TELECENTRES AS A STRATEGY FOR KNOWLEDGE MANAGEMENT IN THE SCECSAL REGION: A CASE OF UGANDA

Sarah Kaddu and Joyce Bukirwa Nyumba

Abstract

For the last ten years the International Telecommunications Union (ITU) and UNESCO have been introducing Multipurpose Community Telecenters (MCTs) in a number of countries including the SCECSAL region as pilot projects. The same is true for Uganda. However, as Uganda and the SCECSAL region leapfrog into the knowledge society, one still wonders to what extent telecenters have or can make a contribution. This paper therefore makes an attempt to devise strategies for improving KM in the SCECSAL region with special reference to Telecenters in Uganda. The specific objectives are: to establish the state of KM in Telecentre Centre (TCs) in Uganda, to highlight the problems affecting KM in TCs and to make proposals for improving KM in TCs. This study is based on: Literature review, Document Analysis, interviews and questionnaires administered to both Telecentre (TC) staff and users.

1. INTRODUCTION

Although there is a recognition that the knowledge society and the knowledge economy have arrived, and that knowledge is a key business asset, organizations are still in the early stages of understanding the implications of Knowledge Management (Rowley, 1999). Those organizations that will succeed in the global information society are those that can identify, value, create and evolve their knowledge assets. Many argue that knowledge has become the main competitive tool for many businesses. Drucker (1993) for instance, described knowledge, rather than capital or labour as the only meaningful economic resource in the knowledge society, while Senge (1990) warned that many organizations are unable to function as knowledge based organizations, because they suffer from learning disabilities. Community Telecenters can play an important role in promoting and improving Knowledge Management in the SCECSAL region. It is true that for the last ten years, the International Telecommunications Unions (ITU) and UNESCO have been introducing...
Multipurpose Community Telecenters (MCTs) in a number of countries as pilot projects (Mahmood, 2005: 204-220). This has been the case for the SCECSAL region. However, as the SCECSAL region continues to leapfrog into the Knowledge Society, one still wonders to what extent telecenters have made a contribution and how much more they can offer.

This paper, therefore, makes an attempt to devise strategies for improving KM in the SCECSAL region with special reference to Telecenters in Uganda. The specific objectives are: to establish the state of KM in TCs in Uganda, to highlight the problems affecting KM in TCs and to make proposals for improving KM in TCs.

First of all, an attempt is made to define and explain the major concepts: Telecenters (TCs), Knowledge Management (KM) and Information Management (IM) and to establish the status quo of the current application of these concepts with particular reference to their operations and contributions to development in Uganda. The study covered three Telecenters: Nakaseke, Buwama and Nabweru Multipurpose Community Telecenters. Data was collected using Literature review, Document Analysis, Focus group discussions, observations and interviews for both TC staff and users selected using purposeful and convenience sampling methods.

1.1 KNOWLEDGE MANAGEMENT (KM)

While it has been argued that Knowledge Management is the act of making tacit knowledge explicit (http://www.moviemaven.com/technical/definitions/elist.htm 8/11/2005), Santosus and Surmaz (2004) noted that there's no universal definition of Knowledge Management, just as there's no agreement as to what constitutes knowledge in the first place. Knowledge Management has been considered to be a business discipline, a collection of technologies and a philosophy. Santosus and Surmaz (2004) advise us to think of Knowledge Management in the broadest context.

"Knowledge Management as a concept, is about the way organizations create, capture and re-use knowledge to achieve organizational objectives. It is the process through which organizations generate value from their intellectual and knowledge-based assets. Most often, generating value from such assets involves sharing them among employees, departments and even with other companies in an effort to devise best practices". (Santosus and Surmaz, 2004)

While Knowledge Management is often facilitated by Information Technology (IT), technology by itself is not Knowledge Management. KM is an attempt to do with the collective knowledge of an organization, the individuals within the organization and what an individual does with his/her own knowledge. That includes storing, cross-linking, categorizing, contextualizing, retrieving and presenting. Davenport (2005) notes that,

"Knowledge Management is related to Information Management, but is not the same thing simply because Knowledge and Information are not identical. Information is atomic and static, but knowledge is associative, rich, multilayered, multi-faceted, contextual, accessible, and dynamic. For example, Information is what you get when you run a web search on Google but knowledge is what you would get or at least get closer to if all of the results that came back from that search were relevant to what you actually wanted, and were presented consistently Davenport (2005).

Although that's still not quite knowledge, it is closer. Ideally, knowledge would belong to an individual, but since Knowledge Management has been commercialized and more related to organizations, Knowledge Management looks at an organization as an individual or a single brain. According to Hawkins (2000), the key to Knowledge Management is capturing the knowledge of process - how organizations get their work done - and how various elements of information connect to this.

Rowley (1999) highlights the core themes for Knowledge Management as relating to: the creation of knowledge repositories; the improvement of knowledge acquisition; the enhancement of the knowledge environment;
and the management of knowledge as an asset. LaBranche (2000) enhanced this definition by saying that,

"Knowledge Management is the process of transforming information and intellectual assets into enduring value. It connects people with the knowledge that they need to take action, when they need it." (LaBranche, 2000)

It is concerned with organizing knowledge repositories (data bases etc.) so as to allow for easy retrieval and exchange of the information stored therein (Weigel, 2004). LaBranche (2000)'s definition has been adopted as the operational definition of Knowledge Management for the purpose of this paper.

1.2 INFORMATION MANAGEMENT

Weigel (2004) observes that Knowledge Management in the 21st century is equivalent to Information Management, the discipline that analyzes information as an organizational resource. Its major focus is to identify and gather content from documents, reports and other sources and to be able to search that content for meaningful relationships. It covers the definitions, uses, value and distribution of all data and information within an organization whether processed by computer or not. It evaluates the kinds of data/information an organization requires in order to function and progress effectively.

1.3 TELECENTERS (TCS)

Four definitions that seem to stand out have been highlighted. A Telecenter is a place where you find telecommunication facilities. These may include telephone, fax, e-mail, and Internet facilities while a Multipurpose Community Telecenter (MCT) has other facilities such as Library, audiovisual, education resources and indigenous knowledge resources (Nakaseke Multipurpose Community Telecenter, 2003).

Caspari (2002) defines it as a common point of access for multiple users providing a range of ICT services including Internet, fax, Word Processing and even specialised information returnable or applications.

According to Mahmood (2005: 204-220) an MCT can be defined as a technology hub that allows a community to establish many programs and services, which provide social, economic and Information Technology (IT) support. MCTs are structures that encourage and support communities to manage their own development through access to appropriate facilities, resources, training and services. "Multi-purpose" means that a telecenter is able to provide different user groups within a community, with a range of services relating to different domains (from education/training to business, from health to local governance), and it does so by offering several technologies. "Community" refers both to local community ownership and community access through the telecenter. MCTs rely on such resources as Public and Community Libraries and Local Mass Media in order to facilitate access to information services and to improve the dialogue between citizens and local/national institutions. Various forms of telecenters include Basic Telecenters, Telecenter Franchises, Civic Telecenters, Phone Shops and Cyber Community Centers.

A Telecentre is a community owned, managed and incorporated facility, which incorporates some “Hi Tech” equipment for the purpose of providing services which stimulate the creative use of telecommunications, computer technology, information access, education, employment, training and business enterprise. Emborg (1996) states that a Telecentre is a shared Information and Communication facility for people in rural and isolated areas. Share (1998) concurs; "a telecentre refers to virtual village halls, telelearning centres, telecottages, electronic cottages, community technology centers, networked learning centers and digital clubhouses".

1.3.1 History of Telecentres in Africa

The telecentre is a relatively new institution in Africa, and indeed in Uganda. Although it is still surrounded by many unknowns, it is believed that as a delivery model for ICTs, telecentres have the potential to transform the lives and livelihoods of many in the developing world and
even those in remote locations in developing countries (Etta, 2003). Drawing from experience of how Information and Communication Technologies (ICTs) have transformed the way people in the industrialized world manage their professional lives, International Telecommunications Union (ITU), United Nations Educational, Scientific and Cultural Organisation (UNESCO), and Canada's International Development Research Centre (IDRC) jointly financed the "Multipurpose Community Telecentre (MCT) Pilot Project for Africa". Within this pilot project umbrella, is the Acacia Initiative, an international effort led by IDRC to empower Sub-Saharan African communities with the ability to apply Information and Telecommunication Technologies to their own social and economic development. Thus, Acacia is meant to test the proposition that ICTs can also have significant transformation effects in the developing world like they did in the developed countries.

In the mid 1990s, the International Development Research Centre (IDRC), the International Telecommunications Union and UNESCO, invested time, effort and money to study this phenomenon of this growing importance. In the earlier part of this engagement, because of the paucity of projects, much of the effort was spent in intervention type projects, establishing telecentre-type facilities and structures in schools, in rural settings, hospitals etc. in a handful of African countries to spread knowledge of the new Information and Communication tools.

Etta (2003) adds:
Between 1997 and 2000, Acacia an IDRC Programme Initiative was launched in 1997 as Canada’s response to the call and support for an African Information Society Initiative (AISI), concentrating its work in four countries in sub-Saharan Africa: Mozambique, Senegal, South Africa, and Uganda. A few projects were implemented in other countries, for example, Mali, Benin, and Tanzania. Since this beginning Acacia has supported a total of 35 telecentres in seven countries in sub-Saharan Africa five of which have been jointly funded with other international partners such as UNESCO, International Telecommunication Union (ITU) and others (Etta, 2003)

A Community Telecentre is one way in which developing countries can accelerate their participation in the information economy.

2. METHODOLOGY

The study covered three Telecentres in Uganda: Nakaseke, Buwama and Nabweru Multipurpose Community Telecenters. Data was collected using literature review, document analysis, focus group discussions, observation and interview of both TC staff and users selected using purposeful and convenience sampling methods. Observations about the services offered were made and how they are used, literature was reviewed, the radio was also an information resource, Focus Group discussions were also held with persons who are directly involved with these Telecentres and more Information was got from the Internet to enrich the information that was obtained in the field. In addition, in-depth interviews were also used in collecting data from both the users and the Telecentre Managers.

3. FINDINGS

The study findings are based on three Telecenters: Buwama, Nabweru and Nakaseke Telecentres. Before evaluation of the Knowledge Management activities in these Telecenters, a brief about each of them is given.

3.1 Buwama Multipurpose Community Telecentre

Buwama Multipurpose Community Telecentre is located approximately 80 kilometers South of Kampala along a major highway and off a small trading centre built around Local Administration Headquarters. The local administration is responsible for a population of approximately 35,000 people, which is also the population the telecentre is meant to serve.

Buwama Telecentre, run by a Telecenter Management Committee, provides services according to the needs of the local Community. The center plays multiple roles in the rural community including: e-commerce, health, education, and community group capacity building. Services provided include: Telephone/fax; Library and information access point for digital and print materials, on a wide range of issues; ICT training and
3.2 Nabweru Multipurpose Community Telecentre

Nabweru Multipurpose Community Telecentre is located approximately 8 Km North of Kampala City. The telecentre is located at the Local Administration Headquarters which is the centre of administrative activities for the population around. The telecentre is located some 2 Km from a commercial trading centre comprising a population of about 10,000 in the low income bracket. Services offered include: Telephone/fax; Library and information access point for digital and print materials, on a wide range of issues; ICT training and visual applications; Internet and email; Topical Video shows; Photocopy; Outreach programs and community development programs and Entertainment through radio and television production facilities.

3.3 Nakaseke Multipurpose Community Telecentre (MCT)

Nakaseke Multipurpose Community sub-county is located approximately 50 km North of Kampala and 16 km from Luweero District Offices. From the 1991 Census, it has a population of 31,004 out of which 15,6172 are women. The 1997 projected growth is put at 35,953. Nakaseke Town itself has a population of 3,000 people. Most of the people are Baganda who are the biggest tribe in the Central part of Uganda. Other tribes in the area are Basoga, Banyoro, Luo and Etesot. The youth (below age of 15) form the biggest single population age group. The community is largely oral and doesn’t have a credible reading culture. Till the Telecenter started, there was no newspaper supply in the area. It was only available at the next town that is 10 Kilometers of a rough road.

Nakaseke MCT provides telecommunication and information services (telephone, fax, and library, Internet, education video, daily newspapers, photocopying) and several other services including:

i. Electronic delivery of Agricultural Information from National Agricultural Research Organization (NARO), an outreach program that has opened 16 community satellite telecentres at parish level;

ii. Computer applications training in primary schools and institutions of higher learning such as Nakaseke University and Nakaseke Core Primary Teachers College and Nakaseke Hospital;

iii. A partnership and network of Community Based Organizations and Non-Governmental Organizations e.g. Micro Finance, World Vision, Volunteer Effort for Development Concern (VEDCO) as well as research and educational institutions (e.g. NARO, Makerere and Kyambogo Universities).

iv. Annual sports events involving locally grown teams based at parish level.

v. Subscription to national and international networks such as the East African Theatre Institute and the British Council.

vi. Indigenous Knowledge Management.

vii. A virtual reality program focusing on social needs such as water and sanitation and household health and HIV/AIDS.

viii. A primary-schools-focused computer based mathematics program (B-Maths)

ix. A Community Radio broadcasting over a radius of 30 km

3.4 Telecentre Users

Telecentres users include: teachers, students and pupils, who want photocopy services and a good resource centre; medical officers who often want a good and appropriate reference library; business people with the interest of communicating with others in the capital city and an interest in innovations to make own receipt forms and custom letters; community members, elders and opinion leaders interested in reading newspapers and following current affairs; young people who are interested in learning new skills and trying them out and women in development groups who want to enhance their work by getting information on videos.
1. THE STATE OF KNOWLEDGE MANAGEMENT IN TELECENTERS IN UGANDA

From the information gathered in the field and observations made, the KM activities carried out by the Telecentres include local radio programmes, documentation of local language literature including recordings focusing mainly on development projects in the area and empowering the communities with ICT skills. This has enabled access to and sharing knowledge using ICTs amongst the communities. Others include secretarial services and making small booklets, in the local and English languages.

Community Discussions are also coordinated by the TCs. The telecenter public address systems are used to hold discussions on topical issues affecting the communities at intervals. In Nakaseke, such discussions take place once a month and a recording of the events is captured either on audio or video tapes.

All these activities have resulted into:

(a) Stimulated and created capacity for the community access to local, national and international information services and resources.
(b) Utilized information from the Centres for rural community development especially in the fields of agriculture and environment protection.
(c) Imparted skills in information searching including the use of modern information technologies, including typing, Internet and e-mail services
(d) Generated local information and knowledge from resources available within the community under the indigenous knowledge projects

From the findings above, it was noted that Information and Communication Technologies (ICTs) have repeatedly demonstrated their potential for improving Knowledge Management in Uganda. In many instances, poor people have experienced benefits in the form of: increased income; better health care; improved education and training; access to job opportunities;

engagement with government services; contacts with family and friends; enterprise development opportunities; increased agricultural productivity and environmental management. However, these developments face a number of challenges.

5. CHALLENGES OF KM IN TELECENTERS IN UGANDA

Among the challenges identified as affecting KM in the TCs studies include: Distance of the TCs from the intended users, made worse by very poor transport infrastructure, low ICT skill levels amongst staff and TC users, Low literacy levels amongst the community, Limited equipment, Language barrier, unstable electricity supply, Telephone and network breakdowns, and limited Internet bandwidth

Perhaps the major factor, which has prevented many rural areas from benefiting fully from the potential of ICTs, has been the low penetration and quality of telecommunication services. Although recent developments and cost reductions in wireless communication technologies, including both local loop and satellite communications, permit the availability of telecommunication services at any spot on the globe, there is still a cost barrier that rural communities will not easily be able to overcome.

Moyo (1997) concurs: The centres face many challenges that characterize other developing countries. The centres have struggled with phone lines and trying to get online. Power backups have not in some centres been installed, and the reality remains that any breakdown of a computer or technical breakage requires time and distance to fix.

Richardson (1997) adds, “rural communities represent the last mile of connectivity, telephone density is very low in the country”. Therefore, due to poor connectivity, inadequate infrastructure and human resource limitations, most of the centres provide very limited services. Low level of communication infrastructure in the rural areas makes it difficult for such areas to be linked electronically.
6. STRATEGIES FOR KNOWLEDGE MANAGEMENT IN THE SCECSAL REGION

Arising from the findings, below are proposed strategies for improving KM in the SCECSAL region.

(a) Governments should:
   - Offer Telecentres services at a very low subsidized charge to allow accessibility and usability of the services offered by these telecentres;
   - Expand the Information and Communication Technologies (ICTs) environment and Public sector agencies should spend their budgets by using Information Technology (IT) tools such as software, Networks to improve the performance of public programs such as in education;

Furthermore, there must be a change in state policies that will make access to telecommunications more democratic. This means that organizations and social groups involved in the telecentre projects must press for the definition of policies and decisions, for which they need to have strategic allies at all levels in the region.

(b) Information and Communication Technology Infrastructure development. There is need for a well-developed infrastructure for the production, distribution, retrieval and use of information. Communication channels should be well established, reliable and economical. With the advent of ICTs, knowledge should be free to circulate seamlessly irrespective of distance or gender. There should be timely transmission of great amounts of information from one side of the World to the other within a matter of seconds. ICTs should be seen as being:
   - A bridge between developed and developing countries;
   - A tool for economic and social development;
   - An engine for growth;

(c) Education and Training

People living in rural communities in which these centres are situated should be trained and sensitized to access the required information in order to lower the traditional barriers to using any new technology. This will better performance in work, self-employment, communication and life-long learning.

There should be adequate continuing education and training for Telecenter staff including KM awareness programmes. Such training should be relevant and applicable to the developing countries' environment. Also, staffs that are conversant with KM issues should be taken on by organizations ready to go in for the challenges.

Training organizations, especially Schools of Information and Library Studies, are urged to ensure that their courses and programmes are designed and conducted in such away that they are relevant to KM.

(d) Library and Information Service institutions should:
   - Produce and implement long-term strategies for Knowledge Management. These strategies will involve: targeting priority needs; securing funding; advocacy and innovation; monitoring and evaluation;
   - Develop user/community-based approaches to KM, which incorporate consultation with and partnership with local communities;
   - Initiate ICT and networking projects which actively focus on KM;
   - Adopt the five I's of involvement when dealing with Knowledge Management:
     1. Information/Knowledge (maximum public access to as much information/Knowledge as possible);
ii. Independence (community access to independent specialist advice);
iii. Initiative (community groups to develop their own agendas for KM, pro-actively);
iv. Influence/Employees to influence decision making concerning KM issues;
v. Implementation, where employees participate in implementation, monitoring and supervision of KM projects.

(e) The Telecentre Managers and Information Officers, though computer literate, lack both technical and professional skills necessary for the challenging ICT tasks ahead of them. As a matter of extreme urgency, there should be intervention in strengthening a range of human resource development needs right from the community users of the TCs.

(f) Constant sensitization of the community, as opposed to a one-shot sensitization exercise, to create awareness and sense of telecentre ownership among the local communities is very crucial for the success and sustainability of the KM activities in the telecentres. Outreach sensitization exercises may be used.

(g) Although telecentre initiatives are community based, and therefore participatory, there is need to jump-start them off with some guidelines on roles and responsibilities to avoid conflicts between operations and steering committee roles.

(h) The Telecentre Managers need not underestimate the importance of keeping updated user registration logs and recording daily usage data to enable routine monitoring and evaluation of the telecentres. It is from these periodic assessments of the telecentre operations that efficient utilisation and reinvestment in the telecentres will be based. Thus, the TC Managers should keep an eye on this important aspect.

(i) Research institutions and research funding bodies should fund detailed research into KM related projects and undertake detailed statistical monitoring of the involvement and use of KM in various organizations.

7. CONCLUSION

By adopting the above strategies, countries in the SCECSAL region shall eventually get included in the KM era thus leapfrogging into the Knowledge Society. Finally, progress towards a knowledge society for the SCECSAL region will require the participation of all stakeholders in government, civil society and private sector. Government should provide a conducive environment through policy, enabling political stability, free market economy, enabling regulatory framework and continue to attract foreign and local investment. The private sector should enhance research through partnership with universities and other research institutions to come up with best practices in the Knowledge Management industry including viable business models that would enhance access to affordability and use of telecommunication services. The civil society on its part should help mobilize the grassroots people to participate in the change process towards the Knowledge Society by interpreting implications of ICT to cultural and social values of communities and its economic potential to them. Information professionals should be highly involved in the Knowledge Society issues like debates, policy implementation and coordination of efforts, content development and collecting data about Knowledge Management initiatives all over the country. This way, consensus can be achieved and bridges built to mobilize all stakeholders to achieve the move toward the Knowledge Society in the SCECSAL region.

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