

Incorporating Gender Issues in ICT Policy-Making and e-Strategy Formulation:

By Mridul Chowdhury¹ and Tahmina Khanam²

Abstract: This paper takes a broad overview of the issues of gender and ICT from a policy-making perspective. The specific objective of this paper is to provide a systematic framework for incorporating gender issues in ICT policy documents. This framework is designed to serve as a toolkit that can be used by policy-makers, researchers and advocates to evaluate the “gender-sensitivity” of ICT policy documents. The framework attempts to identify the deficiencies in addressing gender issues in the following areas: communication infrastructure, public access to ICTs, applications in e-Government, e-Commerce, e-Health and e-Education, women entrepreneurship in ICT sector, equitable capacity building for developing ICT applications, and ICT-based means of capturing public opinion.

Keywords: Gender, ICT, Computer, ICT Policy, e-Strategy, e-Government, e-Commerce, e-Health, e-Education, ICT Education, Telecommunication, Infomediary

¹ Mridul Chowdhury is Director of e-Policy Center (A Sister Wing of D.Net), Co-Founder and Executive Committee Member, D.Net and e-Governance Consultant to the Ministry of Planning, Government of Bangladesh

² Tahmina Khanam is Lecturer of Management at BRAC University

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1 Introduction

The process of ICT-policy making is a relatively new experience for policy-makers around the world. Those in the developing world are facing considerable challenges since the relevant institutions are generally not well-prepared for the dynamism required to deal with the new and growing phenomenon of ICT from a policy perspective. If we trace the evolution of policy perception towards ICT, we will see that in the beginning, ICT was primarily perceived as an emerging new industry; then it was recognized as an important instrument for overall economic advancement through modernization of activities of the public and private sectors. It is only recently that ICT has begun to be seen as a significant tool for social change in areas of women empowerment, youth mobilization, and other civil society movements. But the process of ICT-policy making has largely not been able to keep pace with this evolution, particularly with respect to gender issues. In most ICT policy documents of developing countries, gender issues are not explicitly taken into consideration; in some, it is perfunctorily treated as a separate item, thus ignoring the cross-cutting issues of gender in almost every aspect of ICT policy. The purpose of this paper is to develop a framework for policy-makers and strategists for incorporating or assessing gender-sensitivity in ICT policy documents.

2 Understanding the Policy Areas

This section examines the key policy areas in the form of questions that policy-makers should keep in mind while formulating ICT policies and e-strategies. They are classified into ten different categories: namely, Communication Infrastructure, Public Access to ICT, Access to E-Services, E-Government, E-Commerce/E-Business, E-Health, ICT Education, ICT-based Awareness Program, Women Entrepreneurship and Women in ICT Policy-making.

2.1 *Communication Infrastructure*

This section deals with issues of telecommunications infrastructure, particularly last-mile solutions.

2.1.1 **Does the last mile connectivity infrastructure ensure equitable access with respect to gender?**

In many regions of the world, rural areas are often more dominated by female population since many of the young and middle-aged men tend to go to urban centers for jobs. In such circumstances, an urban-centric telecommunications infrastructure inherently puts women in a disadvantageous position in terms of access. While mobile phones have reached a decent level of penetration in most developing countries, land phones and Internet connectivity have been mostly urban and sub-urban-based.

2.2 Public Access to ICT

This section deals with issues of mechanisms for service delivery to end-users.

2.2.1 Do local public ICT access points located in areas which have easy access to people of all gender and age?

It is often the case, especially in many rural areas, that certain localities have a heavy orientation towards one gender or the other. For example, bazaars are often heavily dominated by male, while other places of congregation are dominated by female, depending upon culture and religion. This is one important factor that should be taken into consideration when deciding on location of public ICT access points – the more gender-neutral locality, the better.

2.2.2 Do local public ICT access points provide services during times that are conducive for people of all gender and age?

In many patriarchal rural settings, males tend to congregate during evenings and females tend to congregate during late afternoons. This factor also needs to be kept in mind when deciding on the operating hours of public ICT access centers.

2.2.3 Does the condition inside public telecenters ensure an environment that is conducive to both genders?

According to many studies, telecenters are often found to be heavily dominated by young male, and there are many instances, where public Internet cafes are used for accessing pornographic materials mainly by males. More importantly, there is often wide-spread perception that these cafes are not places where ‘nice and decent’ girls go to. There should be strict guidelines and policies against such misuse of public Internet access points and also against businessmen who allow such activities. In strictly religiously conservative areas, there may be provision for separate space for women.

2.3 Access to E-Services

This section deals with issues access to ICT-based services, use of different combination of ICT channels and the role of the infomediary.

2.3.1 For telecenter-based e-services, does the role of infomediary ensure equitable access to both genders?

Infomediary is a tremendously important component of ICT-based service delivery since it is the final interface between the service provider and the service recipient. Thus, gender and orientation of infomediary sometimes have significant effect on the acceptance and popularity of service-delivery mechanisms. Female infomedaries are specially suited for delivery of certain kinds of services, and male infomedaries are more generally more suited for some other purposes, depending on the culture and norms of different societies. Therefore, careful consideration should be given to choose infomedaries, depending on circumstances.

2.3.2 Are there provisions/opportunities for e-services to be taken to individual households to ensure accessibility to women who face immobility due to social, religious and physical constraints?

There are many regions across the world – rural and urban – where women face immobility due to various factors, such as social and religious constraints. In such circumstances, a telecenter-based service delivery would produce a heavy bias against women. There should be provision to take different services to households using a variety of technologies, such as the mobile phone, handheld PDAs, community radio, TV etc.

2.3.3 Are there differential pricing policies or credit options for e-services for women?

Women in disadvantaged regions generally have less disposable income – with that in mind, there may be differential pricing policies or credit options for women so that they can afford to avail the e-services provided in the community.

2.4 E-Government

This section deals with issues of e-Government, particularly in areas of enhancement of rights of citizens.

2.4.1 Due to the introduction/implementation of e-government, have women been able to exercise their rights as citizens more?

One explicit goal of e-Government is to enable citizens to better exercise their rights through various ways such as voicing opinions, providing feedback, and demanding reaction from the government on issues of public interest. Whether the ICT channels that allow citizens to exercise their rights are equitably accessible and usable by both genders should be an important consideration for policy-makers.

2.4.2 Has e-government enhanced the ability of local government institutions to better address the needs of both genders equitably?

Like intermediaries in the case of telecenters, local government institutions are important in the case of e-Government, since these are the last mile service-delivery arms of the government. Therefore, it is important to ensure that the e-Government services delivered through local government institutions, such as electronic birth registration and automated land registration, are accessible equitably by both genders.

2.5 E-Commerce/E-Business

This section deals with issues of e-Commerce, particularly with respect to activities related to online marketing and promotion.

2.5.1 Has e-commerce services extended the provision of women in disadvantaged areas to market their products and services and also communicate with potential clients?

In many developing countries, women in rural areas are involved in the production of products that have buyers from urban areas and sometimes from other countries. But they find it difficult to market their products, and often have to hand out an unfair commission to middlemen who take advantage of their positions. E-commerce services that allow women to market their products through the Internet may greatly contribute towards ensuring that these women are not exploited.

2.6 E-Health

This section deals with issues of ICT-based delivery of health-related services.

2.6.1 Are there provisions for e/tele health services to be extended to individual households during times of emergency?

One drawback of telecenter-based tele-health services is that it necessitates physical visits to avail these services. Since there technologies available that enable some of the services to be taken to individual households if necessary, there may be provision to allow it during times of emergency, such as cases of pregnancy and heart attacks. Such provisions would be especially beneficial for women, who are often more inclined to stay at home even during severe need of medical attention.

2.6.2 Does health related digital content address issues and needs of both genders?

Health-related digital content provided through online and offline means are increasingly becoming a prime source of information for doctors, health-related NGOs and also private individuals. Emphasis should be put to make sure that these content address issues and needs of both genders equitably.

2.7 ICT Education

This section deals with issues of formal and informal ICT education.

2.7.1 Is there adequate importance given to introduce ICT education at the primary school level to ensure the equitable participation of both genders in ICT education?

In many developing countries, ICT education is provided mainly at the secondary or higher secondary level, as a result of which females are at an inherent disadvantage in terms of getting ICT education, since in many countries, more girls tend to drop out of school after primary level than boys. In such realities, steps may be taken to ensure that basic ICT literacy is part of the curriculum at the primary level.

2.7.2 Do ICT-related formal education and other training programs ensure equitable participation by both genders?

In many countries, developed and developing, it is seen that the ICT workforce is heavily dominated by males. One reason for that is a negative bias among females to study ICT-related courses. There may be initiatives to attract more females in this sector to ensure a more equitable balance in the workforce.

2.8 *ICT-based Awareness Program*

This section deals with ICT-based issues of awareness programs delivered through ICT-based channels.

2.8.1 In ICT based awareness program has adequate strategies been taken to ensure reaching women who face immobility?

ICT-based programs to raise awareness about different issues of public interest are often provided through channels and times that are not always favorable to women. There should be provisions to ensure that these awareness campaigns reach individual households.

2.9 *Women Entrepreneurship*

This section deals with issues of women in ICT-related businesses.

2.9.1 Are equity funds/tax incentives/ loans for ICT-related or ICT-based businesses equitably accessible and usable by both genders?

To promote ICT-related or ICT-based business activities, several kinds of financial incentives are generally provided by the government, the banking sector and sometimes NGOs. It is important to ensure that gender equity is maintained while defining eligibility criteria for these loans and incentives. There may also be mechanisms to make sure that women have control and decision-making authority over the loans that they take out – in many regions, women sometimes have greater access to microcredit loans. It should also be ensured that credit facilities are available for different kinds of ICT-enhanced commercial activities, so that those that have bias towards one gender or the other do not get undue preference.

2.10 *Women in ICT Policy-Making*

This section deals with issues of involvement of women in the process of ICT policy-making.

2.10.1 Is there adequate involvement of women who can flag gender sensitive issues in ICT policy making?

ICT is becoming an increasingly important cross-cutting issue that affects almost every aspect of socio-economic life of people and hence there should be equitable participation and representation of both genders in high-level policy-making bodies. In most cases, it is seen that such bodies are heavily dominated by males, thus causing many gender-sensitive issues to fall to the sidelines.

3 Framework for Policy-Makers

The following framework has been developed to summarize the points mentioned in the previous chapter in a clear and easily apprehensible manner. The stages are meant to give an idea of the gradual progression of the level of ‘gender-sensitivity’ in different policy areas.

I. Communications Infrastructure

	Stage 1	Stage 2	Stage 3
Fixed Telephony	Fixed telephony infrastructure is mostly urban-based with very limited reach outside cities	Fixed telephony infrastructure has reached urban and sub-urban levels with increasing reach outside cities	Fixed telephony infrastructure has reached much of the country using various telecommunication technologies
Mobile Telephony	Mobile telephony infrastructure has reached beyond urban centers to reach major sub-urban centers and some rural areas	Mobile telephony infrastructure has reached much of the rural areas, islands and hilly areas (if applicable)	Mobile telephony infrastructure has reached almost the entire country
Internet	Internet infrastructure is mostly urban-based with almost no reach outside cities	Internet infrastructure has reached most sub-urban centers and some rural areas	Internet infrastructure has reached much of the rural areas, islands and hilly areas (if applicable)

II. Public Access to ICTs

	Stage 1	Stage 2	Stage 3
Locality	Most public ICT access points are located in areas/ localities which have a distinct bias towards male presence	Many public ICT access points are located in areas/ localities which have flow of people of both genders, but at different times during the day	Most public ICT access points are located in areas/ localities which have flow of people of both genders during most times of the day

Operational hours	Most public ICT access points are open during the evenings when females in many societies stay inside home	Many public ICT access points are open during the entire day and also evenings	Most public ICT access points are open during the entire day and also evenings
Operating Conditions	The operating conditions inside most public ICT access points are not at all conducive for female use	The operating conditions inside public ICT access points are favorable for female use mostly in urban areas, but only to a limited extent in rural areas	The operating conditions inside most public ICT access points are favorable for female use across the country

III. Access to e-Services

	Stage 1	Stage 2	Stage 3
Role of Infomediary	The infomediaries in most public telecenters which offer various electronic services and relevant digital content are not able to satisfy the demands and expectations of both genders	The infomediaries are able satisfy demands from both genders to a limited extent, and not able to handle issues that strictly require a knowledgeable and capable woman as the infomediary	The infomediaries are able to satisfy most demands from both genders
'Mobility' of e-Services	e-Services are provided at the telecenters only, and no e-Services are provided through mobile technologies	Some limited number of e-Services are provided through mobile technologies, but they are taken to individual households to a very limited extent	A number of e-Services are available through mobile technologies and are taken individual households through different initiatives
Affordability of e-Services	e-Services are available but are often not affordable by women, specially in rural areas	Micro-credit loans and other mechanisms are available to afford e-Services, but getting these loans is not always easy	There are schemes for differential pricing based on urgency and financial status

IV. e-Government

	Stage 1	Stage 2	Stage 3
Local Government Institutions	e-Government has not enabled local	Some e-Government initiatives have	e-Government schemes have enabled

	government institutions to better serve people of both genders equitably	enabled local government institutions in certain localities to respond to the needs of women in particular	local government institutions to serve the needs of both genders equitably
Beneficiaries of e-Government Services	e-Government services have not allowed people of both genders to benefit equally	Some e-Government initiatives have been chosen to specifically address women's issues	e-Government services allow people of both genders to benefit equally
Capturing Public Opinion	e-Government has not allowed capturing of public opinion from both genders equitably	e-Government has only allowed only those who have direct access to the Internet to voice their opinions	Different combination of ICTs such as mobile technologies are being used to allow people of both genders to voice their opinions

V. e-Commerce/ e-Business

	Stage 1	Stage 2	Stage 3
Online Marketing	e-Commerce initiatives have not at all benefited women, particularly in rural areas, to market their products	e-Commerce initiatives have allowed women to market their products through certain portals and online services, but there is no effort that specifically markets their products	Specific initiatives have been taken to market the products made by women, specially by those in rural areas

VI. e-Health

	Stage 1	Stage 2	Stage 3
'Mobility' of telehealth services	Telemedicine and tele-health services are largely restricted to health centers	Telemedicine and tele-health services are available outside health centers, some can be taken to individual households, but are expensive	Some telemedicine and tele-health services are taken to individual households if needed at affordable cost
Equity in Health-Related Content	Health related digital content do not contain issues that are specifically catered to women's needs	There are some health-related content that specifically caters to women's needs, but much of them are not in the local language	Significant amount of health-related content that caters to women's needs are available in local languages

VII. ICT Education

	Stage 1	Stage 2	Stage 3
Target Groups for ICT Education	ICT education is largely biased towards male students	ICT education does not have gender bias, but is primarily limited to high school, where male students dominate	ICT education is provided at all levels without any bias
ICT Workforce	ICT workforce is heavily male-dominated	ICT workforce is heavily male-dominated outside urban centers, but there is more equity in cities	Gender distribution in the ICT workforce is equitable across the country

VIII. ICT-based Awareness Programs

	Stage 1	Stage 2	Stage 3
Target Groups for ICT-based Awareness Programs	ICT-based awareness programs do not place adequate emphasis on women	ICT-based awareness programs does target women, but many of these programs cannot reach women who are home-makers or those who do not have direct access to the Internet	Different combination of ICTs are employed to reach women across the socio-economic spectrum

IX. Women Entrepreneurship

	Stage 1	Stage 2	Stage 3
Eligibility for financial support	Business loans and equity funds are heavily biased towards male businesspersons	Loans and equity funds are available for all, but still female businesspersons face particular problems in proving their eligibility	Loans and equity funds are available for all with eligibility criteria equitably enforced for both genders
Credit facilities for different ICT-enhanced commercial activities	Credit facilities are largely biased towards certain ICT-enhanced commercial activities in which there is a gender bias	Credit facilities are available for certain ICT-enhanced commercial activities, in which female participate but	Credit facilities are available for different kinds of ICT-enhanced commercial activities, in which both genders

		generally do not take an entrepreneurial role	participate and take entrepreneurial role in
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X. Women in ICT Policy-Making

	Stage 1	Stage 2	Stage 3
Representation and Participation	There are no women in the process of national ICT policy-making	There are a few women in ICT-policy making but they are not very vocal due to lack of capacity building facilities	There a fair number of women in ICT policy-making who can actively voice gender issues

4 Conclusion

The above framework has only been a preliminary step to highlight the cross-cutting issues of ICT and gender from a policy perspective. Many of the areas have not been touched upon in detail, while some others have been left out. The authors hope that during the course of time, others may take up this framework and enhance it to suit the specific purposes of different countries and special cultural and social circumstances.

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