONIC COMMUNICATION AND NO BUSINESS



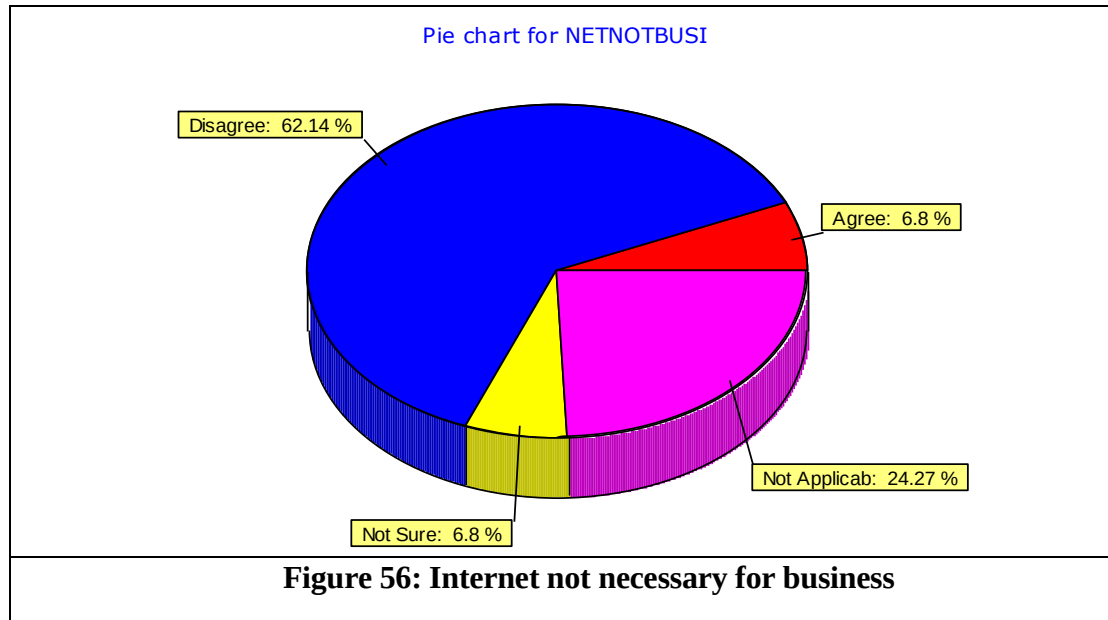
According to the figure above, respondents were asked to respond by indicating if electronic communication has nothing to do with business improvement. Responding to this, Figure 54 above reveals that 60.68% did not agree with the opinion that electronic communication has nothing to do with individual's business, thus, they oppose. At the same time, a 5.83% was in agreement with the opinion. However, there was a category of 11.17% which neither agree nor disagree with this; while another 22.33% showed that this opinion was irrelevant to their situation.

INTERNET AND BUSINESS AFFAIRS



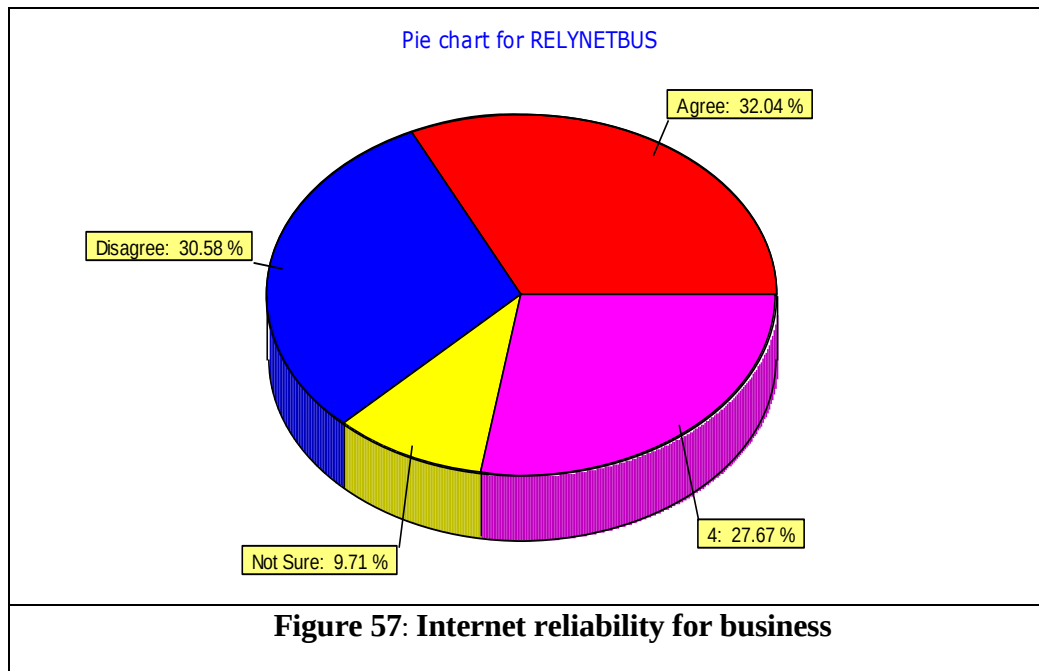
Asked to indicate if they use internet to communicate their business affairs, figure 55 reveals the findings from respondents in Maseru. Slightly exceeding half percentage (53.88%) of the population agreed that it does use while a 14.08% did not agree with this. There was another category of 3.88% which was not sure if it uses or does not use internet in the business affairs. A noticeable number (28.16%) indicated that it did not have any business, and therefore, this did not apply to their case. Of critical importance is to re-call that the study employed random sampling techniques which are rather non-selective in approach.

INTERNET NECESSITY



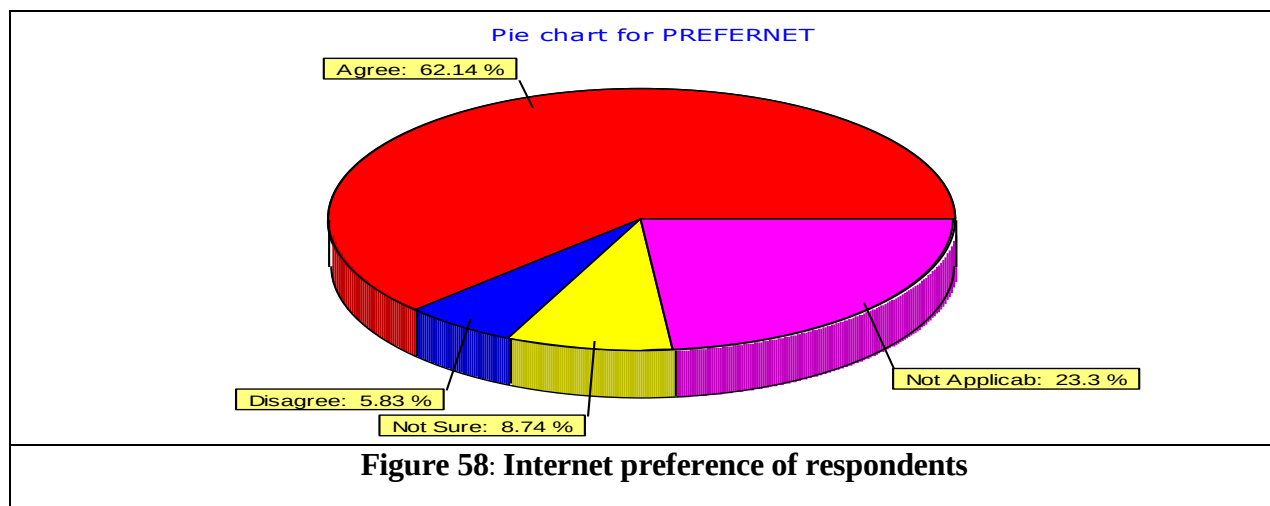
According to figure 56, respondents were asked to indicate if they agree that internet is not necessary for their businesses. Responding to this, the biggest number (62.14%) chose to disagree with this statement. This implies that this category of people is of the opinion that there is internet necessity for business. A category of 6.8% noted that internet has no place in the business. Another 6.8% was not even sure if the two phenomena (business and internet) have any relationship. A considerable number constituting 24.27% said that this was not applicable to their situation.

INTERNET RELIABILITY



The researcher asked respondents to show if they rely heavily on internet for daily activities of their businesses. The figure above depicts the findings. About (32.04%) of them agreed. They were followed by those who did not agree (30.58%), and then those not sure 9.71%. The last category of responses indicated that this opinion did not apply to their case.

INTERNET PREFERENCE



Asked to express if they would prefer using internet if ever infrastructure was available, figure 58 reveals the responses to this question. The majority (62.14) agreed with this. Thus, it would utilize these resources if ever available. A 5.83% did not agree with this, they would have no need to use internet for their businesses. About 8.74% chose not sure with regard to this question. Once more, a noticeable number of responses (23.3%) indicated that this issue was not applicable to their circumstances.

TELEFAX INTRASTRUCTURE

Frequency table for WORKTELFAX			
Value	N	%	Cum. %
Agree	125	32.52	32.52
Disagree	213	55.34	87.86
Not Sure	46	12.14	100.00
TOTAL	384	100.00	

Table 24: Telephone/fax infrastructure of respondent

Table 24 above illustrates the basic ICT infrastructure (telephone or fax) available at the work place. The researcher asked respondents to show if their work place has either telephone, fax or both of them. Results are shown by table 24 that 32.52% agreed that there is at least a telephone or fax at their work place. A considerable number of respondents (55.34%) exceeding half disagreed with this, thus, their work place has neither telephone nor fax facility. Another category of respondents constituting 12.14% were not sure if they agree or disagree.

AN ELECTRONIC LIBRARY

Frequency table for WORKELIBRA

Value	N	%	Cum. %
Agree	78	20.39	20.39
Disagree	248	64.56	84.95
Not Sure	58	15.05	100.00
TOTAL	384	100.00	

Table 25: An electronic library for respondents

Table 25 above is a depiction of responses to a question whether their work place has an electronic library. Data obtained from responses indicates that very many of the respondents (64.56) disagreed that they have an electronic library. Just only 20.39% agreed that there is an electronic library at their work place. A 15.05% of respondents was not even sure if such a centre does exist or not at their place.

INTEGRATED INTERNET

Frequency table for WORKFULNET

Value	N	%	Cum. %
Agree	129	33.50	33.50
Disagree	183	47.57	81.07
Not Sure	72	18.93	100.00
Total:	384	100.00	

Table 26: Integrated internet system

According to table 26, a huge number constituting 47.57% did not agree with the statement that there is a fully integrated internet system at their organisations. A 33.50% agreed with this statement while about 18.93% was unsure.

STRUCTURED PRINTING

Frequency table for WORKPRINT			
Value	N	%	Cum. %
Agree	128	33.50	33.50
Disagree	194	50.49	83.98
Not Sure	62	16.02	100.00
TOTAL	384	100.00	
Table 27: Structured printing centre of respondents			

The researcher investigated the issue of printing centre availability in respondents' organisations. Table 27 depicts the findings. Findings revealed that just about half (50.49) of total views disagreed that there is a well-structured printing centre in their organisation. Another category of 33.50% did agree with this statement while a small number of about 16.02% was not sure about this.

KEEPING DOCUMENTS ELECTRONICALLY

Frequency table for EDOCUWORK			
Value	N	%	Cum. %
Agree	140	36.41	36.41
Disagree	175	45.63	82.04
Not Sure	69	17.96	100.00
TOTAL	384	100.00	
Table 28: Keeping documents electronically			

Table 28 depicts that the researcher investigated if work places keep documents electronically or not. Responses indicated that more (45.63%) of the respondent's work places did not keep documents in electronic formats. A few of these (36.41%) agreed with this statement. Another category of respondents (17.96%) said that it was not sure about this.

KEEPING DOCUMENTS ON SHELVES

Frequency table for HARDDOCWOR

Value	N	%	Cum. %
Agree	207	53.88	53.88
Disagree	117	30.58	84.47
Not Sure	60	15.53	100.00
TOTAL	384	100.00	

Table 29: Keeping documents on shelves by respondent's places

The researcher further asked the subjects to state if their work places keep documents in hardcopies (manually). In responding to this as table 29 illustrates, a 53.88% response rate agreed, about 84.47% response rate did not agree with this, while a 15.53 response rate stated not sure about this.

ELECTRONIC COMMUNICATION

Pie chart for USEECOMSMS

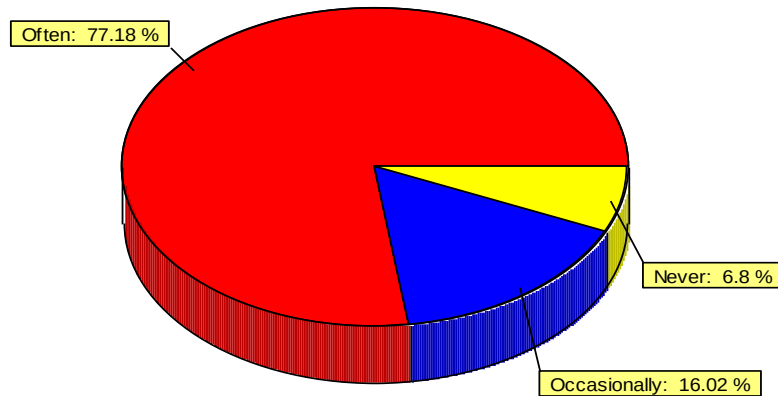
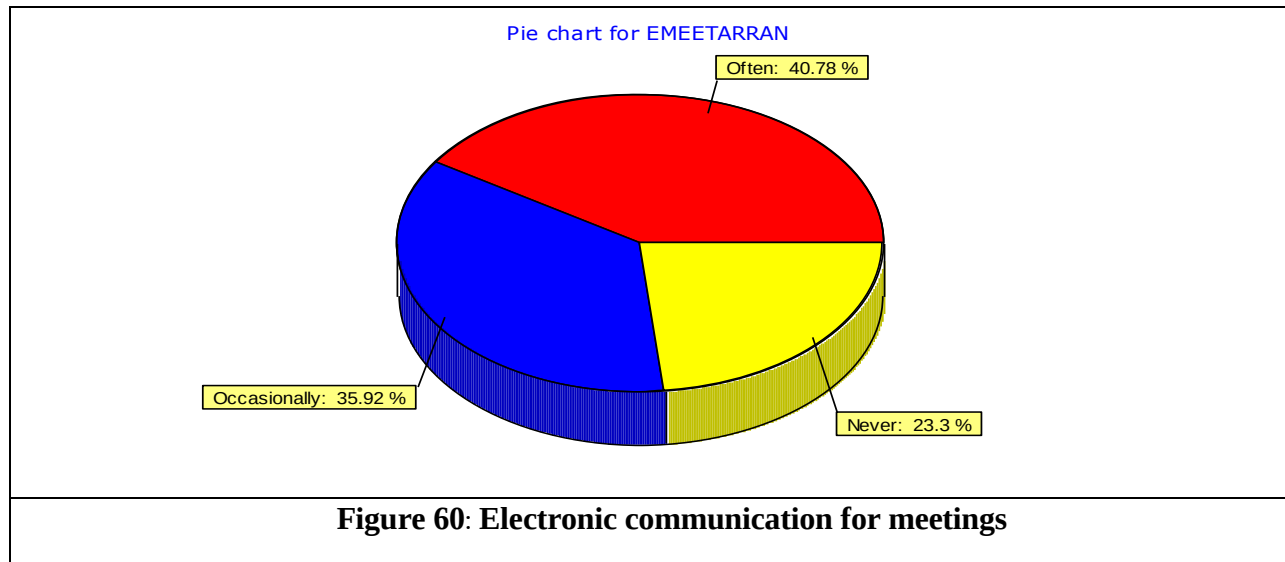


Figure 59: Electronic communication for messages

The study further investigated respondent's use and frequency of electronic communication systems. Figure 59 illustrates that they were asked to indicate the frequency of using electronic communication either for sending or receiving messages. In responding to this question, 77.18%

response rate showed that they often use electronic communication for sending or receiving messages. A 16.02% response rate pointed out that they occasionally use electronic communication to receive or send messages. A small number constituting 6.8% never use electronic communication for receiving and sending messages.

ELECTRONIC COMMUNICATION FOR MEETINGS



Respondents according to figure 60 above were asked to indicate the frequency of using electronic communication in order to arrange meetings. From the data captured, a 40.78% of response rate indicated that they arrange meetings using electronic communication often. A 35.92% said that they occasionally arrange meetings using electronic communication, while a 23.3% simply never use.

ELECTRONIC COMMUNICATION FOR BUSINESS

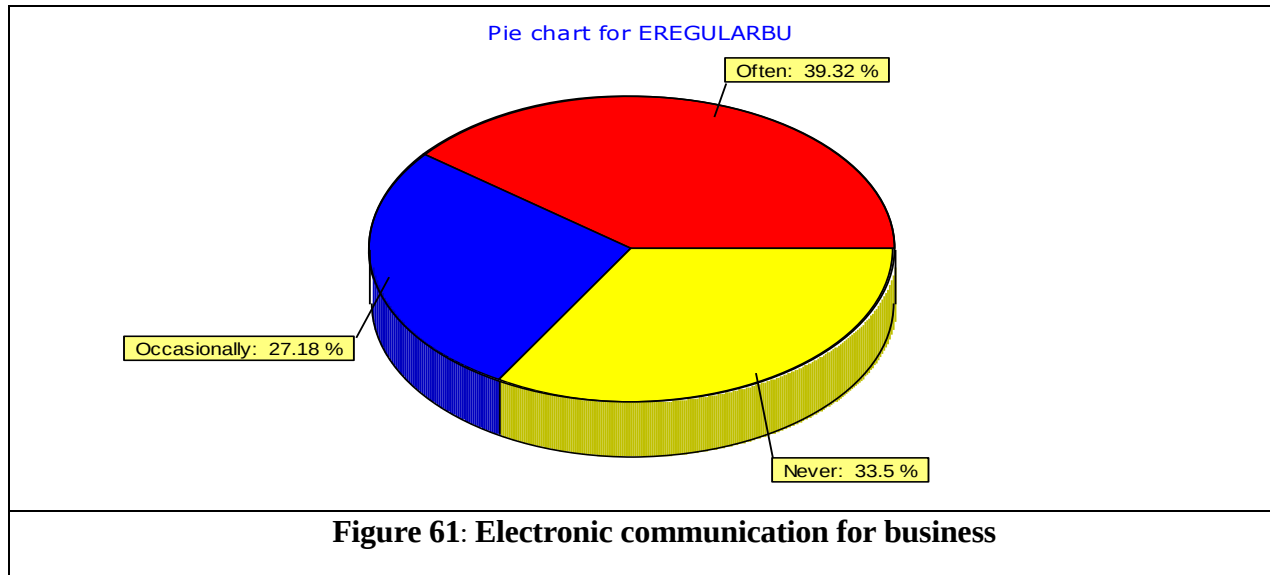
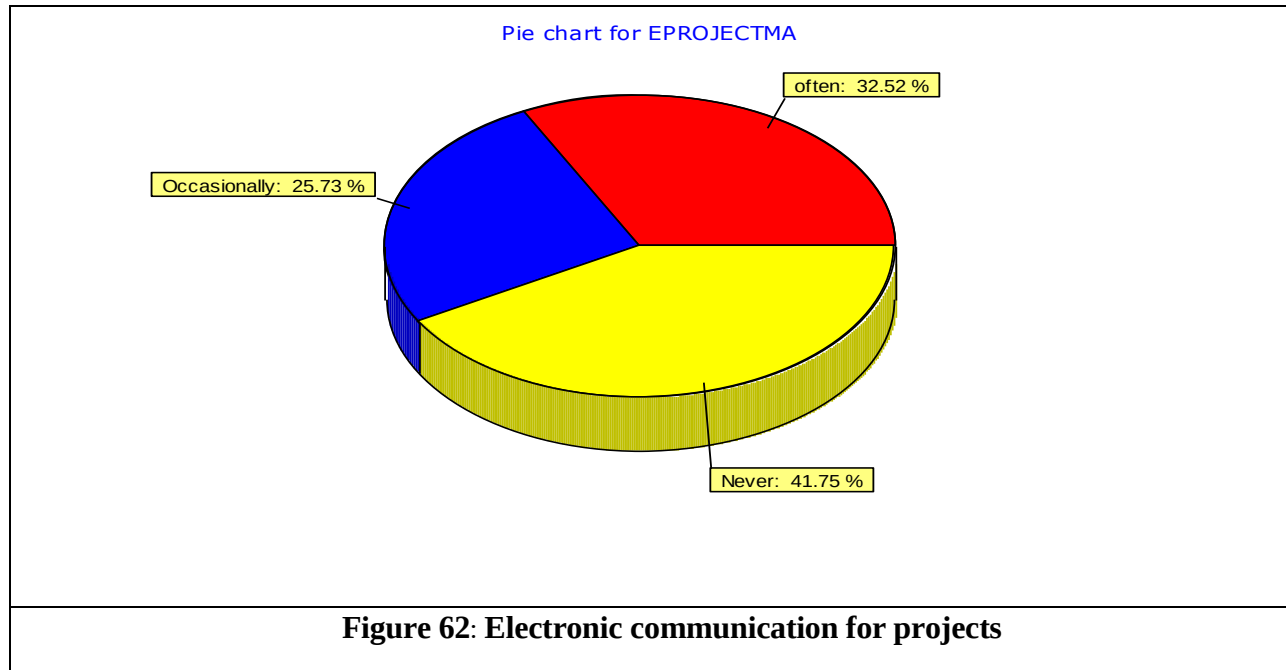


Figure 61 illustrates that the researcher asked subjects to indicate the frequency by which they make use of electronic communication in order to implement their regular business. According to the findings in the figure above, about 39.32% uses electronic communication often to implement an individual regular business while 27.18% uses it occasionally. A 33.5%, more than those using it occasionally, never bother using electronic communication for regular business.

ELECTRONIC COMMUNICATION FOR PROJECTS



The above figure depicts that a 32.52% response rate uses electronic communication to manage projects while 25.73% uses it occasionally. Besides, the greatest numbers (41.75%) of total response rate never use electronic communication for project management.

ELECTRONIC COMMUNICATION FOR RESEARCH

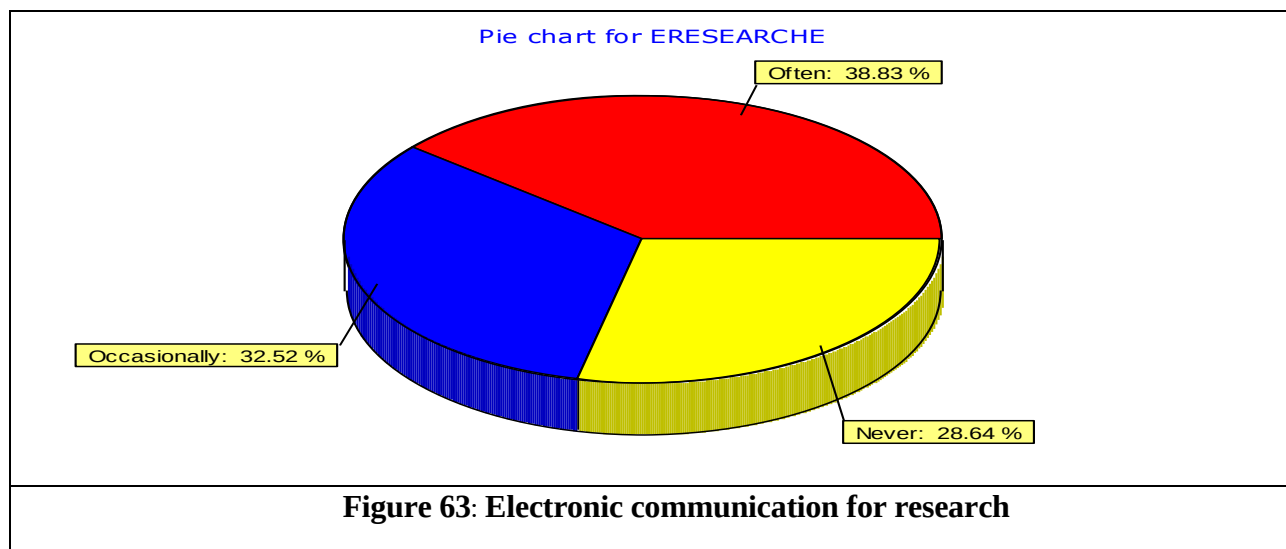


Figure 63 is a depiction of respondents' frequency use of electronic communication with regard to exchanging research ideas. About 38.83% of respondents often use electronic communication to exchange research ideas. Besides, about 32.52% responses use it occasionally while a 28.64% never use it.

ELECTRONIC COMMUNICATION FOR RECEIVING ADVICE

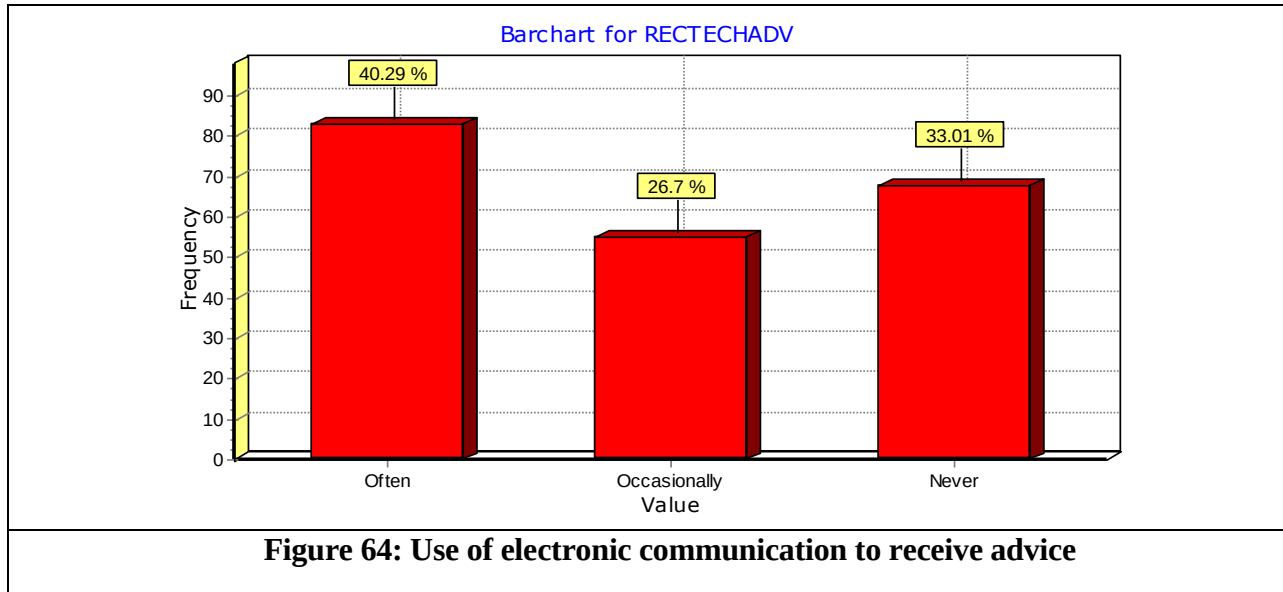
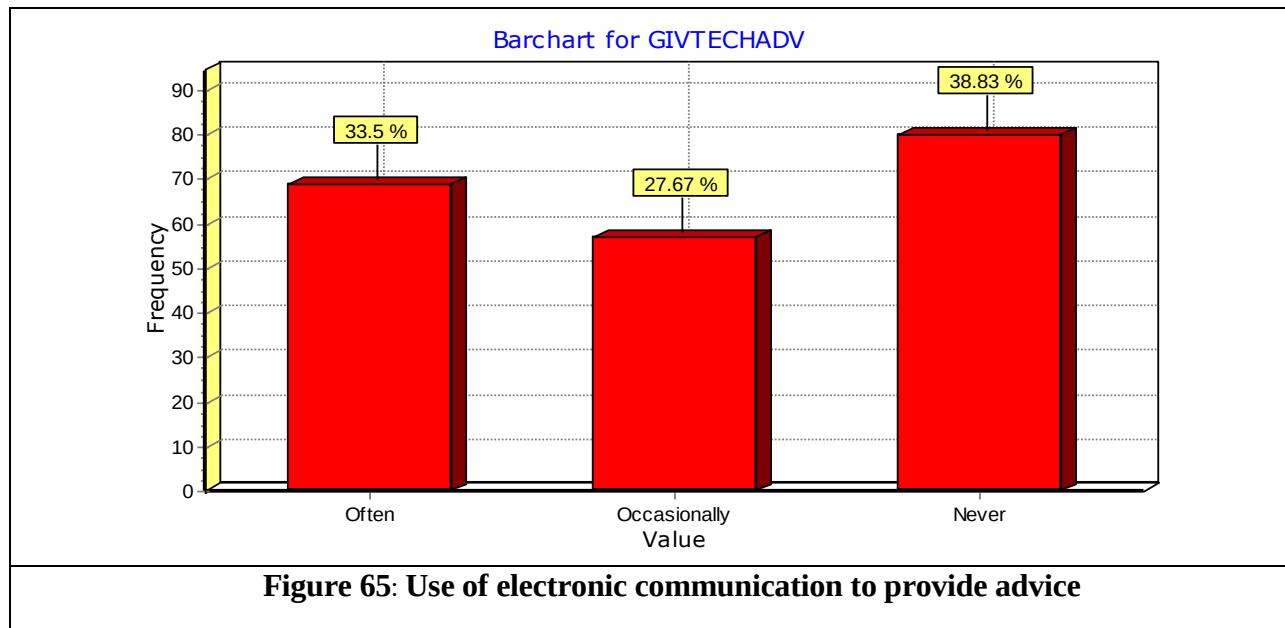


Figure 64 graphically represents opinions in relation to frequency of using computer communication for receiving technical advice. Accordingly, a greater (40.29%) participation in the survey often uses electronic messages for receiving technical advice while 26.7% occasionally uses electronic messages in this way. A considerable number of people (33.01%) participating in the study was of the view that they never happen to use electronic messages in this manner.

ELECTRONIC COMMUNICATION FOR PROVIDING ADVICE



Respondents were asked to indicate the frequency in which they use electronic communication in order to provide technical advice. Figure 65 shows responses to this question. In accordance with data, the total response rate constituting 33.5% said that they often use electronic messages to provide technical advice, while a 27.67% was of the opinion that they use it occasionally. The greatest number (38.83%) of response rate said that they never use electronic messages for this purpose.

ELECTRONIC COMMUNICATION FOR LITERATURE

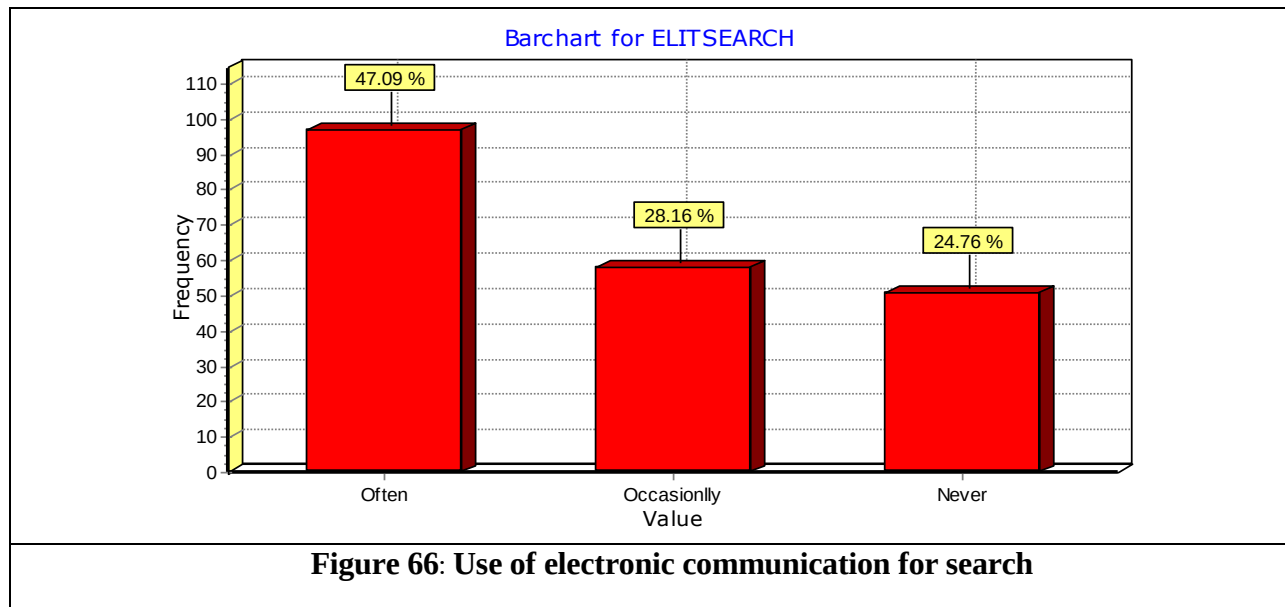
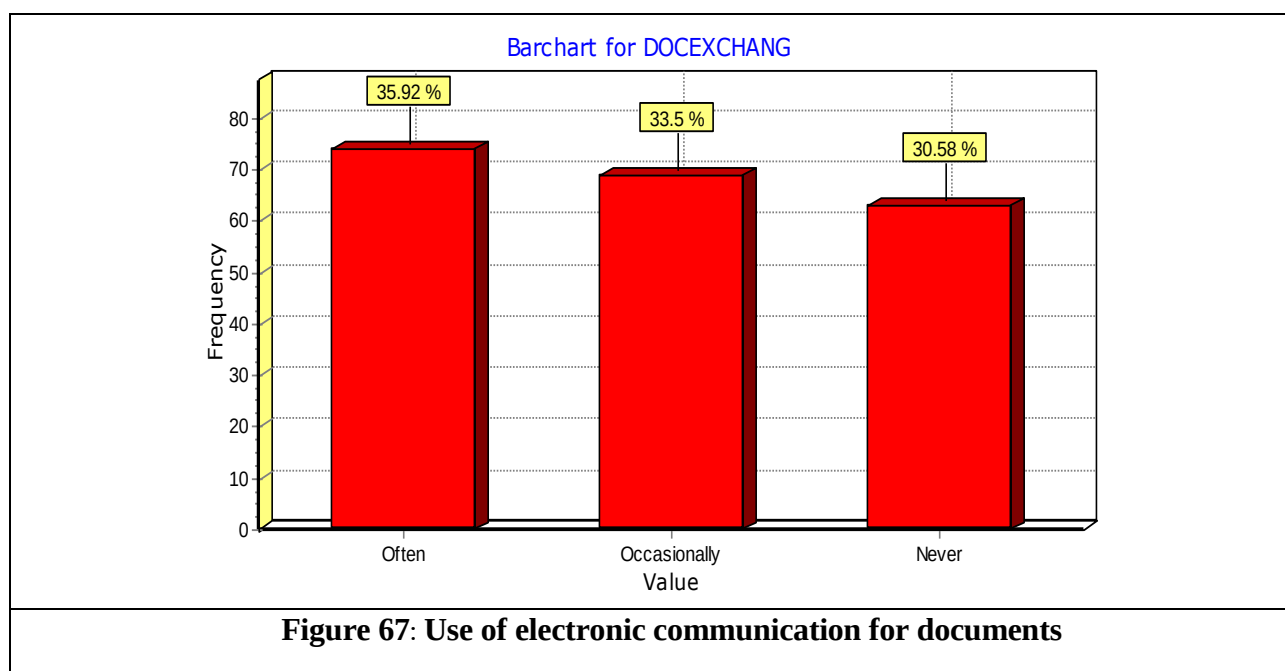


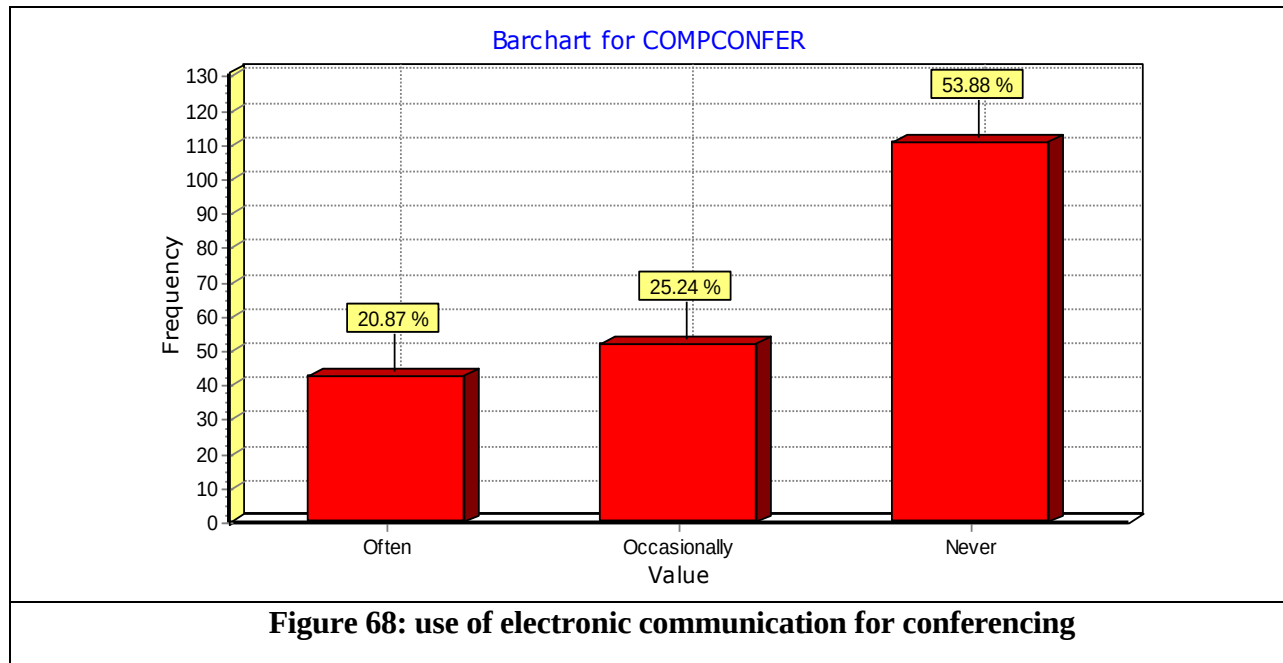
Figure 66 illustrates that a large number (47.09%) of respondents often use electronic communication to do literature search. About 28.16% of total responses occasionally use electronic communication. The smallest category of people (24.76%) noted that they never happen to utilize computer communication to conduct a literature search.

ELECTRONIC COMMUNICATION FOR EXCHANGE OF DOCUMENTS



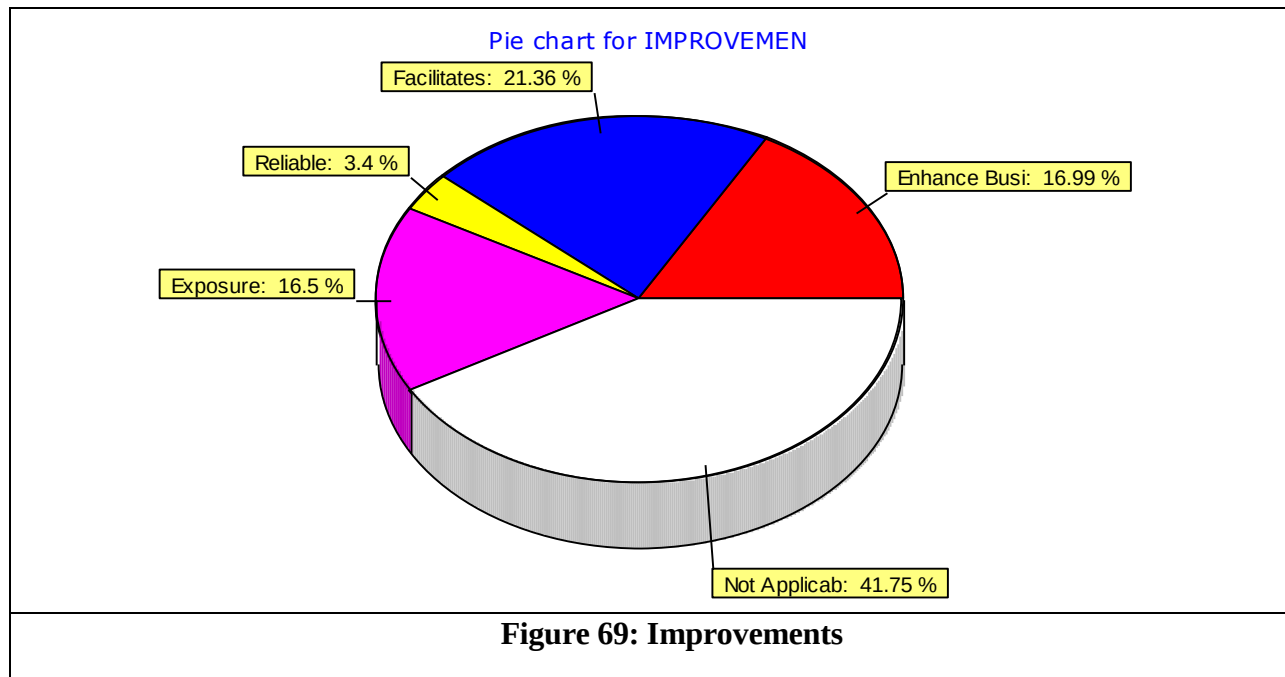
According to the figure above, about 33.92% respondents often use electronic communication in order to exchange documents with others while it is about 33.5% which occasionally uses this form of communication for documents exchange. In addition to this, it is 30.58% which never use this form of communication as opposed to those who use it either often or occasionally.

ELECTRONIC COMMUNICATION FOR CONFERENCE



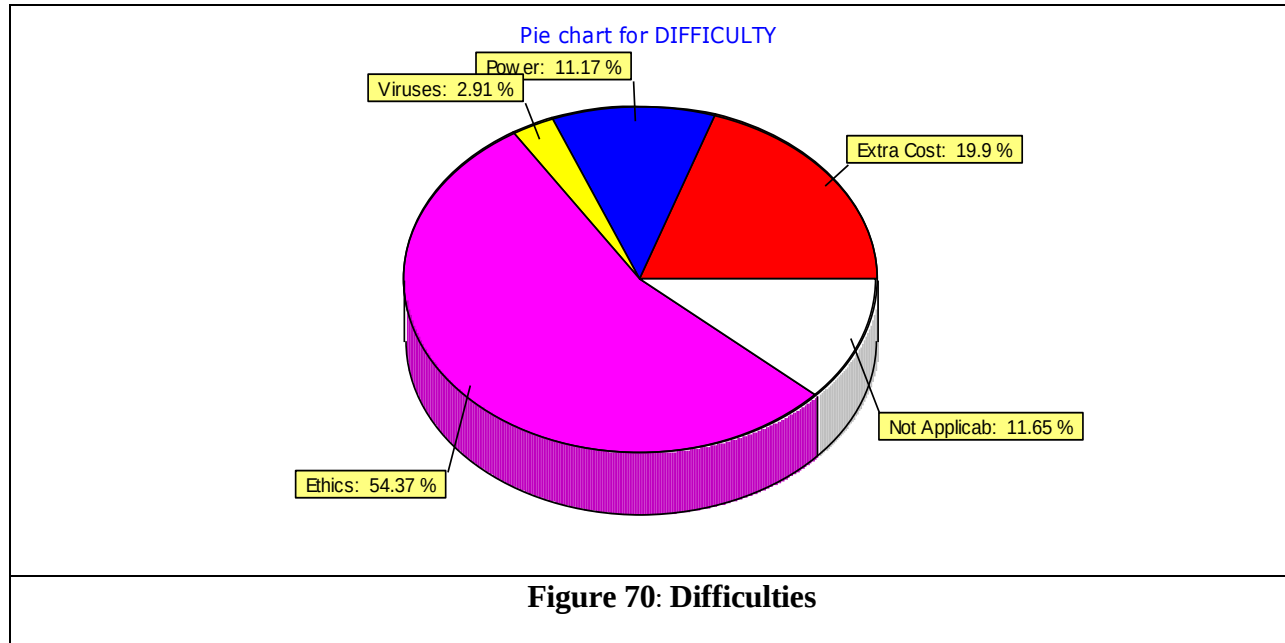
Respondents were asked to indicate their frequency of utilising electronic communication for computer conferencing. Figure 68 depicts that just only 20.87% uses computer for organising conferences. Moreover, about 25.24% indicated that use of computer for organising conferences is something occasional. The greatest numbers (53.83%) have never attempted to use electronic computer conferencing.

IMPROVEMENT OF ELECTRONIC COMMUNICATION



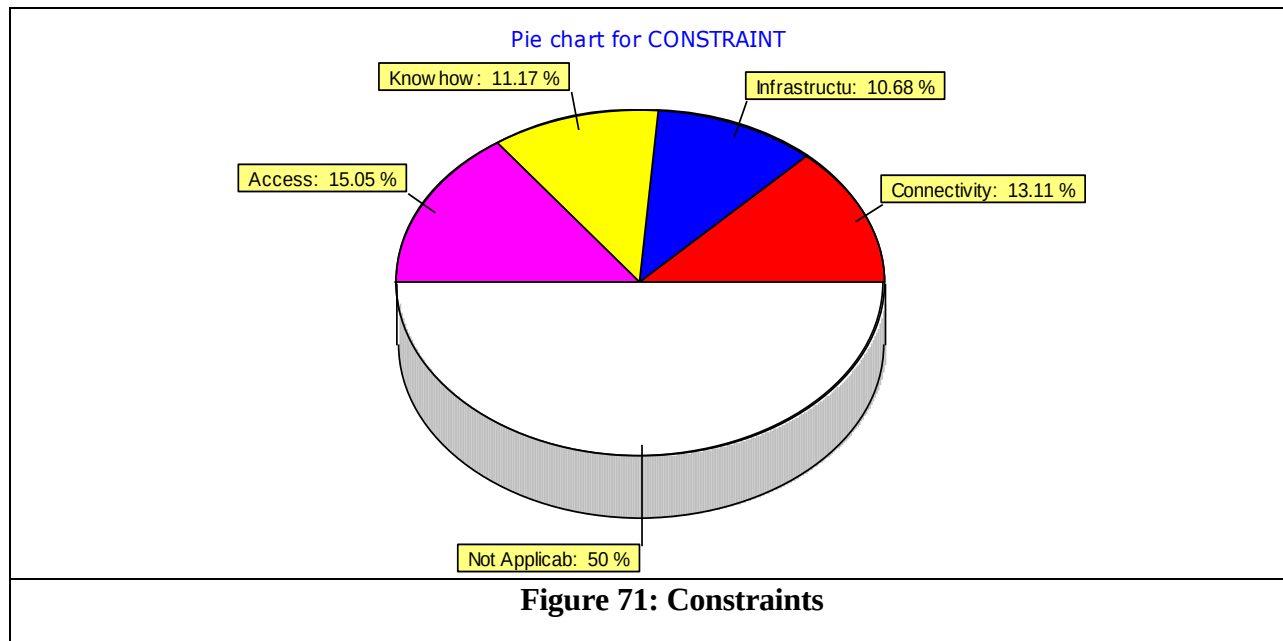
The survey further asked respondents to cite according to their views as to what improvements are brought about by electronic communication to their businesses. A 21.36% noted that electronic communication basically facilitates. Facilitating is in terms of making work fast, easy and reliable. Besides, a 16.99% stated that electronic communication enhances business itself. Enhancement is described in terms of the quality of output with less human effort. About 3.4% view online communication as reliable while 16.5% believe that this form of communication makes an enterprise exposed. Exposure here is interpreted in terms of making it known to potential customers or clients. The greatest numbers (41.75) said that this question was not applicable to their situation.

DIFFICULTIES BROUGHT BY INTERNET COMMUNICATION



Respondents were also asked to cite as to what they consider the major difficulties brought by the use of internet communication in their enterprises. Figure 70 above depicts responses to this question. About 19.9% views indicated that extra costs are a common problem. Extra costs are interpreted in terms of putting in place or installing infrastructure. Another category of responses (11.17%) complained about power availability and reliability. Thus, this mode of communication technology can only be possible in the presence of power, and therefore can cause a lot of inconvenience during power cut. A category of subjects constituting 11.17% was of the opinion that viruses are a threat to an efficient use of electronic communication. The greatest numbers of responses (54.37%) indicated that business ethics is a great difficulty. Ethics here deals with an acceptable use of internet for businesses. Unethical use of this communication was associated with employees chatting on social media and ignoring valuable business time. Finally, an 11.65% said that the question was not applicable to them.

CONSTRAINTS



The survey asked respondents to cite the main constraints brought by the use of electronic communication in their businesses. Figure 71 illustrates that about 13.11% responses view connectivity as one constraint. Connectivity deals with the reliability of the network system and speed of internet. Besides, about 10.68% pointed out infrastructure. They indicated that inadequacy of ICT infrastructure can limit somebody's communication with clients or customers. A response rate constituting 11.17% cited knowhow of people as a constraint. This basically is interpreted as people's knowledge of ICTs. Respondents stated that clients or stakeholders are not well competent in ICTs usage; this can influence the quality and extent of communication between two interacting parties. About 15.05% cited accessibility while half (50%) of total responses cited not applicable.

CONCLUSION

This chapter provided adequate analysis and interpretation of data which was collected through questionnaires and interview schedule. These results were further explicated through the use of graphs and tables. The next chapter outlines the conclusion, summary and recommendations extracted from the result of the research findings.

CHAPTER 9

CONCLUSION, SUMMARY AND RECOMMENDATIONS

INTRODUCTION

The analysis of research data and information does not in itself provide answers to the research problem. Thus, it is essential to interpret the data and information gathered from the results to ensure that the research questions have been answered. It is also imperative to interpret and discuss the data to establish whether or not the objectives of the study have been met. The aim of this chapter is therefore to discuss and interpret the findings made from data collected on the role of online communication on social and development in Maseru, Lesotho, respectively. To achieve the aim some objectives were set. This section attempts to present and summarise the findings by assessing and re-stating the objectives. Suggestions for further research are also presented.

The objectives were set to break the aim down into more specific, measurable, and timely units.

The objectives of this study were as follows:

- To determine if the Maseru community is aware of the benefits of Information Communication Technology.
- To determine the issues which prevent the acceptance of technology usage in Maseru.
- To determine if Lesotho is adequately educating its children about Information Communication Technology (ICT).
- To determine if there are adequate public internet facilities for the community to acquaint themselves with the use of Information Communication Technology (ICT).
- To determine why traditional communication practices are still being used by business houses in Maseru.
- To determine if the internet plays any significant role in Maseru at all.

SUMMARY

This section summarizes the findings under each of the study's objectives. It serves to illustrate how the research questions and objectives were answered.

ASSESSMENT OF OBJECTIVES

The first objective was to determine if the Maseru community is aware of the benefits of online Communication Technology. This objective measures people's perception of internet's role in human transformation process. With regard to this objective, the community of Maseru is quite aware and holds a strong view that use of information and communication technology is of great benefit. There is even a strong feeling that many people in the city use internet for a particular purpose such as business.

The second objective sought to determine the issues which prevent the acceptance of technology usage in Maseru. This objective was also achieved through the findings from interpreted data. In as far as this objective is concerned, many of the responses (62.14%) agreed that they would prefer to use internet if ever infrastructure was available. Meanwhile, it was only 20% which did not agree with this view. Besides, about 8.74% responses were not sure whether they agree or disagree while 23.3% indicated that this was not applicable to them. There was also a popular believe that information communication technologies such as the internet are associated with a lot of virus threat.

Thirdly, the survey aimed to determine if Lesotho is adequately educating its children about Information Communication Technology (ICT). Again, this was also achieved through findings' analysis and interpretations. In relation to this objective, overwhelming numbers of responses (86.41%) agree with the view that it is good for children to use the internet to do homework. This view also shared the same sentiments with those who agreed in greater numbers that internet facilitates teaching and learning in numerous ways.

Fourthly, the survey aimed to determine if there are adequate public internet facilities for the community to acquaint themselves with the use of Information Communication Technology (ICT). With regard to this objective, over half total responses (54.85%) said they use a public computer (library/school/university or internet cafe) which has internet access. These were majority responses as opposed to 40.29% who denied that there are adequate internet facilities in Maseru. The least responses constituting 4.85% were unsure about this situation.

Furthermore, this survey aimed to determine why traditional communication practices are still being used by business houses in Maseru. This objective was achieved through questioning and interpreting responses. Respondents were asked to describe problems associated with use of digital communication technologies, which inevitably makes them use or rely on ancient traditional communication practices. The findings reveal that many business houses, exceeding half total responses, (54.37%) noted that use of online computer communication is to a very large extent attributed to ethical issues. Thus, they point out that employees use internet unethically during crucial business times. A 19.9% complains of extra costs while 11.17% complain about power problems involved.

Lastly, to determine if the internet plays any significant role in Maseru at all. This was also achieved through findings. With regards to this, the overwhelming numbers of response rate (91.75%) agree that if a person has internet access he has golden opportunities of doing business with other countries and cities and therefore improve the business in Maseru. Apparently, internet use generally appears to be popular among the city people.

RECOMMENDATIONS

These recommendations are based on the results revealed by the study. The study therefore recommended the following:

1. Basic information and communication infrastructure in the form of computer device should be made available to most of ordinary homes and work places otherwise Maseru will never compete in the new information and communication technologies' (ICTs) economies.

2. The Internet and e-mail facilities should be introduced or made available to everybody or majority of the people in the community, so that the communication and dissemination of information becomes easier and faster. The same could be said from the e-mail facility. Through Internet e-mail services are made available to users which speeds up communication and provides a cheap medium of communication.
3. The development of professionals and youth as viable intermediaries in bridging the digital divide experienced by low literate or illiterate youth in internet education programs in developing communities is also of crucial importance.
4. Most of the enterprises studied seemed not to have adequate ICTs infrastructure and therefore cannot utilise important communication or information establishments such as electronic libraries, electronic data storage and a fully integrated internet system. The establishments should therefore be made available and be effectively utilised.
5. Given the ethical dilemmas facing internet users and the importance of the subject, internet ethics should be made an integral part of staff training and development in the corporate context.
6. Finally, further studies or investigations are recommended to unearth more on access, interaction, use and impact of internet based communication on societies.

CONCLUSION

The results of the study generally show a lack of adequate exposure to online communication practices in some of the sectors of Maseru economy. From the findings it is also apparent that Lesotho should adopt strong ICTs policy that will be visible in all sectors of the economy. It has been proven that the success of ICTs in rural development yields better results when social, political, and economic factors and various modes of communication are taken into account. Such modes of communication include: the computer and other related services, such as e-mail and the internet; wireless technology, satellite technology, traditional media communication technology, such as the video; and discussion groups; all of which have to be seen to work together.

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ADDENDA

ADDENDUM - QUESTIONNAIRE TO RESPONDENTS

For office use only: Respondent Number: _____

Voluntary questionnaire for the respondents

The Role of Online Communication on Social and Economic Development in Maseru (Lesotho)

Department of Communication Science

University of Zululand

Researcher: Lelingoana Benedict Lerotholi (Student Number: 20066711)

Supervisor: Prof H. Rugbeer

Note to the respondent

- I appreciate your willingness to assist in this research, however, please note that you are not compelled to partake in this survey.
- Your contributions to this questionnaire will remain private and confidential. No one will be able to trace your responses back to you as a person.
- Your permission to use these responses is required. This will form the first part of the questionnaire.
- This is a confidential survey and your name will not be linked to your responses. All personal information will remain confidential.

The questionnaire has two parts:

Section A requests permission to use your responses for academic research.

Section B asks how electronic communication is utilized in the community and if there is any importance to enhance ICT infrastructure in the community.

How to complete the questionnaire

1. Your opinion is required. It does not matter what other people think. I am solely interested in your opinion. Tell me how you feel. Your responses are important to me.
2. Read each question carefully and take a moment to ponder your answer.
3. Please use a pen to mark your responses by placing a tick (✓) or a cross (X), in the appropriate column, or by writing down the appropriate information, where ever required.
4. Please do not change any of your responses afterwards (for instance: do not scratch out or tippex any of your responses).

Thank you for your participation.

Contact Details: lelingoanlerotholi@gmail.com (00266 63044486), (00266 59871159)

SECTION A

Please provide the following confidential information to indicate that you are granting me **permission** to use your responses in my research. *Your personal identity will NOT be revealed when the survey results are published in my thesis.*

1. Your initials and surname

2. Your home address

Suburb		Postal code	

3. Your telephone OR cell phone number

4. Email

5. Your

Male

Female

I do not want to answer this question

gender

6. Your age

16 to 25 years	1	
21 to 35 years	2	
36 to 45 years	3	
46 to 55 years	4	
Over 55 years	5	
I do not want to answer	6	

7. Your race

Black	1	White	2	Indian	3	Coloured	4	Other	5	I do not want to answer	6
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8. I am a resident of Maseru

YES ☐ 1 NO ☐ 2

SECTION B

This section deals with exposure, degree of competence and utilization of ICTs infrastructure. (Please insert a tick (✓) or a cross (X) on the box that corresponds to your response).

	COMPUTER ACCESS	YES (1)	NO (2)	I DO NOT WANT TO ANSWER THIS QUESTION (3)
9.	I Have my computer			
10.	My family (home/ has a computer which I use			
11.	I use a public computer (library/ school / university or internet café)			
12.	I use the computer at work			
13.	I have very little access to a computer			
14.	I have no access to a computer			

	INTERNET ACCESS	YES1 (1)	NO (2)	NOT SURE (3)
15.	I Have internet access on my computer			
16.	My family home has a computer with internet access which I use			
17.	I use a public computer (library/ school / university or internet café) which has internet access			
18.	I use the internet at work			
19.	Many people use internet for studying or learning in Lesotho			
20.	Many people use the internet to make friends and contacts in Lesotho			
21.	Many people use the internet to do business in Lesotho			
22.	I have very little access to the internet			
23.	I have no internet access			

	OPINIONS ABOUT E-COMMUNICATION IN MASERU	AGREE (1)	DISAGREE (2)	NOT SURE (3)
24.	Internet is important to do business or improve business			
25.	If a person has access to the internet he can do business with other countries and cities and improve the business in Maseru			
26.	Internet is NOT necessary to improve business in Maseru			
27.	Installing internet cabling in Maseru is a waste of time			
28.	Using internet enhances business efficiency			

	NECESSITY OF INTERNET IN SCHOOL	AGREE (1)	DISAGREE (2)	NOT SURE (3)
29.	It is good for children to use the internet to do homework			
30.	Pupils who use internet to study are more likely to perform better academically.			
31.	Internet makes teaching and learning at school more easier			
32.	Internet makes learning and teaching in school boring			
33.	Distance learning can be improved by using the Internet			
34.	Internet does not make learning accessible to everybody.			

	NECESSITY OF INTERNET IN UNIVERSITY (or tertiary institutions)	AGREE (1)	DISAGREE (2)	NOT SURE (3)
35.	Text books should be replaced by the internet			
36.	Internet should be used to compliment textbooks			
37.	Textbooks are good enough for students to learn. They must not waste money on internet.			
38.	Books provide more updated information than internet			

	SOCIAL NETWORKING (TWITTER, FACEBOOK)	AGREE (1)	DISAGREE (2)	NOT SURE (3)
39.	I do not know what social networking is.			
40.	I do not use face book or any other social networking.			
41.	Social networking is good for business			
42.	Social networking is a waste of time			
43.	Social networking is good for human relationships			
44.	Social networking is good for pleasure			

	COMPETENCY	YES (1)	NO (2)	NOT SURE (3)
45.	I am good at using the computer			
46.	I am not good at using the computer			
47.	I am good at using the internet			
48.	I am not good at using the internet			
49.	I would love to use the internet			

(Please insert a tick (✓) or a cross (X) on the box that corresponds to your response).

	YOUR OPINION ON BUSINESS AND ELECTRONIC COMMUNICATION	AGREE (1)	DISAGREE (2)	NOT SURE (3)	NOT APPLICABLE (4)
50.	Electronic communication makes my business grow				
51.	Electronic communication has nothing to do with my business				
52.	I use internet to communicate the affairs of my business				
53.	Internet is not necessary for my business				
54.	I rely heavily on internet				

	for day to day running of my business				
55.	If the infrastructure was available, if would prefer to use the internet to improve my business.				

	INFRASTRUCTURE	AGREE (1)	DISAGREE (2)	NOT SURE (3)
56.	My workplace only uses a telephone (and/or fax)			
57.	My workplace has an electronic library (data base)			
58.	My workplace has fully integrated internet system.			
59.	My workplace has well-structured printing centre			
60.	My workplace keeps documents electronically			
61.	My workplace keeps documents on bookshelves (hardcopies)			

(Please insert a tick (✓) or a cross (X) on the box that corresponds to your response).

	ELECTRONIC COMMUNICATION USAGE	OFTEN (1)	OCCASIONALLY (2)	NEVER (3)
62.	I use electronic communication to send and receive messages (cell phone or computer based communication)			
63.	I use electronic communication to Arrange meetings			
64.	I use electronic communication to			

	Implement my regular business			
65.	I use electronic communication to Manage projects			
66.	I use electronic communication to exchange research ideas			
67.	I use electronic communication for receiving technical advice			
68.	I use electronic communication for providing technical advice			
69.	I use electronic communication to do Literature searches			
70.	I use electronic communication for Exchanging documents			
71.	I use electronic communication to organise Computer conference			

72. Cite, in order of importance, at least 2 major improvements and difficulties brought to your work by the use of electronic communications (feel free to explain)

73. Cite at least two major constraints for making a more effective use of electronic communications.

Thank you. Your co-operation is indeed appreciated

