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ACRONYMS AND ABBREVIATIONS

ACWICT	**African Centre for Information and Communication Technology**
AED	**Academy for Educational development**
AfriAfya	**African Network for Health for Health Knowledge Management and Communication**
ALC	**African Lakes Cooperation**
ALIN-EA	**Arid Lands Information Network for East Africa**
ANITEP	**African Network of Information Technology Experts and Professionals**
APC	**African Policy Monitor**
ARCC	**African Regional Centre for Computing**
ATU	**African Telecommunications Union**
CCUC	**Centre for Cultural Understanding and Change**
CBOs	**Community Based Organisations**
CCK	**Communication Commission of Kenya**
CDWs	**Community Development Workers**
CHAK	**Christian Health Association of Kenya**
CGE	**Commission on Gender Equality**
CSK	**Computer Society of Kenya**
CSIR	**Council for Scientific Research and Development**
ELIS	**Every Life Information Seeking**
DCNS	**Digital Cellular Networks**
DFID	**Department for International Development**
EASSy	**Eastern African Submarine System**
FAO	**Food For Agricultural Organisation**
FIDA	**Federation of women lawyers**

GCIS	**Government Communication and Information System**
GICT	**Gender and Information Communication Technology**
GSA	**Government of South Africa**
GDRCG	**Gender Donor Roundtable Statement Consultative Group**
GII	**Gender Initiative Institute**
HAWKNeT	**The Horn of Africa Regional Women's Knowledge Network**
IBA	**Independent Broadcasting Authority**
ICASA	**Independent Communications Authority of South Africa**
IDS	**Institute for Development Studies**
IDRC	**International development Research Centre**
ITDG	**Intermediate Technology Development Group**
ITDG	**International Technology Development Group**
IBA	**Independent Broadcasting Authority**
ICASA	**Independent Communications Authority of South Africa**
ICIPE	**International Centre for Insect Physiology and Entmology**
ICRAF	**International Centre for Research in Agriculture and Forestry**
ILRI	**International Livestock Research Institute**
INFODEV	**Information for Development Program**
ISP	**Internet Service Provider**
ISSC	**International Steering Committee**
JAD	**Joint Application Design**
KACE	**Kenya Agricultural Commodity Exchange**
KBC	**Kenya Broadcasting Cooperation**
KPTC	**Kenya Post and Telecommunication Cooperation**

KZN	**Kwa-Zulu Natal**
LANS	**Local Area Networks**
MPCC	**Multipurpose Community Centres**
MDGs	**Millennium Development Goals**
NARC	**National African Rainbow Coalition Kenya**
NCRF	**National Community Radio Forum**
NCWK	**National council of women of Kenya**
NCSW	**National Commission on the status of women**
ODI	
OMCT	**World Organization Against Torture**
OECD	**Organization for Economic Corporation and Development**
PAR	**Participatory Action Research**
PDC	**Participatory Development Communication**
PRA	**Participatory Rural Appraisal**
PEST	**Political, Economic, Social and Technological**
PTO	**Private Telephone Operations**
PCOs	**Public Call Offices**
REFCOFTC	**Regional Community Forestry Training Centre**
RSG	**Radio Sonder Grense (National Afrikaans programme**
RINAF	**Regional Integrated Networks for Africa**
SABC	**South African Broadcasting Corporation**
SAITIS	**South African Information Technology Industry Strategy**
SANGONet	**South African Non-Governmental Organisation Network**
SAT/WASC	**South African-Western Africa Submarine Cable**
SAFE	**South African and Far East**
SDLC	**System Development Life Cycle**
SKA	**Square Kilometre Array**
STST	**Socio-Technical Systems Theory**

STIN	**Socio Technical Information Network**
TELI	**Technology Enhanced Learning Institute**
UNDP	**United Nations Development Programme**
UNIFEM	**United Nations Development Fund for Women**
USA	**Universal Service Agency**
UIDP	**Umlalazi Integrated Development Plan**
VANS	**Value Added Networks**
VTI	**Vivendi Telecommunications International**
WANS	**Wide Area Networks**
WASC	**West African Submarine Cable**
WSIS	**World Summit on Information Society**

CHAPTER FIVE

GENDER, ICTS AND DEVELOPMENT

5.0 Introduction

The previous chapter examined Info-mobilisation as a platform for rural community development within the context of systems and social technical systems (STS) theories.

This chapter reviews the literature related to the entire study. This involves the systematic identification, location and analysis of documents containing information related to the research problem under investigation (Mgenda and Mgenda, 1999:29). In this connection, the chapter reviews literature in the following areas: Women's information and ICT needs; Gender, ICTs and sustainable development; ICT impacts and challenges; Telecommunication and Information services for the poor; Mobiles and poverty reduction; The role and use of rural radio in Africa; How-to incorporate gender in projects; Overcoming the gender digital divide; Gender equality and empowering women in the Millennium Development Goals; ICT impact and use in women's empowerment and advancement

and Participatory design.

5.1 Women's information and ICT needs

Experience indicates that information and communication technologies (ICTs) have become an integral part of the development process around the world. Recognising the potential benefits of ICTs and the fundamental role played by women in development, many organisations have begun trying to facilitate women's access to information and ICTs (Huyer, 1997:4). However, women's access to ICTs cannot therefore be assumed to "naturally" occur. Women's needs for information are structured according to gender specific roles and responsibilities, which in turn influence their use of, and response to, ICTs.

Although the computer and e-mail communication era has not found easy assimilation amongst women (Nair: 2002:1), Huyer (1997: 14) underscores the fact that "*when women can understand and experience the benefits of ICTs, they are quick to use them*". This need is catapulted by specific information requirements/needs using given ICTs. Huyer further argues that there has been little research done on women's information needs and access to appropriate information in developing countries. In this respect, in order to facilitate access for different categories of women, ICTs need to be located in other local institutions to which women have open and equal access, such as NGO's, women's employment centres, local health institutions, libraries, and even churches (Huyer:1997:14).

Hafkin and Taggart (2001:6) argue that "*the single most important factor in improving the ability of women in developing countries to take full advantage of the opportunities offered by information technology is more education, at all levels from literacy through scientific and technological education*". Hence, women are poorly placed to benefit from the

knowledge economy because they have less access to scientific and technical education, skills training, and development.

Additionally, Hafkin (2002:1) explains that women are not likely to benefit equitably from ICT projects unless special efforts have been made to: (i) identify their situation and needs; and (ii) take effective action in order to incorporate their active participation in project implementation and development. As such, women not only have less access to the technology itself, but also find themselves financially limited and with less time to learn and use the technology. The author also argues that women are absent from decision-making positions in information technology in developing countries.

Marker, Wallace and Mcnamara (2002:6) underscore the fact that access to ICTs should not be seen as an end in itself. The authors argue that if ICTs are properly deployed, they have enormous potential as tools that increase information flows and empower people.

5.2 Gender, ICTs and sustainable development

Rural economic development can be transformed from a survivalist genre into a more profitable one using technology that enables, enhances, and aids economic activities (The World Bank, 2001). The use of information and communication technology (ICT) is expected to bring about a change in the development of rural communities. Community development can be defined as a global, dynamic, iterative, and interactive process that attempts to satisfy basic needs, such as education, health, employment and entrepreneurship, natural resource management, and governance. However, the differential influence of technology on various sectors of society is often ignored. For example, feminist scholarship has pointed to women's exclusion from science, and also from the creation, design and use of technology (Gurumurthy, 2004).

Information Technology can offer significant opportunities for virtually all women in developing countries, but most women within developing countries find themselves further removed from the information age than the men whose poverty they share. If the access to and use of these technologies is directly linked to social and economic development, then it is imperative to ensure that women in developing countries understand the significance of technologies and how to use them (Hafkin and Taggart, 2001). Richardson et al.'s (2000) findings link women and technology to improved social and economic development. Their research showed that women with access to ICT services increase their ability to generate income and enable them to help empower other rural women. The UNDP (2002) reinforces this notion by indicating that the ICT's 'promise' of substantial cost savings and potential to reach new markets make them attractive to women. The fact that the majority of the rural poor in developing countries are women, who generally experience more difficulties in accessing ICTs than men, raises concerns about the ability of ICTs to significantly impact on country development if women's ICT needs are not specifically addressed.

5.3 ICT impacts and Challenges

The Organization for Economic Corporation and Development [OECD] (2004:9-10) denotes "*that capital deepening through investment in ICT establishes the infrastructure for the use of ICT (the ICT networks) and provides productive equipment and software to businesses. This is because investment mechanically adds to the capital available to workers, thereby contributing to labour productivity growth*". For instance, ICT accounted for between 0.3 and 0.8 percentage points of growth in GDP and labour productivity over the 1995-2001 period in OECD countries.

The OECD further denotes that having ICTs linked to the sector, producing ICT goods and services, is characteristic of rapid technological progress

and very strong demand. This is illustrated in Finland, Ireland and Korea, where 1 percent of aggregate labour productivity growth between 1995 and 2001 was due to the strong productivity performance of the ICT sector.

Furthermore, the contribution of ICT services (such as finance, business services and distribution) to aggregate productivity growth, rose slightly during the 1990s in Finland, Netherlands, Norway and Sweden, and even more substantially in Australia, Canada, Ireland, Mexico, the UK and the US. Network effects have also increased the overall efficiency of using labour and capital, or multi-factor productivity growth (MFP).

5.3.1 ICT challenges

According to the UNDP (2001:3-16), there are approximately six challenges that have affected the design, implementation and outcome of information, communication and technology development (ICTD) initiatives, the first of which is awareness. The UNDP argues that harnessing ICTs for human development requires awareness raising and constituency building across all levels of society. As maintained by the UNDP, the link between ICTs and many development challenges is not always obvious, especially within countries with low educational standards and poor physical and information infrastructures. Following this is the challenge of politics, whereby the UNDP argues that information and ICT initiatives are political as the effectiveness and potential of ICTD initiatives can be inhibited or circumscribed by national and/or local power relations. Examples of this are the many cases of state controlled newspapers, radio and television stations. The UNDP states the third challenge as that of access, whereby barriers to universal access are not only about the availability of telecommunications infrastructure and computing equipment, but also barriers to individual access, such as educational and

socio-cultural (for example, technophobia) hurdles. In the fourth challenge, i.e. relevancy and meaningful use, three interrelated issues are identified, namely:

(i) Information has to be relevant and useful to end-users if ICT initiatives are to be appropriated.

(ii) Even if the information accessed is useful, development outcomes would be negligible unless the end-users have the capacity to act. An example of this is how market prices delivered to the rural poor are useless if there are no roads to transport goods, or how medical advice to rural healthcare workers is meaningless if there is no money to purchase medicines. An even better example is cited by Panos (1995/1998 in UNDP 2001:12), where he describes the US based Earth Market Place initiative set-up in 1995. In spite of an elaborate web-site with the capacity to sell products, it was unable to raise sufficient capital to undertake marketing activities and to guarantee the quality and delivery of the imported produce.

(iii) ICTs work best when they render more effective existing or clearly desired information flows. In other words, it is important to include the targeted user in the project planning stages in order to establish what types of information and services are most appropriate.

The fifth challenge is that of sustainability, where the UNDP denotes that ICTs are compromised by unrealistic time frames, insufficient training and inappropriate technology. Finally, the challenge of coordination is cited sixth, where the UNDP asserts that lack of coordination can lead to the duplication of efforts and the incompatibility of technical solutions.

5.4 Telecommunications and information services for the poor

The World Bank (2002: ix) states that access to information and communication technologies is crucial for economic development and poverty reduction, affecting poverty reduction in three significant ways,

i.e.: ICTs increase the efficiency and global competitiveness of the economy in growth and development; ICTs enable the better delivery of public services in areas such as health and education; and ICTs create new sources of income. The World Bank further argues that the digital divide, as measured by indicators such as telephone penetration and the number of internet hosts, exists not only between developed and developing countries, but also between urban and rural populations, and between poor rural nations. According to the World Bank, the isolation of rural communities poses a major challenge to service expansion.

In order to reach whole populations, the World Bank (2002:7) underscores the challenge of expanding telecommunications networks in developing countries as a major factor. The World Bank argues that there's a need to overcome the "market efficiency gap" and the "access gap". According to the World Bank, market efficiency refers "*to the difference between the levels of service penetration that can be reached under current plans and conditions, and the level one would expect under optimal market conditions*". For instance, service penetration under sound policies and a liberalized market, and service penetration in the absence of such conditions. The World Bank further describes the access gap as situations in which "*certain areas or groups cannot be reached commercially, without some form of intervention*".

Similarly, Odame (2005: 15) points out that on average, women have less income, education, time, and mobility, and face religious or cultural constraints that restrict their access to, and use of, technology. Odame further argues that some groups of women (i.e. rural women) are more disadvantaged than younger, more literate or wealthier urban women.

5.4.1 Mobiles and poverty reduction

The Panos Institute (2004:1-4) report states that mobile phones have greatly simplified the provision of services. The report declares that telecommunications contribute to development by facilitating social change and economic activity and improving quality of life. However, the Panos (2004:8) Institute cautions that although the initial installation is cheaper, mobile phones are expensive for users, as the cost of equipment and calls are generally higher than with land–line systems.

Correspondingly, there are several meritorious ICT interventions being used today that could serve as learning platforms for African countries. A good example is the Bangladesh mobile help line for women, better known as Pallitathya. According to The Association for Progressive Communications (APC, 2005), this enterprising group of rural women deploys women in the community as "mobile operator ladies". These women move from door to door to enable women, mostly housewives, to ask questions related to livelihood, agriculture, health and legal rights via the mobile phone. The "help-desk" operator comprises not only an information database, but resource persons from government, NGOs, health groups and human rights organizations. Notably, the activities of this group have been highly acclaimed by Gender and Information Communication Technology (GICT):- they won 1st prize, beating 39 other entries, in a recent 2005 ICT contest.

Another idea of introducing telecommunication services into a rural community whilst offering them income generating viability is the example of Grameen Telecom. Grameen Telecom (2005) is an NGO set up by Professor Muhammed Yunus, who had a vision of providing telecommunication services to 100 million rural inhabitants in the 68,000 villages in Bangladesh. The concept of this organization combines bank experience, in this case, Grameen Bank, with village based micro - enterprises, the latest digital wireless technology, Public Call Offices (PCOs) and privately operated phone centres. Grameen Bank provides a lease-financing program to a village phone operator, who subsequently

becomes the owner of the phone. This village phone operator can then provide outgoing and incoming services to people in adjoining areas whilst collecting daily call charges. Grameen Bank provides organizational and infrastructural support to Grameen Telecom, and also collects phone bills and other dues. This idea has proven successful, as the project benefits all parties concerned whilst catering for the needs of the communities.

There are several initiatives in Kenya that are providing links between ICTs and sustainable livelihoods in activities such as agriculture, pastoralism, entrepreneurship and the provision of employment vacancy information. According to Wainaina (2005:25-28), the use of mobile phone text messaging to provide market prices to farmers, employment vacancy alerts to the unemployed, and local news to disadvantaged communities and slum dwellers, is an invaluable approach to poverty reduction. For example, SokoniSMS empowers farmers by providing SMS market prices, a service launched by the Kenya Agricultural Commodity Exchange (KACE) in 1997.

Similar initiatives, which tackle challenges of sustainable development and view the information society as a catalyst for viable solutions, include Simu ya Jamii (family phones) Community Phone services. This initiative involves small scale businesses running mobile telephone kiosks. With the help of Safaricom limited, and other local micro-finance organizations, credit facilities have been arranged for small–scale entrepreneurs. This has resulted in improved access to telecommunications, employment and other business opportunities. Furthermore, there is the CommunityNews Service, which is situated in the heart of slum dwellers. This service sends regular messages that deal with health, sanitation, business advice and scholarship opportunities, to over 3,000 residents in Kenya's largest informal settlement (Up to 70% of Nairobi's population lives in the informal settlements, with Kibera accounting for the majority) (Wainaina, 20005:29).

5.4.2 The role and use of rural radio in Africa

With regard to the rural radio, IIboudo (2003:206-208) argues that the radio should aim to belong to a community and respond to their needs. Ultimately, the radio has the capacity to enable the broad participation of men and women in a local community. The author points out that the radio is the cheapest of all mass communication tools and that rural people can obtain it easily. IIboudo further asserts that the radio has flexibility when playing the following roles: (i) a means for disseminating key information, in a great many languages, and in geographically vast or restricted areas; (ii) a platform for dialogue and debate between developmental stakeholders; (iii) a platform for rural and urban communities to express themselves; (iv) a tool for awareness–building and social mobilization; (v) and an instrument for research, providing genuine information about rural communities (upwards) to decision makers.

Although the radio is still commonly used by most rural women, it is important to remember that there is an urgent need to increase the connectivity of the rural poor to the computer and the internet. This can be achieved through policies that increase connectivity and take into account the constraints facing poor people (World Bank, 2002:2-3). According to the World Bank, competition between telecommunication companies slashes service costs and improves access to the technology in question. The World Bank argues that since large telecom operators tend to limit their operations to high income urban areas, privatization should be opened up to enable small entrepreneurs to supply telecomm services to rural areas. Through *"regulation and subsidies, private operators can be invited to bid to provide services in areas that are not commercially viable, in return for a subsidy financed from a Universal access fund".*

Another point to consider is the fact that interventions must be designed to reach their target beneficiaries, i.e. the poor rural woman (World Bank, 2002:4-5). According to the World Bank, *"ICT projects that succeed in reducing poverty are generally run by organizations with a proven track record".* To be relevant to poor people, applications must take into account the local languages, be visually oriented, and use voice interfaces.

5.5 How to incorporate gender in projects

In a report on whether or not ICTs are gender neutral, Hafkin (2002:16) reviews case studies in six countries, namely: China, Ethiopia, India, Kenya, Panama, and Peru, and suggests that it is imperative to involve the beneficiaries in project design. In other words, gender considerations are crucial from the beginning of project design or the planning stages of the project under consideration. Requirements include: (i) sex – disaggregated data on projects, especially those involving training; (ii) the need to correctly assess skill levels before training for adjustment, as more women [than men] may have low skill levels in information technology; (iii) taking into account gender specific cultural constraints, such as women's family responsibilities and difficulties in attending evening training sessions; and (iii) a post training follow-up to ensure access, combat cultural constraints and promote skills retention.

The fact that information is power, and that women constitute more than half of the population in most African countries, necessitates the need to prioritize actions needed to help women have access to information (Solange and Momo, 2005:6). According to the authors, these actions require the need to always conduct an area study before any project that involves ICTs is implemented. This enables the collection of socio-economic data and the identification of information requirements

(education, family planning, legal matters, etc). Solange and Momo (2005:6) further state that it is important to always define objectives, establish a given project's methodology, and identify the project's beneficiaries . This ensures that the target audience, in this case the poor rural woman, is reached. Furthermore, it is essential to consider the legal implications of the setup. This establishes that all the necessary protocol has been observed. The authors further add that the information infrastructure in relation to the technology in question must be taken into consideration, i.e. cultural traditions (oral), or adapted tools (radio). In other words, it is important to ascertain how information flows in the community and what communication tools are in use. In this way, potential risks and threats associated with the use of ICTs would be avoided or minimized (Harris, 2004: 37). Finally, any existing infrastructure should be used as an entry point into a community (e.g. a school, a church, etc).

Needless to say, the constraints facing developing countries are numerous, and could be said to hamper ICT development. They include lack of purchasing power, inadequate training and human capacity, illiteracy, poor physical and information orientated infrastructures, and inadequate access to capital and private investments (EC, 2000/2001:7). All these factors play an important role in the socio-economic fabric of a society. The World Bank (2002:1) points to three crucial elements required in efforts to combat poverty: opportunity, empowerment and security. According to their report, experiences in rural India indicate that ICTs can enhance poor people's opportunities by improving their access to markets and health care, empower them by expanding their use of government services, and increase security by widening access to micro-finance.

5.6 Overcoming the gender digital divide

Huyer and Sikoska (2002:19) underpin the importance of women collectively organizing themselves in order to: (i) determine the type of information they need; (ii) determine the way that information is presented; and (iii) develop the concrete means required for information to be accessed and used. Additionally, the authors iterate that it is necessary for all stakeholders involved to address the following barriers to ICT access: (i) low levels of literacy and education, including training in languages predominantly used in ICT platforms and on the internet; (ii) less time, due to women's domestic, productive and community management responsibilities, leading to a much longer workday than men's; (iii) less access to financial resources that cover the cost of equipment and access; (iv) and geographical location, as women in developing countries tend to live in rural areas more than men. According to the authors, infrastructure in such places is less dependable, and travel to ICT centres is affected by cost, time and cultural constraints.

Finally, training is necessary, as learning is rendered more effective through both practical application, and innovative and interactive training (World Bank, 2002:5).

5.7 Gender equality and empowering women (MDGS)

In a recent report prepared by the UN Millennium Project Task force on Education and Gender equality, Grown et al. (2005:33-34) define the concept of empowerment as being related to gender equality, yet distinct from it. According to the authors, "*empowerment implies that women must not only have equal capabilities (such as education and health) and equal access to resources and opportunities (such as land and employment), but they must also have the agency to use those rights, capabilities, resources and opportunities to make strategic choices and decisions (such as is provided through leadership opportunities and participation in political institutions)".* The report further lists seven

strategic priorities previously outlined in international agreements, including the Beijing Declaration and Platform for Action, and the Cairo Programme of Action. These priorities include: (i) strengthening opportunities for post primary education for girls; (ii) guaranteeing universal access to a broad range of sexual and reproductive health information services, (iii) investing in infrastructure to reduce women's time burdens; (iv) guaranteeing girls and women's property and inheritance rights; (v) eliminating gender inequality in employment; (vi) increasing women's share of seats in national parliaments and local governmental bodies; (vii) and combating violence against girls and women.

Access to information by women can be seen as a central empowerment issue. Control over the kinds of information they need and produce is a fundamental aspect of empowerment. Despite this, there has been little research done on women's information needs and access to appropriate information in developing countries. Links between development and the use of ICTs are yet to be clearly established and rigorously supported by empirical results, particularly within African contexts. In developed countries, the evolution of ICTs has been closely linked with the power and economic boom of these countries, and there has been an additional strong positive correlation with development (Thioune, 2003).

5.7.1 ICT Impact and use in women's empowerment and advancement

Marcelle (2002:3) calls for the empowerment of women through the enhancement of skills, knowledge, and access to ICTs. The author underpins the fact that there are two critical prerequisites for bringing ICT economic benefits to as large a group of women as possible, namely: making improvements in access; and promoting initiatives that include rural women in the informal sector.

Marcelle (2002:3) further notes that the main challenge facing the use of ICT for advanced applications such as e-commerce is the fact that the appropriate infrastructure and supporting polices are unevenly distributed. For example, 85% of the world's commerce websites are US-based, with Western Europe and Asia making up the rest. Additionally, not many people possess visa cards etc. that would enable them to buy on the internet.

Wheeler (2005:1-3) ranked expanding women's access to information technology as the third most pressing concern women face, preceded only by domestic violence and poverty. According to the author, women have observed that the internet and other forms of IT provide access to professional networks, and allow them to keep in touch with friends and family, especially those residing abroad. Additionally, IT training empowers women with marketing skills, familiarizes them with computers and also gives them an edge in competitive jobs.

Similarly, Thas (2005:1) argues that women can be enriched by having "*the right information at the right time and at the right place*." The author adds that one can be impoverished without access to, or control and ownership of, this valuable information resource. Thas, cautions that the freedom of information today has impacted heavily on the ease and the extent of knowledge sharing. According to the author, control over "*who harnesses what information*", and to "*what extent that knowledge is further shared and with whom*", has become politically volatile since the September the 11th (2001) attacks.

5.8 Participatory Design

Participatory design is referred to as the Scandinavian school of design, and originated in the Scandinavian trade unions of the 60s and 70s. The

question this poses is how can participatory design be used to alleviate poverty amongst the rural poor? In response to this question, Bessette (2004) stipulates that promoting community self-organization is the only practical approach when faced with a state that does not have the necessary resources to assume all of its responsibilities, such as addressing basic human needs and socio-economic development. Bessette coins his argument around the concept of participatory development communication (PDC).

According to the author, the community should be encouraged to participate in development initiatives through a strategic utilization of various communication strategies, which include:

- discussing natural resource management practices and problems;
- identifying, analyzing and prioritizing problems and needs;
- identifying and implementing concrete initiatives to respond to those problems;
- identifying and acquiring the knowledge required to implement such initiatives; and
- monitoring and evaluating their efforts and creating a plan for future action.

In this communication process, all stakeholders are brought together, i.e. community members, active community groups, local and regional authorities, NGOs, government technical services or other institutions working at the community level, and policy makers who are or should be involved with a given development initiative. Bessette (2004) emphasizes that this kind of communication means moving away from persuading people to change their behavior or attitudes, to a focus on facilitating exchanges between different stakeholders which address a common problem in a two-way communication process. The author denotes that the

communication process should also be able to facilitate the learning process, especially where the goal of the research or development initiative involves acquiring knowledge and developing skills or know-how.

Bessette also points out other important factors that should be considered in a two way communication process. These include:

(i) The use of adult education as a non-directive teaching approach - the ability to facilitate participation in a small group, identify attitudes, collect views and perceptions and facilitate moderate discussions.

(ii) Making information accessible in a form consistent with the characteristics of the participants in the communication process. Information on desertification prevention, for example, will not necessarily have the same meaning for nurses, peasants, soldiers, traders and youngsters.

(iii) Encouraging and organizing women's participation in serving as communication facilitators, as only women are able to communicate genuinely with other women about their needs and help them channel their efforts to bring about change.

(iv) Identifying communication tools already in use within the local community. Communication tools may be in the form of mass media (newspapers, radio, and television), traditional media (storytelling, theatres, and songs), "group" media (video, photographs, posters) and community media (short-range rural radio broadcasting). Different forms of interpersonal communication include:

- Discussion and debate.
- Screening sessions of a film or video.
- Focus group discussions with a small number of people (7-10).
- Participatory rural appraisal techniques (PRA). This technique gives a lot of information in a limited time span about the characterization of natural resources in a given area and basic social, economic and political information.

- Role-playing - helps to facilitate participation in a small group, identify attitudes and collect views and perceptions.
- Visits, tours, workshops and exhibitions - assist in collecting views and also in raising awareness.

At the community/grassroots level, earlier studies conducted by Ngimwa, Ocholla and Ojiambo, (1997); Mooko (2002: 110) and Veli and Ocholla (2004), underscore the importance of participatory mechanisms for community engagement when implementing ICT related projects. These include alternative media resources, and sources of information such as, women's groups, folk media, religious gatherings, exhibitions, extension services and discussion forums.

5.9 Summary

The review confirms that ICTs play a fundamental role in the lives of women, especially in information access. Special efforts, however, need to be made in order to facilitate this process. These may include research on information needs, the use of information and specific problems encountered prior to project implementation. There is also a need to enact policies that take into consideration the plights of the rural poor in relation to ICTs. Last but not the least, it is necessary to involve target beneficiaries or end-users in the project planning processes.

The next chapter (six) deals with the research methodology of the study.