Lifelong Learning: Telecentres in Semi-rural Areas as a Bridge between Formal, Non-formal, and Informal Learning

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Abstract: The usage of telecentres has been the main initiative in many countries to provide information and communications technology in rural areas in a try to address the digital divide. In this paper, we analyse the situation in Sri Lankan semi-rural areas, discussing whether telecentres in the Nenasala network has a potential to act as local knowledge centres; bridging formal, non-formal, and informal learning. The visited telecentre is located about 50 kilometres east of Colombo. A qualitative design has been used where interviews with managers and users, and passive observations were conducted. Findings show that the visited telecentres play an important role in bridging formal, non-formal, and informal learning and education in the local community. Nevertheless, there are gender-based differences among pupils in the acquisition of provided content. Some children claim that they learn more by undergoing classes at the telecentres than in formal classes.

1. Introduction and Aim

The idea of telecentres network has been a common initiative in many emerging regions in a try to address the digital divide and clearing the disparities between urban and rural areas.

Sri Lanka has a fast growing economy with a growth of 8% in 2010 when the Colombo bourse was the world's best performing market (Asian Tribune, 2010).

This paper exhibits on-going, empirical research on telecentres focusing upon learning and education form a gender perspective in semi-rural Sri Lanka. The theory to a larger extent is based upon our own previous research.

1.1 ICT in Sri Lanka

The first computer in Sri Lanka was seen in 1967 when a mainframe was brought to the island. Computer science and programming then became an integrated part of mathematics at university level. A more general and broader acquisition of computers and communication

technologies was started in the late 1970s when Sri Lanka opened up of the economy and began its globalisation process. (Mozelius & Meegammana, 2011)

Still in the 1980s computer usages and IT facilities were privilege of the Sri Lankan elite. Nevertheless, towards the end of the decade; private and public institutions began to computerise their administrational systems. Among the very first organisations were airlines, travel agencies, financial companies, and some public institutions as well. In the 21st century, private and public institutions were using computers in their daily routines and most major information centres and libraries were computerised. (Hansson et al, 2010)

This infrastructural development made it possible for the Sri Lankan society and industry to be permanently online with computer based services, although access to computers and the Internet in 2011 is still not for all Sri Lankan citizens. (Mozelius and Meegammana, 2011)

On the Sri Lankan island, Information and Communications Technology (ICT) facilities have been a privilege in the capital Colombo and its environments in the western province, major provincial towns like Kandy, Galle, and Batticaloa. In non-urban areas in which over 75% of the population lives, the infrastructure is left far behind. (Hansson et al, 2010)

1.2 Telecentres and the Sri Lankan Nenasala Network

The embryo to what is called the telecentre movement started in Scandinavia in the 1980's as an approach to adapting to the changes facing of both individuals and the community (Crellin, 1994). A large number of people are depending on shared access to ICT facilities (Colle and Roman, 2003), and telecentres have a potential to satisfy those needs.

Literature suggests that telecentres are shared ICTs in isolated rural communities (Agbeja & Salawu, 2007) that provides access to the Internet, computers, software, and other public information services with the aim at empowering rural communities with educational, personal, social, and economic development, or just being used for social gathering activities (Yusop, et al., 2010).

It has been discussed if the term telecentre might be out-dated and a term like knowledge centres or information centres could be more appropriate (Gaiani et al, 2009 a). However, in Sri Lanka the Sinhala term *Nenasala* is used and the four main variations are:

1. Rural Knowledge Centres

2. E-libraries

3. Distance & e-Learning centres

4. Tunami camp computer kiosks

The Nenasala Project is one of several different projects that were implemented under the umbrella of the e-Sri Lanka Initiative with a main objective to introduce several models of the telecentres or knowledge centres to spread ICT facilities to the islands rural and semi-urban regions. (Nenasala, 2011) Translated to English, Nenasala would mean something like *centre for knowledge*. (Meegammana et al, 2010). So far (17/10/2011), 624 Nenasala knowledge centres have been completed in a plan for a total amount of 1000. Nenasala Telecentres can be built in several models, but in the initial ICTA funded standard setup they were equipped with two to four computers, a printer and Internet access. (Meegammana et al, 2010)

1.3 Lifelong learning: formal, informal and non-formal education

Why bridging formal, non-formal, and informal learning and education? Literature mainly argues this is one of the keys to the success of lifelong learning.

Research on lifelong learning in relation to ICT usage takes place in social contexts, preferable in a community, and is said to be primarily collaborative rather than competitive (Sharples, 2000). Tracey et al. (1999) stresses a governmental belief that educational institutions have the potential to support lifelong learning by the creation and connection of a learning "community". In this case learning in school is connected with learning at home, which means teachers, students, and family members are a part of the learning community, and that the Internet may serve as a medium. In this way, formal learning can easier be connected to informal learning.

Consequently, what is done in primary schools depends largely upon how successful such a connection would be. Teachers must be aware of how to support children so as they can develop a desire for lifelong learning. (Wanzare, 2002) This may be a concern.

For Sharples (2000) tools that enable lifelong learning would be highly portable, individual, unobtrusive, available, adaptable, persistent, useful, and intuitive. Sharples emphasises particularly mobile solutions for lifelong learning. Learning using mobile phones moves

learning from the classrooms into the student's environment: "thus reconceptualizing learning as personal, situational, collaborative, and lifelong." (Uzunboylu et al., 2009, p. 382) Andrade et al. (2008) states, e-learning must focus on two student profiles, namely traditional students that acquire knowledge prior to starting a professional life; and workers in need of acquiring knowledge to keep up with job requirements. This later is referred to as lifelong learning. Technology itself is not the goal to provide these two groups with knowledge, rather a means to enhance learning.

Hawkey (2002, p. 5) argues for that learning through ICT has much in common with learning in informal environments. Hawkey stresses that if learning, as in lifelong learning, using ICT is more than transmission of knowledge, the view on pedagogy needs to be revised. Hawkey's context is the informal environments presented by science museums and science centres. These environments have potential because employing the web; the user can reach a vast and varied audience, offering democracy and differentiation. Users may for instance create their own pathways to learning by choosing topics, levels of difficulty, routes and pace.

1.4 Aim

In this paper we analyse and discuss the potential for telecentres located in semi-rural areas in the Nenasala network to act as local knowledge centres bridging formal, non-formal, and informal learning and education.

2. Method

During a full day, we visited two telecentres. The visited telecentres are located in Kirindiwela and Madagama in Gampaha district about 50 kilometres east of Colombo in the Western Province of Sri Lanka. The questions asked were based on Gaiani et al (2009a). These questions and similar approaches have also been used in studies of the telecentres in other countries, which also allows a degree of comparison in future studies. The questions were semi-structured and regarded the following:

1. Planning horizon.
2. Language strategy
3. Authentic local needs
4. Local ownership
5. Education/literacy
6. Societal information that can be provided for the public/users using the telecentre

7. Competence network (how defining and identifying skills, competences so as the telecentres can be maintained, further developed, etc)
8. Documentation & measurable results
9. Resources and sustainability
10. Fun and motivation (how making them rewarding and motivating for all parties)

Questions were put to managers and visitors who happened to be there. Hence we did not actively try to reach any particular user. An advantage with this approach was, we were able to see what happens in a "normal" day.

Findings show the two telecentres are working in a similar way and therefore we just shed light on one of them in this initial paper, principally because of space limitation.

3. Findings and Discussions

Computer Training College, Kirindiwela

The government gave one of the owners, Mr. Sampath Karunanayake two computers and Internet connectivity to start this particular telecentre in year 2007. He runs Computer Training College (CTC), which is an extension of two previously started centres, together with Ms. Dilini Karunanayaka. All the three centres therefore build a network. The managers do not explicitly collaborate with other telecentres in the area, all though they may know each other. In total, they have 6-8 persons working with them.

CTC has two main activities: (1) to provide education and educational aid to clients, which are adults and youths. (2) a straight business purpose, offering reparation and sell of computers. It is therefore possible for the managers to allow students to take part of services without payable fees. Instead, they use the money generated from the business part to keeping CTC sustainable.

CTC mainly reaches three different groups, which are officials, students, and farmers, offering them (1) English and Computer classes, based upon the national curriculum; (2) How to access and use societal and governmental information and services (3) Vocational training on how to do transactions, use blogging tools, and social tools such as Facebook, and e-mail; (4) Extra classes for students enrolled in the formal education; and (5) Teaching farmers on how to use ICT in agriculture. Age bracket among learners are 11 to 55 years. CTC consists

of one classroom that fits 14-15 students. They teach face-to-face as well as online using Skype and the Internet.

Language diversities in teaching and learning are not big issues since the people in the communities speak the same language, which is Sinhala. In terms of English command, most learners are on the same level, which makes it easier to structure and organise the classes. The managers say that most people here are able to read and write in English but lack command of speaking.

One educational aid used is *Shilpa Sayura* that is Sinhala e-learning system, run on servers, based upon the national curriculum to teach most school subjects. The tool can be found on http://www.shilpasayura.org/.

We asked whether there are any restrictions regarding who can use the facilities. The telecentre is open for anyone. However, most people using the facilities can be grouped as in women's community or student's community, for example. Therefore, these particular groups of users create small segments of needs that CTC try to take into consideration

On the issue of women, they have a programme for women teachers, like primary teachers and schoolteachers training programme. All though, most of these teachers are women and the course are designed for women, the programme is actually not restricted to women, but even men can take part of it.

All though they have different groups, they consider each student being an individual, which means they strive to meet the needs of the students on an individual level.

"All though we have different groups, we regard the students as single persons and consider their personal needs, because everyone wants to learn in different speed and with different kind of content."

This means the groups are individualised based upon personal learning needs rather than gender. In fact the CTC suggests that there is no need to stress gender diversities, but focus should be put upon actual needs no matter what the background of the learner happens to be. We wanted to know therefore, whether users in general are male or female.

CTC provides basic education on one hand and job oriented or vocational training related to business services on the other. The vocational training includes typesetting, printing, and web services, for example. These latter services mostly attract male clients. Women are more interested basic education including literacy skills, one of the managers says. The other manager suggests the reason is the following:

"The male clients think they can get promoted, which means a higher salary if they undergo these [business] classes."

The manager also underline that "women are more enthusiastic and learn faster". We consequently asked why this is. The suggestion from the managers was that women want to improve themselves and their capacity so as become more empowered in the society. Therefore, women are more forward. The students also undergo tests to see if they have reached a certain goal. If a student does not pass, s/he is given extra support and asked to re-do the test until a successful result is achieved.

This way to measure results and collaboration with the student's parents has shown them that students improve what they are supposed to learn in the formal school by using the telecentres.

In order to measure the results and progress of the students, all students are registered before they start the classes. The student's data are saved in individual files and are also discussed jointly with the student's parents. These records are also used as basic data in order to give better feedback to each one.

Students we discussed with confirmed to the fact that they learn more in the telecentres because to a larger degree they are allowed to put questions and raise their voices.

Overall, collaborating with the students' parents seemed successful:

"The students come, but then they come, they also want their parents to enrol."

This mostly applies to the mothers, said by the managers. This indicates that many mothers send their children to telecentres to have a better education than themselves. It also indicates that these mothers would like to study but for some reason find it difficult to take the first step.

Findings show that the visited telecentres play an important role as a bridge between formal, non-formal, and informal learning and education in the local communities. Nevertheless there are gender based differences among pupils in the acquisition of provided content. Some children claim that they learn more by undergoing classes at the telecentres than in the formal education. The telecentres are operating close to the Governmental vision "e-Sri Lanka". The educational material is contextualised. This means, the material is developed so as to fit local experiences and culture and at the same time draw from the formal, national curriculum.

Account is taken of those who have not completed a formal education yet as well as of those who have. The managers use ICT as an aid and a complement to a teacher rather than fully rely on the ICT in a belief it would replace teachers.

4. Conclusions

Managers believe that there are no real differences based on gender. We state there are, although they are not as obvious as in other countries in which we have conducted similar research based upon same approach and design.

For instance, women prefer basic training whilst men prefer training directly connected to their profession. This stresses at least two important things: (1) women to a higher degree have less education and do not work outside their home compared to their male counterparts. In addition, (2) women probably are illiterate to a larger extent and therefore need basic training before they can gain from the advanced.

The managers state that they care for the individual in the group. For this reason it is not clear that any efforts at gender level needs to be done. However, if this is the case, it is important an adequate attention is paid to the individual so that the woman not is forgotten. Managers also argue that women learn quicker than men. This makes it especially important to address these individuals' needs.

These initial results show the importance of studying the impact of formal, non-formal and informal learning. The study has shown that these three forms of learning can usefully be combined to the goods within a lifelong learning, which the whole family can enjoy.

The telecentre cannot easily be put under any of the suggested variations of Nenasala. It seem to be however, more related to the first and third verity. CTC has created a sort of learning

"community", in which the telecentre, student, and her/his family, and community are included.

The student learns non-formally in the telecentre, teaches their parents (often the mother) informally, and brings her/his knowledge into the formal class room. This is thus, a combination of all three learning forms theoretically illuminated.

Recommendation for further studies

We recommend that a network of telecentres also should include the semi-rural areas of an emerging or developing economy in to strive for a national dissemination of computer based learning. As a recommendation for future research, we would suggest that more attention should be paid to the analysis of formal education in the Sri Lankan context to understand more in detail why several children found the telecentres even more important than the formal ditto based on the national curriculum.

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