

Role of Information Communication Technologies (ICTs) in Empowering Rural Women of Bangladesh

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ABSTRACT: Access to Information and Communication Technologies (ICTs) can have impressive force on poverty alleviation for rural women. Rural women need to treat ICTs as an empowerment tool and a means to a living. The main intention of this study was to identify and explore the present use and access to Information and Communication Technologies (ICTs) among the rural women in Bangladesh and suggest mitigation solutions. The study was conducted in the Dinajpur district under Khansama and Chirirbandar Upazila during 2014. Among the two Upazils, two Unions were selected randomly and finally two villages were chosen purposely. The People in the study area are engaged in a host of livelihood activities and most are involved in agriculture. Survey method was used and rural women aged between 16 to 61 years were sampled. In total, 50 respondents were the sampling size and respondents were selected randomly. The Focus Group Discussion (FGD) was done with Up Chairmen, Members, Teachers, Government and NGOs personnel. PRA methods were also used for the study. Besides, correlation between the respondents' level of education, types of ICTs access, information needs and purposes were observed.

INTRODUCTION

Information communication technologies have become a potent force in transforming social, economic, and political life globally. More and more, development strategists see the need for developing countries to embrace information communication technologies both as a way to avoid further economic and social marginalization as well as to offer opportunities for both growth and diversification of their economies (Sachs, 2000). The uneven distribution of these technologies within societies as well as across the world has been termed "the digital divide." It reflects a division between the information "haves" and "have-nots" on many lines that often overlap — within countries by race, ethnic group,

class, age, region, and gender; between countries; and globally, between those who have access to abundant information resources and those who do not have this access. Women within developing countries are in the deepest part of the divide, further removed from the information age than are the men whose poverty they share. The gender gap in the digital divide is of increasing concern.

If 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 these technologies and use them (Nancy and Hafkin, 2003). If not, lack of access to information and communication technologies becomes a significant factor in the further marginalization of women from the economic, social, and political mainstream of their

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countries and of the world (Rahman, 2008). Without full participation in the use of information technology, women are left without the key to participation in the global world of the twenty-first century. ICTs are one of major development issues of the coming decades (Women 2000 and Beyond, 2003).

The Beijing Declaration and Platform for Actions adopted at the Fourth World Conference on women drew attention to the emerging global communications network and its impact on public policies, as well as the attitudes and behavior of individuals. It was called for the empowerment of women through enhancing their skills, knowledge, access to and use of information technologies. As Bangladesh is a part of Beijing Platform for Action, several ministries including women affairs, education, agriculture, environment and forest, fisheries, health and family welfare, home, industry, labor, law, local government, rural development, social welfare and planning are working in an integrated manner for empowering the women (Abbas, 2009).

One of the best ways of developing women socio-economic status is access to Information Communication Technologies (ICTs). Unfortunately rural women in Bangladesh could not acquire as much weight in technology as in numbers. The flow of information to the rural women is an essential precondition for the development of rural areas as well as for the development of Bangladesh. Considering the urgency, the present Government of Bangladesh emphasized to visualize Digital Bangladesh by 2021. For making the vision of Government successful the researcher tried to explore the present use and access to ICTs in rural women of Bangladesh and suggest mitigation solutions.

INFORMATION COMMUNICATION TECHNOLOGIES (ICTS)

Information and Communication Technologies (ICTs) were recognized by the world leaders as a key of development in the World Summit on Information Society (WSIS) in Geneva in 2003 and in Tunis in 2005 (Tunis Commitment). In the Poverty Reduction Strategy of the country called National Strategy for Accelerated Poverty Reduction (NSAPR) 2009, ICTs were similarly identified and given due importance. Information and communication technology (ICT)

comprises of three separate words – information, communication and technology. Information is defined as any kind of message, written, audio, visual or audio-visual through which a person gets knowledge about a new person, place, thing, situation, or environment. Similarly, communication is the way of transferring such message to others which needs a medium, a clear message, and sender and receiver. Information and communication technology is the use of modern technology to aid the capture, processing, storage and retrieval, and communication of information, whether in the form of numerical data, text, sound, or image.

Definitions of ICTs are as varied as they are diverse. Marcelle (2000) defines ICTs as a complex and heterogeneous set of goods, applications and services used for producing, distributing, processing and transforming information. Ngenge (2003) perceives them as technologies that enable the handling of information and facilitate different forms of communication between human actors, human beings and electronic systems, and between electronic systems. Overall, ICTs are grouped under two categories: ‘traditional’ and ‘new’. Traditional (old) ICTs constitute no electronic media such as print and analogue technologies, i.e., radio, television, fixed line telephones, and facsimile machines. These technologies have been gradually ingrained in the daily lives of people and communities. ‘New’ ICTs consist of computers (in their entire myriad manifestations) and data processing applications accessible through their use email, Internet, word processing, cellular phones, wireless technologies and other data processing applications (Kwake and Adigun, 2008).

Digital Bangladesh

Broadly speaking, a digital society ensures an ICT driven knowledge-based society where information will be readily available on line and where all possible tasks of the government, semi-government and also private spheres will be processed using the state of the art technology. So, a digital Bangladesh refers efficient and effective use of modern ICT in all spheres of the society with a view to establishing good governance. Making Bangladesh a digital one, we have to establish technology driven e-governance, e-

commerce, e-production, e-agriculture, e-health etc. in the society emphasizing the overall development of the common people, the major stakeholders of the country (Kabir, 2009).

The present Prime Minister of Bangladesh in her party's election manifesto in 2008 pledged to develop a digital Bangladesh by 2021 through effective use of information and communication technology. The philosophy of "Digital Bangladesh" comprises ensuring people's democracy and rights, transparency, accountability, establishing justice and ensuring delivery of government services in each door through maximum use of technology-with the ultimate goal to improve the daily lifestyle of general people. Government's "Digital Bangladesh" includes all classes of people and does not discriminate people in terms of technology.

Digital Bangladesh is a continuous process of development. For those who thinks that it can be developed in a specific time and budget is absolutely wrong. The whole process requires lots of tasks, for which we have to be prepared. After all, digitization is the only pathway to economic success, quality education, public health and also generating transparency in governance with full public participation. To materialize the idea of digital Bangladesh, development of countrywide backbone and expected number of human recourses is the basic needs. On the other hand, while mass people are concern, availability, accessibility and affordability must be ensured; otherwise the objective of building a digital Bangladesh could not be achieved properly (Abbas, 2009). For achieving the target, "Digital Bangladesh" by 2021, the present government is trying to the best and that's why the US President, Barack Obama gave full credit to Bangladesh on his Kenya visit on July 25, 2015. In his official speech Obama mentioned how much improve Bangladesh has done on the IT sector. It's a Great Achievement for Bangladesh (BBC, 2015).

Research Objectives: The broad objective of the study was to assess the state of the access to ICT by the rural women for achieving digital Bangladesh and to identify the factors affecting the issues by introducing information communication systems. Specific objectives: (i) Determine the types of ICT access to the rural women; (ii) Search for available

information service tools for rural women empowerment, and (iii) Identify the factors that are affecting use of ICT to the rural women of Bangladesh.

METHODOLOGY

Both qualitative and quantities methods and different data collection tools were used. To generate the primary data, the structured questionnaire, semi or unstructured interviews and observations, as well as Focus Group Discussion (FGD) methods and PRA were used for the proposed study. Structured questionnaire were prepared to generate the realistic and accurate data from selected HHs survey of the respondents from the study areas. The primary data was also collected from key informants using the unstructured interview method. The interview was taken as cross checking for data obtained from questionnaire. Each household from the survey area were visited and observed by the researcher. The focus group discussion was held in selected study areas among household, local residents, Government and NGOs personnel. PRA methods were also used in the study. Secondary data was collected from published, unpublished written documents from individuals, experts and organizations related to ICT programs.

FINDINGS OF THE STUDY

Age of the Respondents

In the study, one of the main purposes was to identify which age-groups of rural women use ICTs frequently, keeping that view in mind the researcher has categories the age of the respondents. The lowest age was 16 year and highest 61year. Most of the respondents (30%) were of the age range between 28-38 years, and the next highest group was between 17-27 years. Out of 50 only 4.00 respondents were belong to 61years or above. In the report most of the respondents were married.

Education Level of the Respondents

For the establishment of knowledge based society education is undoubtedly needed for to access highly sophisticated technology like mobile and internet using, where the technologies conserve the skeleton of the ICT. In the study, educational levels of the respondents were not high. Most of them, levels of

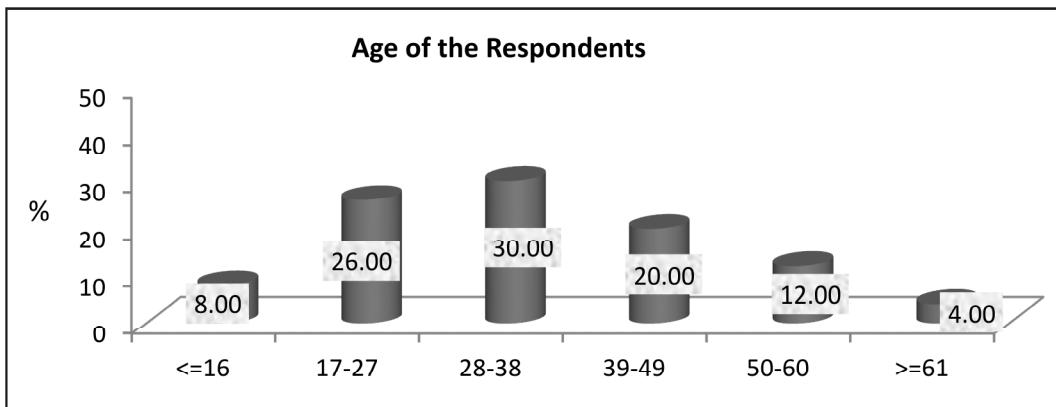


Figure 1: Age of the respondents

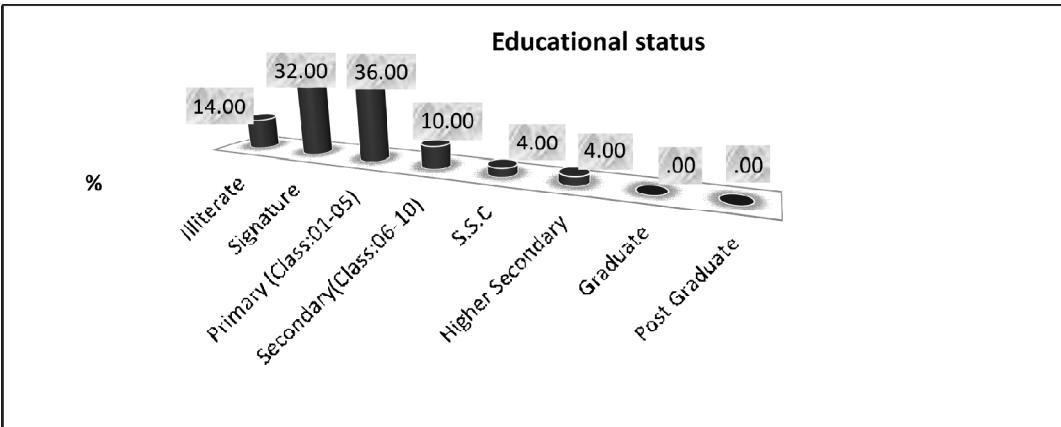


Figure 2: Educational status of respondents

education (36%) were up to primary school, and 32% of them could put their signature only. Rests of the respondents (4%) the education status was of Secondary School Certificate and Higher Secondary School Certificate.

The data reveals none of them were highly qualified. All of them were having levels of education below graduation.

Family Income Range (Monthly)

Income and use of ICTs are closely connected. Keeping this in mind, view, the researcher tried to assess the income range of the respondents' family per month. It was found that most of the respondents (64%) range of family income was Taka 1000-10,000.

Many of them were found to be within income range of Taka 10,000-15,000 to Taka 20,000-50,000 range.

The data indicates that in most of the respondents' families the income level was not high, and thus for not having a high range of income they couldn't buy the ICTs as per their need and desire. The respondents told that if their income rises they will purchase more ICTs instruments for their daily use. The researcher thus found that there is a link between income and the use and access to ICTs. During FGD, it was found, the respondents whose level of income was high, they were capable to buy more ICTs, since except cell phone most of them are costly. Thus it was observed that income is one of the major factors for having access to ICTs.

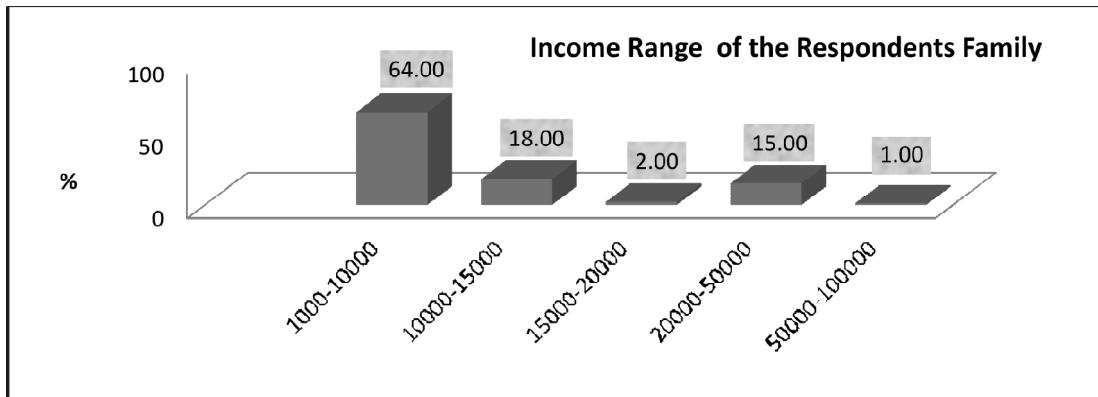


Figure 3: Income range of the family per month

Types of ICTs Used by Respondents

TABLE 1
Types of ICTs used by respondents

Information and Communication Technologies (ICTs)	No. of respondents	%
Radio	12	24.00
Television	35	70.00
Cell Phone	20	40.00
Telephone	—	—
Computer	5	10.00
Internet	3	6.00
Mobile camera	10	20.00

The Table 1 shows the use of mobile and internet at home has given a widen opportunity to women in general to communicate with their world outside. Women have the privilege to know about, the whereabouts of their relatives and friends through the use of the ICTs. The use of technologies, such as television, cell phone, and radio are much high among the rural women. The largest part of the women respondents (70%) used television; next one is cell phone (40%) used by them. Many respondents used radio (24%) as a source of information, entertainment, and for gathering knowledge. Some respondents gave multiple choice and usage.

ICTs used to access/receive educational, business/ trade, health, agricultural and social welfare information

TABLE 2
Access to information about education, health, business and agriculture

ICTs	Education		Health		Business		Agriculture		Social welfare	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%
Radio	12	24	10	20	3	6	6	12	5	10
Television	25	50	30	60	20	40	10	20	13	26
Cell Phone	9	18	8	16	18	36	9	18	11	22
Telephone	—	—	—	—	—	—	—	—	—	—
Computer Internet	7	14	3	6	2	4	4	8	10	20
Video	6	12	1	2	2	—	—	—	—	—

In the study, the respondents were asked through which ICTs and on what issues they are able to get information on education, health, business, agriculture and social events (Table 2). They get information on family planning, respiratory illness, cancer,

waterborne diseases, diet/nutrition, diabetes, pregnancy issues and vaccinations for children, price of products, supplies of product, mobile banking, animal husbandry, poultry, craftsmanship, enrolment to academic institutions, exams schedule, academic

results, students attendance, social safety nets programme, spiritual matters and house clearing etc. As a source of information highest were computer and cell-phone. In this aspect the contributions of internet can be highest, since internet is the speedy, updated and main source of getting information. Some respondents gave multiple choice and usage.

Usefulness and availability of ICTs

Table 3 shows that most of the respondents were found interested in ICTs. To be benefited from ICTs 36% respondents replied that ICTs must be made affordable to them. Among them 32% told for their lifestyle they can't use it as much as they need. Most of the time, they are busy with their household work and for that main reason they are not able to spend their times with ICTs activities. Some of the respondents opined that they are interested in ICTs, but there is lack of opportunities for using internet as per their needs. For that reason, affordable and easy access to all is important.

TABLE 3
Usefulness and availability of ICTs

Comments	No. of respondents	%
Affordable to ICTs	18	36.00
ICTs should be made available	1	2.00
ICTs should be made accessible	3	6.00
Improved information access through the use of ICTs	7	14.00
Use of ICTs depends on one's lifestyle	16	32.00
There is need for ICT centers in rural areas	5	10.00
TV/ Radio networks are Poor	—	0.00
Total	50	100.00

Most of the areas of Bangladesh are now within the mobile network coverage. There are six mobile phone operators working in Bangladesh and they have reached in every corner of the country. Grameen Phone (GP) has the largest network with the widest coverage in the country. The GP network now covers over 98 per cent of the population and over 87 per cent of the land area (Splittstoesser and Kimaro, 2000). Grameen Phone has made major progress with expansion of mobile phones by a village phone program (270,000 village phone operators in 50,000 villages). World Bank has also helped support the private telecommunication firms, such as Grameen Phone to accelerate the dissemination of mobile phones throughout the country. As of 2011, the project provided mobile phones to over 60 million people, established over 500 Community Information Centers (CIC), and provided the network signal to over 90 per cent of the population (GP Annual Report, 2011).

The other five operators are Robi, Airtel, Banglalink, Teletalk and Citycell. These five operators are working to reach a similar statistics like Grameen Phone in the area of coverage and subscription and for the reason the respondents didn't complain about networking systems.

Empowered Rural Women

Women's role in the family affairs, especially in decision-making, are no longer ignored. Now women earn for their family by means of ICT and this substantial revenue stream has elevated the women's positions in their own households, and the society they belong to. The role models of women who actively participate in the socio-economic development can

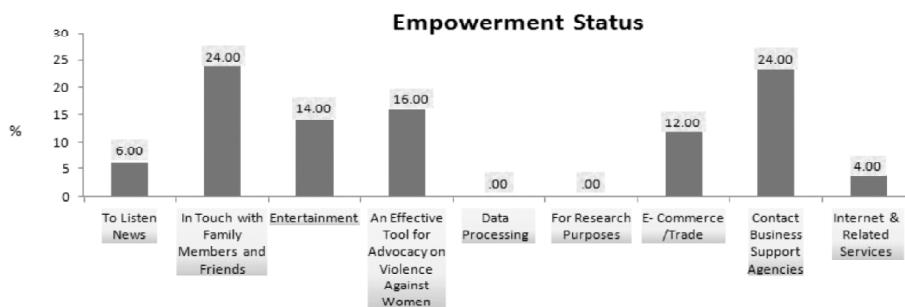


Figure 4: Empowerment status of rural women

increase self-esteem and self-confidence of other women and therefore encourage them to push for changes in their own social status. Information and communication technology (ICT) is not just a technology but an inalienable weapon of women empowerment (Women 2000 and Beyond, 2003). In the present study it was observed, 24% respondents opined that through cell phone they can keep in touch with family members and friends. Many of them

(16%) stated that they could take help through cell phone for violence against women, and further did small business, contacted business support agencies.

Obstacles to the use of ICTs

Respondents were asked questions relating to ICTs hindrances. Using a close-ended questionnaire, appropriate multiple answers were selected.

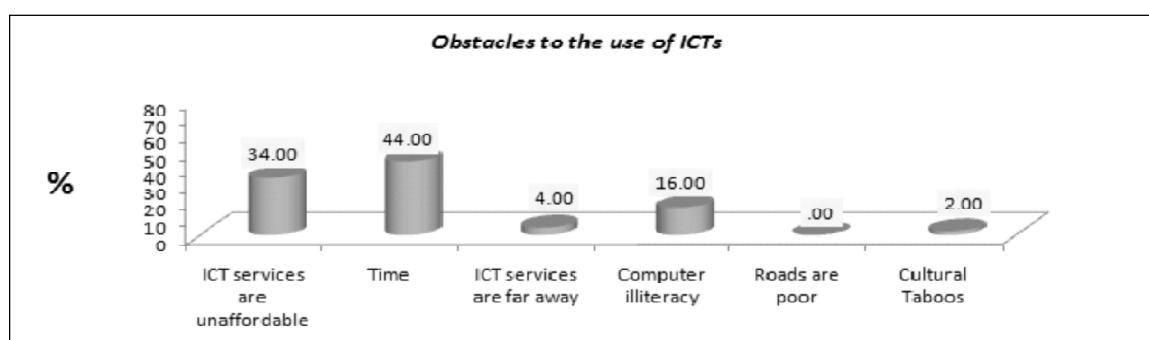


Figure 5: Obstacles to the use of ICTs

Among the respondents most of them (44%) replied about the time constraint and 34% told that it is unaffordable to have ICTs services, these were the main problems. In rural areas most of them worked hard from morning to mid-night and because of that they didn't get time to use the desirable technology. Further for lack of money they didn't get chance to use them. In this cases their affordability must be raised.

RECOMMENDATIONS

Based on the present study some recommendations have been suggested for better access to ICTs for rural women in Bangladesh. They are as follows:

- For improving the capability of women in Bangladesh to take full advantage of the opportunities offered by information technology lifting up of educational level is urgent, at all levels from literacy through scientific and technological education. As women are poorly placed to benefit from the ICTs knowledge because they have less access to scientific and technical education and less access to skill training and development. To make digital Bangladesh more practical the government should try to extend the education level of the rural women.
- There is a strong correlation between English literacy and ICT development in the present context of globalization. In the arena of ICT English has become the Lingua-Franca. On the other hand, we have not localized Bengali in the domain of computing. Hence, English literacy is a must in rising rural women's skill in ICTs sectors.
- The cost of internet connectivity is still one of the highest in local areas and is well below the affordability of the common people. Broadband access is still in its infancy because of lacking last mile connectivity and high cost of access. Development of a policy for Universal Service Fund is still an area of exploration.
- Plans need to improve fixed broadband internet connections at the Upazila and Union levels as well as regulate service quality and customer satisfaction and protection.

- Strong hotline for getting any information. It will help rural women in using ICTs especially in emergency.
 - A special taskforce must be formed to look after the ICTs sectors by the government which includes the Finance Ministry, BTRC, NBR and Ministry of information and Communication Technology.
 - A separate standardization institute at the Union Parishad levels for ICTs sectors as well as an institutional framework for spectrum engineering and management must be set up to improve the sectors. Spectrum allocation is to be extended to the ICTs service providers.
 - Already Bangladesh has formulated ICT policy in 2009 which must be updated from time to time and will be separated from other technological policies, and 4501 Information Service Centers had been set up at Union level. In this case, Information Service Centers should make more contacts with the rural women and men.
 - The government should take necessary steps for creating work opportunities leading to increase per capita income of the rural women. So that, they can go to the mainstream of the information and communication technology policy of the country.
 - Workshop and training centers like tale-centers of Grameen Phone with key gatekeepers and stakeholders can be conducted for awareness rising among rural women. Young women groups should be an important target group for training.
 - Rural women can earn more for their family by means of ICT and this substantial revenue stream can elevate the women positions in their own households, and the society they belong to. The role models of women who actively participate in the socio-economic development can increase self-esteem and self-confidence of other women and therefore encourage them to push for changes in their own social status. Information and
- Communication Technology (ICT) is not just a technology but an inalienable weapon of women empowerment. In the era of knowledge-based culture, Bangladeshis can achieve excellence through proper use of the ICT in rural area.
- Collaboration among government, development organization, NGOs and other stakeholders need to be encouraged in finding solutions to the common problems through application of appropriate ICT services in rural areas. Public-private partnership (PPP) should be a landmark to foster large scale investment in local areas.

CONCLUSION

ICT must be a powerful medium for political and socio-economic empowerment of rural women and for promoting of gender equality in Bangladesh. We will need to take a pragmatic and visionary approach so that it can curb the prevailing digital gap in the society. If we want to achieve Digital Bangladesh by 2021, we must address the above states issues effectively and efficiently in transparent manners. It is essential to increase availability of ICT resources in rural areas among women, need more training for awareness building in using ICTs for rural women. The information technology empowers women to have better say in the family space as well as in the national and global communities. For a digital Bangladesh, all activities allied to empowerment of women are linked to the idea of advancement of digital Bangladesh too. Thus women must have to be empowered digitally.

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