Investigating a Rural Community's Use of Communication Technology: A Study of Nakaseke Community Multi-media Centre in Uganda

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By

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DEDICATION

To my parents; Mr. & Mrs. Tamushangye, who left no stone unturned in their determination to give me a decent education..

And to my late brother, Godfrey Mike Mugisha, who took up their parental role when they could no longer meet the costs of my education.

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ABSTRACT

An assumption that Information and Communication Technologies (ICTs) and economic development have an automatic linkage has gained wide acceptance over the last decade. As a result, developing countries are under pressure to apply this prescription as a solution to poverty. With the help of development partners in the developed world and the United Nations, developing countries have embraced this call to increase access to ICTs to bridge the ever-widening gap between the 'information rich' and 'information poor' (Castells, 2001). One of the strategies has been the establishment of telecentres where the least privileged people might access ICTs for their own development needs. However, this strategy has tended to overlook contextual factors and circumstances in developing countries. ICTs are thus being introduced in an environment of mass poverty, illiteracy and poor infrastructure, exacerbating existing inequalities in some cases. Much attention has been focussed on initiatives aimed at expanding the ICT infrastructure for wider population access without addressing what the users actually do with such access. This study aims to make a contribution in that direction.

The study focuses on Nakaseke Community Multi-media Centre (CMC), the first telecentre introduced in Uganda in 1997. Using a combination of quantitative and qualitative research techniques, the study sets out to develop deeper insights into how the Nakaseke community uses, engages with and relates with communication technologies installed at the telecentre. It probes whether these practices advance the dominant view that ICTs are a panacea for rural development. The findings indicate that while access to communication technology has expanded, albeit at a slow pace, the benefits might take very long to have a significant effect as many targeted users do not make use of the facilities because they lack the human skills and financial resources to exploit the technologies. Other problems such as poor electricity supply and sustainability also actively militate against the potential of the project to deliver. Besides, people tend to appropriate technology in ways different from those intended by its promoters. As Burton (2002) explains through the concept of 'affordances' and 'culture', some users perceive technologies essentially as something that bestows the status of being modern or sophisticated on their community, rather than as a development tool. In conclusion, it is

argued that if used for development, ICTs can indeed make a difference in the lives of rural people. However, besides investing in technology, there is need to invest more in empowering the people themselves with skills, particularly literacy, to enable them use ICTs productively.

CHAPTER ONE: INTRODUCTION

Introduction

This study was first conceived after reading a Ugandan newspaper report in The New Vision on October 8, 2002 titled 'The 70-year-old computer wizard' (Kato, 2002). In this report, Maria Nakalema, a semi-literate septuagenarian, was reported to have embraced communication technology provided at the Nakaseke Community Multi-media Centre (CMC) with enthusiasm and was disseminating her newly acquired knowledge to fellow women in her community. As a journalist in a developing country with an interest in rural development, this narrative aroused my curiosity and drove me to investigate whether telecentres might be the path to rural development. This study was subsequently conducted at Nakaseke CMC and in this chapter I will present the background of the study, its focus, context, objectives and a breakdown of the chapters.

Research focus

This study engages with the debates around communication and development, including the modernisation, dependency and 'new multiplicity' paradigms (Servaes, 1996). It is positioned within the 'new multiplicity' paradigm, which advocates participatory communication and democracy for sustainable development and investigates the use of communication technology in the rural area of Nakaseke, aiming to explore in what ways ICTs facilitate development in developing countries.

The study recognises that a hegemonic view exists that proposes an unproblematic correlation between access to modern communication technologies and accelerated rural development. This notion has been endorsed by the United Nations as one of its millennium goals (UN, 2000) and adopted by governments in developing countries, including Uganda (Nasasira, 2002). However, the notion has been criticised for seeking to introduce ICTs in an environment of mass poverty and illiteracy, exacerbating inequalities in some cases. Informed by these debates, the study examines the

effectiveness of a telecentre in accelerating rural development as championed by the United Nations and international development agencies. It set out to evaluate the performance of the Nakaseke pilot scheme by investigating how the community makes use of the technologies at the telecentre with the ultimate objective of establishing whether the goals of the founders are being realised. More specifically, the study aims to establish the identity and profile of users, including their number, sex, occupation as well as ratio of women to men. The nature and purpose of use are also investigated. In addition, the study incorporates a cultural analysis of technology use in line with the notions of 'affordances' and 'culture.' In the section below, I highlight the contextual framework that influences the study.

Context

The contextual framework of this study is discussed under three categories - history of the telecentre, facilities, and users.

History

Established in 1997, the Nakaseke CMC was conceived as a pilot project to test the impact and viability of telecentres in Africa. Its main objective is to provide information and communication services "to aid self-driven development among the rural poor" (Nakaseke, 2002). The project was funded by UNESCO, the International Development Research Centre (IDRC), the Canadian International Development Agency (CIDA), DANIDA, and the British Council, among other donors. Besides donor funding, it is sustained through a tax levy on each household in the community. The telecentre is located 65km north of Kampala, the Ugandan capital, in a rural area afflicted by poverty, disease and illiteracy, like many villages in Uganda.

Facilities

While a typical telecentre in a developing country might consist of a small room equipped with one or more computers, a telephone line, fax machine and TV (Rogers and Shukla, 2001), the Nakaseke CMC, in comparison, is a well-established centre. It operates in a four-room building with 11 computers, eight of them connected to the

Internet, a community radio station, a library of more than 5,000 books, a photocopier, a TV and a van (grounded for mechanical reasons at the time of this research).

Power outages

Although quite well-equipped, the telecentre endures infrastructural problems normally associated with rural areas in the developing world, the most debilitating of which is the unreliable electricity supply. During these power outages, only the library and radio (which has a special generator) can function. When this occurs, most activities at the telecentre grind to a halt as visitors find little reason for visiting. Moreover, according to the managers the outages are very common, sometimes lasting an entire week. This I can verify as I had earlier postponed my data collection exercise after being advised that the telecentre was going through a long spell without electricity. Eventually the period of data capture for this study proved no exception to the problem. Interrupted by the outages on two of the five days dedicated to data collection, the study was conducted in the regular environment of unreliable power supply at the telecentre. However, being a common occurrence at the telecentre, the outages are not considered to have affected the generalisability, reliability or validity of the findings (Bryman, 1988; Jensen, 2002).

Nakaseke community radio

The Nakaseke Community Multi-media Centre acquired its new name (CMC) after the introduction of a radio component in 2004. Before that, it was known as the Nakaseke Multi-purpose Community Telecentre (MCT). Because of its relative suitability for rural conditions in relation to other technologies, the radio station has become a significant communication tool for the community. Covering an estimated radius of 25km, Nakaseke Radio 102.9 FM opens at 5 a.m. and closes down just before mid-night. In a rural area with hardly any public telephones or newspapers, announcements are one of the most important forms of broadcast programmes on this community station. The announcements fall into two categories; commercial ones are charged a fee while death announcements are free. Free death announcements are a particularly important service to

a poor community considering that Kampala-based private FM stations which broadcast in the area charge a considerable fee for the same. The radio also broadcasts programmes on a wide range of issues including health, education, agriculture, environment, gender and entertainment. Experts are often invited to discuss different themes.

However, this study did not foreground the Nakaseke community radio because it was introduced after the research process was already underway. The issue was raised by respondents during focus group interviews and semi-structured interviews, so it could not be ignored. Besides, the views from these sources indicate that the community radio is highly regarded, perhaps more than any other communication technologies at the telecentre because of factors discussed in Chapter Four.

Users

Students

The telecentre serves different categories of users at different times. For instance, the study was conducted during school time which excluded most students in the area. Some of the students are in boarding schools while those in day schools inevitably get caught up in domestic work after school, which limits their use of the telecentre. This particularly affected library use as, according to the managers and other users, students are the main users of that facility during their school holidays. While it is important to keep it in mind, the results of the study still have relevance because school vacations take up only a quarter of the year (three months), the period outside holidays is the more common schedule. At the same time, I would not wish to minimise the significance of the library for the students. This issue is discussed further in Chapter Four.

Knowledge group

Besides students, the study takes note of another interesting category of users, the Knowledge Group. According to the quantitative findings, there were more users describing themselves as farmers than any other category. Perhaps the main reason

largely semi-literate farmers come in fairly big numbers, even when the findings indicate that the telecentre is mainly used by a small 'elite' group of already advantaged users, is because unlike other users, they are organised as an association known as the Knowledge Group. Formed by the Nakaseke CMC, the Knowledge Group comprises 25 farmers. The group of mainly semi-literate small scale farmers was formed to help them improve their yields by engaging in sustainable methods of farming. Experts on agriculture often visit the telecentre to teach members of the group about farming skills. Besides their household farms on which they practice what they learn, the members have communal demonstration farms on which different crops are grown. Belonging to a group puts members of the Knowledge Group in a better position to take advantage of communication technologies at the telecentre than individuals. Even when individuals in the group lack the necessary skills to exploit the technologies, they are still able to benefit through lectures delivered by experts, seminars, videos or CD-ROMS. The CD-ROMs which are both in English and Luganda, the local language, carry information on income generating activities such as farming, trade, as well on health and the environment.

Breakdown of chapters

I have divided this thesis into five chapters. In this chapter, I have briefly presented the focus of the study, its background and its context.

Chapter Two presents the theoretical framework and literature review informing the study. The chapter articulates the debates around the issue of new media and their role in the development of Third World countries. It also explores the three paradigms associated with development, modernisation, dependency and 'new multiplicity' in which it is located. In addition, this chapter informs the data analysis presented in Chapter Four.

In Chapter Three, I explain the research process, articulating the methods used in the study and justifying the choice of those methods. The decision to engage with quantitative and qualitative research methods is also explained.

Chapter Four presents the findings of the study and discusses them under four broad categories, namely the use of the technologies; the perceived benefits to individuals and

community; status bestowed on users; and reasons for non-participation. The findings are also linked to the literature review presented in Chapter Two.

Chapter Five concludes by indicating possible further areas for study and making recommendations.

CHAPTER TWO: THEORY AND LITERATURE REVIEW

Introduction

The study of Nakaseke CMC in Uganda is informed by debates around the role of new media in development in a Third World country, particularly in a rural setting. This chapter summarises the three paradigms often associated with the concept of development as well as assumptions informing their positions. In so doing, the chapter takes note of the modernisation and dependency paradigms, but is premised on the third participatory approach, also referred to as 'new multiplicity' (Servaes, 1996:20) in which my study is located.

The chapter engages the concept of development and attempts to position this study in the above theoretical framework. It reviews some of the literature relating to ICTs and development, highlighting the historical role of the media in development and probing the assertion that new media technologies are a panacea of development in Third World countries. The cultural aspect of media technologies in relation to this study is also identified, with particular emphasis on the ethnographic research tradition, which informs this study. The chapter locates ICTs and development within the global and African contexts, underlining obstacles for Africa but also pointing out opportunities. It concludes by appreciating the role of ICTs in development but at the same time urging caution on any attempt to create an automatic link between the two variables.

Historical overview

The most frequently cited approaches to communication and development are 'modernisation and growth' versus 'dependency and underdevelopment' (Servaes, 1996). The modernisation approach emerged in the 1950s and 60s and is informed by a model in which communication is seen as a linear, sender to receiver process. Development was similarly considered to be linear, flowing from the top (First World) downwards (Third

World)[1]. The understanding was that developing countries could overcome 'backwardness' by merely adopting market policies of Western countries (Servaes, 1996) and allowing penetration of their multinationals into Third World economies. The dependency paradigm emerged in the 1970s to challenge the modernisation perspective. Latin American advocates of the paradigm sought to highlight the connection between dependency and underdevelopment in the Third World (Servaes, 1996). In contrast, Servaes argues in favour of a third paradigm, which he labels 'new multiplicity' (1996:82-83). This new paradigm argues that the path to development is not universal, but differs from one country to another (Servaes, 1996). In the section below, I will identify the main assumptions of the three approaches.

Modernisation approach

As the name suggests, the modernisation approach is so labelled because the thinking behind it proposes that by adopting Western market policies, developing countries can 'leap-frog' (Annan, 2000:11) over some of the stages of development that every country experiences on the path to modernisation (Hallowes and Butler, 2003; Berger, 2002). Certain assumptions underpin the modernisation paradigm and include the following ideas:

- Development is a spontaneous, unilinear, evolutionary process inherent in every society.
- The process of development can be divided into distinct stages, showing the level attained by each society.
- Development can be stimulated by external factors and by internal measures that support the modernisation of traditional sectors.

[1] The terms 'Western', 'First World', 'developed', 'industrialised' countries on one hand and 'Third World', 'developing', 'underdeveloped', 'non-industrialised' countries on the other have been used in different historical contexts to differentiate between rich and poor countries. The terms are used interchangeably in this chapter but bearing their various historical contexts in mind.

- Underdevelopment can be seen in terms of observable and quantitative differences between the 'rich' and 'poor' on one hand and the 'traditional' and 'modern' on the other.
- Development refers to greater economic growth, more per capita income, and attainment of a standard of living equivalent to that of the industrialised countries.
- Capital accumulation and mass production of goods and services constitute the ideal of development.
- The state is the main framework of reference and the market solution is the most appropriate strategy.
- Underdevelopment is a result of internal backwardness in the affected Third World country (Mansell and Wehn, 1998; Servaes, 1996; Tehranian in Servaes, 1996).

While this understanding of development continues to have purchase, it was subsequently challenged because it concentrated too much on material acquisition, giving too little consideration to non-material aspects that relate to the lives of people in developing countries (Mansell and Wehn, 1998; Wilson, 2002). The paradigm, for example, pays little attention to the capacity to acquire and generate knowledge, including recovery and upgrading of traditional knowledge, which can greatly contribute to the improvement of the human condition (Bezanson and Sagasti in Mansell and Wehn, 1998). Moreover, the modernisation theory whose essence was that developing countries 'catch up' with the developed world, failed to deliver on this promise in most countries (Wilson, 2002:86). The expectation that benefits of ICTs will spread out to the Third World through 'trickle-down' effect (Castells, 2001: 19) is not being manifestly realised either. Such optimism ignores obstacles such as the volatility of financial markets, the rise of a criminal economy, extreme underdevelopment of technological infrastructure and illiteracy, all of which virtually make the 'trickle-down' thesis unsustainable (Castells, 2001b).

Like other aspects of the economy, the media in this paradigm are commercialised and tend to be ideologically supportive of the state and market economics. They are viewed as vehicles of awareness of new possibilities and practices associated with modernisation and civilisation. They are understood to inform, educate and entertain

large numbers of people. Thus the development of the media is closely related to some of the indices of social and economic growth, such as literacy, per capita income and urbanisation (Servaes, 1996).

The assumptions of the modernisation approach leave no doubt that the paradigm argues for a global capitalist system in which the media are seen primarily as "vehicles for corporate marketing, manipulating audiences to deliver them as 'good consumers' of capitalist production" (Tomlinson, 1991: 38).

The dependency paradigm

Discontent with the modernisation paradigm and a critique of its assumptions and impacts gave rise to the 'dependency' paradigm. Latin American social scientists (e.g. Frank, 1969) who led the critique of the modernisation model were concerned with the effects of dependency in Third World Countries in the 1970s. 'Dependistas', as they were called (Servaes, 1996: 31), argued that obstacles to development were not necessarily internal, as proposed by modernisation theorists, but external (Servaes, 1996).

> The problem wasn't internal backwardness and indigenous states of mind [as modernisation theorists proposed], but the actual integration of Third World economies in a dependent, exploited relationship with the First World. The role of media was simply to reinforce this dominance and dependency. They also began to critique the notion of 'development', saying that it had to incorporate a level of equity, else it was mere growth (Berger, 2002:1).

Dependistas see the domination of the periphery (dependent Third World countries) by the centre (dominant First World countries) in all aspects of life, including culture. They argue that one of the ways through which industrialised countries perpetuate the dependency of the Third World is through 'cultural' or 'media' imperialism (Servaes, 1996:34; Tomlinson, 1991:34). While modern media are perceived as vehicles of 'development' in the modernisation model, the media imperialism approach perceives them, given their trans-national character, as an obstacle to meaningful socio-economic development in the Third World in the sense that they provide a fertile cultural context for the reception of economic policies, goods and services from the First World (Strelitz,

2001). Western media messages are thus viewed as vehicles of 'a consumptive culture' which recipients are powerless to resist (Servaes, 1996:34; Strelitz, 2001:50). Strelitz summarises the concerns of the media imperialism thesis thus:

> Firstly, the process [of cultural imperialism] is seen as homogenising, replacing cultural diversity with standardised commodified culture; secondly, it promotes consumption practices; and finally, it paves the way for the spread of trans-national capitalism (2001:50).

The media's perceived strong role in perpetuating this dependency led to the birth in the late 1970s of the New World Information and Communications Order (NWICO) (Brown-Syed, 1999). Supported by UNESCO, Third World countries sought to alter the one-way imbalanced flow of information that favoured the First World at their expense. This initiative followed a similar call for a New International Economic Order (NIEO) in the United Nations General Assembly in 1974. The resolution calling for NIEO, "which shall correct inequalities and redress existing injustice and make it possible to eliminate the widening gap between developed and developing countries" (in Tomlinson, 1991:16) was in effect an admission within the UN of the exploitation of the Third World by the First. This development was unpopular in Western countries, leading to the withdrawal of the United States and Britain from the United Nations body in the mid 1980s (Brown-Syed, 1999).

Although the politicians in Third World countries generally deplored media imperialism and called for a balanced flow of information, the positions they adopted with regard to internal and external policies were marked by contradictions, as on one hand, they demanded free and balanced flows of information between the First and Third Worlds, while at the same time disallowing this norm within their own countries (Servaes, 1996). In fact, in some African countries, the struggle against perceived cultural imperialism took the form of nationalisation of the media, which were then deployed as propaganda machinery for the incumbent regime. As a result, 'development journalism', a form of journalism that had emerged to emphasise local developmental needs as opposed to Western news and entertainment, was discredited in these locations (Berger, 2002).

One of the most important critiques of the media imperialism thesis is that while it theorises about production, distribution and content of global media, it fails or declines to address the issue of reception of these texts by local audiences (Strelitz, 2001). A major flaw of the thesis is its failure to recognise that reception and appropriation of cultural products is an "inherently critical and socially differentiated" activity, taking place within definite socio-historical contexts (Thompson, 1998:366). Thompson's argument is that individuals draw on material and symbolic resources available to them, as well as the interpretive assistance offered by those with whom they interact in order to make sense of and relate to the messages they receive (1995). This understanding, also referred to as the 'ethnographic turn' (Moores, 1993:1), will be addressed in greater detail later in this chapter.

Particular assumptions that inform the dependency paradigm according to Servaes (1996) are listed below:

- The process of development should be analysed in terms of relations between regions, that is between the centre and the periphery.
- The main obstacles to development are external to the underdeveloped country.
- The periphery is denied of its surplus resources; thus development at the centre implies underdevelopment in the periphery.
- It is necessary for peripheral countries to quit the world market and seek self-reliance.
- The centre dominates the periphery through culture, the military, economics and politics.

Assumptions of the dependency paradigm, particularly the 'core-periphery' model of global political-economic power articulated above, and often associated with the global capitalist system, clearly show the neo-Marxist character of this approach.

The third perspective

One of the major flaws identified in both the modernisation and dependency paradigms is that neither of the two approaches attempts to address the concept of development in

relation to social justice. The new perspective labelled 'multiplicity' and 'communitarian' by Servaes (1996) and Tehranian (in Servaes, 1996) respectively, argues that people have to participate in development initiatives if they are to achieve any success. Servaes labels the third perspective 'multiplicity in one world'. The paradigm seeks to combine economic growth with social justice by rethinking freedom and justice in the relationship between people and society (1996:32). The term 'multiplicity in one world' arises from the assumption that there is no single path to development as modernisation theorists suggest but multiple paths, and that all countries of the world are dependent on each other in one way or another (Servaes, 1996). Tehranian on the other hand refers to his approach as 'communitarian' because it tends to foreground the preservation of the community (Servaes, 1996:20). The central assumptions of the third approach advanced by Servaes (1996) and Tehranian (in Servaes, 1996) are outlined below:

- All nations are in one way or the other dependent upon one another. Thus, internal as well as external factors can influence the development process.
- Development needs to be studied in a global context for both the centre and the periphery to be taken into consideration.
- More attention should be paid to the content [as opposed to form] of development, which suggests a normative approach.
- There is no universal model for development; each society must develop its own development strategy.
- There is a 'profound linkage' (Tehranian in Servaes, 1996:55) between communication, peace, social justice, democracy and authentic development.
- No country can claim to be developed in all aspects.
- People cannot be developed as such; they can only develop themselves, which underscores the importance of participation.

Participation, according to Servaes (1996), means that the viewpoint of local groups be considered before the resources for development are allocated and distributed, and that suggestions for changes in the policy be considered. In effect, the multiplicity paradigm proposes a revolutionary approach that calls on the citizenry in developing countries to challenge the local administrative system if it is seen as a stumbling block to their development (Berger, 2002). The paradigm thus emphasises the power of the people to

take charge of their destiny. Hamelink agrees that civil society ought to rise up "when it no longer trusts states and markets to accommodate their needs" (1994:145). The new paradigm, according to him, should be neither state nor market-centric (both attributes of the modernisation paradigm), but inspired by 'civil democracy' (Hamelink, 1994:145).

> In the same way, the media are viewed as potential vehicles of democracy and peace in this paradigm. The uniform, centralised, commercialised and state-controlled trans-national media are rejected in favour of "multiplicity, smallness of scale, locality, de-institutionalisation, interchange of sender-receiver roles, horizontality of communication links at all levels of society, interaction" (MacQuail in Servaes, 1996:34).

The main weakness of the multiplicity paradigm lies in the fact that it is yet to be accepted by policy makers, both at the local and international levels. Even its advocate Servaes concedes that, "multiplicity is gaining ground in academic spheres, in practice it is looked at as a sympathetic, though idealistic side show" (Servaes, 1996:40). That basically means that in practice, modernisation is still favoured in the First World as well in the Third World.

> Most Western governments, transnationals, academicians, policy-makers, as well as the public at large, continue to look at development and communication from a modernisation perspective, which emphasises economic growth and explains the state of 'underdevelopment' as a mainly internal Third World problem. Underdevelopment can, therefore, be solved by external, technological aid (Servaes, 1996:84).

The multiplicity paradigm has not displaced the modernisation approach because its assumptions are at odds with the current world economic system - a global capitalist market economy in which developed countries dominate the allocation of human and natural resources (Tomlinson, 1991).

Understanding 'development'

Despite the elaborate debates on development outlined above, the concept of development remains a contentious one. Mensell and Wehn (1998) contend that there is no clear definition for the term and propose that every country should reach a consensus

on its changing meaning. This contention is in line with the participatory approach on which this study is hinged as it assumes that there is no universal path to development. The study also assumes that contrary to the assumptions of the modernisation theory, no single country is developed in all aspects (Servaes, 1996). In an attempt to define 'development' there is often a tendency, especially among those informed by the modernisation approach, to simplify the concept by equating it to 'progress'. This tendency is manifested in laying emphasis on economic growth, capital accumulation and mass production of goods and services, as well as the assumption that more necessarily means better (Servaes, 1996; Marchant, 1988). However, development means much more than that, especially for the multiplicity paradigm, which recognises that the social setting and people's capabilities are crucial to the development process and acknowledges that knowledge and human capital are essential to all aspects of development (Mensell and Wehn 1998). In the multiplicity paradigm's understanding of development, issues of equity and justice are also foregrounded.

More media does not constitute development either. Citing UNESCO's set of minimum standards for the mass media: 100 newspapers, 50 radio sets, 20 cinema seats and 20 TV receivers per 1,000 people, Servaes contends that these standards have since been achieved or surpassed by most developing countries, a demonstration that more media facilities do not necessarily translate into higher standards of economic or cultural development, improved social communication or greater democracy (Servaes, 1996). Servaes argues that on the contrary, the opposite might be true in the context of the Third World where media programmes are often dominated by First World imports and government propaganda, a reference to media imperialism (Servaes, 1996).

This section (and by extension this chapter) recognises that there is no consensus on what actually constitutes 'development'. The section, however, identifies three paradigms associated with the concept and outlines assumptions informing their positions. These assumptions will be taken into account in the study.

Media and development

In this section, I will consider the role of the media, particularly new media, in development. Some authors have identified three broad waves through which global development has evolved over the centuries: the agricultural revolution, the industrial revolution and the informational society (Lyon, 1995; Brody, 1990). According to this view, societies have evolved from the nomadic era through these stages up to the post-industrial era we currently inhabit. It is important to note that each of the stages continues to predominate in some countries (Brody, 1990). The media are considered to have played an important role throughout this evolution. The perception of the media (here I refer to traditional media) as tools or agents of development is well documented (Marchant, 1988). The invention of movable type and the printing press, which enabled easier publication of books and newspapers, is argued to have galvanised the industrial revolution in the eighteenth century (Marchant, 1988). The subsequent innovations of the telephone, radio and television, are described as developments which have speeded up the pace of life (Marchant, 1988). The radio, for example, has been remarkable as an agent of development. Radio-centred discussion groups, like those first introduced in Canada (Marchant, 1988) in 1941, are still in use to discuss development issues, especially in developing countries. Community radios have also become an important channel of information on development. A frequently cited example of conscious and deliberate application of media technologies to achieve development is the Satellite Instructional Television Experiment (SITE) of 1975 in India.

SITE was billed as the biggest media-driven development project aimed at rural areas in a developing country at the time. The project was designed to promote social change and increase national participation in the process of development. Using satellite technology provided by America's National Aeronautical Space Administration (NASA), television programmes were transmitted directly to selected village communities in India to serve as a communication channel for development. Community TV sets were

distributed to participating villages and viewed communally. The transmissions took place twice a day: one-and-a-half hours of educational broadcasts for schools in the morning and two-and-a-half hours of general programming in the evening. According to Marchant (1988), SITE proved that community television by satellite can reach people who would otherwise be out of reach. He, however, noted that the people must have the resources needed to make use of the information they receive. In fact, a major criticism of the modernisation approach, which the SITE project embraced, is that it focusses a great deal on material acquisition and ignores non-material aspects that relate to people's lives (Mensell and Wehn, 1998).

Although referred to as old or traditional media, the press, radio or television have not been replaced by new media as such. They have instead adopted new technologies (Brody, 1990) and fused with new media through a system of media synchronisation referred to as `convergence' (Bell, 1974). Media convergence is characterised by "the union of audio, video and data communications into a single source, received on a single device, delivered by a single connection" (Forman and Saint John in Gorman, 2003:185). However, while the traditional media have been at the centre of these innovations, never before have the media been viewed as the catalysts of development as the new media technologies are being seen today, as I argue in the following section.

Information and communication technologies

Today, more powerful and flexible media technologies have emerged and with them a stronger and widespread belief that they will spur development in the world's poorest countries and regions (UN, 2000). One of the notable writers on this subject, Castells, views the new media technologies, also known as information and communication technologies (ICTs), as being part of a new 'network' economy in which information and knowledge are more important than ever before (1996:2-3).

> We are seeing the emergence of a new technological paradigm organised around new, more powerful and more flexible information technologies, which makes it possible for information itself to become a product of the production process (Castells, 1996:113).

It is these ICTs, comprising of computers, mobile phones, the Internet, etc. (Leonardi, 2003), that many local and international policy makers perceive as the remedy for the Third World's development needs. Policy makers in this category argue that the diffusion of ICTs in developing countries will unproblematically result in development as the marginalised masses are ushered into the Information Society (Wilson, 2002; UN, 2000; Mensell and Wehn, 1998). This ICTs-for-development thesis is rooted in the modernisation theory, which prescribes stages of development and aims to 'leap-frog' non-industrialised countries over some of the stages on the path to development as understood in the industrialised world. I, however, argue in this chapter that an ICT-development strategy that adopts the participatory approach is likely to be more successful at promoting development appropriate to its context than the top-down modernisation prescription.

The perception of ICTs as a remedy for the world's development problems has been endorsed by Western governments, the United Nations, the New Partnership for African Development (NEPAD), major international organisations, and almost all the governments of developing countries (UN, 2000; Nasasira, 2002). Addressing the International Telecommunications Union (UTU) conference in Buenos Aires, Argentina on March 21, 1991, the then vice president of the United States, Al Gore said:

> The President of the United States and I believe that an essential prerequisite to sustainable development for all members of the human family is the creation of a global information structure. This GII [global information infrastructure] will circle the globe with information superhighways on which people can travel. The GII will not only be a metaphor for a functioning democracy, it will in fact promote the functioning of democracy by greatly enhancing the participation of citizens in decision-making (Al Gore in Hamelink, 1995).

Subsequently, ICTs for development constitute one of the millennium goals of the United Nations. The UN General assembly in 2000 resolved:

> To ensure that the benefits of new technologies, especially information and communication technologies, in conformity with recommendations contained in the ECOSOC 2000 [UN Economic and Social Council] Ministerial Declaration, are available to all (UN, 2000).

In 2002, the eight major industrial nations (G8) described ICTs as "one of the most potent forces in shaping the twenty-first century" (Colle and Roman, 2002:2). The Okinawa Charter that resulted from their deliberations committed the countries to the 'principle of inclusion' (Colle and Roman, 2002:2), which proposes that everyone, everywhere should be enabled to participate in and no one should be excluded from the benefits of the global information society. To demonstrate how seriously the international community takes the matter, a two-phase World Summit on Information Society (WSIS) was held, one phase in Geneva, Switzerland (December 2003) and another in Tunisia (2005) under the auspices of the United Nations (WSIS, 2002).

With the backing of international organisations, financial institutions and Western governments, developing countries, among them Uganda, have responded eagerly to the call to embrace ICTs. The Ugandan government recently put ICTs at the top of its agenda in the campaign against poverty and reduced taxes on computers to encourage their use. The declared goal is "to 'leap-frog' Uganda to benefit from the globalised economy" (Nasasira, 2002).

Are ICTs tools of development?

In this section, I will engage with the debate around whether availability of ICTs leads to development, particularly in rural areas of developing countries. Several studies have proposed that the availability of ICTs spurs development, especially in marginalised areas. In one such study, Braga et al. (2000) who favour this view, argue that ICTs are instrumental in giving a voice to marginalised segments of the population, raising awareness of social, economic and environmental issues, as well as playing a central role in the provision of better education, health care and improved farming techniques in rural communities of developing countries. This argument suggests that lack of information in rural areas undermines the development process, a position that economists like Ray (in Thamizoli and Balasubramanian, 2001) uphold. To these economists, the diffusion of ICTs opens up opportunities for developing countries to harness the technologies and services to serve their development goals. New opportunities for economic growth, new

markets, new products and new sources of revenue are the anticipated results of ICT use, according to Mansell and Wehn (1998). Such arguments place the ICTs for development thesis in the modernisation paradigm, which emphasises economic growth and the sender-receiver communication model but is silent about social justice and other non-material and social aspects of people in developing countries.

Attracted by such utopian promises, developing countries seem to be prepared to accept the modernisation approach to ICT diffusion at all costs. In their proposal for a World Bank Group Strategy, Talero and Gaudette (1996) quote the former Prime Minister of Malaysia (a developing country that has aggressively embraced ICTs), Dr. Mahathir Mohammed, supporting this hegemonic view:

> It can't be an accident that there is, today, no wealthy developed country that is information-poor, and no information-rich country that is poor and underdeveloped (Schware in Talero and Gaudette, 1996).

Despite the confidence among international policy makers that ICTs play a leading role in development, not all seem to share that belief. A report prepared for Britain's Department for International Development (DFID) and the G8 Digital Opportunity Task Force (DOT) by the Commonwealth Telecommunications Organisation and the Panos Institute categorises the policy-makers' divergent viewpoints as follows:

a) Those who doubt that investment in ICT automatically translates into economic and social development

b) Those who believe that development assistance activities should concentrate on other areas and let the market take care of ICT (MacLean et al., 2002).

The Commonwealth Telecommunications Organisation report referred to above indicates a sense that many ICT professionals and developed country policy-makers have sometimes overestimated the contribution of technological solutions to development. The report further notes that the same professionals have often underestimated "the challenges facing developing countries in terms of affordability of new technologies and the costs of economic, social and cultural adaptation" (MacLean, 2002:17).

Raising further doubt, a study conducted for the World Bank's i*nfo*Dev Working Paper series found no link between ICTs and society-wide economic progress, although the authors contend that ICTs can improve education, health, job creation and governance for individual communities under the right circumstances (Rodriguez and Wilson, 2000).

Mansell and Wehn reckon that there's considerable evidence that ICTs contribute to economic growth, but caution that, "Investment in ICTs is not a panacea for development problems" (1998:3). The analysis above brings to the fore two kinds of information society theses. The first one stresses automatic development as a result of investing in ICTs. The second thesis is more cautious and open-ended, portraying development through ICTs as 'problematic' (Lyon, 1995:67). My study recognises that the two tend to overlap as demonstrated above but will be largely guided by the second thesis.

Telecentres

In line with the 'principle of inclusion', community telecentres are designed to offer public as opposed to private access to ICTs (Rogers and Shukla, 2001) in order to give people who cannot afford personal computers or telecommunications equipment, or live in remote areas, a chance to use them. Telecentres started spreading among developing countries in the mid 1990s (Colle and Roman, 2002). The Nakaseke CMC in Uganda, which is the focus of this study, was established in 1997. A typical telecentre in a rural setting may consist of a small room equipped with one or more computers, a telephone line, fax machine and TV (Rogers and Shukla, 2001).

It is important to note that telecentres are not just a Third World phenomenon as industrialised countries have also had their own forms of community ICT initiatives. In 1994, the Netherlands government established what was called 'De Digitale Stad' (The Digital City) in Amsterdam to facilitate community participation in government affairs (Talero and Gaudette, 1996; Castells, 2001:146). In the United States, 'freenets' were established to serve a similar purpose, while 'telecottages' provided isolated village communities in the Nordic countries with access to ICTs (Talero and Gaudette, 1996; Mensell and Wehn, 1998:100; Colle and Roman, 2002:2).

However, while in the First World such initiatives are aimed at preventing the marginalisation of a few remote areas and peoples, in the Third World countries they are generally looked upon in themselves as the only available means of access to ICTs by rural people who constitute the majority of the population. Despite such huge expectations, there are still few telecentres in Third World countries. Besides, even the few available such as Nakaseke largely depend on donor funding, which often undermines sustainability (Kane, 2002:50; Burton, 2002). This has given rise to the view, as propagated by Kane (2002:50) that perhaps privately run cyber cafes or private community centres offering basic telecommunications services might have an important role to play in developing countries. This view, however, ignores the main reason telecentres are promoted – access for those who cannot afford the kind of charges likely to be associated with a private business enterprise.

Africa and ICTs

As earlier noted, developing countries, many of them in Africa, have prioritised ICTs in their quest to develop their economies. This section examines the efficacy of ICTs in Africa. It will also engage with the debate as to whether ICTs should be a priority in Africa, given the continent's other pressing and seemingly more critical problems. The section also deals with the notion of 'digital divide' and how it fits into the larger picture of ICTs and development.

Promoting ICTs in Africa is viewed by critics as introducing technologies in an environment of mass poverty and illiteracy, which will not succeed in delivering development (for example, Minges, 2001). They argue that it will instead exacerbate existing inequalities in what has been labelled the 'digital divide'.

The digital divide has been defined as "the distinction between those with access to new technologies, and those without such access" (Hall, 2001:226). Although this phenomenon exists in both the First and Third worlds, the digital gap between the 'information rich' and the 'information poor' (Castells, 1996) is more serious in the Third World, particularly Africa, where it is exacerbated by widespread poverty. The digital

gap thus manifests itself at two different levels - first between countries and secondly, within countries. Although ICTs are employed to bridge this gap, experience has shown that they could actually exacerbate the divide at both levels (Minges, 2001; Castells, 2001). In Africa, this could result in deep divisions alongside gender, racial, ethnic, literacy and urban-rural lines, as Mensell and Wehn point out:

> The application of ICTs as 'tools' for development offers opportunities to reduce some existing disparities in income distribution and the quality of life… However, they are also giving rise to new forms of exclusion by virtue of gender, religion, ethnicity, language or illiteracy (1998:3).

These distinctions tend to follow the existing unequal power relations in a given society. ICT projects, including telecentres, are likely to reinforce these power relations partly because intellectual and managerial skills are required to exploit information profitably and these skills are not evenly distributed in society (Lyon, 1990). To counter the effects of the digital divide, developing countries are establishing community telecentres to provide ICT access to people that may have been marginalised for one reason or another (Rogers and Shukla, 2001). As already noted, however, there is a danger that telecentres themselves could actually widen the digital divide they are established to bridge (Minges, 2001).

The digital divide problem, poverty, illiteracy, lack of adequate infrastructure and appropriate skills to harness information have led many people to wonder whether ICTs should be a priority for Africa. Citing United Nations Commission for Trade and Development (UNCTAD) statistics about Africa and other developing countries, Mensell and Wehn note that in 1991 only 21% of the people in Uganda had access to safe water, 22% in Mozambique, 25% in Ethiopia and 23% in Madagascar. They also note that from 1980-90, the percentage of rural people living in absolute poverty was 80% in Uganda, 90% in Burkina Faso and 90% in Central African Republic (1998: 103). Such statistics have been used to demonstrate that, perhaps, ICTs are not a priority for Africa at the moment.

> These indicators illustrate that people in the LDCs need 'access' to many things – medical facilities, water and other resources, jobs and money. Where should

> 'access' to the telephone or the Internet be placed on the list of priorities for development? (Mensell and Wehn, 1998:103)

Similarly, Bill Gates, reportedly the world's richest man (Itano, 2003) who has contributed to many African causes and, ironically, heads the giant computer firm, Microsoft, seems to espouse that view. "The world's poorest two billion people desperately need healthcare, not laptops," he is reported to have argued in *The Guardian* newspaper (Colle and Roman, 2002:11) of November 5, 2000.

Advocates of the ICTs-for-development model point to the need for Africa to catch up with the industrialised world or risk further exclusion but they do not seem to appreciate the social, economic and technological quagmire the continent is mired in (MacLean, 2002). Castells (1998), who is generally pessimistic about Africa in his writings, views the continent as being entangled in a 'black hole' and sliding further into the 'Fourth World' from which it is unlikely to emerge, as a consequence of underdevelopment. The 'Fourth World', according to Castells, is born out of the negative effects of globalisation on the Third World and Africa is the fulcrum of this new world.

> Over all, the systematic logic of the new global economy does not have much of a role for the majority of the African population in the newest international division of labour. Most primary commodities are useless or low-priced, markets are too narrow, investment too risky, labour not skilled enough, communication and telecommunication infrastructure clearly inadequate, politics too unpredictable, and government bureaucracies inefficiently corrupt (Castells, 1996:135).

In his view, "structural irrelevance is a more threatening condition than dependency" for Africa (1996:135). Further expressing pessimism about Africa's ICT potential, Castells argues:

> Technological dependency and technological underdevelopment in a period of accelerated technological change in the rest of the world, make it literally impossible for Africa to compete internationally either in manufacturing or in advanced services (1998:95).

Castells' position on Africa appears, to my mind, linked in certain ways to the modernisation approach, which believes in universal stages of development, its related

notion of ‘leap-frogging’, and views development problems in the Third World as being internal. In his critique of the Castellian position, Netshitenzhe (2001) argues that asking Africa to ‘leap-frog’ just the way some countries in East Asia have done ignores the massive resources poured into the East Asian economies during the Cold War. In another critique, Visvanathan, adopting a dependency paradigm stance, argues that apart from the breakdown of the state and growth of a predatory state, Africa’s underdevelopment might be connected to the ‘model of sciences’ (2001:39) applied to the continent. He argues that the Western development model might have destroyed African models of farming and healing which are believed to have embodied different notions of community and science. According to him, these systems could have constituted alternative paradigms to current models had they not been destroyed.

So, does Africa have what it takes to join the ICT revolution? If infrastructure, experience and skills are the yardsticks to measure Africa’s potential, as Mensell and Wehn (1998) suggest, then I am afraid the answer is “no” because Africa performs poorly at each one of them. For infrastructure, the traditional measure is the size and growth of the telecommunications network. In Africa, underdeveloped and obsolete telecommunications infrastructures pose an impediment (Mensell and Wehn, 1998; Marchant, 1988). For experience, the measure is the level of growth of the electronics industry and demand. The indicators here are the ICT production capacities of countries as well as domestic use and export or import of electronic products, and Mensell and Wehn (1998) contend that Africa again performs very poorly. For skills, the measure is the state of readiness to transform information into knowledge, which demands a level of literacy that much of Africa lacks. Mensell and Wehn (1998) thus note that there is little to be gained from access to global or even local digital information resources if the skills to select, interpret and apply the information are absent or very poorly developed throughout the population. Their view is that capacity to generate, distribute, and share information about local resources and activities is as important as access to distant digital information (1998).

Castells is in agreement when he argues that access alone does not solve the problem, but is a prerequisite for overcoming inequality (Castells, 2001). Specific skills are needed to be able to turn information into useful knowledge and this comes from education and

training. Human resource development, Castells notes, is the "essential infrastructure without which technology means nothing. The new economy is a people-based economy. This means education" (2001:4). Stressing the point further, Wilson argues that technology cannot be equated with access and use because both are "intricately woven within the local socio-technical system, including the political and economic constraints facing developing countries" (2002:96).

Nevertheless, some policy-makers are optimistic about the prospects of ICTs in Africa. Mensell and Wehn quote the United Nations Economic Commission for Africa (UNECA) Action Plan of 1996 as stating that Africa has great potential to 'leap-frog' development stages by adopting new strategies to build new capabilities (1998:113). Responding to critics who suggest that Africa needs to meet basic needs first and ICTs later, Kenny et al. argue that access to ICTs has potential to rescue the poor from poverty.

> While access to telephones or the Internet cannot be considered a basic need of the poor as compared to food, water, shelter and sanitation, access to ICTs does provide the poor with a potential means to escape their poverty (2001:33).

Kenny et al. (2001) believe that this would be possible through access to new income generating activities, improved skills obtained through long distance education and training, improved provision of services by local governments and access to markets and credit information.

Supporting this position, Castells dismisses the view that Africa needs to start with 'the real problems of the Third World' (2001:269) – meaning health, education, water, electricity, and the like, arguing that without an Internet-based economy and management system, there is little chance for any country to generate the resources necessary to meet its developmental needs in a sustainable way.

Both positions, however, fall short of claiming an empirical link between ICTs and improved standards of living in the face of research suggesting the contrary (Mensell and Wehn, 1998; Rodriguez and Wilson, 2000).

Just as in the general debate about the role of ICTs in development, there is no consensus on the role of ICTs in Africa's development. Two arguments however stand

out. First, with problems such as the digital divide, poor infrastructure, lack of skills and resources, as well as the myriad basic needs, Africa is not ready for the information society. Second, ICTs are the best opportunity for the continent to overcome its problems, 'leap-frog' stages of development and catch up with industrialised countries. This study recognises that Africa cannot afford to ignore ICTs as this would cause further exclusion of the continent from the global economy. The study is based on the premise that although ICTs are not a panacea for Africa's development, benefits of investment in ICTs can, given the right stimuli, outweigh the risk of diverting scarce resources from other sectors (Mensell and Wehn, 1998).

The culture of technology use

Looking at the dependency paradigm earlier in this chapter, I noted that advocates of the cultural imperialism model often dwell on the production and distribution of content and disregard the context within which it is appropriated. In the same way, many researchers tend to imagine that access to ICTs is an end in itself and fail to question what people do with such access (Karim, 1999). Recent media research takes cultural forms seriously (Strelitz, 2001) and in line with that, the research model I am proposing for this study will seek to establish what the Nakaseke rural community does with the cultural products provided by the telecentre.

This approach is necessitated by the desire to understand the context within which media consumption occurs as it impacts on how the audience will interpret the media content (Strelitz, 2001). Contrary to the media imperialism thesis which focuses on passive use of media content, this approach views the reception and appropriation of cultural phenomena as "hermeneutical processes" (Thompson, 1995:172) in which individuals draw on material and symbolic resources available to them, as well as on the interpretive assistance of those they interact with in order to make sense of the messages they receive and find a way to relate to them.

This approach, which is committed to viewing media consumption as an act of symbolic significance happening within a certain context has been referred to as the

'ethnographic turn' by Moores (1993:1). Likewise, the use of ICTs takes place within a certain social context. Technology is not always used the way it was intended by its designer. Users may appropriate ICTs in their own ways, including rejecting them or redefining their functional purpose (Mackay, 1995). However, the range of choices in appropriating technologies is not limitless. Some technologies are considered more amenable to being used for a range of purposes than others. The computer for example can be used for playing games, education, typing, military purposes and crime, to name just a few uses (Mackay, 1995).

Furthermore, looking at the twin notions of *affordances* (possibilities that an object or environment offers, or appears to offer, in order to perform an action upon it) and *culture,* Burton (2002) notes that a computer cannot be used as a bicycle, which attests to its functional *affordances*, but it can be used as a way of saying something about a community. It may be invoked as a status symbol for example, even if it does not work (Burton, 2002:51). Burton notes that *culture* is in itself an *affordance* because cultural objects tend to be defined in different ways. He cites the Bhamshela telecentre in South Africa where computers were used for 'training' despite lack of electricity – calling this a "charming ruse for a group of seven women to get together regularly" (2002:52).

Thus, while some users have no idea what computers or the Internet can do for them, or the information they lack (Burton, 2002), others use ICTs for ends that do not advance development as Castells found out when he visited Columbia (2001). After landing in Bogota, Castells read the headline of *El Tiempo*: 'New uses of Internet in Columbia' and was eager to read about light at the end of the tunnel of Columbia's violence. It turned out that extortionists and kidnappers had resorted to the Internet to distribute threats through electronic mailing lists. This example illustrates Castell's point that ICTs have the potential to promote a criminal economy especially in developing countries (in Muller, 2001). My study will be enriched by the realisation that ICTs can be used both productively and unproductively. It will also be informed by the realisation that ICTs can be abused.

The ICT dilemma

As pointed out already, a decisive causal link between ICTs and society-wide economic progress remains elusive (Rodriguez and Wilson, 2000), leaving many people sceptical about the potential of ICTs. Mensell and Wehn (1998) note that measuring returns on investment in ICTs has often proved difficult and controversial because the product, information, is an intermediate, not a user good. The point has already been made in this chapter that, first of all, there is need for skills to transform information into useful knowledge. Secondly, it must be noted that users negotiate media meanings in relation to their own lived experiences and not necessarily according to the intention of the producer. Meanwhile the value of the intermediate good (information) varies, depending on the context in which it is being applied, which in turn depends on the level and nature of the development problem to which ICTs are being applied (Mansell and Wehn, 1998). Information can also be rejected as being irrelevant, ignored or interpreted differently (Hall, 1997).

Calling it a genuine dilemma, MacLean (2002) notes that while ICTs are costly in the short term, development and ICT professionals have problems to "identify, estimate or cost-justify" the benefits and opportunities provided by ICTs in the long term (2002:17). This lengthy quotation from Menou (in Mensell and Wehn, 1998) sums up the dilemma:

> Although we have witnessed a steady growth in the provision of information services in developing countries, a number of fundamental questions remain unanswered. The people of these countries question the relevance and appropriateness of the services offered. Development assistance agencies are concerned about problems of sustainability. The extent to which information [and communication] services actually contribute to the empowerment of people and the accountability of the institutions concerned are subjects of controversy and debate. Logic dictates that information is an essential resource for the social and economic development of Third World countries, but how can this be demonstrated? How tangible is the linkage between information investments and the achievement of specific development goals? (1998:15).

On the whole, most research in this field, as the United Nations Commission on Science and Technology investigation between 1995 and 1997 reveals, has found that in many instances, ICTs bring widespread social and economic benefits. But the same

research has also found at the same time that in as many instances, “ICTs are making no difference to the lives of people in developing countries or are even having harmful effects” (Mensell and Wehn, 1998:1).

As a result of these unanswered questions, there is growing literature on performance indicators that seeks to assess the impact of ICTs from the perspective of particular user communities rather than attempting to quantify the overall impact of ICTs on the economy. This study falls in the same category. The goal is to relate the initial objectives of users (and sponsors) to observed outcomes and to identify the important economic, social, cultural and organisational factors that influence these outcomes (Mensell and Wehn, 1998). My study is in line with the new perspective in communications research which has reversed the question often posed from “what the media do to the people” to “what people do with the media” (Moores, 1993:6).

At the same time, many policy makers are gradually coming to terms with the possibility that ICTs are not a ‘magic money-spinner’ either in the First World or in the Third World. It is not a panacea for development in the Third World (Berger, 2002:1). Castells (2001) believes that the Internet is a fundamental instrument for development in the Third World, but argues that the context of its appropriation needs to be altered if the current situation in which about 50 percent of humankind barely survives with less than two dollars a day is to be reversed. Altering this context will require developing countries to design appropriate national ICT strategies that address their peculiar developmental needs (Mensell and Wehn (1998). Such strategies must take note of what Heeks calls the ‘design-reality’ gap (2003).

In the global public sphere, it is apparent that interests of the Third World need to be taken into account in line with the participatory approach, if sustainable development is to be realised. To that end, the role of the media, particularly new media, is limited but nevertheless very critical. ICTs can play a supportive role, but are unlikely to be the driving force or catalyst. That role belongs to wider and over-determining political and economic processes over which ICTs have no power. There should, however, be no doubt that effective use of new media can still be of great value (Berger, 2002).

Conclusion

I have examined the concept of development, identifying three distinct paradigms often associated with it: modernisation, dependency and 'new multiplicity', and articulated their assumptions. I have attempted to link these assumptions to my study, focusing on the third perspective in which my study is rooted. In addition, I have articulated the general debates around the issue of ICTs and development through a review of some of the related literature. This chapter recognises the assumptions informing the debate both at the global and Africa levels. These assumptions are to be examined further in the study, especially in my chapter on research findings. Problematising the issue of ICTs for development as I have done is not meant to negate the potential role ICTs, specifically telecentres, can play in the pursuit of sustainable development but simply an attempt to highlight the danger of technological fetishism which Heeks defines as the belief that the provision of technology can itself solve socio-economic problems from poverty to global competitiveness (in Gillward, 2001). The potential role of ICTs in the development of the Third World is appreciated, but the chapter cautions that it must not be oversimplified.

CHAPTER THREE: RESEARCH METHODOLOGY

Introduction

The assumption that ICTs and development have an automatic linkage has gained much currency in recent years yet it remains largely untested as discussed in Chapter Two. In this chapter I set out to discuss the methods used in the study of this phenomenon with respect to the Nakaseke CMC and the justification for each of them. The chapter also describes the sampling techniques employed in this regard, in addition to outlining the general research process.

Research question

This study aims to investigate how a rural community makes use of, makes sense of and relates to ICTs so as to establish to what extent these practices are consistent with the objectives of the advocates and sponsors of the ICT for development model. The research question that underpins this study is: "How does the Nakaseke Community engage with the communication technologies available at the telecentre?" This wider question will be broken down into six smaller ones that seek to establish:

a) The identity and profile of users;
b) The nature and purpose of usage;
c) The attitude of users;
d) The level of interest among users;
e) Ratio of women to men; and
f) What impact the technologies have on the community

This study has identified different research techniques - both quantitative and qualitative - to address these research questions. Issues related to who uses it, how many users, how often, how many men as opposed to women, are addressed through a quantitative method, namely a questionnaire. In addition, answers to questions related to how the centre is used, whether this is in line with the objectives of the founders or whether the usage affirms or negates the assumptions of the three approaches to

development (modernisation, dependency, 'new multiplicity') are established through observation as well as qualitative research questions posed in focus group interviews and semi-structured interviews.

The study, using the methods outlined in this chapter, sets out to establish how services at the telecentre are being used and to question whether this is consistent with the modernisation approach which emphasises a one-way information flow and material acquisition on one hand, or the 'new multiplicity' approach which calls for participation and attention to people's non-material aspirations on the other hand.

In the sections that follow, I discuss the three research methods that guide this study as well as the sampling and data collection and analysis techniques associated with them.

Methodological considerations

This study engages with qualitative and quantitative research methods. Hansen et al. note that:

> For examining the dynamics of what experiential knowledge and frames of interpretation audiences bring to bear on their use of media content, what role media use has in the everyday life of audiences, or how audiences use the media as a resource in their everyday lives, it is necessary to turn to more qualitative methods (1998:257).

Unlike quantitative research which tends to view events from outside (Bryman, 1984), qualitative research seeks to see through the eyes of the people being investigated and to understand their social behaviour within a certain social context (Moores, 1993).

However, a researcher may not completely divorce every aspect of quantitative analysis from qualitative research. As Bryman (1984) and Deacon et al. (1999) point out, qualitative researchers often use terms such as 'many', 'frequently', 'some of the time', 'less', 'more', 'majority', which are clearly quantitative in nature. In fact, a new trend in audience research supported by a number of authors (for example, Schroder, 1987; Livingstone, 1991) advocates the use of qualitative methods in combination with quantitative techniques.

Thus, despite the methodological differences between the quantitative and qualitative research traditions, it is possible to draw on both to formulate a single research design. As Strelitz (2002) notes, combining approaches actually enables a researcher to draw on their respective strengths and mitigate their weaknesses. With this in mind, the study employs a questionnaire, a quantitative research instrument, particularly to establish the identities of the Nakaseke CMC users in combination with observation, focus group interviewing and semi-structured interviews, all qualitative research methods.

By its nature, qualitative research is multi-method and incorporates an interpretive and naturalistic approach to its subjects, which means studying things in their natural settings and "attempting to make sense of or interpret phenomena in terms of the meanings people bring to them" (Denzin, 1994:2). As Denzin further notes, "qualitative researchers deploy a wide range of interconnected methods, hoping always to get a better fix on the subject matter at hand" (1994:2).

Methods

The quantitative dimension

As earlier noted, in order to answer questions of a quantitative nature about people who use the Nakaseke CMC, I found it necessary to employ quantitative research techniques to supplement qualitative methods. It has been said that where research seeks quantifiable data, quantitative analysis becomes necessary (Bryman, 1988). In the absence of a daily register at the telecentre, to establish how many people make use of the facility and how frequently, I constructed a questionnaire to elicit this information (appendix i). This quantitative research technique was used to establish the number of people who use the facility as well as their profile, particularly their age, occupation, sex, frequency of visits, purpose of visit and type of information sought. The questionnaire was handed out to all users of the centre for five days, apart from a very small number who declined to answer and a few others whose visit was restricted to merely photo-copying documents. Those visitors who came to the telecentre more than once during the data collection period were required to complete the questionnaire once only.

Observation

Observation as a research technique, according to Malinowski (in Deacon et al., 1999), pays particular attention to phenomena that cannot easily be recorded through questioning or computing documents but can at best be observed. It refers to "a set of research activities that involve the continuous and long-term presence, normally of one researcher, and generally in one delimited locale" (Jensen, 2002: 235). This mode of investigation has been praised as "the most exciting, challenging and, potentially, rewarding of all mass communication research methods" (Hansen et al., 1998:35). Observation is argued to deliver on the promise of qualitative research to view events from the point of view of the subject. However, observation is rarely used as the sole method of research but in combination with other methods (Hansen et al., 1998; Deacon et al. 1999). Observation as a method of investigation incorporates a number of possible forms of data collection including interview, talk and documentary records analysis (Hansen et al., 1998).

Unlike other research methods which typically require the design and deployment of a research instrument such as a coding schedule for content analysis or a questionnaire for a survey or interview schedule, the participant observer is his or her own research instrument (Hansen et al., 1998). He or she must be in position to observe, record and collect data. For this reason, the observer's skill is a big factor in the success of a study. As Deacon et al. (1999) note, observation requires flexibility, good memory, tact and intuition. If a researcher has these attributes, observation offers an opportunity to pursue unforeseen lines of inquiry and thus secure new findings (Hansen et al., 1998). Observation is credited for enabling the researcher to watch events on a first hand basis as opposed to a survey questionnaire, for example, which depends on second-hand indicators. This is made possible by the fact that there is no time lag between the event happening and the researcher's access to it (Deacon et al., 1999).

My investigation combined both simple and participant observation. Simple observation is where a researcher is like a 'fly on the wall' without a relationship with the

people being observed as they remain unaware of his/her activities (Deacon, et al., 1999). Participant observation, on the other hand, is when a researcher takes part, to some degree, in the activities of the people being observed (Deacon et al., 1999). The aim of combining the two types of observation was to draw on the strengths of both approaches while at the same time minimising their weaknesses.

However, both forms of observation have their limitations. One of the main problems often encountered by observation researchers is gaining access to the subjects and acceptance. While permission must be sought before access can be granted, acceptance, most of the time, comes gradually. There is also a possibility of arousing the curiosity of subjects through taking notes or just appearing to be a silent stranger in their midst as Elliot (in Deacon et al., 1999) discovered when he conducted research on the making of a British commercial television series. The tendency of a researcher appearing to be a stranger, however, diminishes through explanation of the researcher's activities and as the research process progresses.

Another difficulty associated with this method of investigation is that participation may make it practically difficult to observe, while observation may in turn make it hard to participate. The balance between participation and observation is a matter of the researcher's judgment as it depends on the setting and changing relationships during the research process (Deacon et al., 1999). In the case of my study, this did not arise for my participation was only limited as noted below.

Observation process

Two leading authors on mass communication research have identified almost similar stages (see table below) to guide researchers who engage in the observation process and these are represented schematically below (Deacon et al., 1999; Hansen et al., 1998).

Deacon et al (1999)	Hansen et al (1998)
1-Entry	1-Design
2-Sponsorship/gatekeeping	2-Access
3-Planning	3-Field relationships
4-Data collection	4-Collecting and recording data
5-Data analysis	5-Analysing data

Table 1: Observation stages

These stages do not need to be rigidly adhered to and as Hansen et al. (1998) and Deacon et al. (1999) note, observation is always likely to be reflexive, open to the contingencies of field experience and less than strictly linear in its execution. Nevertheless, keeping the stages in mind was helpful in guiding me through the process.

Planning/design

Like in any other research method, observers need to have an idea of what they are about, why they are about it, how they intend to go about it. A plan at this stage is described as a map, indicating the route, the approximate time allowed to travel between the milestones along the way and the final point of destination (Hansen et al., 1998). Observation demands rigorous but flexible and careful planning (Deacon et al., 1999). For my own research process, I outlined guidelines I would follow and the kind of information I would be seeking during my observation phase.

Access

The first task for any observation researcher is to ensure access to the situations and people s/he needs to observe (Deacon et al., 1999). The Nakaseke CMC constituted an open research location because it is a public facility open to everyone. Access to it for

research purposes was, however, secured through the sponsors and management of the telecentre. Visiting the telecentre to secure permission for my research, I met the manager who advised me to obtain a letter from the Uganda National Commission for UNESCO in Kampala, the main sponsors of the project. At UNESCO, I met the Programme Officer who, without hesitation, wrote an introductory letter for me to the manager (appendix ii).

Gate keeping

A gatekeeper is defined as someone who lets the observer in, while a sponsor is one who takes responsibility while observation goes on (Deacon et al., 1999). The authors caution that gate-keeping and sponsorship could "prejudice or interfere" with the research process, suggesting "a degree of distance from the sponsor or gatekeeper" whenever possible (1999: 271). As earlier mentioned, UNESCO and the management of Nakaseke CMC were my host and sponsor. Both parties willingly facilitated me to conduct the study and did not show any interest in influencing the results. Both parties, however, separately pointed out that previous researchers at the site have not had the courtesy to pass on a copy of their findings to the telecentre and requested that this be done on conclusion of the research.

Data collection and recording

This involved data collection and data organisation. I was at the telecentre for five working days from the time it opened to the time it closed, observing how many people visited, what particular ICTs interested most of them, how much time they spent at the centre and what they did with the facilities. I selected a routine week in June 2005 for the data collection exercise so as to ensure reliable results. A questionnaire (Appendix i) was passed on to almost all visitors. The questionnaire required the users to state the following for purposes of my study: name, age, sex, occupation, purpose of visit, frequency of visit and type of service being sought. The choice of five days was to enable me get a representative sample of the visitors. I also took cognisance of resources

available, as I had to spend all days and nights at the site, which is 60kms from the capital Kampala where I live.

The purpose of the questionnaire was to inform my observation process and help me find answers to some of the questions this study set out to answer, particularly the quantitative type mentioned earlier. The questionnaire was in English but I was at hand to help respondents who did not understand the language.

To supplement the information drawn from the questionnaire, I took notes as I went about observing how the visitors made use of the facilities available at Nakaseke CMC. As a simple observer, I sat still watching quietly for the most part, while as a participant, I occasionally occupied one of the computers in the room, all the while collecting data. A few times I was called upon by the users to help them out on computer use and I obliged. The visitors were quite comfortable with my presence judging by the serious or casual nature they went about their business despite my presence. As observation includes documentary analysis, I was also able, during this phase, to gather some literature related to the study.

The next step required a decision on how to analyse the data I had gathered. Following Deacon et al. (1999), I kept a field diary in which I took notes of the events as I watched them, as well as my thoughts and reflections. I registered each day's observations on a separate page in my diary, clearly marked, 'Day One'; 'Day Two', up to five.

Data analysis

Data analysis and data collection are inextricably linked in observation studies and as Deacon et al. (1999) advise, ordering your data as you go along ensures that analysis is well under way when research is complete. Besides the questionnaires, all my data is contained in a note book in which I transcribed material from interviews and reflections noted through observation. Through reading and re-reading these notes and documents, I was able to identify related material.

The next stage in my three-level research design was now to undertake focus group interviews.

Focus group interviews

This study adopted the focus group interview method because of its suitability when examining how media audiences relate to, make sense of, negotiate and interpret media content (Hansen et al., 1998). Focus group interview research involves "bringing small groups of people together to discuss issues identified by researchers" (Deacon et al., 1999: 53). They allow the researcher to observe how audiences make sense of the media through conversation and interaction with each other (Hansen et al., 1998). As is often the case, I was both researcher and moderator in all the focus groups convened.

Although focus group interviews have a long history in research, the method has become very popular since the 1980s as a means of analysing media audiences (Deacon et al., 1999). The rising importance of focus group interviewing in this period was related to the shift in media audience research away from questions about media influence and effects on audience behaviour and beliefs toward concerns about how audiences "interpret, make sense of, use, interact with and create meaning out of media content and technologies" (Hansen et al., 1998:259). As mentioned in Chapter Two, the method is, therefore, closely associated with reception analysis, which seeks to highlight the social context of media consumption and the active role of the audience in decoding media texts (Deacon et al., 1999).

Central to focus group interviews is group discussion, which is seen as likely, through interaction, to generate rich data not easily obtainable through individual interviews (Hansen et al., 1998; Morgan, 1988:12). As Hansen et al. note,

> It is precisely the group dynamics and interaction found where several people are brought together to discuss a subject that is seen as the attraction of this mode of data collection over individual interviews (1998:262).

Focus group interviews are known to be relatively cheaper than individual interviews, yet they generate much data. The method, however, has its disadvantages, and one of

them is that some outspoken individuals in the group may dominate the discussion while timid ones remain silent. As moderator, however, my role was to see to it that the talkative participants were politely restrained while the quiet ones were encouraged to participate sometimes through asking them by name to contribute. Focus groups also tend to work towards 'consensus', and as a result, some dissenting voices kept their views to themselves (Morgan, 1988:20; Hansen et al., 1998:263). However, it is argued that these possibilities make group discussion a 'natural' form of data generation because that is how it is in everyday life (Liebes and Katz, 1990).

Sampling process

Researchers using the focus group method often seek to draw their sample from 'naturally' existing groups (for example, women's groups, pressure groups, fan clubs, political parties or youth associations) where possible, which makes the task of identification, selection and sampling much easier (Hansen et al., 1998). Hansen et al. also note that focus group studies in media research rarely seek groups representative of the general population. Instead, they seek groups with specific elements thought to be of significance to the way in which people use and interpret media content. In other words, they seek participants who are representative of the 'population of interest' (1998: 265).

To draw a sample for my focus groups, I employed the 'purposive' or 'theoretical' sampling technique, whereby all visitors to the telecentre during my five-day data capture period formed the sampling frame. Using the researcher's discretion, I approached eligible participants and enlisted the willing. The goal of this type of sampling, according to Maxwell, is to "make sure that one has adequately understood the variation in the phenomenon of interest in the setting, and to test developing ideas about the setting phenomena that are crucial to the validity of those ideas" (in Strelitz, 2002: 13).

In selecting my subjects 'purposively', I aimed at getting a fair representation of respondents with specific dimensions significant to my study, and these included age, sex, education and occupation, among other considerations. Some of my respondents

were drawn from the 'Knowledge Group', an organised group of men and women, who use the telecentre to improve their farming techniques.

To create a comfortable environment for my subjects, I sought to form homogeneous groups, always trying to create separate groups for students, women, youth or men whenever possible. Homogeneous groups arguably enable more discussion than heterogeneous ones (Morgan, 1988). People tend to feel more at ease in the midst of their peers or other people they can identify with as opposed to those they do not. This was however not possible in one of the focus groups I conducted because the respondents were in a hurry and thus had to be interviewed in a mixed group.

I conducted five focus groups (FGs) consisting of 26 respondents out of the 52 visitors who completed the questionnaire. Two of the groups comprised of women (FG1:Betty, Miriam, Martha and Harriet; FG2: Orla and Melda), two of men (FG3: Bart, Semo, Billie, Musa and Tim; FG4: Malta, Mamba, Siraje, Bernard and Sammy) and one of men and women (FG5: Netta, Edmund, Eriya, Kelly, Abel, Juliet, Gemina, Sarah, Namu and Nelly). Apart from gender, the composition of the groups was purely coincidental.

Five groups were judged sufficient as focus group interviewing was only one of my methods of investigation, supplemented by observation and interviews. In addition, my sample population was fairly small (25 people visit the centre on average everyday), thus further justifying only five focus groups. Resources (time and money) also counted in my decision to conduct five focus groups. Hansen et al. (1998) argue that the number of focus groups should depend on the aims of the research and resources available, adding that where focus groups form the central part of data collection in a study, it would be hard to justify less than six groups.

Besides, not many visitors were willing to participate, as they could not appreciate the purpose for which information was being gathered. To induce them, I paid each participant Shs 2,500 as a token of appreciation. In defence of inducement, Hansen at al. (1998) argue that most respondents would be reluctant to give up their time for nothing in return. However, even with the inducement, the frequency at which targeted respondents came and went out made it difficult to have enough numbers to convene groups at any

given time. Moreover, many of them came from distant areas and the idea of asking them to return on given days was not practical.

As for the number of participants in each group, although there seems to be a general understanding that 5-10 participants in each group is ideal (Hansen et al., 1998; Morgan 1988), I found myself conducting a 'group' of two young women (FG2) who came too late for the group they should have been part of. Rather than let them go, which would have meant not participating in the study, I decided to host them, and the results were rewarding. While this was unplanned, and as Strelitz (2002) discovered in his audience study, a two-member focus group can generate data as rich if not richer than one comprising more participants. In addition, one group comprised four respondents, two groups had five respondents each while one had 10.

Interview scene

I conducted all my interviews in the library of the telecentre, which was made available by the management of the centre. The venue was convenient for the subjects, all of whom had come to the centre on their own business, not primarily to participate in my study. It was also a 'neutral' venue as suggested by Morgan (1988:60) in that it was unlikely to intimidate the respondents. However, the library had its disadvantages, as at some point, a workshop was going on in the adjacent computer room, interrupting the group discussions.

Research assistant

I had initially planned to hire an assistant to help with the translation where necessary, as I am not very fluent in the local language spoken around Nakaseke, but I dropped the idea because it was proving expensive, some participants could speak English, and my understanding of the local language (Luganda, which is closely related to my own vernacular) was good enough to maintain a fruitful discussion.

Interview guide

To ensure that the discussions remained on track as well as consistency in questioning, I drew up an interview guide (Appendix iii). Hansen et al. describe it as a 'menu' of the topics, issues and areas to be covered (1998: 274). However, at times I found myself digressing from the interview guide or modifying it to suit changing situations. This is in line with Morgan's (1988) experience. The guide assisted me in ensuring the focus of the FGs as well as consistency in questioning. In addition, it was subsequently helpful in identifying categories for purposes of data analysis.

Recording data

Before every focus group discussion, I administered my questionnaire to every participant (those who had not filled it yet). Besides easing identification during data analysis, the questionnaire was also helpful when I needed to match the views of the participant with his or her age, sex, occupation or level of education. I also sought permission from the participants to record the proceedings of the discussion before it could start. To identify the participants when transcribing the recording, I made them mention their names for the record (to match their voices with their contributions while transcribing), in addition to registering their names and jotting down the first words of every speaker.

Analysing data

I tried to categorise the responses according to issues on my interview guide for easier analysis.

Semi-structured interviews

To mitigate the weaknesses of observation and focus group interviews, I also conducted six semi-structured interviews with selected telecentre users and non-users. I needed to develop insight into the relationship existing between an individual and media technologies within a social context and this type of interview was the most appropriate to provide that. As Deacon et al. (1999) note, semi-structured interviewing is concerned with an active, open-ended dialogue as opposed to standardisation and control. The interviewer, however, keeps control of the discussion to avoid going astray. Semi-structured interviews are good at mitigating some of the disadvantages of focus group interviewing such as individuals dominating the discussion. Also known as free format questioning (Deacon et al., 1999), semi-structured interviews are known to generate richer and more sensitive data on the dynamics of audiences and their relation to the media than other types of interview or research methods (Hansen et al., 1998). In selecting interviewees, I was keen on respondents with interesting information regarding the telecentre, and willing to share it. A deliberate effort was made to include three non-users in the area to get an insight into why they do not use the telecentre.

My recording and analysis of data from these interviews followed the same pattern as that employed for the focus group interviews. The interviews were conducted in different places, depending on the convenience of interviewees. The average time spent on each interview was 45 minutes. Data recording and analysis was conducted just the same way as I did it in the first two stages of my research. Some of the interviews were tape-recorded and later transcribed while others were handwritten out.

Limitations of the study

The data collection part of my study was largely successful. It was easy for me to gain access to Nakaseke telecentre, the focus of my study, as the management was very co-operative. However, the low level of education of most respondents limited their conceptualisation of certain issues pertaining to the study. Furthermore, the fact that many respondents could not communicate in English and the researcher's Luganda is not

very good affected the focus group discussions and interviews. The study was also hampered by unreliable electricity supply at the telecentre. An extra day was scheduled to address this limitation. Besides, I was informed that holiday time brings many students to the telecentre, but being in the middle of an academic term, this segment of users was largely unavailable for my study. However, five days during holidays would not be considered a routine period as the holidays last only three weeks. I did nevertheless come across former students, teachers, as well as parents, all of whom gave an account of how important the telecentre is to students.

Conclusion

In this chapter, I have articulated the methods employed in my study as well as the sampling techniques, data recording and analysis options associated with them. I have also justified the choice of these methods visa-a-avis the research problem.

Finally, I reviewed the methodology applied in the study, pointing out its limitations and suggesting ways through which they could have been mitigated.

CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

Introduction

This study set out to develop greater insights into how a rural community makes use of, makes sense of and relates to communication technology. As noted earlier, it investigates how these practices relate to the assertion that communication technologies are a panacea for rural development in line with the ICTs for development model (Wilson, 2002). The findings of my investigation into the use of communication technology in Uganda's rural Nakaseke community are presented in this chapter.

The quantitative dimension

The quantitative dimension of the study (described in Chapter Three) sought to establish the identities of the Nakaseke CMC users. It aimed to establish the number of users, age, frequency, sex, occupation, services of interest and the information sought by the users. The quantitative data was obtained through a simple questionnaire (Appendix i) which all visitors to the telecentre during the period of data collection were requested to complete.

Table 2 presents the quantitative data relating to the users of the telecentre who completed the questionnaire. Thereafter I discuss the findings in relation to the number of visitors, their sex, age, occupation, frequency of visits, purpose and information sought.

Day	F	M	Age	Occupation	Frequency	Purpose	Information
1.1	X		18-30	Electrician	5x wk	Computer	Education/school
1.2		X	-18	Student	5x wk	Library	Education/school
1.3		X	30-50	Trader	2x wk	Computer	Internet/email
1.4		X	+50	Priest	2x wk	Computer	Internet/email
1.5		X	30-50	Priest	2x wk	Computer	Internet/email
1.6		X	30-50	Teacher	3x wk	Computer/ library	Education/farming
1.7		X	18-30	Student	1x wk	Library/computer	Education/school
1.8	X		18-30	Secretary	1x wk	Computer	Education/school
1.9	X		30-50	Civil servant	2nd visit	Photocopy	-
1.10		X	18-30	Farmer	5x wk	Computer	Health
1.11		X	18-30	Civil servant	1st visit	Library	Health
1.12		X	-18	Student	1x wk	Computer	Sports
1.13		X	18-30	Student	3x wk	Computer	Education/school
1.14		X	30-50	Civil servant	4x wk	Photocopy	-
1.15		X	18-50	Student	3x wk	Computer	Internet/email
2.1		X	18-30	Farmer	5x wk	Computer	Entertainment
2.2		X	18-30	Farmer	2x wk	Photocopy	-
2.3		X	30-50	Farmer	2x wk	Photocopy	-
2.4		X	18-30	Farmer	2x wk	Drama	Entertainment
2.5	X		18-30	Civil servant	2nd visit	Computer	Health
2.6	X		30-50	Civil servant	1x wk	Computer/copy	Health
2.7	X		30-50	Civil servant	Irregular	Photocopy	-
2.8	X		30-50	Civil servant	2x wk	Computer/copy	Health
2.9	X		30-50	Civil servant	1x wk	Library	Health
2.10		X	30-50	Farmer	2x wk	Library	Farming/business
2.11	X		30-50	Casual worker	5x wk	Computer/copy/video	Farming/entertain
2.12	X		30-50	Nursing assist	2x wk	Computer	Farming/health
2.13		X	30-50	Civil servant	5x wk	Computer/library/copy	Farming/educ/sports
2.14		X	18-30	Student	5x wk	Computer	Education/email
2.15		X	30-50	Tourist	1st visit	Computer	Internet/email
3.1	X		30-50	Civil servant	5x wk	Library	Health
3.2		X	30-50	Priest	1x wk	Computer	Internet/Email
3.3		X	30-50	Journalist	Irregular	Computer	Internet/Email
3.4		X	18-30	Teacher	1x wk	Library	Education
4.1		X	18-30	Civil servant	2x wk	Photocopy	-
4.2	X		18-30	Civil servant	1x wk	Computer	Internet/email
4.3	X		30-50	Farmer	1x wk	Seminars	Farming
4.4		X	-18	Student	2x wk	Library	Education
4.5		X	-18	Student	2x wk	Library	Education
5.1	X		30-50	Farmer/trader	1x wk	Computer/video	Farming/trade
5.2		X	+50	Farmer	5x wk	Computer	Farming
5.3		X	+50	Farmer	1st visit	Computer	Farming
5.4		X	30-50	Farmer	1x wk	Computer	Farming
5.5		X	+50	Farmer	1x wk	"To learn"	Farming
5.6		X	30-50	Farmer	1x wk	Video/learning	Farming
5.7		X	+50	Farmer	1x wk	Computer	Education
5.8		X	+50	Farmer	2x wk	Library/computer	Farming
5.9	X		30-50	Farmer/h-wife	1x wk	Computer/copy	Farming/health
5.10	X		+50	Farmer/h-wife	1x wk	computer/seminar	Farming
5.11	X		30-50	Farmer	1x wk	Computer/video	Farming
5.12		X	18-30	Farmer	5x wk	Library	Education
5.13		X	+50	Farmer	2x wk	Library	Farming
Total	17	35					

Table 2: Nakaseke CMC visitors over 5 days from June 13-17, 2005

Nakaseke CMC visitors

In addition to the 52 people listed in the tables, a small number of visitors to the telecentre did not complete the questionnaire either because they declined to or their visit was restricted to photocopying documents and deliveries.Seventeen of the fifty-two visitors who did complete the questionnaire were women and thirty-five were men.

For a telecentre established to serve two sub-counties (Nakaseke MCT, 2002) with a combined population of 37,354, the number of visitors was notably small, suggesting low interest. Arguably, many would-be visitors lack the intellectual and managerial skills needed to exploit information profitably (Lyon, 1990; Mensell and Wehn, 1998).

The finding that the number of women who visited was 32.6% of all users compared to 67.3% for men is in line with the United Nations' findings that women are more likely than men to lack basic literacy and computer skills which would enable them to take advantage of the new global communication opportunities (United Nations, 2000). This low ratio of women to men at the telecentre was hardly surprising. A level of literacy is required for one to ably exploit communication technologies but women in developing countries, particularly rural areas, have lower levels of literacy as a result of social and cultural factors. Women comprise 64% of illiterate adults globally; girls comprise two thirds of the school-age children in the developing world without access to basic education (United Nations, 2000:116).

Age range of visitors

Twenty-four of the respondents were aged between 30-50 years, 16 were between 18-30; 8 were older than 50 years, while 4 were younger than 18 years. Notably, there were considerably few users older than 50. This was expected in a rural Ugandan setting where literacy among the older people is much lower than among the younger ones. Older people also tend to be more conservative and resistant to change occasioned by technology. However, it was unexpected that the 30-50 age bracket would register the

largest number of visitors. This pattern inevitably changes during school vacations when students tend to dominate as telecentre users (see context in Chapter One).

Age range	Number
Under 18	4
18-30	16
30-50	24
Above 50	8
TOTAL	52

Table 3: Age range of visitors at Nakaseke CMC from June 13-17, 2005

Occupations of visitors

Users identified their occupations as farmer (20), civil servant (12), student (8) priest (3), teacher (2), electrician (1), trader (1), secretary (1), journalist (1), nursing assistant (1), casual worker (1) and tourist (1). Apart from the farmers, many of them semi-literate, most users could be described as a modestly educated elite. This is an indicator that the telecentre mainly serves an already advantaged[2] group in Nakaseke. These findings in relation to the occupation of Nakaseke CMC users are consistent with those of Minges (2001) in his study of telecentres in Uganda that most targeted illiterate farmers who do not speak English do not use the services which tend to benefit the educated elite in the rural areas. This scenario becomes even more apparent when one considers the frequency of visits.

[2] They are advantaged to the extent that they are better educated or perhaps economically better off than the rest because they have jobs.

Frequency of visits

Most respondents used the telecentre once a week (17). Others used it twice (14), five times (10), three times (3) and four times (1) weekly. Two respondents used it once in more than two weeks. Three users were visiting for the first time while 2 visited for the second time. While there were 52 visitors to the telecentre during the data capture period, some of these used the facilities more than one day a week, visiting two to three times in the week. On Day 3 and Day 4, visitors making a second or third visit in a week comprised 66% and 50% of those days' users respectively. On Day 2 and Day 5, they were 25% and 38% respectively. From this data, it becomes clear that the centre tends to be patronised by the same fairly small number of people. The finding that only three people were visiting for the first time, including a tourist who will possibly never return, and only two were visiting for the second time, also supports this finding.

Day	Total No. of visitors	New visitors	Returning visitors	% of return visitors
1	15			
2	20	15	5	25
3	12	4	8	66
4	10	5	5	50
5	21	13	8	38

Table 4: Returning visitors

Purpose of visiting

Computers were identified as the purpose for most respondents visiting the telecentre. Thirty respondents visited to use computers, 12 to use the library and 6 for photocopy services. Four others visited for videos, seminars and drama. Where more than one purpose for visiting was cited, only the first one was considered for this study. The

interest in computers by 57% of all telecentre users was expected because of the many functions a computer can perform, including typing, Internet/email, as well as providing a range of information on health, farming, business, sports and entertainment. Of the 30 respondents interested in computers, 15 were aged 30-50; 9 were 18-30; 5 were older than 50 while 1 was younger than 18. Furthermore, 18 were male and 12 female. The library had fewer visitors because students who are its main users were at school. The photocopier arguably had the highest number of visitors but as already explained, the questionnaire was not administered to many of them. On the other hand, the radio was not included because users do not have to visit the telecentre where the questionnaire was administered. The use of these facilities is discussed in more detail under the qualitative dimension later in this chapter.

Age	**Under 18**	**18-30**	**30-50**	**Above 50**
Number	1	9	15	5

Table 5: Age of computer users

Information on farming was sought by more telecentre users (16 or 30%) than any other category. With 20 users (38%) describing themselves as farmers, that is hardly surprising. Thirteen of these (65%) were members of the Knowledge Group. It is however striking that almost twice the number of people who sought information on farming (29 or 55%) visited the telecentre to find information on the Internet/email, education related material, entertainment and sports (as well as photocopy (6) which was not considered as information). That finding tends to confirm the assertion that apart from farmers, the majority of telecentre users are a fairly small group of already advantaged users. Education-related material was the target of 12 users. Users interested in Internet/email were 8, health (7), entertainment (2) and sports (1). Where more than one item was mentioned, the first one was considered.

The telecentre was established primarily to bring communication technologies closer to the rural population and thus bridge a digital divide between the 'information

rich' and the 'information poor' (see Chapter Two). However, the considerably low turn out, the low ratio of women to men and the finding that the telecentre serves a small group of advantaged users indicates that ICTs in rural areas could actually exacerbate the divide rather than stem it. As Mensell and Wehn note, "the application of ICTs as tools for development offers opportunities to reduce some existing disparities in income distribution and quality of life but it can also give rise to new forms of exclusion by virtue of gender, religion, ethnicity, language or illiteracy" (1998:3).

Despite the low turn out illustrated in the quantitative dimension, the Nakaseke CMC offers a degree of access to communication technologies to the Nakaseke community. The next question to pose then is what they do with this access (Mensell and Wehn, 1998), and it is addressed in the following section.

The qualitative dimension

In addition to quantitative analysis, I employed qualitative research techniques, namely observation, focus group interviewing and semi-structured interviews (see Chapter Three). The qualitative dimension sought deeper understanding of how members of the community engage with the communication technologies at the telecentre. Thus, the study sought to establish how the visitors use the facilities, the nature of the use and the perceived impact of the use on individuals and the community. It also set out to probe to what extent these practices relate to the assertion that communication technologies promote development in line with the ICT for development model (see Chapter Two).

The qualitative research techniques provided rich data that is analysed in the section below under four broad categories; use of technologies; perceived benefits to individuals and community; status bestowed on users, and reasons for non-participation.

Use of technologies

Computers: 'Information is there sleeping'

The more educated respondents were arguably more conversant with computers than their less educated counterparts. The participants in FG3, for example, could all use a computer. Semo[3] could read newspapers on the Internet and use email to communicate with his relatives in the United Kingdom while Tim who had just completed a basic computer course now visits the telecentre to practice and email friends. Billie, a teacher, uses the computer to prepare lessons for his class, while Musa uses it to read about European soccer.

Apart from FG3, the respondents generally did not know how to use a computer. A few others however reported using computers. Mamba (FG4) said he sends email to relatives abroad and reads news on-line. Kelly (FG5) also reads news on-line while Netta (FG5) uses the Internet to look for sponsors for her bee-hive project and prepare lessons for her adult literacy classes. This contrasts sharply with the quantitative dimension finding that 57% of the users (30 out of 52) visit the telecentre to use computers.

Lack of computer literacy was identified as the reason most respondents in FG1, FG2, FG4 and FG5 were not using computers. The irony is that some of the respondents claimed they could use a computer but were unable to explain what they do with it. They were also proud of having email addresses they never used.

Consider Harriet (FG1) who visits the telecentre regularly but does not use a computer because she lacks technical competence and money. She is however proud to have an email address she admits not using:

> I don't understand email, what I understand best is post office. Moreover, to go on email every now and then, I have to pay. At post office, I have my box, I go open it, pick my letters and pay only once a year. The reason I got an email address is because I thought if I get friends abroad it would help me. But I don't know how to send it. They

[3] Names of respondents have been altered to withhold their identity

> said they would organise lessons for us but they have not…So these things discourage me and I said let me keep with my post office, otherwise if I got that knowledge I would have discontinued postal services (Harriet in FG1).

The continued convenience of the post office is linked to her ability to use it without having to seek the assistance of the post master to open her mail box while, in comparison, she needs telecentre staff to help her use email. With relatives in the United States and Sweden to correspond with, Harriet recognises that the cost of posting letters (about $2.5 each) is higher than that for email (about $0.5 for 30 minutes). In addition, she has to wait for at least two weeks to get a reply in contrast to the immediacy of email. Harriet would like the telecentre to organise lessons for older people like her at a reasonable cost, taking "into consideration our understanding as old people because they might say only one lesson, but I don't understand these things so fast."

Miriam (FG1) could use a computer but lacked the knowledge to find information on the Internet:

> That is the problem. Even if it (information) was there, we wouldn't know because we don't know how to access it. They say there's information on farming but it is there sleeping and even if you want you can't see it, unless through other people. If one had seen it, they would have encouraged the rest also to get interested. But now even if you say there is this or that on the Internet, they will ask you, have you seen it? (Miriam in FG1).

Respondents in FG2, both young trainee midwives, described themselves as "computer illiterate." When Orla and Melda visit the telecentre with some work to type, telecentre staff does it for them. Orla would be interested in using the Internet but "I'm green about how it is done." Both respondents supported Harriet's idea of special computer training targeting adults.

> You know everybody these days is talking about computer; you find even a primary school kid talking about it; if they can organise for us adults, surely we would be up to date with other Ugandans (Orla in FG2)

While respondents in FG4 claimed to use computers, none could explain what they do with them. They have email addresses but admitted not using them, with two of the

participants blaming power outages and shortage of computers. However, in spite of the complaint, during the course of the five days of data collection I never saw all eight connected computers being used at any one time. As in FG4, FG5 respondents had email addresses but only three reported using them. It is probable that these respondents do not know how to use computers. Some, like Edmund (FG5) who said he doesn't use email "very much" because he doesn't have relatives abroad, do not even know what to do with the email addresses they have. On being questioned about his computer use, all one respondent could say was:

> I used to see a computer and recognise it, but from my training here what I thought a computer was is not what it is. This is my main benefit and what friends who are still behind are missing (Malta in FG4).

For Malta, therefore, and probably other respondents, 'knowing' or recognising a computer is good in itself, even if he cannot use it. His 'understanding' of computers relates to the twin concepts of affordances (possibilities that an object or environment offers, or appears to offer, in order to perform an action upon it) and culture (Burton, 2002). A computer cannot be used as a bicycle which attests to its functional affordances, but it can be used as a way of saying something about a community or someone. It could be invoked as a status symbol for example even if it doesn't work or the 'users' do not know how to use it (see Chapter Two). Arguably, respondents like Malta want to be seen to know about a computer because of its symbolic value.

These responses are interesting and noteworthy. They are reminders of the level of skill and literacy required to use ICTs. That the group with more educated respondents (FG3) appeared to have the most skilled users of the computers emphasises this point.

From the findings, it is clear the majority of visitors interviewed do not know how to use computers and need training to do so. However, the reasons they put forward for using computers include status. Orla (FG2) aspires to be "up to date" by learning how to use a computer because "even primary school kids" are talking about computers these days. Thus to respondents like Orla, Melda (FG2) and Malta (FG4), among others, the computer is a status symbol, not a development tool, which suggests that even with access, there is no reason to assume that it would have any development focus.

Furthermore, the findings show that like all cultural products, consumption of communication technology takes place within a certain context (Moores, 1993). Technologies are not always used as intended by the designers, let alone the sponsors. Users may appropriate ICTs in their own ways, including rejecting them or redefining their functional purpose. The computer for example can be used for playing games, education, typing, military purposes and crime, to name just a few uses (Mackay, 1995). Similarly, it was established in both the quantitative and qualitative dimensions of this study that some telecentre users were interested in sports and entertainment. These forms of use may not necessarily be in line with the providers' intentions.

The photocopier

The photocopy section is the busiest at the telecentre. Nakaseke Hospital and sub-county headquarters in the vicinity as well as nearby schools provide the biggest clientele. Documents photocopied at the telecentre include administrative letters, examination papers, reports and CVs.

High interest in the photocopier probably shows that it is more relevant to the needs of the people here than computers, for example. Besides, unlike a computer which requires users to know how to operate it, resulting in many being left out, the photocopier is operated by telecentre staff. However, as the Nakaseke community comprises mainly small scale farmers who have little reason to photocopy, this facility again serves the needs of members of a socially and perhaps economically advantaged class, the main users of the telecentre.

The photocopier runs as a commercial enterprise, earning the telecentre more money than any other technology, according to staff. A number of respondents (Miriam in FG1, Tim in FG3 and Namu in FG5) noted that the presence of a photocopier at the telecentre had saved users from having to seek the service in the nearest town 15km away. Billie and Bart (FG3) added that the photocopier at the telecentre was more efficient than those likely to be found in the town. However, according to one staff member, as the machine

is designed as an office rather than a commercial photocopier, it is prone to costly breakdowns, especially during school examination periods when it is even busier.

Nakaseke FM

Radio has been considered a remarkable agent of development over the years because of its ability to reach more people than other communication technologies (see Chapter Two). The radio component at the telecentre was introduced after the proposal for this study had been written so it was not foregrounded by the researcher as it was not included in the interview guide. However, its popularity was highlighted by respondents in focus groups and interviews who perceived it as a medium through which useful information is disseminated. Others perceived it as a status symbol for the community. The popularity of Nakaseke FM in contrast to other communication technologies at the telecentre is perhaps derived from its being cheaper and more convenient to use than other ICTs. That makes it an appropriate medium for the dissemination of information on income generating activities (Betty in FG1) such as farming and trade. Olive (FG2) cited the radio's role in health education while Ben (FG3), Sammy and Siraje (FG4) praised its mobilisation capacity.

In addition, respondents across all focus groups were excited by the idea that voices they hear on air belong to people they meet on the village paths everyday as opposed to Kampala FM stations whose presenters they only hear of and never get to meet. Furthermore, the radio's popularity relates to the fact that unlike the computers or photocopier, users do not have to pay to listen. In addition, listeners need not be sophisticated or print literate to benefit from its development programmes, after all, most of them are in Luganda, the local language.

As a result, the radio is perceived as being more relevant to the needs of the people than some of the other communication technologies at the telecentre. For example, Siraje (FG4) remarked that many people now prefer to listen to the radio rather than make the journey to the telecentre. He noted that more people were phoning the station to discuss programmes on the air than were visiting the centre physically. However, the manager

sees the radio as an important tool in mobilising the people to visit the telecentre (interview). Though these are contrasting positions, they agree that the radio plays a significant role for the telecentre.

Poor staff remuneration was understood to be one of the radio's problems. Respondents in two focus groups complained that radio staff are poorly paid which, they argued, is likely to undermine their performance. Sammy (FG4) argued that better pay would translate into more quality broadcast programmes, suggesting that the government should help by paying staff salaries. Malta (FG4) and Namu (FG5) added that radio staff is likely to lose interest in their work because they have little to gain from their labour.

A radio that covers a wider area and attracts bigger advertising was preferred. Sammy (FG4) and Abel (FG5) argued that wider coverage would bring in more revenue through announcements as well as advertisements from big companies while Kelly (FG5) appeared to be interested in expansion for its own sake. This proposal suggests that the respondents are not interested in the radio only as a development tool but as a status symbol as well. They would prefer a more powerful radio station for the sake of uplifting the area's status. Kelly explains:

> The telecentre has brought enlightenment. There are things we never expected to see in our area in our lifetime. Look at our radio, it is very important for people to say, this is Radio Nakaseke (Kelly in FG5).

Similarly, Siraje (FG4) would prefer the community radio to be equipped with mobile phones and live broadcast equipment so that, like bigger FM stations in Kampala, its reporters can cover live events in the field.

The library

The relatively well-stocked library is most popular among students and fills up during school holidays, according to the telecentre manager and some users. As explained in the context (see Chapter One), this study was conducted during school time and in the five days of data collection, less than 10 people used the library. This finding is hardly

surprising considering that most of the books are in English while the majority of members of the community use Luganda, the local language. In fact, Mamba (FG4) proposed that more books in Luganda should be introduced.

Not surprisingly again, several respondents (Harriet and Jalia in FG1; Sammy in FG4; Juliet and Jane in FG5) think the library is not meant for them but their school-going children. That also explains the low interest in the library among non-students. Respondents in focus groups praised the library in relation to what it has done for the children. "Our children have benefited a lot; pupils who have been using the library perform very well," said Sammy (FG4).

In contrast, Billie (FG3), a teacher, described himself as an ardent user of the library. Other respondents in FG3 (Semo, Musa and Tim), which has been identified as comprising more educated individuals than others, also said they use the library regularly while Bernard (FG4) claimed that his farming had improved because of the knowledge he acquired from the library.

Advantages to individuals and the community

Having examined how the Nakaseke community uses communication technologies at the telecentre, this study now focuses on what users perceive to be the benefits they derive from it as individuals and as a community.

Despite the finding in the quantitative dimension that much of the targeted Nakaseke community cannot use the telecentre productively because members lack the skills and resources to do so, responses obtained in the qualitative dimension indicate that the small number of people who have been exposed to ICTs through the telecentre perceive their quality of life to have improved as a result. Perhaps no other user typifies this perception of the telecentre more than Maria Nakalema, a rural, semi-literate woman in her 70s who inspired this study (see Chapter One) as I explain in the following section.

Maria Nakalema

One of the six interviewees, Nakalema started visiting the telecentre the year it opened in 1997. She participated in development seminars conducted at the telecentre and set out to disseminate what she had learnt to other people in the community. Nakalema did not know how to use a computer until the International Women's Tribune Centre and the International Development Research Centre (IDRC) facilitated her trip to the United States where she undertook three months' computer training in 2001. On her return, Nakalema was given a lap-top computer. In Uganda, she went for further training in computer use for which she obtained a certificate.

A member of the Knowledge Group, Nakalema often moves around the villages, sometimes with her computer, to teach fellow women and other people how to look after their animals and crops. Her training tool is a CD-ROM developed by the International Women's Tribune with the help of Nakaseke women, which teaches the women how to get involved in income generating activities using resources at their disposal. She also talks to them about health, particularly HIV/AIDS, discouraging the use of condoms and instead encouraging abstinence and faithfulness[4]. Nakalema tells her listeners that they or their children will not get jobs if they do not learn how to use a computer.

Working with the CD-ROM on behalf of the telecentre has put Nakalema in a position of power. She uses this position to construct herself as an authority on topics ranging from starting a business to fighting HIV/AIDS. Within a largely semi-literate community that arguably lacks the knowledge necessary to challenge her positions, Nakalema has become an icon. Arguably, the community trusts and looks up to her as a role model for not only is she able to use a computer at her age, she has been profiled in the two national English dailies and even travelled to the United States, achievements others in her community can only dream of.

Moreover, her methods and style are likely to appeal to her audience. For example, by providing local names for some of the instruments she uses, *kyuma kikalimagezi* (intelligent machine) for a computer and *akamese* (rat) for a mouse, Nakalema makes it

[4] ABC (Abstain, Be faithful or use a Condom) is Uganda's official anti-AIDS strategy, but of late the government has been criticised for emphasising abstinence at the expense of condoms.

easier for them to understand complex technologies by avoiding technical jargon. Nakalema also challenges the view that you need some education to be able to use a computer. The septuagenarian who went only up to Primary Six argued:

> Me, where did I go to school? I am an example that you can use a computer without being educated. It is the computer teaching me. With the computer you even get good health; do you think I would still be able to walk? (Interview with Nakalema)

From her responses, Nakalema presents a very simplistic view of communication technologies, tending to believe that a computer can do everything in itself, including guaranteeing good health. And given her iconic following, her views, however outrageous, may not be questioned by a semi-literate audience. As she is considered authoritative, her personal conservative views and values evident in her advice against condoms in favour of abstinence in the fight against HIV/AIDS, hold credibility among her semi-literate audience.

Furthermore, Nakalema epitomises a modernisation approach to development. Her assumption is to equate communication technology to progress. This understanding of development, as explained in Chapter Two, emphasises material acquisition of technology and pays little attention to non-material aspects that relate to the lives of people such as the capacity to acquire and generate knowledge (Mensell & Wehn, 1998; Wilson, 2002).

While Nakalema could be seen as challenging the assumption that you need some level of literacy to exploit communication technology effectively, her dogmatic faith in computers could as well be understood in light of her limited formal education. Less educated people tend to be more at risk of what Heeks calls technological fetishism (in Gillward, 2001) which he defines as the belief that the provision of technology can in itself solve social economic problems from poverty to global competitiveness (see Chapter Two).

The section below presents the respondents' perception of advantages accruing from the telecentre in relation to health, farming, literacy, education and status, as obtained from focus group interviews.

Health

Dissemination of and access to information on health, especially on HIV/AIDS, immunisation and hygiene through radio, seminars and posters was cited as one of the roles performed effectively by the telecentre. It is not surprising that health was cited as an important factor as the telecentre is located next to a regional referral hospital where some of the respondents work. The health workers who were scattered throughout the focus groups were understandably more focused on health matters than other respondents.

The centre was seen as helpful to the community, particularly through advice and support of pregnant women in relation to caring for their babies and to HIV positive mothers in relation to preventing mother-to child infection (Martha in FG1). Orla explained:

> The radio has done a lot of work disseminating messages on health and normally there are professionals who come on air, so many people who listen in get some useful information. Also, there are pictures hanging on the walls which carry very helpful information – something they would not ask at the hospital or health centre, they come here, read it and understand (Orla in FG2).

Furthermore, immunisation levels were understood to have improved (Sammy in FG4 and Nelly in FG5). Together with Bart (FG3), they praised the community radio for facilitating adequate mobilisation. Nelly noted that all members of the Knowledge Group to which she belongs were now immunising their children. Immunisation understandably came up as a topic of interest because it is a contentious issue in rural areas of Uganda where its opponents perceive the immunisation drugs as harmful to humans. According to Nelly (FG5), the telecentre has also been helpful in relation to issues of personal hygiene such as advising on washing hands before eating and better sanitation in order to combat water borne diseases such as cholera, outbreaks of which are fairly common in Uganda.

Farming

Improved farming methods were perceived as another benefit attributed to the telecentre and were mentioned in three groups (FG3, FG4 & FG5). One respondent in FG3 and two in FG5 declared with pride that there is a clear difference in farm yields between farmers who visit the telecentre and those that do not. The difference was understood to emanate from the formers' adoption of sustainable farming methods learnt through the telecentre.

> Those who have taken interest have improved their farming. They have been coming, observing, then listening to lectures from experts from Kawanda (Agriculture Research Station) and when they go back they change their ways. A farmer who has been exposed to this place can't be the same as the one who has not in the way they do things (Semo in FG3).

Abel and Amina (FG5) concurred that it was "very easy" to tell the difference between users and non-users of the telecentre among the farmers in the area. The "new ways" include basic farming skills such as spacing, pruning, use of natural fertilizers, pest and disease control, as well as use of improved varieties. Some of these practices are resisted by the more conservative farmers in favour of their familiar traditional ways.

Status bestowed on users

Computer training, library use and education were perceived as tools the telecentre uses to fight illiteracy and thus uplift the social status of the community. Respondents in all focus groups cited these services, with Sammy (FG4) attributing academic success among pupils in the area to the library in particular. Furthermore, Kelly (FG5) spoke of improved communication, "enlightenment and education", suggesting that illiteracy in the area would cease in 15-20 years if the telecentre were to stay in place, a particularly modernist assumption that equates education to progress.

> Now with the radio, you can have a teacher abroad teaching people of Nakaseke. It will not be possible to come here in 15-20 years and call 15 people and find that none of them can speak English or use a computer. Illiteracy will be a thing of the past (Kelly in FG5).

It is necessary to note that the telecentre was not established to replace formal education institutions. Further, with the government's Universal Primary Education programme (UPE)[5] now in place, it is hoped that illiteracy will be reduced substantially in that period. A more literate Nakaseke community would be in a much better position to use communication technology.

Some respondents however understood the telecentre's role as that of giving their area symbolic value. One such respondent said:

> The telecentre is very important because previously we didn't have a facility of this kind. Now people of all kinds come from all corners to visit. Previously Nakaseke was known for the hospital but now people can as well know it for the telecentre (Bernard in FG5).

Sammy (FG4) expressed similar sentiments:

> I see a problem of transport. UNESCO gave us means but the van is grounded. At least when it was moving, wherever it passed in the city people would read 'Nakaseke Telecentre'; it adds on something. Also, it helped in transport (Sammy in FG4).

Such responses illustrate the perception of technologies as status symbols or "rhetorical signifiers of modernity" (Burton, 2002: 51) in relation to the twin notions of culture and affordances (see Chapter Two). For such respondents, the telecentre was perceived in terms of the glory it brings to Nakaseke. It was perceived as bestowing the status of being modern and sophisticated.

Furthermore, a number of respondents I interacted with through interviews and observation left me with the perception that they view themselves as enlightened and privileged in contrast to other people. This impression was underlined by respondents in four of the five focus groups who perceive the telecentre as bestowing a degree of status on individuals who use it. Illiteracy was cited as being partly responsible for this perception because the largely illiterate community considers the users an elite group

[5] The UPE programme introduced in 1997 enables Ugandan children to get free primary education.

(Martha in FG1) and the telecentre as being for people who are educated (Harriet in FG1). This perception of the users as 'elite' or 'educated' serves to enhance their social status as 'modern' within the community. For some it represents a step up the social ladder. Siraje (FG4) noted that it was not until he came to the telecentre that he learnt that an old man like him could use computers, which he earlier thought was the preserve of white people. A member of the same group was more forthright:

> The centre has helped me. Now I am a reporter for Nakaseke Radio, and because of that position, I get respect from everyone, which makes me swell, my children are using the library and everyone in the village knows me (Sammy in FG4).

Sammy's sentiment was reiterated by a radio co-presenter, Musa (FG3), who identifies his ability to use communication technology as the source of his newly found respect:

> You meet an adult who could even be your parent; he goes on his knees and says, 'welcome back my son, thanks for sending us greetings on air.' They take you as someone so special and it is difficult to get that attitude out of people, to take us as ordinary people (Musa in FG3).

Musa added that one of his proud moments at the telecentre was being interviewed by a white reporter on his job as a radio presenter. By associating himself with a white reporter, Musa is, like Siraje who associated a computer with a white person, equating white people with modernisation and sophistication (a common tendency in Uganda and perhaps other developing countries).

Gender

The perception of the telecentre as having a modernising influence was also reflected in FG5. It was Namu's argument that the telecentre had enabled Sarah (a woman in her 70s who was part of the group) to participate in the focus group interview.

> Because of this telecentre, that is why a woman like her can stand up and talk before any kind of audience. She has been exposed; she is now modern (Namu in FG5).

Being a woman, Sarah's use of the telecentre was understood as not only breaking barriers of 'backwardness' but of gender power relations as well, on the path to

'modernity'. More so, contrary to what I as a researcher had anticipated in a traditional and patriarchal society, married men were understood to be positive about their wives visiting the telecentre. Apart from Namu (FG5) who said that some men fear their wives will become "difficult" if they visit the telecentre, it was the position of respondents in all groups that the women were freely using it.

> This centre has helped families; in situations where both man and woman visit, when they go back and apply the new knowledge, the results are very good for the household, especially with farming…Good enough, telecentre activities take place during the day so it reduces suspicion but generally we haven't had this problem (Mamba in FG5).

Another respondent agreed.

> The centre hasn't caused us any problem. The man cannot say no because what you do at home after spending time here (at the telecentre) shows itself (Gemina in FG5).

However, as established in the quantitative dimension, women's participation is still lower than that of men. 32.6% of all visitors to the telecentre are women compared to 67.3% for men.

Language of access

Further promoting the respondents' sense of superiority, those who do not visit the telecentre were seen as feeling inferior or alienated by the use of English at the centre. Kelly explained:

> When one who can't speak English comes and meets three people speaking English, he says ah, I don't see what I can gain from there (Kelly in FG5).

The reference to 'white people', 'modern woman' and 'speaking English' in different interviews illustrates the perception of modernisation among users of the telecentre. That Kelly, who is understandably learning English at the telecentre, finds not speaking that language an impediment to using the telecentre sums up a feeling of alienation that non-English speakers, the majority in the Nakaseke community, might have. With English

being seen as a language of access to the telecentre, the perception of users as modern, elite, enlightened or sophisticated can only grow. This perception is partly responsible for the considerably low numbers visiting the telecentre.

Reasons for non participation

In this section, I examine why some people are not visiting the telecentre from the point of view of users interviewed in focus groups and non-users in interviews.

Lack of time, interest and awareness, and the perception that it is for the educated, were understood to be the reasons why the telecentre is not getting more visitors. For the population of 37,000 served by the telecentre, an average of 25 visitors per day as the quantitative dimension of the study reveals, excepting the few who didn't complete the questionnaire and the power outages which kept some away, is considerably low. Below I outline the reasons advanced to explain the low turn out.

'I don't have the time'

Lack of time was identified to account for low attendance by focus group respondents (FG1, FG2 and FG5) and interviewees. Moreover, in an interview with Conrad, who runs a retail business in Nakaseke trading centre, he stated that he could not find the time and that he had never felt the need to use the Internet in his business. Other non-users interviewed, Jonathan and Paulina, also cited lack of time. Interestingly, the focus group respondents who raised the issue of time (Miriam, Melda, Orla, Abbey and Jalia) also had other responsibilities to attend to which they organised around in order to visit the telecentre. My understanding was, therefore, that although lack of time does indeed deter some potential users, it is primarily a lack of interest or motivation. Lack of interest was indeed cited as being the reason for some people not visiting the telecentre (Miriam in FG1; Semo and Siraje in FG3; and Malta in FG4). The telecentre's perceived lack of relevance to the lives and needs of the people was understood as partly responsible for the low turn out.

‘They had never seen a newspaper’

The lack of newspapers was specifically seen as contributing to the perception that the telecentre was not relevant (FG3 and FG4). The telecentre discontinued the supply of three daily newspapers recently because it could no longer afford them. The dailies, two in English and one in Luganda, were a major attraction because the average telecentre user cannot afford daily copies on his or her own. Some people in the outreach centres[6] had never seen a newspaper; but depended on hearing reviews of news headlines being read out on radio, according to a telecentre staff member.

The telecentre now encourages interested visitors to read the papers on-line, but not all are able to do that. While some are unable to use computers, others prefer a newspaper that they can touch and feel.

In addition to the lack of newspapers, other potential users are said to have lost interest in the telecentre after finding the facilities too complex for them to operate and not meeting their expectations. Semo explains:

> When some people heard of a computer, they thought you come and stare at it and get whatever you want. Reality was different. When you try to show him how it works and he finds some difficulty, the next day he doesn’t come back (Semo in FG3).

Therein lies one of the major problems of promoting ICTs among a semi-literate people. Like Harriet in FG1 who finds postal services easier to use than email, people with a low level of education or none at all understandably find computers complicated. For technology to make sense to such people, it would have to be more user-friendly.

‘I’m not going to eat a computer’

The perception that without an education one cannot use the telecentre effectively was widespread in the focus groups as well as the interviews. It was the understanding of some people that the telecentre can only benefit the educated (Harriet in FG1, Semo in

[6] 16 outreach centres established in different villages by the telecentre to take services closer to the people were closed for lack of adequate funding.

FG3, Kelly and Juliet in FG5). Respondents (Malta, Abel and Juliet in FG4 and FG5) reported being asked by their associates how they would benefit from the telecentre since they had not gone to school. An interviewee, Jonathan, who doesn't visit the telecentre, was very blunt in his response: "Those things do not mean anything to me in the village. I am not going to eat a computer, am I?" Paulina, another non-user interviewed, added that computer instructions were in English which she could not speak as her education was limited. Similarly, quoting her friends who do not visit the telecentre, Juliet in FG5 said: "They say, 'I didn't go to school, what will the computers benefit me?'"

'Not enough mobilisation'

In addition, it was generally perceived that lack of awareness of the telecentre and its importance was responsible for the small numbers turning up (FG2, FG3 and FG5). This was blamed on lack of adequate mobilisation and sensitisation of the community. It was understood that there was little effort invested in teaching people to appreciate the benefits of the telecentre (Sammy, Mamba and Malta in FG4). "There isn't enough effort directed at people to participate," said Malta. Certain respondents proposed a video-backed operation in the villages to show the people what the telecentre is all about. In support of the idea, Mamba explained that people are likely to appreciate only what they can see:

> Sometime ago, when tractors were introduced, people felt that they were bad for farming because they could dig soil from underground and bring it up on top, so what the authorities did, they brought videos to show people those using tractors and those using hoes and eventually everyone realised the benefits of a tractor. This example works here, when you go to the village and tell them about something they haven't seen, they don't care; but if you show them, they will pick interest (Mamba in FG 4).

'We have natural knowledge'

Mamba's analogy (above) reveals yet another reason advanced to explain why a number of people do not visit the telecentre, namely fear of the unfamiliar. Some people were understood to resist change on the basis of tradition. For example, Siraje (FG4) said

some non-users argue that “they have natural [indigenous] knowledge; they know how they have always done things.” This conservative tone is perhaps unsurprising considering the traditional context of the members of the community.

If telecentre were to go

Having focused on reasons why some people do not use the telecentre, I now move to consider the importance users attach to it. The respondents in focus groups were asked their reaction to the possibility of the telecentre being closed. It was unanimously agreed that it would be disastrous as the nearest services of its kind would have to be found 15km away. Disadvantages that could ensue were identified as higher costs and poor services. Not only would they have to spend a lot of time and money on the journey to Wobulenzi, the nearest town, it would also cost them much more than presently at the telecentre as the facilities in the town are commercial enterprises with their attendant profit motives (Miriam in FG1, Tim in FG3 and Namu in FG5). Besides, it was feared that the services there would be of lower quality than those offered at the telecentre (Billie and Bart in FG3). For Jane (FG5), the closure would mark the end of computer training and library services for the children in the community.

The telecentre was established to serve a marginalised group that would otherwise not access ICTs because of cost or distance, so its closure would mean that its current users are left with no other source of affordable technology services. However, as argued in previous sections, many targeted users are yet to use the telecentre anyway, which undermines its potential. A considerable increase in the number of people visiting the telecentre was perceived by respondents as directly linked to its realisation of its goals:

> The goal will be reached but it will take time. Those who have been trained are very few; they are not able to run everything and unless very many people are trained, it is hard to achieve the goal (Siraje in FG4).

Sammy, Semo (FG3), Kelly and Malta (FG5) agreed with Siraje (FG4) on the importance of the telecentre attracting more visitors.

Conclusion

In this chapter I have analysed the findings of both the quantitative and qualitative dimensions of the study of the Nakaseke community's use of communication technology. The study sought to investigate how the Nakaseke community uses, makes sense of and relates to communication technology at the telecentre. The ultimate goal was to establish whether the telecentre fulfills its anticipated role in relation to development in the area, in line with the much talked about ICTs-for- rural-development model (Braga et al., 2000). In the quantitative dimension it was established that considerably few people visit the telecentre because many lack the necessary intellectual and managerial skills to exploit ICTs adequately. It was also established that the telecentre largely serves a fairly small group of already advantaged individuals in the community. The qualitative dimension on the other hand established that many visitors are computer illiterate. It was also established that many users perceive the telecentre as a status symbol and themselves as 'modern' which tends to exacerbate the digital divide that the centre was established to bridge. The study also reveals a modernisation approach to development as technology is equated to progress by the respondents. The findings are thus in line with the literature review (see Chapter Two) which cautions against suggesting an automatic link between ICTs and rural development. These conclusions are developed in the final chapter.

CHAPTER FIVE: CONCLUSION

Conclusion

In this chapter I present the conclusion to the study, suggesting recommendations and possible areas for further research. This study set out to investigate the use of communication technologies at Nakaseke CMC, aiming to establish how the Nakaseke community makes use of, makes sense of and relates to ICTs at the telecentre and to probe whether these practices sustain the view that ICTs are a panacea for rural development. In that regard, the study set out to answer questions related to the identity of users, nature and purpose of use, ratio of women to men as well as attitude of users.

The study is informed by the debates around the role of new media in the development of rural areas in Third World countries. It examines the three paradigms associated with the concept of development, modernisation, dependency, and 'new multiplicity' in which it is located. The modernisation approach is associated with the 1950s and 60s and perceives communication and development as a linear process. According to this approach, developing countries can "modernise" by simply adopting market policies of western countries (Servaes, 1996) and letting multinationals into their markets (see Chapter Two). Assumptions of the modernisation approach were however challenged by advocates of the dependency paradigm in the 1970s who suggested a link between Third World underdevelopment and dependency (Servaes, 1996). On the other hand, the third paradigm ('new multiplicity') advocates a path to development that differs from country to country as well as participation of the targeted population in development initiatives (Servaes, 1996).

Despite the paradigm changes highlighted above, the current discourse on ICTs and development in developing countries is still largely influenced by the assumptions of the modernisation model (Akpan, 2000). It is assumed that Third World countries cannot develop unless they are part of the new global economy which is driven by information and communication technology. Thus organisations such as UNESCO, International

Development Research Centre (IDRC), International Telecommunications Union (ITU), World Bank and the British Council, are at the forefront of getting Africa "connected."

However, the automatic link between ICTs and development championed by these organisations has been oversimplified as it tends to ignore issues of poverty, poor infrastructure, language barriers and lack of technical knowledge, which according to Mensell and Wehn (1998), undermine the potential of ICTs in the rural areas of developing countries. This realisation creates doubt as to whether ICTs should be a priority for Africa.

In fact, some radical critics such as Robbins (2002) have suggested that international organisations at the forefront of "connecting" Africa are only interested in opening up the global market in favour of western business interests.

> Even as they proclaim Africa's 'hopelessness', transnational corporations eye the continent's 800 million potential consumers (Robbins, 2002:240)

Likewise, Herman and McChesney (1997) complain that ICTs have expanded, enabled by privatisation and deregulation of telecommunications in developing countries, "with little questioning of the superiority of the market and the profit motive" (1997:241).

The drive to "connect" developing countries also tends to ignore or is oblivious to the low level of interest in telecentres among targeted users. The low interest is arguably because most would-be users lack the necessary technical and intellectual skills needed to exploit ICTs profitably. In the midst of a largely illiterate population, the Nakaseke telecentre has failed to attract more people because it is perceived as being for the educated. Indeed the findings of the study indicate that many would-be users lack the technical knowledge to use the communication technologies. As a result, the telecentre is being used by a fairly small group of already advantaged people in the community.

Non-participation by targeted users is perceived as not taking advantage of the ICTs but it is also true that the technologies are not immediately relevant to the needs of the people in the area. Not only does effective use of the technology require English, a language many do not understand, it does not solve immediate needs affecting poor people, such as that for food.

In addition, some people tend to negotiate technologies in their own way which is different from that intended by the sponsors. For example, as the findings indicate, many users perceive the telecentre not as a development avenue but as a status symbol. It is perceived as bestowing on users the status of being modern or sophisticated. Besides, other respondents claim to know how to use the technologies but are unable to demonstrate it.

Despite these loopholes, the telecentre is perceived as being helpful in providing information on farming and health. However, while these benefits can raise the rural people's standard of living, they cannot on their own leapfrog developing countries to modernisation in line with the ICT for development thesis.

Even the use of email, the main activity performed by users on the computers, may not be something to celebrate in relation to development. The Internet provides many opportunities in research and commerce that users could benefit from but they are limited by lack of technical knowledge, awareness and the nature of their rural and agricultural cash-based economy where credit cards are still limited to tourists, expatriates and a tiny elite class (Minges, 2001). However, email can also be perceived differently. It could be used to contact relatives and friends abroad much faster and perhaps more cheaply than post office.

While the principle might be noble, the Nakaseke telecentre cannot achieve its objectives because of the limitations mentioned above. The telecentre has arguably brought ICTs closer to more people in the area, but many people cannot exploit the opportunities it presents because they lack the necessary tools, such as technical knowledge. They are also hampered by infrastructural inadequacies such as the rampant power outages. In the end, as the findings indicate, the service tends to benefit a fairly small and already advantaged elite class of users.

Recommendations

In light of the contention that most telecentre users lack the technical knowledge to exploit its facilities appropriately, it is imperative to consider the Knowledge Group as a

good example that users can benefit from ICTs even when they are semi-literate or lack technical knowledge. The group comprises 25 mainly semi-literate small scale farmers. Because of their limited education and lack of technical knowledge, as established in their focus group interview, most of these farmers are unable to use a computer. However as a group, the members are still able to take advantage of ICTs when the telecentre organises seminars, videos and CD-ROMS for them. The telecentre could consider organising homogenous groups of that kind for women, youth and other groups through which individuals with limited education and technical knowledge can also benefit from ICTs communally rather than individually.

While computers are at the core of the ICTs at the telecentre, this study has shown that many people cannot use them because they lack the knowledge. Also, computers are not really relevant to the needs and lives of most people in the community. In contrast, the community radio appears to be more relevant and convenient to the people. Besides, it is cheaper to use and no level of sophistication is needed to use it. More over, the language mainly used is Luganda, their vernacular. Because of this realisation, the telecentre ought to strengthen the radio to enable it to play its potential role more fully. This includes hiring more appropriately qualified staff and perhaps improving their remuneration, issues some of the respondents complained about.

Furthermore, the telecentre also needs to establish a reliable power supply if it is to be effective. The power outages are disruptive and partly responsible for the considerably low turn out. To this end, according to the manager, the sponsors have pledged to provide a solar system to solve the telecentre's constant power outages.

In addition, the telecentre needs to focus more on young people. Not only do older people tend to be more conservative and negative towards change (users such as Maria Nakalema cited in Chapter Four are an exception), they are also the least educated. The younger people will either influence the older ones to be interested in the technologies or they will themselves grow up to become a technology-keen generation. Therefore, rather than concentrate on changing attitudes of older people or educating them, which will take a long time, the telecentre might focus on the future by investing more in the young generation, particularly students. More over, according to the 2002 Population and

Housing Census, 56.1% of Ugandans are aged below 18. It is noteworthy that telecentre staff are taking computers to neighbouring schools and teaching students how to use them as that is a step in the right direction.

Further research

There is need for more detailed research on non-users to establish their insights into why they do not visit the telecentre. The responses of users with regard to this question and those of the three non-users interviewed may not be sufficient.

One respondent suggested that since the radio was introduced, some people who would otherwise come to the telecentre now prefer to stay at home and listen to the broadcasts. The manager however felt that the radio is playing an important role in mobilising the people to visit the telecentre. Thus there is need to investigate whether more or less people are visiting the telecentre as a result of the introduction of the radio.

Finally, this study was limited by resources and time. A larger study covering a longer period and involving more respondents would offer a broader perspective.

Summary

This study investigated the use of communication technologies at the Nakaseke CMC to establish whether the telecentre is a panacea for development in the area. The findings presented in Chapter Four generally indicate that the potential of the telecentre to spur development in the area is undermined by inherent social and economic problems associated with rural areas in developing countries. These include poverty, illiteracy and poor infrastructure. As a result, the telecentre mainly benefits a fairly small group of advantaged users while the majority of people stay away. The community radio however offers hope for increased and more productive use of the telecentre. Also, the Knowledge Group offers an example of an alternative avenue through which unprivileged members of the community can take advantage of communication technologies.

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APPENDICES

Appendix i: Questionnaire

Questionnaire

1-Name (Erinya)

Tick as appropriate

2-**Sex**: Male Female

3-**Age**
(Below 18) (18-30) (30-50) (Above 50)

4-**Occupation**
Farmer Civil servant Student Unemployed
Trader Housewife Other (specify)

Frequency
5-~~**Number**~~ **of visits**
First time Second time Regular user (specify) Daily user

6-**Purpose of visit**
Library Fax Photocopier Video
Computer Telephone Other (specify)

7-**Information sought**
Farming Health Entertainment Sports
Education/School Business Other (specify)

Appendix ii: Letter seeking permission to conduct interviews

Uganda National Commission for UNESCO

REPUBLIC OF UGANDA

UGANDA NATIONAL COMMISSION

TELEGRAMS: "UNESCO"
TELEPHONE: 256 (41) 259713 DIRECT LINE
Fax: 256 (41) 258 405
E-mail: admin@unesco-uganda.org

EMBASSY HOUSE,
King George VI Way
P.O. BOX 4962
KAMPALA, UGANDA

UN/PGI/81 (NAKASEKE) 12th May 2005

Mr. Peter Balaba
Manager,
Nakaseke Community Multimedia Centre,
P. O. Box
NAKASEKE

Subject: **INTRODUCTION OF JAMES TUMUSIIME MASTERS STUDENT IN JOURNALISM AND MEDIA STUDIES**

This is to introduce the above student who is currently undertaking a Masters programme in journalism. He is investigating the use of communication technology in the rural community of Nakaseke. Attached is his proposal.

Please provide him the necessary information he may require from time to time.

Nsubuga Martin
Programme Officer,
Communication and Information

Appendix iii: Interview guide

Interview Guide

Introduction

I'm investigating how the people of Nakaseke use this telecentre and what it means to the community. This information is strictly for academic purposes and, thus, confidentiality is assured.

1-The centre (Begin with lighter questions to put respondents at ease)

a) Test how much the group members know about the centre/each other
b) Did they meet at the centre? Any prior interaction?
c) Their opinion on why they think the telecentre was established
d) Do they think the goals are achievable or have they been achieved?

2- Reason for visiting

a) Why do they come to the telecentre? (Probe and if necessary rephrase)
b) What is most attractive to them at the centre? What is most unattractive?
c) What would they otherwise be doing during the time they are at the centre? (Aim to establish whether centre is for passing time or serious business)
e) Do they visit with family members? Friends? If yes, do they sit together? (Find out whether visiting has social implications)

3) Frequency

a) How often do they visit?
b) About how much time do they spend? (Aim to establish how committed they are).

4) Facilities

a) What is their favourite section? Library? Computers? Photocopy?
b) Why are some facilities unpopular? (Probe: is it language barrier, lack of interest, lack of knowledge?
c) Do they use computers? What for? (Lead them on the different uses)
d) In the case of email, who do they correspond with?
e) Do they find computers useful? Handy? (Probe: Get a sense of how much they know about computers and how they perceive them).

5) Attendance

a) Seek information on friends who don't come to the telecentre. What reasons do they give for failure/refusal to visit?
b) Does the community view those who visit any differently from the rest?

(Probe possible factors behind their interest: search for status?)

c) Any family conflicts arising from visiting the telecentre? (Probe whether the centre is changing any cultural/traditional practices).

6) Benefits

a) Does community view telecentre as worthwhile investment?
(Seek to understand value community attaches to facility)

b) Ask what they perceive as its achievements

c) If it wasn't there, how and where would they get the services it provides?
(Get a sense of its importance to users)