

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) AND WOMEN EMPOWERMENT IN INDIA AND HER NEIGHBOUR COUNTRIES BANGLADESH & MYANMER

Aritra Brahma

Guest Lecturer,

Department of Computer Science, Charuchandra College.

Email : brahma.aritra@gmail.com

Paramita Chatterjee

CWTT,

Department of Computer Science, Charuchandra College.

Email : pc11april@gmail.com

Moumita Biswas

Assistant Professor,

Department of Computer Science, Charuchandra College.

Email: mmoumitabiswas@gmail.com

Abstract : The term 'Empowerment' refers autonomy, determination and self-respect that enables the responsibilities to provide support to the society, people and to overcome their sense of powerlessness and lack of influence, and to recognize and use their resources. On the other hand, Information and Communication Technology (ICT) stresses the role of unified communications and the integration of telecommunications, computers as well as necessary enterprise software, middleware, storage, and audio-visual systems, which enable users to access, store, transmit, and manipulate information.

One of the main curse of twenty first century is gender inequality and biasness. Women and girls are always kept to the backward rows. Most of the times they are deprived and often neglected. Though 50% of the population are female, so it is the vital challenge to make the empowerment of girls and bring them into the mainstream through proper education, involvement and activities for the global development.

ICT is one of the best way to make the woman empowerment and accelerate the overall development of the women. This paper discusses the overall women empowerment in India and other neighbour countries. The objective of the paper is to overcome the barriers and threats of women empowerment through ICT in India and her neighbour countries.

Keywords: Information and Communication Technology (ICT), Women Empowerment, Gender Inequality, Entrepreneurship, Development and Digitization, e-learning, Technology and Mobile Communication.

1.0 Introduction: One of the main curse of the twenty first century is the gender inequality and biasness. Women and girls are always kept to the backward rows in economic, political and social structure in any society across India and neighbour countries. Most of the times they are deprived and often neglected. Though almost half of the population are female, so it is the vital challenge to make the empowerment of girls and bring them into the mainstream through proper education, involvement and activities for the global development.

Empowerment refers autonomy, determination and self respect that enables the responsibilities to provide support to the society, people and to overcome their sense of powerlessness and lack of influence, and to recognize and use their resources.

Information and Communication Technology (ICT) stresses the role of unified communications and the integration of telecommunications, computers as well as necessary enterprise software, middleware, storage, and audio-visual systems, which enable users to access, store, transmit, and manipulate information.

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2.0 Goals of ICT and Empowerment

The condition of women in India is more miserable than the rest of the world in almost every field of social life. The goals of ICT and empowerment are as follows -

- There is a rapid growth of ICT since the 1980's.
- ICT encompasses on telecommunication, television, radio broadcasting, computer hardware and software and services and electronic media like the Internet and the electronic mail.
- ICT enable users to create, access, store, transmit and manipulate information.
- The revolution of ICT have changed the life style of people's, communications has become very easy and cheap in any part of the world.

3.0 Necessity of Woman Empowerment in ICT

According to a survey of **BMRB** (British Market Research Bureau) International, it is observed that –

- Women are less likely than men to have access to or use a PC.
- Women's use of internet lags behind men.
- Women are less likely to feel that PCs and internet would be beneficial in their daily lives.
- Women seem to be less confident in the computer abilities.
- Women are understated in all sectors, accounting for around 30% of employees.

4.0 Opportunities

NASSCOM estimates that the male: female ratio in IT industry has improved from 72:24 in 2005 to 72:32 now. IT reduces the impact of barriers of time and distance in organizing and managing the service delivery of businesses. A large part of jobs outsourced are going to women. The freedom to work from anywhere and anytime can become a catalyst for financial independence and empowerment of women by enhancing their extra income. A women entrepreneurship cell should be set up to handle the various problems of women entrepreneurs in all states at the college level.

5.0 ICT and Woman Empowerment in India

- As per the United National Development Fund for women (UNIFEM), the term women's empowerment means:
 - Aspire gender parity in social and economic space
 - Self-belief and controls in one's decision making and actions
 - Developing the ability to become agent of household, social change of existing gender biased order
- Irrespective of Social base, the fundamental fact of women empowerment are –
 - accumulation of endowment (health, education and physical asset)
 - use of those endowment to take up economic opportunity and generate income
 - finally using those endowment to take action to become agent affecting individual and societal well- being.

6.0 ICT Progress in India

India has make an ICT progress in the following sectors -

6.1 IT Sectors : The robustness of empowerment takes part in the IT sectors. Infosys employs the largest percentage of women at 33.4%, followed by TCS 30% and Wipro 29%.

6.2 Software Outsource : India is one of the leading country to outsource software product to other countries.

6.3 Smart Technology : India is one of the most enriched country in technology. ICT helps in that technological growth.

6.4 E-Transactions : Focuses on cashless online transactions. More flexible in online marketing activities.

6.5 Smarter Learning : Fully digitally equipped classrooms along with the smarter study tools.

6.6Others : ICT makes a strong impact on the other fields like Agriculture, Social and Economical Lifestyle, Human Resources etc.

7.0 ICT and Empowerment in Indian Schools

The Information and Communication Technology has become a very important part in most of the schools in India.

The Information and Communication Technology (ICT) in Schools was launched in December, 2004 and revised in 2010 to provide opportunities to secondary stage students to mainly build their capacity on ICT skills and make them learn through computer aided learning process.

7.1 For Teachers :

- Using the ICT gadgets teachers can easily represent their lecture.
- More interesting and fruitful teaching technologies.
- Use of Audio-Visual aids, Graphical representations of lessons, which helps the students to understand the topic properly and clearly.

7.2 For Students :

- Smart virtual classrooms with smart technologies.
- Voice communication aids to gain confidence and social credibility.
- Helps them to the proper use the Internet .
- Improve independent access for students to education and learning.

8.0 ICT and Women Empowerment in Bangladesh

In Bangladesh, 45% of the population lives below the poverty line. The main causes of poverty in many developing countries like Bangladesh include gender inequality, lower education, unemployment and income inequality. In Bangladesh half of the total population is women whose socio economic condition is very low. Struggle for modernity, tradition, men women equality, social dignity, security and for multilateral pressure the position of women in the family is very complex. Many indoor and outdoor activities of women are not treated as work. The devaluation of women labour in labour market also hinders women right. But in market economy women of Bangladesh are always facing new challenges. In Bangladesh the latest BDHS, 2004 finds that only twenty percent women work for cash. Among them only 48 percent are able to spend their money on their own, the rest are dependent upon spouses or other family members to take joint decisions on spending. Though women work in educational institution, medical, factories, police, even in the uneven areas, women are neglected, and tortured. In the society of gender disparity it is difficult for women to stay parallel and enjoy the right of equal participant. Women suffer from severe discrimination, due partly to a lack of access to information. Information and communication and technologies (ICT) are tools that potentially can reach women and address their knowledge and information needs.

Information technology (ICT) has become a potent force in transforming social, economic, and political life globally. Though there are many constraints against women in ICT but there are some aspects of life which have a direct influence of ICT especially on women in Bangladesh. These are:

8.1 Increase of Women's Access to Job Market Using ICT: In the past women were only considered for household work and were left outside the mainstream of development. In today's Bangladesh, The scenario has not changed much. But with the advent of ICT, this conservative outlook about women is diminishing gradually. As a result we find more women are employed in various knowledge based industries such as computer aided designing, graphics designing, composing etc. With this growing number of women employment the job environment is becoming more convenient and friendly for women. The provisions for ladies common room, green room etc. are considered as a necessity now a day. This changed scenario indicates a positive attitude towards women employment.

8.2 Improve Women entrepreneurship using ICT : ICT is not only creating employment for women but also creating a chance for them to emerge as entrepreneurs especially in SME. Women are encouraged to take initiatives to invest in ICT and they are also improving their competence using ICT as an entrepreneur in different sectors.

8.3 Women Empowerment : Women 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 positions in their own households, and the society they belong to.

8.4 ICT Education and Training Initiatives in Bangladesh : Dhaka Ahsania Mission is playing a vital role to provide computer and Internet facility in the rural areas shorten "digital divide" and create opportunities for addressing and eliminating poverty and hunger through education and technological intervention[5]. According to this mission and vision, Dhaka Ahsania Mission has established Ahsanullah Institute of Information and

Communication Technology (AIICT), Ahsanullah University of Science & Technology (AUST), Institute of Literacy and Adult Education (ILAE), Non-Formal Basic Education, Continuing Education Program, ICT Ganokendra (a community learning center that has access to the computer and internet) etc. Dhaka Ahsania Mission is trying to establish a relationship between Ganokendra and Bangladesh Open University (a governmental institution for distance education) so that poor rural people get distance and adult education.

8.5 Technology Driven Banking in Bangladesh: The FCBs operating in Bangladesh like Standard Chartered Bank and HSBC are the pioneers to introduce technology driven banking facilities. These banks provide services like ATM, debit card, credit card, Point of Sale (POS) services, internet banking, phone banking, any branch banking, Electronic Fund Transfer (EFT). Along with these services Standard Chartered Bank is providing KIOSK service to its customers.

9.0 Role Of ICT in Women’s Empowerment in Rural Bangladesh

Since women’s empowerment is a complex entity to measure, Chen’s (1997) conceptual model is considered appropriate because it has been developed for South East Asian countries like Bangladesh and India, where socio-cultural norms are similar and women suffer similar types of discrimination in rural areas. ICT intervention for women’s empowerment is a relatively new issue and therefore needs to be examined for the appropriate application of technology for social inclusion. Searching the web about ICT for women’s development in Bangladesh, several appropriate projects were identified.



10.0 Location of ICT Projects in Bagerhat District in Bangladesh (Bagerhat.Net, 2009)

Since 2002, the D.net project has been working with children, youth and women to increase health care, education and social awareness. Under the Computer Learning and Education Program, this organization has been working since 2005 to teach students and youths of the village about computers. Through this project, a student or trainee can learn computer skills and attain a certificate from Microsoft under the curriculum of Microsoft Unlimited Potential. The program also disseminates information among villagers, especially to rural women, through computers, Internet and movies. Specialist advice for health is passed on through mobile communication. The project provides information to villagers depending on the livelihood problems and the needs of rural people. The information on livelihood includes problems which people in the village face in their everyday lives such as communication, agriculture, health, education, employment, sustainability, human rights, natural disaster management, government forms and provision of services (D.net, 2007). In 2007, there were 16,000 participants in their project of whom 10,000 were female participants in the Bagerhat sub-district. In the village of Boitpur where the D.net project has been established, 20 women who were using ICT tools like mobile phones, computers, or the Internet and were beneficiaries of the Village Information Project. Though Amader Gram was established in 1998 in Srifoltala village, since 2003 it has been working to motivate the young generation morally, and change their mindset through ICT education. The six programs on which they are working are: (i) Breast Cancer; (ii) Amader Gram Database Program; (iii) Knowledge Center; (iv) Literacy for Livelihood; (v) Monitoring and Evaluation; and (vi) Rural News Online. In Boitpur, as most of the ICT women are student trainees and employees of the project, they can use a computer, and the Internet and they are involved in paid training programs of at least 3 months. So, they are gaining more knowledge and education because of the depth of project purpose.

So it can be concluded that if women's engagement in ICT is active and in-depth in terms of learning and education, then women could become more empowered. Moreover, poverty could be alleviated in rural populations in Bangladesh by women acquiring knowledge and education.

11.0 Information and Communication Technology and Women Empowerment in Myanmar

Myanmar, a republic in South-East Asia, bounded on the north by Tibet Autonomous Region of China; on the east by China, Laos, and Thailand; on the south by the Andaman Sea and the Bay of Bengal; and on the west by the Bay of Bengal, Bangladesh, and India. It is officially known as the Union of Myanmar. Myanmar is the only country neighboring with two ICT Super Power countries, India and China. So there are the benefits of spillover effect of these two countries development because of the strategic location.

The ICT infrastructure is the means of basic telecommunications services as well as the essential prerequisite for e-Commerce, e-Government and e-Learning. National backbone has fiber link between major Cities. Cross border fiber links are connecting India and Myanmar, China and Myanmar and Thailand and Myanmar. International links are Sea-Me-We Cable and Satellite. Last Mile Links are Dedicated Link, Wireless Broad Band Access, ADSL and MPT Satellite Terminal.

Myanmar's Tele-Infrastructure can be divided into access networks, switching, transmission and international connectivity. The access network of Myanmar is in a relatively weak condition compared with those of other ASEAN countries. Tele density is under 1% including mobile telephony and the number of Internet users is negligible. At this point, the telephone supply does not meet the increasing demand.

There are institutions in Myanmar ICT development. Myanmar Computer Science Development Council is established in 1996. Myanmar Computer Federation (MCF) is established in 1998. MCPA, MCIA and MCEA are subordinated by MCF.

To reduce the digital divide between the urban and rural areas of Myanmar and to get better communication of citizens by using IT technologies, MCF is carrying out a project of opening Public access centers (PAC) throughout the whole country. To get ICT awareness, MCF also performs seminars and workshops professionals and ICT industry. MCF also performs ICT Caravan to rural areas for the basic ICT awareness and knowledge creation for the local people and students.

This is about 350 ICT Companies members in Myanmar Computer Industry Association (MCIA) . Software development and other is 24.7 % , training is 27.46%, Hardware Sales is 27.14%, Systems Integration is 11.59% and Network solution is 8.55%. It shows that mobile technology could boost farmers' productivity enough to increase agricultural income by US\$138 billion by 2020 across global markets, while access to mobile phones empowers women and leads to multiplier benefits for the household as well. A toolkit for developing appropriate interventions for women farmers, developed by the GSMA, demonstrates the potential for designing mobile agricultural services targeted specifically at women.

12.0 Cyber Crime Against Women

There have been numerous technological advancements over the last decade. The Internet is one of the fastest-growing areas of technical infrastructure development in all nations. Any technological development is capable of beneficial uses as well as misuse. The growth of the internet has also resulted in the creation and growth of cyber-crime. Cyber space has become an instrument for offenders to victimize or infringe women, the most vulnerable targets on internet after children. Internet and electronic network has exposed women to cyber-stalking, cyber defamation, harassments, email spoofing, pornography, psychological torture and sexual abuse etc. Generally, women remain ignorant of these crimes and their inherent danger. With the advent of technology, cyber crime and victimization of women are on the high and it poses as a major threat to the security of a person as a whole. Even though India is one of the very few countries to enact IT Act 2000 to combat cyber crimes, issues regarding women still remain untouched in this Act. The said Act has termed certain offences as hacking, publishing of obscene materials in the net, tampering the data as punishable offences. But the grave threat to the security of women in general is not covered fully by this Act.

13.0 Certain Forms of Cyber Offences Against Women

There are various types of cyber-crimes committed against the women at large, of which some have sensitive effects on the image and security of women are as follows –

- Harassment via e-mails.
- Cyber-stalking.
- Cyber pornography.
- Cyber Morphing.
- Cyber Defamation.
- Email spoofing.
- Cyber hacking.

13.1 Cyber Harassment via Emails: Harassment of female netizens through emails is not new in the internet world which may include vulgar messaging to the profiles' wall and personal email id which is shown in the profile, regular peeping in as a visitor and leaving message in her wall, sending request for friendship, constantly posting messages disagreeing with her and joining groups where she is member etc. E-harassment is similar to the letter harassment or felony, but creates problem quite often when it is posted from fake ids or cloned profiles etc. with the intent to terrify, intimidate, threaten, bother, harass, humiliate, or denigrate to female netizens.

13.2 Cyber Stalking : Cyber Stalking is one of the most widespread net crimes in the modern world. The word "stalking" means "pursuing stealthily. The utilization of technology allows stalkers to harass their target from oceans away. It involves invading the privacy by following a person's movements across the Internet by posting messages on the bulletin boards, entering the chat-rooms frequented by the victim, constantly bombarding the victim with messages and emails with obscene language. In Cyber Stalking, stalker access the victim's personal information like name, family background, telephone numbers and daily routine of the victim and post them on the websites related to dating services with the name of victim.

13.3 Cyber Pornography : It is the other threat to the female netizens. This would include pornographic websites; pornographic magazines produced using computers (to publish and print the material) and the Internet (to download and transmit pornographic pictures, photos, writings etc). Almost 50% of the web sites exhibit pornographic material on the Internet today. Pornographic materials can be reproduced more quickly and cheaply on new media like hard disks, floppy discs and CD-Roms. Furthermore, there are more serious offences which have universal disapproval like child pornography and far easier for offenders to hide and propagate through the medium of the internet. There are number of pornographic case take place in India every day.

13.4 Cyber Morphing: This crime is related with pornography and we can also say it, a cyber obscenity. Morphing is editing the original picture by an unauthorized user. When unauthorized user with fake identity downloads victim's pictures and then uploads or reloads them after editing is known as morphing. It was observed that female's pictures are downloaded from websites by fake users and again reposted/ uploaded on different websites by creating fake profiles after editing them.

13.5 Cyber Defamation: Cyber tort including libel and defamation is another common crime against women in the net. This occurs when defamation takes place with the help of computers and / or the Internet. E.g. someone publishes defamatory matter about someone on a website or sends e-mails containing defamatory information to all of that person's friends.

13.6 Email Spoofing: E-mail spoofing is a term used to describe fraudulent email activity in which the sender’s address and other parts of the email header are altered to appear as though the email originated from a known or authorized source. Email spoofing is possible because the main protocol used in sending email i.e. Simple Mail Transfer Protocol (SMTP), does not allow an authentication mechanism. Email spoof can cause monetary damage also.

13.7 Cyber Hacking: In this kind of cyber violence, some particular targets are chosen for hacking their profiles, using their personal information for evil purposes. Moreover, the hacker may even distribute open invitations for having sex with the profile owner at her home address.

14.0 Provisions of the IT Act 2000 Relating to Cyber Crime and Offences Against Women in India and the Loopholes of the Said Act

Unfortunately even though Chapter XI of the IT Act deals with the offences such as Tampering with computer source documents, Hacking with computer system, publishing of information which is obscene in electronic form Access to protected system, Breach of confidentiality and privacy, Publication for fraudulent purpose IT Act 2000 still needs to be modified. It does not mention any crime specifically as against women and children. The elementary problems, which are associated with Cyber-Crimes, are Jurisdiction, Loss of evidence, Lack of cyber army and Cyber savvy judges who are the need of the day.

15.0 Conclusion

The growth of cyber-crime in India, as all over the world, is on the rise. Anybody who uses the Internet is at risk for becoming a victim of cyber-crime. Cyber space offers a plethora of opportunities for cyber criminals to cause harm to innocent people. India is considered as one of the very few countries to enact IT Act 2000 to combat cyber-crimes. This Act is widely covered commercial and economic crimes which is clear from the preamble of the IT Act but it is observed that there is no specific provision to protect security of women and children. However there are few provisions to cover some of the crimes against women in cyber space under IT Act. In order to avoid the cyber-crime we should not engage in conversation with people we don't know. People on the other end of the computer may not be who they claim to be. We must keep our passwords protected and do not keep sensitive material on the computer as that can be accessed by the hacker. If anything seems out of place or wrong, contact law enforcement immediately. Indian women netizens are still not open to immediately report the cyber abuse or cyber-crime. This nature provides the offenders the chance to escape after the commission of cyber-crime. The problem would be solved only when the victimized woman then and there report back or even warn the abuser about taking strong actions.

15.1 Comparison Chart and Summary

Key Points	India	Bangladesh	Myanmar
IT Development	Contribution in GDP growth 1.2% (1998) to 7.5% (2012). Export revenue growth : 13%	Contribution in GDP growth up to 3.2% (2012-15). The government expects the IT sector to add 7.28% to GDP growth by 2021.	Suitable data not available.
Tele-communications	Telephone Lines : 31.08 million (2012) Cellular : 893.862 million (2013)	Telephone Lines : 962,000 (2012) Cellular : 97.18 million (2011)	Telephone Lines : 556,000 (2012) Cellular : 5.44 million (2012)
Internet Services	Internet Users : 61.338 million (2009) Internet Hosts : 6.746 million (2012)	Internet Users : 617,300 (2009) Internet Hosts : 71,164 (2012)	Internet Users : 110,000 (2009) Internet Hosts : 1,055 (2012)
Economy	Agriculture : 49% (2012) Industry : 20% (2012) Services : 31% (2012)	Agriculture : 47% (2010) Industry : 13% (2010) Services : 40% (2010)	Agriculture: 70% (2001) Industry: 7% (2001) Services : 23% (2001)
Software Outsourcing	49% (2011) 52% (2013) 56% (2015)	26-28% (2011) 30% (2014-15)	Negligible

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