

# Empowerment of women and girls in ICT

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## *Abstract*

*Gender bias had been an age old phenomena throughout the world. Women and girls have always taken a back seat in economic, political and social structure in any society across the globe. Though half the population of the world constitutes of women and girls but their contribution in most of the areas are not significant. The biggest challenge for any government is the empowerment of women and girls to bring them and contribute in the mainstream activities. In the twenty first century vigorous efforts are being made by all the governments, organizations and agencies to empower women and girls through education, funding, participation and involvement in all spheres of activities for overall development.*

*Information and Communication Technologies (ICT) are one of the best ways to facilitate the empowerment process of women and girls to develop, involve and integrate them in economic, political, technological and social environment of the world. This paper discusses the hurdles and challenges in empowerment of women and girls through ICT in India and abroad and also the steps that are being taken all across the world by government, organizations, businesses, non-government organization to empower them through ICT.*

## **Introduction**

The Information and Communication Technologies (ICT) sector encompasses segments as diverse as telecommunication, television, radio broadcasting, computer hardware and software and services and electronic media like the Internet and the electronic mail. ICT<sup>1</sup> enable users to create, access, store, transmit, and manipulate information. In other words it consists of IT as well as telecommunication, broadcast media, all types of audio and video processing and transmission and network based control and monitoring functions.

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<sup>1</sup> As defined in Wikipedia

There has been a rapid and unprecedented growth of ICT since the 80's. The growth of information technology has been phenomenal and its impact is seen in almost every sphere of life. The telecom revolution has also changed the lives of people and has connected every nook and corner of the world. Communication has become very cheap and affordable and has extended to remotest areas across the world.

The broadcasting industry especially the television and radio has also grown by leaps and bounds and is now easily accessible to rural areas also. The broadcast in television is now literally in all languages with many channels being aired. The radio broadcast is also freely available to most of the people and has been well integrated with mobile technology.

Communication has become very easy through various technologies and information in all forms can now be disseminated to the masses. Hence we can say that information and communication technologies have taken the world by a storm and have impacted the lives of people to a very great extent.

The potential of ICT for women in developing countries is highly dependent upon their levels of technical skill and education, and is the principal requirement for accessing knowledge from the global pool. The sophistication of any ICT infrastructure introduced into any environment becomes meaningless if women don't have the skills to operate the system and use it to their best advantage. This implies that the government and the NGOs need to focus on interventions, which lead to skill development and a rise in educational levels among women. It could be done through imparting of technical education on the use of ICT as a part of both formal and informal educational systems and initiating distant-learning and vocational courses on the same. Further, start-up CD-ROMs could be created for women communities having access to ICT. These start-up kits should contain the elementary tools of web-site designing, and designing software, search engine codes, guestbook and counter codes, links to sites providing free web-space, translation/transliteration software, image file compressor software etc.

ICT can accelerate the process of women empowerment by providing them with education, information, and knowledge, training, occupational opportunities, market information, financial services, information about appropriate government programs, information about health agencies and workers, feedback mechanism and support system and networking.

In Indian context this revolution of ICT has not been passed on to the womenfolk primarily due to the social structure, values and beliefs. The urban India has been enjoying the benefits of this revolution; however the rural India is still to take the benefits. Though efforts are being made to use ICT in the best possible way to empower our womenfolk there is still a long way to go. There are many hurdles for empowering women and girls to use ICT. These are discussed as follows:

### **Hurdles and Challenges in Empowerment**

There are many factors that create hurdles in empowerment of women and girls. Some of the important factors are discussed below:

## **Poverty**

Most of the people in India are poor. There are rural poor and urban poor and they are mostly busy trying to meet their ends. They are struggling to earn their livelihood and think ICT is only a source of entertainment which they cannot afford. The population of India is more than 1.2 billion as per latest figures with almost fifty percent female population. As per the latest census recommended by Tendulkar committee endorsed by the planning commission of India, the people living below poverty line in India are 37% which is very alarming. So the priority is to fulfill the basic needs of these people, empowering is a very difficult task for such a huge number.

## **Literacy**

The adult (15 years and above) literacy rate in India is 66%. The literacy rate of females above the age of 7 years is 45% as compared to 75% for boys in the same age group. The drop-out rate of girls studying between Class 1 to Class 8 is nearly 45%. This statistics reveal that almost 55% of females are deprived of basic education and moreover the drop outs are also high by the time they reach high school hence effectively 25% of females take up education till the school level. Rest of the 75% of female population is illiterate or literate till primary or middle school. Moreover most of this education is in vernacular and local language. Though the government is offering free education to the girl child the Indian scenario is pretty grim as far as education to womenfolk is concerned.

## **Computer literacy**

Computer education is generally imparted to students from middle school onwards. The computer education though incorporated in the curriculum otherwise comes with a cost through private coaching. The urban Indian student enjoys the basic computer education but the rural Indian students have to mostly depend on government support. The network of private computer institutes though spreading rapidly in rural community is not affordable by many. Basic computer education is available in English language though slowly the computer education is now coming in different languages. The major hurdle is that most of the education is imparted in vernacular language hence training through English language is difficult. Internet access and education is also a big problem as most of the websites almost 70-80% are in English.

## **Socio-Cultural aspects**

Potential for empowerment is also affected by socio-cultural aspects such as class, age, ethnicity and race. Women from the same social context may not enjoy access to ICT. In India the social structure is such that boys are given preference over girls for everything even education and access to ICT. Boy child is pampered and girl child is often neglected and is involved in household chores. In many parts of the country going out of the house, learning and getting any type of special training is considered as a taboo for womenfolk. Women and girls remain confined to the house and mostly involved in house work. Most of them are cut-off from the outside world so their chance of access to ICT is reduced.

## **Early marriages**

As per latest figures the adolescent girls in India are more than 100 million. More than 50% of these are married before 18 years of age and almost 95% are school dropouts. Early marriages are a big social menace in India. Though the government has imposed a rule of marriages after the age of 18 years for females, still the practice of early marriage is rampant in India. Girls are forced to marry below the age of 18 especially in rural areas. Once the girls are married they have family responsibilities and do not find time for education and to avail the facilities of ICT. Probably television because of its penetration is the only means of entertainment and information.

## **Language barriers**

Language is major constraint in the empowerment process. There are hundreds of languages and thousands of dialect in a big country like India. Imparting knowledge through a few common languages is a big challenge. Most of the Internet learning is through English language which can be implemented in urban areas only. Communication through different languages is a herculean task.

## **Ownership**

Ownership of communication assets like radios, mobiles and computers is rarity in rural areas for women and girls. This mainly is because of poverty and meager income levels. The social structure is such that men and boys are given preference over women and girls. Only in big cities women and girls have a choice of owning these assets.

## **Spending patterns**

Spending patterns of parents on boys and girls are different. Boys are always given preference. Even in developed nations like the US, the parents spend more on boys than girls. In India also the pattern is same as the belief system is that boys are going to be the bread earners in the family so their development is essential and girls are going to be the home makers. Though, this belief system is gradually changing.

In spite of the hurdles discussed above lot of efforts are being made in the whole empowerment process through ICT. There is significant contribution from the government, NGO's, different agencies and business houses. Funds are being raised by various organizations to achieve these objectives. Government of India is also allocating funds for the empowerment and lot of international organization is also funding and facilitating the process.

<sup>2</sup>The initiatives towards ICT at various stages of development/implementation of central government includes: India Portal, National Institute of e-governance, central repository of data, dissemination of Information relating to best practices/innovations in e-governance, awards for best websites and innovative use of IT in the delivery of public services. In addition citizen service centers were set up for

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<sup>2</sup> As per report submitted by VOLUNTARY ASSOCIATION FOR PEOPLE SERVICE (VAPS), Tamilnadu to Department of Women & Child Development Ministry of HRD, Government of India

one stop and non-stop delivery of services to the public. India Portal is a user- friendly portal of all government web sites for providing information and delivery of services.

### **Measures adopted by Government for Empowerment**

ICTs have created new jobs in the field of information processing for banking, insurance, printing and publishing especially for women. Further, projections indicate that over 3,50,000 women are expected to be working in remote data processing by 2008 in India as one million jobs are expected to be created in call center alone by 2007. However, it depends on availability of good telecom infrastructure, IT training in and out of school, training in marketing and business development supported by conducive policies of the government. There are numerous possibilities for ICTs to improve women's economic activities in the field of trade, governance, education, health, crafts, employment in formal as well as informal sector.

In Dhar district of Madhya Pradesh, Gyandoot is an intranet project which connects 21 rural cyber cafes called Soochanalayas. Each Soochanalayas provides services to about 10 to 15 Gram Panchayats, 20 to 30 villages, 20 000 to 30 000 in population. Women benefit from such interventions as now they have a greater understanding and control over the local processes. They may file complaints regarding common public grievances through the net and an e-mail reply is assured within seven days. Provision of this basic information to the women communities would imply their greater awareness and interest about governance issues leading to their greater involvement.

The project "Inter-city marketing network for women micro-entrepreneurs through cell phone" launched by Foundation of Occupation Development (FOOD) in Tamilnadu has established a closed user group communication network for community based women's organizations (CBO) to promote inter-city direct sales of products made by them.

Computer education was introduced in 757 Schools and School Education Department has covered 543 schools under the Centrally Sponsored Scheme of Information and Communication Technology in schools benefiting 35,751 students with 286 full time teachers. In 2008-09, the State Government is implementing ICT at School scheme for the secondary stage through West Bengal Board of Secondary Education and 1400 schools will be covered under ICT Scheme as approved by MHRD, GOI. Computer Technology is applied as Learning Aid for the learners at Upper Primary School Level. Under Computer Aided Learning (CAL) Program, 610 schools have been provided computers with educational CDs and 1512 teachers have been oriented.

There are lots of government initiatives taken by various state governments to impart computer education to girl students at the primary level. The State of Karnataka has gained world-wide reputation for being in the vanguard of Information Technology.

The policy of the Government is to give Computer Education and Computer aided Education free of cost under “Mahiti Sindhu” to VIII, IX and X standard students in 1000 government secondary schools in the state. While selecting schools, importance was given to girl students of rural areas, SC and ST and backward classes and all sections of society throughout the state. ICT at schools project so far 3298 government secondary schools have been covered under computer education program in the state of Karnataka.

Value added service (VAS) is an important medium of the telecom companies to circulate user intended information through mobile phones to the remotest place possible. The Ministry of Women and Child Development, GOI, wishes to extend mobile VAS to Anganwadi workers covered by the Integrated Child Development Scheme.

### **Measures adopted by various Organizations for Empowerment**

There are various measures adopted by organizations, NGO’s and business houses to empower women and girls. The IT sector is in the forefront towards this process. All big IT companies have women friendly policies with more and more women folks coming in the workforce in IT sector.

Infosys technologies limited, the best brand known in the country employs almost 33% women in their workforce. They have a special women cell called IWIN (Infosys Women Inclusivity Initiative) that encourages women participation in the business operation and also takes care of the welfare activities of women.

IBM India Pvt. Ltd. is the fourth largest employer in the IT industry has flexible working hours for women, work from home facilities for women, extended maternity leaves and women leadership councils in their organization.

Accenture, another big IT giant has “vahini” for women employees and 24X7 emergency helpline for women. Mind tree consulting has day care facility, special leaves and accompanying spouse on travel facilities for their women employees. Ernst & young Global shared services have 50% women in their workforce. They also provide escort service to their women employees.

Tel-Nek is an organization based in Ramavaram, Bangalore Rural, and provides computer training to both women and men in the area. Their aim is to reduce rural-to-urban migration and empower disadvantaged groups through “emerging, innovative ICT models”. As the area of intervention is surrounded by an industrial belt, the training provided by Tel-Nek centers in locally-adapted software has been extremely useful in ensuring that most women get jobs in administrative and data-entry positions, without having to migrate from their communities.

Akshaya project in Kerala encourages telecenters that are run by women, including the elderly, who come confidently to the telecenters to make use of the services offered there including internet telephony, payment of bills, surfing the net, etc.

Broadening Participation in Computing (BPC) is a NSF (National Science Foundation), US sponsored program with the goal of significantly increasing the number of underrepresented graduates in the computing disciplines, with an emphasis on women, persons with disabilities, and minorities

NCWIT is the National Center for Women & Information Technology, in US that work to increase diversity in IT and computing. NCWIT believes that greater diversity will create a larger and more competitive workforce, and promote the design of technology that is as broad and innovative as the population it serves. NCWIT provides a clearinghouse of evidence-based resources relevant to girls, women, technology and computing that are easy-to-use and free, including statistics, research reports, practices, curriculum materials, comprehensive toolkits, posters, workbooks, talking points, webinars, and videos. NCWIT identifies and disseminates practices proven effective in the recruitment, retention, and advancement of girls and women in IT and computing. NCWIT aggregates and publishes data and research findings targeted at specific audiences, and we conduct and encourage primary research in areas where there are knowledge gaps. NCWIT research-backed resources provide the tools for people to implement change, raise awareness, and reach out to critical populations. NCWIT serves as a united, amplified voice for the increased participation of girls and women in technology and computing.

The Grace Hopper Celebration of Women in Computing is a series of conferences designed to bring the research and career interests of women in computing to the forefront. Presenters are leaders in their respective fields, representing industrial, academic and government communities. Leading researchers present their current work, while special sessions focus on the role of women in today's technology fields, including computer science, information technology, research and engineering. Past Grace Hopper Celebrations have resulted in collaborative proposals, networking, mentoring, and increased visibility for the contributions of women in computing.

Also, The Richard Tapia Celebration of Diversity in Computing and the Grace Hopper Celebration of Women in Computing is both technical conferences that focus on supporting diversity in computing. Each of these organizations (and others) is working to increase the participation of women and other underrepresented groups in computing/IT/technology.

Initiatives are taken by some educational societies like Sri Balaji Society, Pune to promote women participation and empowerment. Graduate girls are given preference over boys and as per their policies fifty percent enrolment to post graduate management programs is compulsorily for girls. ICT is part of their curriculum where girls are exposed to all aspects of ICT.

## **Conclusion**

The ICT revolution is an important vehicle for disseminating information and entertainment to the masses. Empowerment of women and girls in ICT is an important part of this revolution. Though there many hurdles in the empowering process, efforts are being made by government and other organizations to attain the objectives of empowerment. Awareness, training, skill development and

funding are the prerequisites for the empowerment. There are many challenges and the road ahead is difficult. Sensitivity to this issue is important as there is lot of gender bias not only in India but in other countries as well. A ray of hope is there as the general education level and awareness level for ICT in women are girls is increasing by the day and many organizations are actively taking part in this.

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