The Potential of ICTs to Empower Rural Women

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Abstract: The purpose of the study is to investigate the potential of Information and Communication Technologies (ICTs) to empower rural women. A variety of ICTs are used by the rural women to develop their ICT skills. Participation in decision-making that affect their lives and the use of ICTs are crucial for the socio-economic empowerment of rural women. Mere availability and access to ICTs will not empower women. The paper highlights the need for rural women's active involvement in ICT policy making and capacity building to give them 'the strength and confidence to' use ICTs. The telecentres can provide government services to the rural women, business opportunities and other income generation opportunities. ICTs should be provided at a reasonable cost to help rural women maintain the 'networks' with other community members and to develop ICT skills. Engendered ICT policies, gender sensitive and innovative programmes that target rural women are crucial for women to overcome the social barriers in accessing information and to improve their capabilities. ICTs have the potential to improve the quality of lives of rural women and can give them more control over their lives.

Keywords: ICTs and empowerment, rural women empowerment, potential of ICTs

1. Introduction

The Association for Progressive Communications classified new Information and Communication Technologies (ICTs) into three groups [1].
1) Information technology that uses computers which are indispensable in modern societies.
2) Telecommunication technologies such as telephones and broadcasting of radio and television through satellites.
3) Networking technologies such as internet which has extended to mobile phone technology, Voice Over IP telephony (VOIP), satellite communication and other forms of communication.

The study investigates the potential of ICTs to empower rural women. Rural women empowerment through the use of ICTs will build the relevant skills to overcome socio-economic barriers. Rural women in South Africa still lack the socio-economic opportunities, lack basic needs and have other economic hardships related to the various diseases that affect them. Mere provision of ICTs to rural areas may not empower rural women, but innovative training initiatives are required to build the ICT skills that will contribute to the empowerment. ICTs are channels of communication to voice any issues that affect rural women.

Some of the developing nations need cultural transformation for rural women to overcome the challenges in using the ICTs for empowerment. Gender sensitive training methods and engendered ICT policies are crucial to empowering rural women. Although

ICTs were available in certain areas, the cultural norms, lack of education and lack of ICT skills posed hindrance to the rural women in realizing the full potential of technologies.

A number of provinces in South Africa have set up telecentres to empower the previously disadvantaged communities. Telecentres provided access to information and a range of ICTs and other services to improve the lives of rural community. Telecentres also improved the communication between the government and the people by giving them the ability to make decisions about the issues that affect them. ICTs improved the partnerships with the communities.

1.1 What Constitutes Rural Women Empowerment Through the Use of ICTs?

Rural women in South Africa lack the necessary ICT skills and opportunities for growth. This is due to high levels of illiteracy, school absenteeism and disinterest in participation in ICT projects. Rural areas have inadequate health facilities and lack adequate ICT infrastructure to provide reliable and affordable information to the people.

Empowerment of *rural women* has a hidden agenda – "to give somebody more control over their own life" [2]. The question is how someone can empower rural women through the use of ICTs. This leads us to think only the disempowered can be empowered and the *empowered* gives the 'power' to the disempowered. In the context of this study rural women empowerment is the process whereby the rural women's capability to make life choices is increased by someone using reliable information through a variety of ICTs. The increase in capability of the women (for instance via ICT resources) and the agents may in turn empower them and better their lives.

Women empowerment should "*reflect differences in preferences from those which embody a denial of choice (p.439) ….build a pathway between access to resources and access translation into agency and achievements(p.443)…ensure decision-making agency should focus on the consequential significance of the decision making(pp.446-447)…. and should differentiate between effective and transformatory agency*" (p.452) [3].

2. Objectives

South Africa's historical past led to many disadvantaged rural communities struggling to better their lives. South African civil society was firmly committed to providing information and access to ICTs at a reasonable cost to the disadvantaged communities from the late 1990s. The World Bank acknowledges the potential of new ICTs "for teaching government and institutions about the poor, for designing programmes that benefit them and for enhancing their participation and empowerment" [4].

The paper highlights the potential of different types of ICTs to empower rural women in South Africa. The paper will draw the attention of South African governmental institutions and ICT policy makers to enable them to improve rural women's access to information and empower them. The paper analyses the role of the telecentres in South Africa and its various programmes that involved the rural women to engage in activities that improved their lives. The paper analyses and interprets other articles by experts that focus on 'empowerment through ICTs' to validate the information collected about the telecentres. The paper throws light on how ICTs provide the resources and information and opened new doors for informal employment to the women in rural areas and informal settlements.

The study has the following research objectives.
1. Describe what constitutes rural women empowerment.
2. Explore the types of ICTs used by rural women and potential of ICTs to empower.
3. To analyse the role of telecentres in South Africa in empowering the community.
4. Identify strategies to empower rural women through the use of ICTs so that they can reap the potential of ICTs.

3. Research Methodology

Two popular research methods were used for investigation based on the fact that "*no single method ever adequately solves the problem of rival casual factors. Because each method reveals different aspects of empirical reality, multiple methods of observation must be employed. This is termed triangulation. I now offer as a final methodological rule the principle that multiple methods should be used in every investigation"*[5].

The paper details the use of *content analysis* from a feminist perspective and the use of case study research method. The paper analyses the contents from six journal articles (Annexure A) to investigate the potential of ICTs for the empowerment of rural women. "*Content analysis is a technique for examining information*" and is used in *"exploratory and descriptive research*" [6]. The feminist content analysis has an *"implicit measure of validity which a researcher must systematically attempt to maintain*" [7]. 'Content analysis has been defined as a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding' [8]; [9]; [10]; [11].

The Table 1 below shows the search criteria, the unit of observation and unit of analysis. Initial sampling included conference proceedings as well. Very few journal articles published during the period 2002-2009 (year) satisfied the search criteria. The journals with relatively high impact factor were selected for final sampling. The two main categories identified are discussed in section 4.

Unit of observation – Journal articles

Unit of analysis – 'Sentence unit' that indicate the main category: 'empowerment through ICTs'.

Themes based on the categories were also identified

Search criteria used for the 'final sampling' (see Annexure A):

- ICTs and Development
- ICTs for empowerment
- Women empowerment
- Potential of ICTs
- ICT access and poverty alleviation
- Women and Technology
- Gender equal access

Table 1: Search Criteria for Content Analysis

3.1 Case Study: Telecentre at GCIS- South Africa

The case study explores '*how*' the community under study access information and '*why*' do they do so [12]. The rationale for the single case is the typical case where this case is '*typical*' or '*representative*' [12] of many other governmental and non-governmental organisations that empower communities using ICTs. All information pertaining to the case study was collected during the period 2006-2007 and later in 2010-2011. The unit of analysis is 'empowerment through ICTs'.

The country was selected for study because of South Africa's commitment to 'universal access' to ICTs and the country has an array of programmes that provide such access. South Africa has a long commitment to addressing inequalities in the wealth distribution due to the historical past. The Independent Communications Authority of South Africa (ICASA), Universal Service and Access Agency of South Africa and Universal Service Fund implemented the Telecommunications Act 1996, (revised Act 2001). Government

Communication and Information System (GCIS) was launched in 1988 to help meet the communication and information needs of government and people. GCIS rolled out many Multipurpose Community Centres (MPCCs) across various provinces in South Africa.

GCIS is one of the governmental departments that ensured governmental service delivery. The main objective was to attain a positive communication environment through offering information and services at MPCC. MPCC helps people to access a range of services and products and engage in government programmes for their own empowerment.

Thusong Service Centres (Thusongs) (previously Multipurpose Community Centres) [14] was initiated in 1999 to integrate government services into primarily rural communities. The service centres were rolled out to address historical, social and economic factors, which limited access to information, services and participation by citizens. In the past rural community had to travel long distances to access these services. Now access to information and services are made closer to where rural women live. The service centres aim to empower the poor and disadvantaged rural women and men through access to information, services and resources from government, non-governmental organizations (NGOs), parastatals and businesses by enabling them to engage in government programmes for the improvement of their lives.

158 Thusong Service Centres were in operation by the end of October 2010, making a crucial contribution to the expansion of infrastructure for access to information and services that citizens can use. Many departments offer services which include those from the departments of Home Affairs, Labor, South African Social Security Agency (SASSA), Social Development, GCIS, and the department of Health as well as telecentres, the Post Office, libraries, agricultural extension offices and municipal services. Community Development Workers, the South African Police Service, NGOs and, community-based organizations, also offer services through the centres.

The centres provide a platform for partnerships which empower communities including rural women through, sustainable projects that encourage ownership and self-employment, as well as employment of others. The centres provide adult basic education and computer training to the rural and disadvantaged women. Thusongs also provide business opportunities such as the small, medium and micro-sized enterprises and other private-sector services such as retail and ATMs.

A Thusong Service Centres in Gauteng province (at Thokoza) has a telecentre that has ten to twenty-five desktop PCs connected to a server. Like most of the telecentres it has photocopying, scanning, faxing, printing, a dedicated phone line and internet facilities. A licensed telecom operator regulated by ICASA provided the services. The telecentre holds community events like music concerts, meetings, voting, workshops etc.

Film Resource Unit and service centre have come up with Audio Visual Education Initiative to educate communities in an interactive way using audio visual material on registration process for grants, voter education, identity documents campaign etc.

Some of the 600 services brought to rural and under-serviced areas by the telecentre include the following government services: application for identity documents, pensions, welfare grants, unemployment insurance, passports, death and birth certificates, information on issues such as health, labour issues, citizen rights, education, contact information etc. Other services that women utilised include banking, craft shops, women's clubs, food production programmes and training on use of computers, the Internet and e-mail.

4. Results of Study

Rural women used ICTs in the Thusongs to improve their ICT skills and for economic empowerment. The centres improved the communication between the government and the people. Thusongs improved the quality of life of rural women by providing other sustainable projects and self-employment opportunities. Although the centres had the ICT

centre women utilised it for other business opportunities and income generation opportunities and for poverty alleviation.

The potential of ICTs to empower disadvantaged rural women is also evident in other journal articles. The journal 'articles' used for the study were renamed for the purpose of content analysis. For example the reference to the International Journal of Education and Development using ICT, 2006 article was renamed IJEDICT-1. Entire articles were analysed thoroughly to ensure the linkage between categories and to the case study to establish the themes.

According to the article in the Journal:	ICTs for poverty alleviation or reduction	ICTs for economic empowerment / income generation	ICTs for access to health or education or for trade	ICTs for cultural transformation	ICTs for improving governance
IJEDICT1		√			
IJEDICT2	√				
IJEDICT3	√		√		
ITD 1	√		√		
ITD 2		√		√	
JID1		√			√

Table 2: Category 1: Potential of ICTs

According to the article in the Journal:	ICTs were used for empowerment	ICTs for development	How to empower communities through the use of ICTs?	Type of ICTs that may be used for empowerment or rural development
IJEDICT1	√		Provide less expensive access to reliable information	Internet, radio, television, email, medical list servers
IJEDICT2	√		Participation of women in policy making	Personal computer internet, mobile phone, satellite, wireless technologies
IJEDICT3	√		Encourage the use of ICTs for other services. Example: income generation	Radio, GSM/Mobile phone, digital television
ITD 1	√		Expand the use of government services	Computerized milk collection centre, Personal Digital Assistant, handheld computer, medical list servers, service kiosk
ITD 2	√		Enhance capabilities through information and knowledge, learning practices should be made gender sensitive	PC, internet (access in community technology learning centres (telecentres), world wide web
JID1		√	Improve governance through knowledge sharing between institutions and government, enhance participation	Radio, internet

Table 3: Category 2: Empowerment through the use of ICTs

The final sampling included a few journal articles that made a special reference to 'rural or disadvantaged' communities. Annexure A provides the references to the sample articles. The tables (Table2; Table 3) show the two categories identified. Category 1 (in Table 2)

explains the potential of ICTs and category 2 (Table 3) explains the type of ICTs used and the strategies to empower communities through the use of ICTs. The potential of ICTs for income generation and improving governance was evident in both the case study and journal articles. The 'universal access' was in a way a less expensive and the reliable way the community accessed information. The journal articles agreed the learning practices should be made gender sensitive. The 'case' and the articles agreed ICTs could 'empower' rural communities.

The ICTs in telecentres enhanced the capabilities of rural women, enhanced participation of women in ICT projects and improved governance. This is evident in the journal articles as well. Government policy makers monitored the Thusongs and ICT policy makers were active partners of the Thusongs. The Thusongs provide us vast amount of information on the potential of the telecentres (and ICTs) for the economic empowerment and poverty alleviation or poverty reduction of rural women in South Africa. The less expensive and the reliable information provided by the service centres motivated rural women to use ICTs in the Thusongs.

Quality of data collection was ensured using the reliability and validity tests. The patterns in the journal articles matched with those in the case study. The sources used for case study were also available in the articles. The triangulation using content analysis and case study ensured the reliability. The data collection using content analysis method could be repeated to ensure same results.
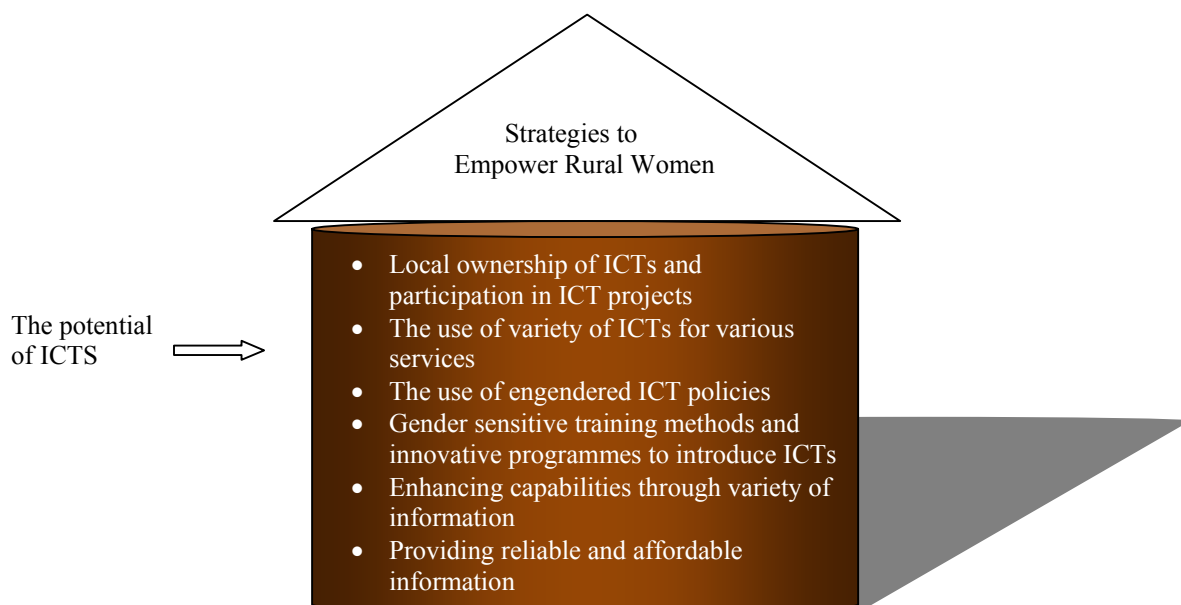

Strategies to
Empower Rural Women

The potential
of ICTS

- Local ownership of ICTs and participation in ICT projects
- The use of variety of ICTs for various services
- The use of engendered ICT policies
- Gender sensitive training methods and innovative programmes to introduce ICTs
- Enhancing capabilities through variety of information
- Providing reliable and affordable information

Figure 1: Rural Women Empowerment Strategies

Rural women empowerment involves encouraging active participation in ICT initiatives, the use of reliable and affordable information to improve skills and enhancing capabilities and women's active involvement in ICT planning and policy making. Various strategies to empower rural women (Figure 1) through the use of ICTs are explained below.

Local ownership of ICTs and participation in ICT projects: ITD 1 indicate "*Successful ICT projects are characterized by local ownership and the participation of the community*" and realizing the potential of ICTs in "*the areas of opportunity, empowerment and security is a difficult endeavour*". All successful ICT projects involved collaboration and partnerships amongst rural women and other stakeholder (NGOs and governmental organisation) to share the benefits of ICT projects. As the case study reveals the local ownership of ICTs and telecentres and the participation in the opportunities provided by the telecentres were crucial for rural women empowerment. The participation in ICT projects

and utilisation of the telecentres improved knowledge sharing between rural communities and the government.

The use of a variety of ICTs to deliver information for various services: In their article (IJEDICT2) the authors opined *"no single information delivery technology emerged as 'the' technology to use in delivering information to rural women"*. The case study and the content analysis revealed there were a variety of ICTs used by rural women for a variety of services including government services. Rural women used various ICTs such as photocopying, scanning, faxing, printing, dedicated phone line and internet facilities in the Thusong service centre to enhance their knowledge related to education, health and agriculture sectors. ICTs were used for income generation and to deliver other services.

The use of engendered ICT policies: IJEDICT2 argues *"no single socio-economic factor emerged as the dominant variable in planning policies to introduce ICTs to the rural women"*. In their article in IJEDICT1 the authors argue about the need for a *"favourable Government policy and the focus on benefits of providing ICTs"*. The ICT policies should be engendered to focus on women's empowerment needs and to plan for ICT use in various sectors such as health, education, agriculture and income-generation in particular. Active participation of rural women in ICT policy making may lead to their empowerment using these technologies.

Gender sensitive training methods and innovative programmes to introduce ICTs: The gender sensitive training practices will be useful for ICT 'awareness raising' on 'gender and ICT' issues. Innovative methods and learning practices customised to the rural communities' needs should be considered for training. ITD2 article reveals the *"training methods are often ad hoc, alienating, and not customized to women's needs. Learning practices for women should be extended to girls and women, made gender sensitive"*. Capacity building using ICTs and training methods customised to rural women's needs are one element that can contribute to women empowerment. The Thusong Service Centres provide gender sensitive capacity building programmes such as craft shops, women's clubs, food production programmes and training to use computers, Internet and email.

Enhance capabilities through a variety of information: ITD2 article suggests the need to use ICTs to promote empowerment and to enhance capabilities through access to information. ITD2 suggests the capabilities can be enhanced through gender sensitive training methods. The individual capabilities depend on socio-economic, political arrangements, among others [13]. The communities' 'welfare' and ICT infrastructure provided by the governmental institutions has a role in enhancing the rural women capabilities. The Thusong service centres enhanced the capabilities of rural women and enhanced participation of women in ICT projects. The overall empowerment of rural women through ICTs can happen only if they access a variety of information to enhance capabilities and to make informed decisions that affect their lives.

Providing reliable and affordable ICTs: JID1 argues *"once radio had been made affordable and independent of electricity grid, its potential use in development process was dramatically enhanced"*. Women should get involved in governments' ICT regulatory policies such as the quality of service and universal access. Unreliable ICTs can lead to disinterest in accessing information. The potential of ICTs to empower is still debatable, but if rural women were to access information, it should be affordable. IJEDICT2 suggests the socio-economic status of households was a factor that affected the rural women's willingness to pay for technology. Unlike many other internet cafes in South Africa the Thusong Service centres provided access to information and computer training at reasonable costs to the rural and disadvantaged communities. Some centres provided information access for free.

5. Conclusion

ICT has the potential for socio-economic empowerment of rural women and for cultural transformation. In the late 1990's South Africa realized failure to improve access to resources and information to the rural areas may disempower the historically disadvantaged people. The telecentres in South Africa were rolled out to ensure 'universal access' and to improve access to the government services by the citizens. Rural women used various ICTs such as computer, fax, Internet and television in these telecentres to access information, for poverty alleviation and to improve their ICT skills. Thusong service centres build partnerships with rural community and paved the way to encourage women to communicate with the government. Telecentres helped rural women to make meaningful life choices and improve their quality of live by providing other self-employment opportunities.

ICT is an enabler of economic growth and empowerment of rural women in South Africa. The author suggests access to reliable information provided at reasonable costs will encourage more rural women to use ICTs for their empowerment. ICT has the potential to enhance the capabilities of rural women by providing a variety of information. Gender sensitive training programmes and other services provided by the telecentres boost the 'self-confidence' of rural women and provide more income-generation opportunities. The ICTs' potential to build partnership with the community, trade and self-employment is evident in the case study.

The paper concludes with various strategies to empower rural women through the use of ICTs. Some of the ways to empower rural women are: encouraging local ownership of ICTs (and the community centres), encouraging active participation in ICT projects and providing reliable and affordable information in a telecentre or a community centre. ICTs were the communication medium between government and its citizens and telecentres are the agents that improved the communication between government and the people.

The use of gender sensitive training methods, innovative programmes targeted for women and the use of variety of ICTs to access information to build ICT skills are strategies to empower rural women. The use of engendered ICT policies and improving the capabilities of women to make life choices through use of ICTs can empower rural women.

There is scope for future research on to what extent the ICTs such as radio and mobile internet were used to empower rural women. There is potential for future research on how rural women use wireless technologies for social networking and the employment opportunities it provide may lead to rural women empowerment. There is scope for study on the innovative ways to encourage rural women to get involved in ICT policy making.

Acknowledgement

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Annexure A- References for content analysis

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