

Gender Empowerment through ICTs: Potential and Challenges for Women in the Caribbean

Nancy MUTURI

ABSTRACT

Information communication technologies (ICTs) have been promoted as tools for national development and for gender empowerment in many developing countries. In the Caribbean, governments, non-governmental organizations and training institutes play a key role in ensuring access to ICTs among women. Gender empowerment is equated to access to information and technology but there are several concerns related ICT access and their effective use among women that are not adequately addressed. This study addresses these issues as well as social, cultural, economic and other factors that challenge women's access and use of communication technology. The study recommends further research in policy development to focus on identifies challenges and strategies that will ensure women's participation in their own empowerment through ICTs.

INTRODUCTION

In August 2005, *Digicel*, one of the two major mobile phone providers in the Caribbean, signed an agreement with the University of the West Indies to partner in the provision of mobile phones to Staff and students at below-market prices. This is a welcome arrangement, which saves the target consumers about 18 percent of the market value. Two years prior to this partnership, the same company signed a similar agreement with farmers' co-operatives to provide mobile services to their members at a reduced cost. The University population is composed of 80% female, students and staff, an image that's reflected in the private and public sectors in the Caribbean where women outnumber men. By the same token, the farming industry is dominated by women as main food and agricultural producers. This focus on female-dominated areas could be associated with the deliberate attempt to target women as technology consumers based on the myths and stereotypes or research surrounding women and telephone use.

Whether in the local farmers market, or at the Institutions of higher learning, Information Communication Technologies (ICTs) have become integrated in people's lives in Jamaica and the wider Caribbean. Mobile communication, for example, is part of their daily activities, an opportunity that the corporate industry is not taking for granted but utilizing it to the maximum. As noted by the Jamaica Promotions Corporation (JAMPRO), the two major mobile communication providers in Jamaica are *Digicel*, a subsidiary of the Irish based Mossel Engineering Limited with an investment of some US\$630 million in mobile communication

with about 700,000 customers in Jamaica; and *Cable and Wireless*, a subsidiary of the United Kingdom (U.K.) with about 350,000 mobile customers and about 500,000 with land phones. The later has been operating as a monopoly provider of telephone and internet service in the Caribbean. In the year 2000, the company teamed up with US software giant Microsoft to offer global business services small-and-medium size businesses (BBC News, Tuesday, 6 June, 2000¹). The emergence of Digicel and other mobile communication providers offering better mobile reception has however broken this monopoly over the recent years providing a diversity of services in the Caribbean region.

The same trend is observed with the Internet where connectivity has become available in almost every part of the region with little or no hassle. From Internet cafés to public libraries, accessibility has become comparable to what exists in any part of the developed world. With prepaid wireless phones and Internet access cards for use at home, offices, schools, internet cafés and other public access locations, this no-hassle accessibility makes it easier for almost everyone in the poor, disaster prone, small Caribbean Islands to be connected to the information super highway. Local institutions and schools are gradually getting connected thus providing easy access to majority of students, workers and affiliates through Local Area Networks (LAN) and wireless connection.

In spite of this situation, however, feminist scholars and researchers have emphasized that communication technology is not gender neutral, that there are differences in access and use of various technologies, which are associated with the digital divide based on gender. The obvious intervention from local and international agencies and from the corporate, government and non-governmental agencies has been to increase access and use of communication technologies among women particularly in the developing world. Rakow (1986) however, advises that that technology should not be examined based on the differences in the behaviour of men or women towards a technology, but instead to “look for the ways in which the technology is used to construct us as women and men through the social practices that put it to use” (p. 23-4). She further argues that more attention needs to be paid to how communication technologies alter, aid, or construct women’s opportunities for interacting with each other, and with the wider public domain.

This study explores the nature of access and use of ICTs among women as well as challenges they face in their attempts to use them effectively. The paper specifically focuses on Jamaica, one of the Caribbean islands that have embraced ICTs as a tool for national development and gender empowerment much more than any other island in the region, adopting the most recent technologies to ensure global connectivity. This is evidenced by UNESCO’s ICT proposal to make Jamaica a hub for ICT connection in the Caribbean region given the potential over other islands (UNESCO, 2000). The proximity to the United States plays a key role in Jamaica’s effort with the current IT policies and setting the island’s ultimate connectivity goals for 2010. On January 7th 2005, for example, the government of Jamaica announced the granting of two licenses for the construction and operation of two submarine fibre optic networks, which will link Jamaica to North America, and the rest of the world. In this project, the licensees, Fibralink Jamaica Limited and Trans-Caribbean Cable Company Limited (TCCCL), are expected to make a total investment of \$5 billion Jamaican dollars (about US\$85million) in the creation of undersea links (*Jamaica Information Service, January 7, 2005*).

The extent of investment from a small island developing State (SIDS) demonstrates the Jamaican government priorities in ICTs and connectivity of the Island specifically for national

development. This kind of investment however leaves questions that are of interest to researchers and feminist scholars and activists pertaining to the impact it has on women and where their role come to play in this apart from merely being consumers of the technology. There are however very limited studies in the region that indicate the nature of access and use of the technology based on gender but as the example above indicates, women have been a target for communication technologies whether through deliberate efforts or unintended outcomes. This study focuses on two major technologies: Internet and mobile phones. These are the most common technology that women have openly subscribed to and the easy access to them, ideally requiring limited or no user training, triggers wider acceptability.

THEORETICAL BACKGROUND

ICTs are defined as “the building blocks of the Networked World”. As noted by UNDP, “ICTs represent the combination of microelectronics, computer hardware and software, telecommunications, and opto-electronics such as microprocessors, semiconductors and fiber optics, that enable the processing, and storage of huge amounts of information, and its rapid dissemination through computer networks. These innovations enable the processing and storage of enormous amounts of information, along with rapid distribution of information through communications network” (UNDP, 2001, p30). From this definition, ICTs include telecommunications technologies such as telephony, cable, satellite and radio, as well as digital technologies, such as computers, information networks and software. These new technologies have a huge impact on journalism and the way journalists globally inform the people about what is happening in the world. From Internet to satellite pictures, mobile and telethons, communicating with people has become easier through use of technology as tools for information dissemination and communication between people at interpersonal, intercultural and international levels.

Gender and communication technology is an area that has attracted interest from various disciplines with increased interest among researchers, from scholars, practitioners and policy-makers (Robins, 2002). Research in this field has ranged from exploring the impact and effectiveness in the new technologies in political, social and economic development and restructuring (Shade, 2002) to the global imbalances in access to the various technologies, which have been an ongoing and persistent issue since the 1970s and the New World Information and Communication Order (NWICO) debates (Thussu, 2000).

Some of the earlier researchers in the field of gender and communication technologies included the work of Lana Rakow (1986) whose focus was on women and the use of the telephone, she concluded in her study that the telephone assumes an important function in women’s lives – a way of maintaining long-distance communications with family and friends, and a way of easing domestic isolation (Rakow, 1988b). Such conclusions could make them a target for the marketing agencies and the corporate world that deals with telecommunications. Whereas a few studies focus on the Net as a dangerous place for women and others on the Net as a basic entrepreneurial tool for women (Shade, 2002), there is a wider majority of feminist scholars who have paid attention to the critical role of ICTs in gender empowerment. Criticizing the current approaches Kramarae (2004) argues that the keen interest in enabling women have this access to equipment diverts attention to the more critical role that this technology can play in enabling effective communication with others as well as links to the available resources. For

example, having access to libraries, educating them about occupational hazards, address issues related to women's and be able to communicate women's experiences with others in other parts of the world. This, Kramarae argues, would be a strategy for providing new voices, values and vision into the traditional discussions of communication and technology, and their role in gender empowerment.

Traditional communication theories that explain the access and use of new communication technologies include the diffusion of innovations theory (Rogers, 1995) and Uses and gratifications theory (Blumler and Katz, 1974). The diffusion theory explores ICTs as new innovations that are widely promoted as tools for national development and of women's empowerment through recording, accessing, searching, sharing and retrieval of information from anywhere in the world in minutes (Uhegbu 2000). As White (2004) observed in a review of the changing trend in development communication, there is a change in communication patterns to facilitate women's participation in the communication process. White stresses that women have all along been blocked by arbitrary cultural discourses that divert resources away from them or which prevent them from getting into decision-making positions. Research on gender issues however has dealt with the changes in the very conception of communication focusing on the removal of the hierarchical, centralized, one-way patterns of communication which have characterized extension of new technologies that open the avenues for participation, dialogical, non-directive and horizontal communication. This approach, as White argues, enables all in the group to gradually come into the decision-making process and make a contribution to collective actions.

Blumler and Katz theory on the other hand explains the active role of communication participants in the communication process by choosing and using the media with the assumption that the users have alternative choices to choose from. With the current technology, people have variety of communication sources ranging from the traditional or folk media in some communities, one way radio, telefax machines, print media, and television to the Internet and mobile communication disseminating messages instantly to any part of the world regardless of time differences.

The contribution of this technology to development has been studied from a variety of perspectives but development is usually equated with access to technology and information. Internet usage for example is regarded as the standard indicator of the use of ICTs and also the most democratic of all the mass media mainly because of their low investment (USAID, 2001). ICTs have been specifically pushed as a tool for women's empowerment and development particularly as an attempt to meet Goal 3 of the United Nations Millennium Development Goals (MDGs) – Gender equality and the empowerment of women. Caribbean, like many developing nations have put some effort in an attempt to achieve this goal, among them increasing access and use of ICTs among women. White (2004), however, notes that gender empowerment needs to be explicitly located within a broader framework of commonly agreed parameters of human and social equity and the strategy of empowerment within a broader framework of universal human rights. ICTs have a critical role as part of this strategy and hence their integration in the national development and gender empowerment process through the diffusion framework through which many developing countries operate from.

Feminist theorists have criticized the diffusion model in promoting ICTs among women. They question the nature of access and use of the technology where women particularly in the less developed countries are merely consumers of ICTs playing minimal or no role as developers

of the technologies compared to their counterparts in the North and Western hemisphere. The latter are becoming more of active agents in the construction of communication technologies particularly the Internet and mobile communication but there are regional differences. Shade (2002) has paid much attention in how Western women create internet communities, which are devoted to issues of feminism, political activism and the use of the Internet for democratic purposes. Hafkin and Odame (2002) on the other hand explore the use of ICTs, specifically the Internet, among women in rural and agricultural development. They focus on how women are not always involved in the design, development and implementation of ICTs for development, a problem that often result in the inappropriateness of new technologies and new problems when they have to use them.

Women's participation in technology development is crucial but there is also a need to explore the differences in access and use of the available technology as well as the digital divide among women in the North and South and among those in the developing countries. In the more developed nations the new media industries have been marred by the persistence of gender inequities, which may have implications for users and consumers of products and services when they are predominantly developed by men, and thus arguably for men. Documenting and challenging such imbalances and factors contributing to it would be a good start toward gender empowerment through ICTs, while using the tools for advocacy and to address women's visibility in the media industry. Rakow (1986) addresses the need to pay more attention to how communication technologies alter, aid, or constrict women's opportunities for interacting with each other, and with the wider public domain.

RESEARCH QUESTIONS AND METHODOLOGY

This study focuses on women as consumers and therefore key users media and communication technology. Information gathered from this study sought to answer questions related to the nature of access to ICTs among women in Jamaica, how women use the technology as well challenges associated with the access and use.

Data were gathered through a 26-item question guide with all open-ended questions. The guide was emailed, self administered or completed face-to-face among women ages 21 and above. Women in the study were selected from four organizations that have a strong gender and communication component either through training, education, advocacy or other gender empowerment component. The survey was sent to all members of these organizations whose contacts were available at the time of the study with a cover note detailing the purpose of the study and requesting the selected participants to respond providing as much information as possible to each of the questions. Over a period of two months with one reminder, 121 women responded. Due to the fast and ever changing nature of ICTs it was imperative to have a time limit for this study hence 8 questionnaires returned after the set deadline were not included in the study.

Information gathered was analyzed both qualitatively using descriptive percentages but also qualitatively seeking recurring themes to women responses. The goal of this second methodology was to gather information related to challenges they face in the world of technology. In addition to the data collected through questionnaires, several other information sources were used including the national ICT surveys carried out by government or corporate agencies as

baseline studies for the promotion of ICTs for National development or for marketing purposes. Reports from NGOs and other smaller studies were also explored, most of which are not published but some available online from the organizations’ web sites.

KEY FINDINGS

There are several technologies that form the category of the new media today as noted by, among others, Hiebert & Gibbons (2000) but not all of these technologies are available in the developing countries. The current trend however indicate that these countries have put much effort and resources to enable them catch up technologically with the rest of the world with only a few years ahead for some before they reach the same level. As indicated in the examples given at the beginning of this paper, ICTs have been aggressively infused into the Caribbean but the Internet and mobile phones are two forms of new media that have recently attracted the attention of the national governments as tools for communication and network, national development and gender empowerment. As indicated in Table 1 below, Jamaican women’s access to these main ICTs in addition to other technologies available to them.

TABLE 1

WOMEN’S ACCESS TO ICTs		
ICT	Number subscribing	% with Access
Internet	98	81
Cell phones	120	99
Land phones	101	84
Cable Television	101	83
Other Television (no cable)	18	15
Radio	118	98
CD players	106	88

N=121

In addition to the mobile telephones with 99% subscription, Internet (81%) and other common media technologies including radio and Television, some women mentioned having access to include digital cameras, Live talk, Disc Video Players and Fax machines. Whereas access to the technology is increasing among women, literature indicates that use of ICTs is decreasing in the developed countries. In the US, for example, only about 52% of women were active users of the Internet compared to Germany (36.6%), France (38.1%) and South Korea (43.4%) (Pastore, 2000). This may suggest a trend in the closure of the digital divide between the North and South but such figures may be deceptive due to the factors leading to the current trends. The reduction of technology users in the North could be a matter of choice or an attempt of selective exposure to information, the opposite of the situation in the South where limited resources hamper connectivity.

ACCESS AND USE OF MOBILE PHONES.

A mobile phone has become a permanent feature in everyday communication changing the existing communication practices and initiating new social arrangements in terms of mobility and connectivity. This is visibly so in the Caribbean where literally everyone who can afford a minimum charge of about US\$25 with free activation has a phone. This study found 99% of respondents with a mobile phone, 20% had two phones while 10% had three.

Asked why they needed more than one mobile phone, respondents emphasised the need to keep in touch with friends, family, workmates and others on a regular basis. This finding supports Rakow's argument that women use the telephone to hold together the fabric of the community, building and maintaining relationships and accomplishing important community functions, as well as fulfilling important personal needs as individuals (Rakow, 1986; Shade, 2002). To fulfil this function, Jamaican women expressed the need for more than one phone depending on their circle of friend and what provider they subscribe to. To call from one provider to another costs more hence the need to have a phone from each provider for keeping in touch with their acquaintances for less regardless of their providers. Using mobile phones to make international calls was also found more affordable than vice versa thus enabling Jamaicans to keep in touch with their family and friends residing abroad.

Other reasons for having several mobile phones that were listed included:

- Better service from one provider including text messaging services and voice mail
- Internet access with the phone from one provider and not the other
- Just to have access both wireless networks.
- Fashionable phones compared to other providers
- One phone for emergency and one for making and receiving calls
- One for business or office uses the other one personal use as a home phone and is post paid the other is GSM pay as you go [prepaid]

Only one respondent who did not own a mobile phone at the time of the study but she indicated an intention to own one in the near future or use it if one is offered to her.

The means of acquiring a mobile phones in Jamaica is convenient with no signed contracts or other commitment to the provider apart with postpaid phone agreements. The postpaid calling system enabled people to call when they can afford to do so or when they have free credit. This monthly free credit with the purchase of the first prepaid phone card within a month is a marketing strategy but has become very popular. However failure to purchase any add credit for the phone for several months often resort to deactivation of the Subscriber Identification Module (SIM) cards, which by 2004 cost as little as US\$5 to replace.

Other uses of the mobile phones included text messaging (49%), access the internet (3%) and for playing games (21%). There are no major gender differences when it comes to electronic games but cell-phones games and text messaging were two female-biased activities. The structure of the mobile phones with small key pads that are more convenient physically for women compared to men. Text messaging is also a more economical way of communicating with free template texts like "please call me", "on my way", "in a meeting" or picture messages that could be sent without charge.

Given the oral nature of the Caribbean societies, with high preference for verbal communication, the cell-phone was found to be an important addition tool. With the access to the mobile phones, there is a great possibility to reach the public with information about certain issues. This was emphasized by one respondent who noted:

Many women, from all economic and social classes have a cell phone as it is a relatively cheap communication tool, so messages could easily reach women from all walks of life, that is, sending out text messages or call them up. Nobody will fuss about receiving calls especially because they don't pay to talk.

About 70% of the respondents thought this would be a good mode of communication to reach women, sending text messages about various issues that affect them or requiring some action from them at their own time and space if necessary. Agencies are however not utilizing this mode of communication to reach women with needed information and education as expected even with the wide acceptance an accessibility region wide. Apart from the marketing agencies that occasionally send text messages to market their products and services, respondents did not mention any social organizations that have attempted to use the mobile technology to reach their publics through the mobile phone. They suggested using the marketing approach, replicating the commercial sector to contribute to women's empowerment through disseminating information about certain gender-related issues would contribute to the empowerment of women through information and education on issues that affect.

A few respondents (30%) were, however, skeptical about submitting sensitive messages on the phone some resenting use of the mobile phone as a mass medium was based mainly on the age. Women were concerned that young children will be exposed to inappropriate information and messages submitted through the phone wondering how this information would be censored or limited to avoid such circumstances. This concern was demonstrated by one respondent's statement:

I really don't feel comfortable receiving messages about sex and HIV/AIDS on my phone, or my child getting a message reminding him to wear a condom every time he or she is having sex. Who will make sure such messages don't go to the children when they are sent to everyone who own a cell phone.

There were already concerns about drug traffickers trying to reach children as customers as some respondents noted: "I have received several of those calls and somebody told me point blank that they want to do business with me. When I insisted that I don't understand, he told me it was about drugs."

In spite of such concerns that require protection of minors, majority of respondents stressed the importance of using mobile phones to reach the public with useful information to enable them make decisions. But it is also necessary to determine the impact of such information to the unintended audience especially when submitted to the general public. Negative implications could be prevented through a selective process where gender and age are taken into consideration. The challenge however remains because those using the technology might not be the registered users.

INTERNET ACCESS AND USE.

Like mobile phones, the Internet is equally accessible with about 81% having access at one place or the other. This finding is closely in line with the national study by the Market Research Services Ltd. (MRSL) commissioned by JAMPRO that found a universal 91% awareness of the Internet among Jamaicans 15+ years. That study sought to establish current awareness and usage of the internet, attitudes and intention to use it, found that close to 70% of those aware of the internet had used the Internet and the remaining 30% had an intention to use it within a short term or as soon as they gain access to a facility that provides access.

Women who had internet access in this study did so from various locations including home (61%), work (33%), school (15%), and other places including the post office, public library, and friends' houses. A small minority (9%) has access at the Internet cafés and a negligible number (3%) did so through their mobile phones. This negligible number of respondents is directly related to the exorbitant cost of accessing the Internet through the mobile phones. However, as one respondent noted, "some young people use their phones to get blue movies", meaning pornographic sites, due to the privacy that this technology provides with no censorship as it is with the internet and at certain locations like schools or public libraries.

Majority of women in this study had access to computers at home (41%) and almost an equal majority has access to the Internet at home. About 60% did not have computers at home but they had access at the offices (28%), school/college (21%) and Internet cafés (9%). These were also the same locations where they indicated having internet access in addition to the public libraries, friends houses and the post office that had a limited promotional free access during the time of the study. Personal Digital Assistants (PDAs) are also means of accessing information online, but none of the respondents indicated owning one or using it to access the internet. As observed, these equipments were used as organizers, to record important information, schedule appointments or as alarm clocks. However, this was found to be an expensive and inconvenient device that only the economically capable and "techno savvy" owned these devices.

Respondents who have access to computers and therefore internet regardless of location had certain priorities that were not uniformly distributed. The priority assigned to the various activities is indicated by how regular the activity was performed as indicated in Table 2 below. Based on the extent to which women had access to computers and Internet for that matter, respondents were asked about the purpose and extent to which they use of this technology.

TABLE 2

INTERNET USE				
Activity	Never use	Rarely use	Occasional use	Often use
Email	9	11	24	54
Instant messaging	24	24	28	22
Play Games	40	14	24	20
Newsgroup / listservs	51	21	18	8
Research/information	10	25	31	32
Search Engine/Web surf	16	15	23	44

N=98

Among those who had Internet access, the largest majority of them indicated going on-line to check email regularly whereas some did so for instant messaging. This finding also confirms Rakow's assertion about women's role as key players in maintaining relationships in society, a role that has been strongly enhanced by technology. Whereas not many women went online to play games or to search or participate in newsgroups or listservs, there is a big number that did so occasionally or regularly for research and information gathering and for Web surfing, an activity that is also directly linked to information gathering whether for school assignments, work-related or personal purposes.

Several organizations in the Caribbean have played a key role providing information on-line but there are also international agencies such as the United Nations and WHO among others that serve as global information resources. Locally, organizations that use ICTs to address these issues that respondents mentioned include: the Cancer Society of Jamaica, University of the West Indies HIV/AIDS Response Programme (UWI HARP) and Center for Gender and Development Studies, Ministry of health, Bureau of Women affairs, Women's Media Watch and the Bureau of Women's Affairs. These are local agencies that were found reliable given the expertise on various gender-related topics. There were other regional and reliable resources including the Caribbean Health Research Council (CHRC), Pan-American Health Organization (PAHO), World Health Organization (WHO) and the UN agencies, including UNIAIDS that have served as crucial information sources with the Internet as a central information dissemination tool.

CHALLENGES TO ACCESS AND USE OF ICTs.

Technology in the Caribbean has been viewed as key to the transformation of traditional concepts where information and knowledge become crucial for economic development. The efforts of the Jamaican government, integrating ICTs into the economy had become a priority and a strategic imperative in an attempt to catch up with the situation in the United States and other developed nations while competing with other developing nations for the market share of the global ICT business. To achieve this goal the government established the Central Information Technology Office (CITO), also known as the Office of Partnerships. This office would be responsible for policy analysis and development, not necessarily implementation, and monitors worldwide market trends and develops strategies, training policies and actions plans to ensure the countries e-readiness in the emerging IT environments. Such efforts have contributed to the increase in the adoption of ICTs throughout government ministries and associated institutions including business and commercial institution.

In spite of this recognition and adoption of ICTs by the public and private sector, there are challenges that are gender-specific and which deter women from equal access and use of ICTs. Though majority of women have access to computers at the workplace there is a common belief in their lack of adequate computer knowledge and fear of technology as indicated in this response:

Women are not techno-savvy as men and most often rely on men to help them with setting up their internet connection and internet access. Males often dominate and there is also the reluctance to use of technology mainly for women over 40.

Gender role socialization are strongly embedded in the cultural and social norms requiring women to be in certain specific roles that were deemed more feminine in the IT field. These roles are reinforced by women's fear, disempowerment and the nature of IT training that they acquire.

Where organizations support access and use of ICTs among women, success of their effort is sometime also dependent on ownership. Hafkin and Odame (2002), for instance, observed that as soon as the new technology starts to produce income, whether it is a newly profitable crop or new processing equipment, it is often taken over by men (Paris, et. al., 2001). On the other hand Shade (2002) points out that even in the corporate world ownership of ICTs among women and specifically of the media ownership is visibly absent (with the exception of Oprah Winfrey and a few other women) in the US. This happens to be the situation, or worse in the less developed countries where women's ownership, access and use of the communication technology, is very limited in spite of the global hype to close the digital divide.

Though ICT policies in the Caribbean are in the development phase, the gender component has been one of the considerations in this development. The Suriname IT policy, for example, emphasizes the inclusion of gender, the disabled, youth and elderly before 2010 is a key component. This suggestion is in accordance with the CARICOM (Caribbean Community) Charter of the Civil Society for the Caribbean. The Charter states that:

States shall respect the fundamental human rights and freedoms of the individual without distinction as to age, color, creed, disability, ethnicity, gender, language, place of birth or origin, political opinion, race, religion or social class but subject to respect for the rights and freedoms of others and for the public interest (<http://www.caricom.org/chartercivilsoc.htm>).

The charter supports the human rights including the right to information and freedom of speech where people of all backgrounds can have access to information and use the technology to develop and disseminate information and messages.

Some of the challenges to the access and effective use of the technology in Jamaica, and the wider Caribbean, for information dissemination and expression of freedom of speech as noted above are associated in access and effective use of the technologies people have access to. For instance, the economic aspects of mobile phone use requiring purchase or prepaid phone cards has been a crucial limitation among majority of mobile phone users. Costs have also been a limitation in Internet access even though many people have access to computers at one place or another. When asked what challenges women faced, a combination of reasons was also listed including lack of: computers (51%); training (56%); Internet connection (41%); and a land phone (26%). All these factors have to do with the cost involved in connectivity regardless of location. This was a general response emphasized by one respondent who noted:

If there is a charge, as there often is—even at the library, women may not be able to afford the cost—. Also, they may not know how to use it and this is a problem because it will take even more time to get information and they are paying for the time spent online.

Economic constraints also included the high Taxes (GCT) when buying computer thus restricting many Jamaicans from doing so, and some companies prevent women administration staff to access internet at work while others noted the lack of computer training or education which limited their use even when they have access to the technology. At the national level, lower cost connectivity particularly in remote areas, public access to ICTs and applications would be welcome innovations and contributors to national development.

Personal security in relation to gender-based violence was another critical issue that women were concerned about in the process of Internet access. The increasing incidences of rape and murder of women and girls in Jamaica has put many women in fear thus raising the need to avoid public places where they might risk their lives. The Internet cafés, for example, are not very popular due to their location, requiring the use of public transportation for many women. The same problem was raised with the access to the public libraries which also had limited access. The limited number of public libraries, their location and transportation issues was noted as a major challenge to women seeking information and access to the Internet.

Individuals fear of technology and apprehension due lack of competency and appropriate training particularly in the more advanced computer technology—hard— and software—was a key issues that came from this study—. Such fear prevented women from acquiring computers or internet access for those with computers and could afford connectivity fees. Partly to blame is gender-role socialization that grants men to support for IT training over women and has contributed to the common myth about men being techno-savvy and therefore possessing certain natural skills that enable them to perform better in technology compared to women. Respondents noted that it is unfeminine for women to perform certain IT-related roles that are considered masculine. For instance, Jamaican men are expected to help women set up their computers and Internet connection at home and workplace, whereas women perform less demanding consumer-related activities in relation to ICTs. This imbalance in gender role differentiation is reflected in the training and personal interests and has been observed in other electronic media where more women as anchors and announcers while men manage and produce television and radio programs.

Cultural aspects associated with gender and access and use of ICTs are not isolated for Jamaica. Throughout the world, there are problems in attracting young women to science and technology studies. Hafkin and Odame (2000) note that this problem is worse in Africa where such attitudes prevent young girls from accessing and using ICTs. In Uganda, for example, girls did not get access to the limited number of computers installed in school (under a WorldLinks Program) because of the socio-cultural norm that “girls do not run.” As a result, boys ran and got to the computers first and refused to give them up to girls. Additionally, the earlier curfew hours for girls at boarding schools further constrained their access. Similarly, in India, Sugata Mitra’s well-known “hole in the wall” experiment, indicates the aggressiveness of boys pushing away girls prevented the girls from using the computers.

TRAINING FOR ICTs.

Though Mitra’s experiment indicated that even children with the most rudimentary education and little knowledge of English can teach themselves to use a computer and browse the Internet, understanding and effective use of technology is necessary for capacity building and professional development. Cooks & Isgro (2003) argue that access to ICTs among women has been on the increase but has also been celebrated, decried, contested, bipolarizing. In the Caribbean, access has been supported and celebrated, with institutions and individuals receiving government support for training. The Jamaican government has recognized that ICT training is one of the critical skills necessary to compete in the labor market for women in the Caribbean. With this recognition, two government-supported institutions offer IT training—the HEART Trust/

National Training Agency has offered a range of courses since the mid-1980s. These include MS Office, basic and intermediate information technology, call centre-worker-training including data entry, and training in networks, as well as training in programming in concert with the Caribbean Institute of Technology. Female enrolment in lower level IT training courses has ranged around 70% since 1999. This figure was however a reduction from 83% in the previous years (Francis-Brown, 2002).

Local training institutions have also taken the lead in ICT training among women. The two main tertiary institutions in Jamaica, The University of the West Indies and the neighboring University of Technology have focused on IT training, providing internet access and wireless hotspots across campuses including lecturer rooms to facilitate online learning. The Caribbean Institute of Media and Communication (CARIMAC) at the University of the West Indies for example, through the Communication for Social and Behavior Change (CSBC) graduate program was launched in 2004, equip program participants with a laptop computer with wireless Internet connection. The institute has a 90% female enrollment, which is 10% higher than the overall university enrollment.

Similarly, women's NGOs have played a key role in this effort providing training and access to members who have no access elsewhere. The Women's Media Watch, an NGO that focuses and monitors the media coverage of gender-related issues in the Caribbean, focuses on ICT training offering computer courses to its members free of charge and at a time that is convenient for them. Such courses include the use of PowerPoint for presentation, Use of Internet, web site development etc. The organization also provides Internet training and access to its members all of whom are volunteers. Similarly members are training on use of other software including word processing and Power Point presentation skills. Such training has enabled members, all of whom are volunteers, to have a better output in their activities. The effort has earned the organization much credibility, as it used the available technology and networking and communication, while encouraging online discussions rather than face-to-face meetings with its members unless when absolutely necessary. This effort has enabled active participation of high profile members Caribbean-wide and abroad thus earning support from the local and international agencies.

Given the need for training and emphasis it has received island-wide with support from the government and training institutions, respondents were asked about the training they have received in computer use and an overwhelming majority (86%) indicated having trained for one or more software or received other IT training. Only about 14% either did not have any training or they learned computer use on their own and could perform most of the basic skills like typing and internet access for email and web surf. Common courses mentioned among those who have had formal IT training included the following:

- Advanced information technology.
- Beginners course in hardware.
- Basic computer training.
- Computer in everyday life.
- Database programs like Excel and Lotus 1-2-3.
- Desktop management/publishing.
- IT related conferences.
- Internet and web page design.
- Information Technology —high school and other IT related conferences.
- MS dos.
- MS office.
- Basic Management Information system.
- Word-perfect.
- PowerPoint Presentation.
- Multi-media courses.

Examining the nature of training and courses that women have taken, there are questions related to career and professional development and confirms previous studies by Dunn and Dunn (1999), Carla Freeman (1998) and Francis-Brown (2002). These studies found that women in the Caribbean are overwhelmingly employed at the lower end of the technology market, doing basic data entry and data processing. Medium and high-technology jobs, involving scanning, imaging and software development and installation, training and repairs, require more technical training and have been found to be male dominated in most of the Caribbean. In Jamaica, as observed by Francis-Brown (2002), the programming courses offered through the government institutions has had more male participants, thus leading to the conclusive explanation for the widening gaps in wages and working conditions where men take programming careers and women venture into data processing in Jamaica, a common scene in other Caribbean islands. Women therefore get jobs the wider technology markets as typists, and as data entry and processing clerks and with the current labor outsourcing, many women have filled positions in the call centers and other service industries requiring minimal IT training, a key observation in this study. This lack of adequate IT training is not addressed adequately by the agencies as noted by one respondent, a senior level manager in a government organization, “they are expected to come prepared for the job, not the company to train them.” Respondents however pointed to the knowledge gap between men and women linking it to social and gender differences in regard to technology use and media consumption.

CONCLUSION

The diffusion of ICTs in Jamaica and the wider Caribbean has been successful in many ways with the support of government and NGOs and training institutions all collaboratively facilitating the process but there have been several challenges related to gender empowerment through ICTs. Access to ICTs and therefore information among women has been equated to development and gender equity and empowerment but this there are several challenges that prevent this access and effective use the technology. Such challenges that are related to economic, social and cultural factors determine this effectiveness but they have not been adequately addressed adequately to ensure gender empowerment and women’s equal participation in the national development process. Though the study indicates a high potential for ICTs, particularly mobile phones, in information dissemination, reaching women with important gender-related information, there is a need to explore the implication as well as the intended and unintended outcomes of such use of technologies. Certain gender sensitive policies that guide that use of technology in this way also to be in place to ensure that equal access and social equality while protecting the rights of those who need it and allowing others to participate in the process. It is imperative that women participate in the development and gender empowerment process, but to do so they require the necessary IT skills to enable them use ICTs effectively.

Further studies are therefore recommended to explore the effectiveness of ICTs in this role while ensuring consideration of the diversity of technology users mainly by age and gender. Furthermore, an assessment of skills that women acquire is critical to ensure that proper training will enable them to participate in the national development process equally with men and for professional development and empowerment.

REFERENCES.

- BBC News, Tuesday, 6 June, 2000). "C&W teams up with Microsoft." (Accessed at October 2005) <http://news.bbc.co.uk/1/hi/business/779457.stm>
- BLUMLER J.G. & KATZ, E. (1974). *The uses of mass communications: Current perspectives on gratifications research*. Beverly Hills, CA: Sage.
- CARICOM, "Caribbean charter of civil society." (Accessed at October 2004) <http://www.caricom.org/chartercivilsoc.htm>
- CITO, 'Jamaica's e-readiness'. Ministry of Science, Culture and Technology, Jamaica, 2001.
- COOKS, L.M. and ISGRO, K. (2003). "A space less traveled: Positioning gender in information and communication technology." ICT Development. *Feminist Media Studies*, Vol. 3, Number 3, November, pp: 347-351
- DUNN L.L. and HOPETON S. Dunn, "Employment, working conditions and labor relations in offshore data service enterprises: case studies of Barbados and Jamaica." *ILO Working Paper* no. 86 (1999).
- FRANCIS-BROWN, S. (2002). Women in the information society. Presented at the *WACC-Caribe workshop: 'Democratisation of Communication in the Caribbean – Confronting the Information Society'*. Havana, Cuba, September 23-25.
- FREEMAN, C. (1998). "Femininity and flexible labor: fashioning class through gender on the global assembly line." *Critique of Anthropology*, vol.18, no. 3, pp. 245-262.
- HAFKIN N. & ODAME, H. (2002) "Gender, ICTs and Agriculture. A Situation Analysis for the 5th Consultative Expert Meeting of CTA's ICT Observatory meeting on Gender and Agriculture in the Information Society."
- HIEBERT R. E. and GIBBONS, S. J. (2000). *Exploring Mass Media for a Changing World*. NJ: Lawrence Erlbaum Associates
- KRAMARAE, C. (2004). "Do we really want more control of Technology?" In Foss, Karen, Sonja Foss and Griffin, Cindy L. (Eds). *Readings in Feminist Rhetorical Theory*. Thousands Oaks. Sage.
- MITRA, S. (2001). *Presentation to USAID Conference on "New Technologies for Development and Disaster Relief"*. Washington, D.C.
- PARIS, T. R., FELDSTEIN, H & DURON, G. (2001). "Technology. 2020 Focus 6. Empowering Women to Achieve Food Security." Brief 5, International Food Policy Research Institute. Washington, D.C. http://www.ifpri.org/2020/focus/focus06/focus06_05.htm. [Accessed 21 September 2005].
- PASTORE, M (2000). "Web Remains a Man's World outside U.S." Retrieved December 20, 2004 from http://www.clickz.com/stats/sectors/demographics/article.php/5901_409541
- RAKOW, L. (1986). "Rethinking gender research in communication." *Journal of Communication* 36:11-36.
- ROBINS, M. (2002) "Are African Women Online Just ICT Consumers." *Gazette: The International Journal of Communication Studies*, Vol. 64, (3) 235-249
- ROGERS, E. M. (1995). *Diffusion of innovations*. 4th edition, New York, Free Press.
- SHADE, L. R. (2002). *Gender and Community in the Social Construction of the Internet*. NY: Peter Lang.
- THUSSU, D. K. (2000) *International Communication: Continuity and Change*. London. Arnold.

- UNESCO, "Study of E-Governance: development of country profiles." Prepared by the COM-NET-I Foundation. Paris, UNESCO, 2002.
- UNITED NATIONS *Development Programme (2001) Human Development Report. Making New Technologies Work for Human Development.* New York: Oxford University Press.
- USAID, (2001). United States Agency for International Development. 2001. "DOT – COM-Digital Opportunity through Technology and Communication Partnerships." (http://www.usaid.gov/info_technology/dotcom/. [Accessed 30 October 2005].
- WHITE, R. A. (2004). "Is Empowerment the Answer? Current Theory and Research on Development Communication." *Gazette: The International Journal for Communication Studies.* 16 (1) February pp.7-24

NOTES

1. A complete story can be found at <http://news.bbc.co.uk/1/hi/business/779457.stm>.