

Information and Communication Technologies and Gender in Sri Lanka

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**Submitted to
Institute of Social Studies Trust, New Delhi**

**MIMAP Gender Network Project, Phase III
2006**

**Sponsored by
International Development Research Centre (IDRC), Canada**

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1. Introduction

Global trends

The new form of socio-economic organisation that has emerged in the last twenty-five years “tooled” by new information and communication technologies (ICT) has resulted in new productivity sources, new organisational forms and a global economy. The new ICT are described as “one of the most portent forces transforming social, economic, and political life,” a vital engine of growth for the world economy,” and one that is “shaping the twenty first century.” The information age and society has emerged from the ICT revolution and consequently “...countries or regions have little chance of developing unless they are incorporated into the information age.” (Hafkin and Taggart, p.1).

Information and communication processes are now organised around telecommunication networks of computers. A universal channel of communication for people across the globe, a means for accessing information, for conducting business exists in the Internet. ICT have enabled countries to leap frog and modernise production and increase their competitiveness. They have allowed for greater networking within the economy, enhanced information-processing capabilities and led to faster diffusion of codified knowledge and ideas. New ICT have impacted on the development of electronic commerce, on line commodity markets, on cost reductions in manufacturing and construction industries and especially on the services sector. It has given impetus to an outsourcing industry that has provided employment opportunities to developing countries. Countries have increased efficiency of government operations, improved the quality of public services and reduced transaction costs. ICT have been applied to the health and education sectors. In fact ICT are increasingly underpinning human activity.

However the diffusion of such a powerful technology and the benefits that have accrued to countries from the use of ICT are extremely uneven. The North and especially the United States have exploited the power of ICT but there is a discernible gap between USA and OECD countries. The gap between the developed and the developing countries, the ‘digital divide’ as it is called is even wider and vast disparities exist between regions. However according to the World Report on Information Technology (2003, p.18) the digital divide between countries is decreasing. Nevertheless these disparities are a reflection of existing

inequalities and unequal economic relations that exist between the North and the South. The diffusion of ICT in the South also varies significantly. The vast majority of the population is excluded from the 'information society.'

The digital divide is at several levels of which the technological divide is deemed to be one of the most critical. According to standard measurements of ICT adoption wide gaps are seen among countries in infrastructure - in telephone density, access to computers and Internet connectivity. However there is also a digital divide in ownership of global ICT systems. Internet though seemingly democratic and providing a level playing field is in fact built on corporate control of information content and architecture. There are very few corporate players in the software and hardware industries, in satellite networks and Internet service provision. UNDP estimates that 60 per cent of the revenues from the computer industry and 86 per cent of the total in telecommunications are received by ten IT multinational firms in the North. The global division of labour in the ICT sector is controlled by transnational corporations and is concentrated in specific countries and within countries sometimes in specific geographical areas. The developing countries of the South are at the periphery of these developments. Their role, once again, is as suppliers of cheap raw materials and consumers of finished products. This time cheap labour and expertise are the raw material and the market they provide is for information products (Verzola).

Research shows that there is a relationship between diffusion of ICT, productivity and competitiveness for regions, countries, industries and firms (Castello, 1999) and in the current context ICT are prerequisites for economic and social development. Investment in infrastructure and education-secondary, tertiary and technical, and favourable policies and institutions are required for countries to take full advantage of the technology.

Many countries have seized the economic opportunities afforded by new ICT but have failed to prioritise how the majority of citizens could benefit from the technology. In the private sector-led market driven model of ICT development the social role of technology has tended to take a secondary role. Gurumurthy (2004) argues that the major problem lies with the adoption of an extraneously developed ICT for development theory. She asserts that ICT infrastructure which should be viewed as crucial social and development infrastructure needs to be a public provision, that diffusion of technology innovation should

be equitable and that investments are required to transform institutions engaged in development activities.

While economic disparities and unequal relations between the rich and the poor countries and between the rich and the poor within countries exist, there is also a gender 'digital divide,' which impacts negatively on gender equity and equality. The unequal participation of women is pervasive. There are hardly any women who are involved in the development of technology, they are poorly represented at decision-making levels and as users. Even in the United States women were only 38 per cent of users of ICT goods and services, in Brazil 25 per cent, in Japan and South Africa 17 per cent, and in China 7 per cent. In the Arab States it was just 1 per cent.

New ICT have tremendous potential for women to overcome the disabilities and disadvantages that they face. When harnessed they can empower women at an individual and a collective level. Unless gender issues are considered and women are given the opportunity to participate in the information society by addressing the already existing gender inequalities there is the possibility that the existing inequalities are exacerbated and new inequalities are created.

Some of the constraints such as infrastructure and connectivity, costs, computer literacy language skills and socio-economic status are common to both women and men. But gender based determinants exacerbate these constraints, which are multi-dimensional. In the first instance technology is not gender neutral and a new technology has differential impacts on men and women. Gender perceptions and ideology, male domination of cyberspace and systemic and institutional barriers also act as constraints. Based on information for 42 countries for which data were available, Hafkin found that female Internet usage could be higher in countries where gender based discrimination and differences between women and men are fewer, in countries in which human development indicators are high and in countries that have achieved a high level of technological development. There was no correlation found between female Internet users and the Gender Empowerment Index (Hafkin, 2003).

Participation of girls in technical and computer education though increasing is still low compared to that of men. A study done in 2003 in seven Asian countries showed that women's informatization was 88 per cent that of men (Wanasundera, 2003). However new ICT have provided more employment opportunities for women. Relocated electronic factories, international jobs that are outsourced, business process outsourcing and call centres that have sprung up in third world countries and tele-work have provided women with new opportunities and independent incomes. In India, outsourcing is projected to account for 8 per cent of the GDP and to provide employment to four million people by 2008 (Hafkin, 2004). Women are expected to be the major beneficiaries. However, despite these positive features women are subject to new kinds of exploitation. The new employment opportunities are mainly for educated and skilled women and this type of development will not reduce unemployment among those who are low-skilled. But even educated women are still subject to cultural norms and boundaries of work-times in the new economy, which do not recognise these constraints. For example young women in call centres (in India) are tied frequently to night shifts and pressure of work makes them leave the job after a few years. Existing patterns of gender segregation in the labour market are being observed in the ICT sector with women at the bottom of the hierarchy and men in decision-making, managerial, and technological development slots. In USA women constitute nine per cent of mid-upper level IT engineers, 29 per cent of computer programmers, 27 per cent of systems analysis, while data entry operators are 85 per cent (UNIFEM, 2000). In Asia women make up 20 per cent of programmers mostly in lower-skilled positions and the majority in data processing, especially in outsourcing work (Mitter, 2001). Women are being used as a new source of cheap labour through tele-work. A global feminisation of labour could occur if these trends continue. Computer based homework could result in women withdrawing from the public sphere to be confined once again to the private sphere with little interaction outside the home. This could lead to an intensification of the traditional gender division of labour.

To minimise these negative impacts it becomes necessary, among other things for women to be computer literate, enter science, technology and computer courses of studies at tertiary levels, be involved in the policy and decision-making processes. It is equally important for men in policy and decision-making positions to be aware of the gender dimensions of technology. Women are urged to use the technology if they are not to lose

out on the benefits that can be derived from it. However women's ability to take advantage of ICTs is dependent on conducive policies, an enabling environment, and elimination of discrimination in education and training and in the labour market.

The Gender Strategies Working Group at the Status of Women identified “seven musts,” as priority issues in the WSIS process. They are the adoption of an intersectoral approach addressing the root of unequal power, building on a global consensus, people-centred development embracing social justice and gender equality, respect for diversity, peace and human development, a human rights framework and supporting local solutions.

Sri Lankan Situation

National ICT industry and Sector

In 2004 the Network Readiness Index (NRI), a benchmarking tool to assess the ICT strengths and weaknesses ranked Sri Lanka 71 out of 104 countries. According to the NRI it appears difficult for Sri Lanka to provide access to the majority of the people who live in rural areas and empower them. Advancing its low-end agricultural and manufacturing sectors to increase competitiveness is also believed to be a challenging task. In the Technology Achievement Index (TAI) of the UNDP Sri Lanka is at the lower end, ranked 61 out of 172 countries for which data were available.¹ But it has categorised Sri Lanka as a dynamic adopter² ahead of India (UNDP, 2001) pointing to the ability of Sri Lanka to forge ahead in this sector. One reason for the slow development of the ICT sector was the armed conflict that has engulfed the country for over two decades, which diverted resources and political attention to solving the crises brought about by civil strife.

However, the ICT sector and industry has grown within the last three to four years. The major impetus to this growth came from the consistent efforts made to implement the e-Sri Lanka policy, setting up of an institutional framework and the receipt of loan funds to implement the policy. The pause-in-conflict of the twenty-year armed conflict also

¹ The components of the index are: Technology Creation - patents granted to residents, receipts of royalties and license fees; Diffusion of Recent Innovations - Internet hosts, High and medium technology exports; Diffusion of Old Innovations - telephones, electricity consumption; Human Skills - mean years of schooling, gross tertiary science enrolment ratio.

² in the classification showing disparities in technological development among four groups of countries with leaders (above 0.5), potential leaders (0.35-0.49), dynamic adopters² (0.20-0.34) and the marginalised

provided a conducive environment for ICT development. Liberalisation of telecommunications sector and service provision and multi stakeholder participation in policy formulation and implementation and a conscious effort to include rural areas and all people have yielded some positive results. Expansion in telecommunications infrastructure especially mobile telephony, which has the potential to overcome many of the constraints of limited land phone coverage has provided benefits to all socio-economic strata, computer usage has increased and more people are logging on to the Internet. Educational programmes have commenced at all levels to provide the necessary skills. Businesses and other economic enterprises are increasingly turning to new computer mediated technology and IT enabled services are starting to take off while electronics factories have been established in the free trade zones. ICT are being used widely for environmental sustainability and natural resource management by both government and non-government agencies. ICT tools such a GIS systems are contributing to scientific policy formulation and decision making. However, the use of ICT in poverty alleviation and in the health sector was minimal (UNDP, 2003).

National Policies

Telecommunication sector reforms started in 1980 with the bifurcation of posts and telecom service provision by the government. Subsequently a regulatory authority was created in 1991 and the reform process was further developed when the Department of Telecommunications was converted into a corporation. Since then three fixed line operators, four mobile operators, over five facilities based data operators, over 20 non facilities based data operators and over 30 external gateway operators have been licensed. Investment in the sector has exceeded USD 1300 million.

The Telecommunications Regulatory Commission of Sri Lanka³ (TRCSL) issued a draft telecommunications policy in 2002. It recognises the need to create opportunities to the citizenry to participate in the global economy by creating conditions for electronic commerce, by supporting their economic activities and personal relationships and to communicate with the government through the use of ICT and to use ICT to improve governance. The government will develop a comprehensive information infrastructure and

³ established in 1996 by an amendment to the Sri Lanka Telecommunications Act No. 25 of 1991. It is tasked with ensuring the orderly provision of telecommunication services by the private sector.

the convergence of traditional broadcast television and radio technologies. The recognition of the need to extend services to under served areas resulted in the inclusion of the provision for an universal service fund from international services to correct regional imbalances. A significant policy initiative was the opening up of the international market to international gateway operators in 2002. A calling party pay regime is to be introduced to increase cell phone penetration. There is no specific Internet policy and matters relating to the Internet come within the telecommunications policy. The next stage of liberalisation focusing on strengthening regulation and improving competition as envisaged in the National Telecommunications Policy approved by the Cabinet in 2002 is still being awaited.

In the fixed sector, despite some lapses the regulatory environment appeared to have had some impact on investment in the sector. For instance the replacement of the first, not-fully-independent regulator with the TRCSL in 1996, having better resources and greater autonomy and the licensing of two fixed access operators gave an initial filip to investment. The highest incremental investments in the fixed sector were recorded during this period. However, investment in the fixed telephone sector slowed down around 2000 among other things due to problems in the interconnection regime. But investment in the mobile sector grew due to a relatively good regulatory environment. Technological changes have also warranted further investment.

E-Sri Lanka Programme

The e-Sri Lanka programme⁴ of 2002 is the first comprehensive plan for the development of ICT in the country. It has as its strategy the use of ICT as a key driver in economic growth and national integration. . Its vision is to take “the dividends of ICT to every village, to every citizen, to every business and also transform the way Government works.” It is a comprehensive, integrated programme that has five components ranging from the

⁴ A draft IT policy was introduced in 1984 but it was not implemented in any systematic manner. This was the period which coincided with armed civil strife in the North and the South of the country and resources and political attention were diverted to quelling, and restraining terrorism and insurgency. Economic growth rates fell and many development projects did not take off. It was not until 1998 that any serious attempt was made to develop the ICT sector. In that year the National ICT Policy was introduced. The privatisation of Sri Lanka Telecom and the liberalisation of the telecom market, continuing deregulation, privatisation and foreign direct investment had a salutary effect on the development of the sector.

construction of the broadband backbone to the development of e-Leadership to achieve this vision by 2007.

Programme 1 – *Build implementation capacity*. This programme calls for enhancing government's ability to realise the e -Sri Lanka vision. The Executive President is to provide leadership in setting the overall ICT strategy. A National Task Force to give ICT policy directions was to be appointed and an ICT agency was to be created. The Administrative Reforms Committee also gives leadership to this programme. The ICTA is to forge partnerships with the private sector, NGOs and the community.

Programme 2 - *Build national information infrastructure and enabling environment*. This programme calls for enhancing the existing competition-centered communication policies and the establishment of the independent Telecommunications Regulatory Commission. It also calls for an aggressive infrastructure development roadmap that will respond to the communication needs of all segments of business and society and is able to mobilise private sector investment. Issues relating to rural connectivity have been taken into account by providing smart subsidy scheme to extend access to rural areas and encourage private sector participation. The poorest areas in the South and conflict affected areas in the North and East are to be targeted. A telecenter programme is to be initiated with public, private and NGO sector participation. It is anticipated that this programme would lead to reduced costs and availability of services, reduced transaction costs, increased private sector investment, e-commerce and services leading to better employment and rural entrepreneurship, and empowerment of communities through locally driven development.

Programme 3 - *Develop ICT human resources*. Strategies for human resource development at multiple levels and for stimulating the ICT industry are based on emerging opportunities in three key segments: 1) Software products for new applications and markets; 2) global software services market; and, 3) global market for ICT-enabled services and business process outsourcing.

Programme 4 - *E-government: delivering citizen services*. This programme aims at achieving seamless interaction among government organisations, government and citizens, and government and businesses. Internal government activities and processes are to be

automated and government call centres established. Transparency in government operations, client focussed processes, government accountability for service standards are other anticipated outcomes of this programme. Government services are to be transformed with the development of new service models.

Programme 5 - Use ICT as a key lever for economic and social development. This programme will focus on societal applications and content development targeted at poverty reduction and social development, connectivity and tele-centers to promote access to the Internet and computer literacy, and the use of mass media for broad based dissemination of information and knowledge. The Sri Lankan economy has been consistently under performing in global markets, and ranks a low 65 on the Global Competitiveness Index. The need to introduce a new set of competitive industries and to promote the ICT industry and the provision of related services is, therefore, a vital component of the overall e-Sri Lanka strategy.

Three stakeholders are seen to develop and promote the four components of the draft master plan. The key stakeholders and their roles are as follows:

The government, which will create the legal framework, will develop the institutional arrangements, policies with regard to ICT development. The government will play a key role in coordination and cooperation, training, international co-operation as well as promote ICT development.

Entrepreneurs, particularly small and medium entrepreneurs that will participate in making investment, supplying products and services, developing the market etc. They will participate with the Government in developing and implementing ICT development policies.

Users who will indirectly make investment in the market, participate in designing and improving the quality of products and services. They will also participate with the Government in developing and implementing ICT policies.

International organisations such as the World Bank, the Asian Development Bank play a role as major financiers.

In addition to the e-Sri Lanka programme there are sectoral policies that have been developed and implemented for example the National Policy on Information Technology in School Education (NAPITSE). NAPITS affirms the policy of the government in making state-of the-art knowledge in IT to the younger generation to enable them to fit into the information society An action plan and a six-year strategic rolling plan for the period 2002-2007 support this policy. The action plan focuses on using IT for teaching and learning, IT for educational management and facilitating the planning, implementation and sustenance of information technology education in schools to enhance students' learning and quality of education.

Four major strategic themes have been identified to achieve these goals. These include curriculum development, human resource development, physical infrastructure development, and support initiatives development.

Institutional Framework

Currently the major institutions involved in driving the ICT programmes are the Information and Technology Agency (ICTA) and the Telecommunications Regulatory Commission of Sri Lanka. Set up by an Act of Parliament in 2003 the ICTA is the single highest body involved in information and communications technology policy and its implementation in both the public and the private sectors. It is the implementing agency for the e-Sri Lanka initiative. ICTA is directly responsible to the President.

The government established the Council of Information Technology (CINTEC) over two decades ago in 1984 as it recognised the importance of developing the ICT sector. CINTEC was superseded by ICTA in 2002. The Telecommunications Regulatory Commission, formerly Office of the Director General of Telecommunications, was established in 1997. The TRC is charged with the function of ensuring the efficient provision of telecommunication services. It manages the radio frequency spectrum, acts as an umpire

for licensed telecommunication operators, ensure quality of service to customers and prices, enables and expansion of telecommunication services, and ensure public interest in telecommunications. It also advises the Minister in charge on matters of policy, is the sole manager of spectrum resources, provides standardisation, and creates safeguards to protect customers.

Promotion, development and use of ICT in government agencies under the e-government programme are carried out under the direction of a Chief Innovation Officer (CIO) in each government agency. The CIO liaises with ICTA on the implementation of the e-Government programme. An ICT Unit under a manager with technical knowledge is responsible for the implementation of out sourced projects.

Legal framework

While there are several laws governing the print and broadcast media laws covering the digital media are limited although there is recognition that ICT have affected traditional legal concepts and that law reform is required to meet the challenges of the electronic media.

Some of the major laws in the sector are the Sri Lanka Telecommunications Act No. 25 of 1991 and its 1996 amendment, which established the TRCSL, and the Information and Telecommunications Act No. 27 of 2002, which set up ICTA.

ICTA has taken the initiative for law reform with regard to e-transactions, regulatory measures relating to privacy and spamming, and developing codes of practices embodying data protection principles.

Sri Lanka has no electronic transaction laws and this creates uncertainty with regard to e-commerce operations. The exception is in the banking sector. Amendments to the Monetary Law, Local Treasury Bills Ordinance and the Registered Stocks and Securities Ordinance have facilitated electronic trading in bonds and securities. The law enacted in 1995 made information and statements produced by computers and facts recorded by other electronic devices admissible as evidence. However limitations of previous laws, for

example on frauds still remain and the Evidence (Special Provisions) law does not address this issue. The use of document imaging technologies is also not possible under the present laws.

There are no laws on data protection, which prevent the free flow of information. This undermines the e-Sri Lanka programme, which aims at computerising all government departments and facilitating electronic documentary service. The lack of data protection laws is seen as hindering the operations of call centres and BPO. The Intellectual Property Act, which was enacted to meet the obligations under the TRIPS Agreement, does some adequate protection to “undisclosed information.” Confidential information could also be protected under the general law and sector specific laws such as the banking laws. However, the absence of a data protection law and a data protection authority in Sri Lanka is a real threat to the recently introduced e-Sri Lanka program.

Under the IPR Code computer programmes are protected works. Computer and computer programmes have been defined in accordance with the model provisions for the protection of computer software prepared by WIPO. Sri Lanka has complied with Article 10 (1) of the TRIPS Agreement requiring countries to provide adequate and meaningful protection to intellectual property rights in computer software. There are also provisions dealing with layout designs and integrated circuits in the IP Code.

Specific legislation, which protects individual privacy or collection of personal information, has not been introduced. The only legislation, which refers to this area, is the Telecommunication Act No. 27 of 1996, which regulates the interception of communications. According to Section 53 and 54 (1) of this Act, the interception of telecommunication transmissions and the disclosure of their contents are offences subject to penalties and imprisonment.

The Computer Crimes Bill presented in Parliament in 2003 to provide legal recognition of digital signatures, which is the basis for e-commerce and electronic data interchange has still not become law. There is also no law relating to Internet content, especially objectionable content. There is freedom of access to the Internet and generation of content.

The lacunae in law have been recognised by the Judicial Reforms Commission and the Law Commission of Sri Lanka. However there are still no specific plans to develop the necessary legal framework in respect to electronic transactions, privacy and security. In addition to these laws it is necessary to identify existing laws and regulations in other domains especially with regard to employment in the ICT sector.

Information Infrastructure

The telecommunication policies accompanied by substantial investments by the public and private sectors in the sector have had a positive impact on the sector with telephone connectivity recording impressive growth rates. The table below shows the growth of telephone connectivity.

Table 1.1
Telephone Connectivity

	2002	2003	2004	2005 (June)
Fixed line phones	880108	909013	991239	1023625
Cellular	901580	1390400	2211158	2774156
Total	1814689	2302416	3202397	3798141
Tele density				
Fixed	4.7	4.9	5.1	5.2
Celluar	4.9	7.3	11.4	14.1
Total subscriber base	9.6	12.2	18.8	19.3
Data comm	75000	85000	90444	108305
Public pay booths	6801	6440	6095	8134
Paging	8178	2851	828	300
Trunk mobile radio	579	137	179	182

Source: TRCSL

A 50 per cent increase is seen in the year after monopolistic control of the telecommunications sector was given up. Since then however connectivity has increased

but at a decreasing rate. As in most other countries the growth in mobile telephony has outstripped that of fixed line telephones. A calling party pay regime is expected to further increase cell phone penetration. The subscriber base had increased from 9.6 in 2002 to 19.3 by mid June 2005. Public pay booths have also increased during 2002-2005. The growth in new ICT has seen the decline of paging services and trunk mobile radio. Spectrum licenses issued stood at 77 as at 30th June 2005 (TRCSL, 2005). The major player in the fixed telephone market is Sri Lanka Telecom with several other private companies providing fixed and mobile telephone services. The former has 87 per cent of the market for fixed line operations and 19 per cent in the mobile market (Sri Lanka Telecom, 2005, p. 12, 20).

The number of Internet service providers (ISP) stood at 27 but 60 per cent of the market is controlled by one ISP while four ISP control more than 80 per cent of the market.

While telephone connectivity has expanded and the number of ISP has increased this growth is highly skewed and regional disparities are wide. The Western province has recorded the highest growth in telephony-50 per cent in Colombo and 3.25, 1.47 and 0.27 per cent in the other growth areas of Kurunegala, Rathnapura and Jaffna respectively. While higher growth rates are being recorded in Kurunegala, Jaffna and Vavuniya districts, Colombo still maintains its concentration of telephones with 44 per cent of the total fixed telephones (Central Bank, 2005, p. 61) The ISP are also concentrated in Colombo. These statistics are consistent with results of the Department of Census and Statistics household income and expenditure survey, which showed that the Western province and Colombo district have the highest monthly, mean and per capita income compared with the other provinces.

Education and Training

Ten Sri Lankan universities and the Open University of Sri Lanka produce graduates in the field of engineering, electronics and computer studies. Within these universities a department under the Faculties of Science, Applied Science, Natural Science, Engineering, and Engineering Technology usually provides computer science courses. In the last few years the universities have expanded student enrolment to meet the demand for information professionals. The University of Colombo School of Computing absorbing the Institute of Computer Technology offers both internal and external degrees. The relaxation of entry

requirements by the UCSC and SLIIT has enabled students with passes in any Advanced Level subject to enrol for computer degree courses. Post-graduate degrees and diplomas to meet industry requirements are also conducted. Computer studies are a compulsory subject for all under graduates.

The Sri Lanka Institute of Information Technology established in 2000 has four campuses - in Malabe, Colombo, Kamburupitiya and Kandy. SLIIT offers IT programmes ranging from diplomas, advanced diplomas, degrees, special honours degrees, post-graduate diplomas and masters degrees to professional development programmes to those in the industry. It anticipates training large numbers of IT professionals to meet the country's requirements. The total enrolment of students at the SLIIT amounts to over 2,750 and within the next two years this number is expected to rise to 3,500.

In addition, there are three major private sector institutions that prepare students for IT degrees. These institutions are affiliated to foreign universities and students earn American, British and Australian qualifications.

There are a large number institutions offering non-degree level IT education courses. The National Institute of Business Management, Vocational Training Authority, National Youth Services Council are some of the public sector institutions that offer training in using IT. In 2000, CINTEC introduced a National Examination in Information & Communications Technologies to standardise IT training to meet industry requirements with an accreditation scheme for training institutes. Mushrooming computer raining centres of varying quality offer training in using various computer packages.

Computer Education in Schools

Computer education at school level started in 1983 but these initial attempts did not provide direction or create a significant impact. It was only with the School Modernisation Project initiated in 1995 that an island-wide effort was made. Computer Resource Centers (CRCs) were introduced with the assistance of the Asian Development Bank (ADB). This network of CRCs has now grown to 73 on an island wide basis, providing computer literacy to students during their vacation and during the period after the General Certificate of Education.

Integration of IT or computer education with the formal curriculum in school education has not taken place as yet. In this backdrop, IT is not offered as a subject in the school curriculum. Nevertheless, there are some activities being run through the “activity room” concept in schools. Also, in the business studies syllabus for junior secondary level, there is a marginal involvement of IT.

Research and Development

Research and development in new technology is still at a low level in the country. According to the UNDP (2001), private industry R&D accounted only for 1.5% of all reported R&D, and the percentage of high and medium tech exports, a key indicator of technology acquisition and use ranked well below those of Korea and Malaysia. An Asia Week survey of the 77 institutions in South, East and North East Asia, Australia and New Zealand the University of Colombo, the only Sri Lankan institution ranked in the survey, was 77th. In comparison India had ten institutions ranked, with eight in the S&T category and two multidisciplinary.

However though not research universities there are universities and several post-graduate institutes that have research excellence. There are public sector institutions that engage in research but there are no data on the quality of research.

Levels of Usage

Use of new ICT in Sri Lanka has expanded rapidly but it is still much lower than in many developing countries. In the NRI, individual, business and government use ranks at 90, 67, and 62 respectively.

The number of Sri Lankans connected has been increasing steadily and by 2003 the number of Internet and email accounts had increased to 85,500 and to 93, 444 in 2004 (Central Bank, p. 61, 2005). A sample survey⁵ of 11,000 households conducted by the Department of Census and Statistics (2004) found that Internet facilities were available to only one per cent of households. For a country to be considered substantially on-line, at least 10 per cent of the population must access the Internet. Even though the number of actual users would

⁵ Covered all districts except Mullaitivu and Kilinochchi

be much higher than 93,444 due to multiple users accessing the Internet from one subscriber line Sri Lanka would still be considered as standing at the low end of countries using the Internet.

The number of computers that are being used in the country too has increased over the years. The sample survey referred to above (2004, p. 7) found that 149,830 households had a home computer and that over 40 per cent of the households had acquired it after 2000. However the availability of computers is concentrated in the Western province. While 10.5 per cent in urban areas had access to a computer in the rural sector 3.1 per cent of households had a computer and in the estate sector only 0.3 per cent of households had a computer (Department of Census and Statistics 2004, p. 7, 8). Digital exclusion in the country is evident.

Local businesses have started automating their operations with the financial sector and airlines being early starters. Internet is being used increasingly to market their products, and connect with global supply chains. “Smart buildings’ and IT parks have come up, and businesses are able to obtain many of the infrastructure that they require using new technology. Yet compared to other countries the business sector still lags behind 66 other countries (NRI).

Apart from the assembly of computers there is hardly any local involvement in electronic hardware –either in designing or in manufacturing. The few companies that are engaged in the manufacture of electronic chips, circuit boards and a few other components are confined to the free trade zone.

On the other hand, though still in its infancy, the software industry has shown considerable dynamism and growth. With about 75 development companies the export earnings from software development increased by 11 per cent to US\$ 72mn in 2004 (Central Bank, 2005, p. 99). Several countries including USA, UK, Australia, Sweden use Sri Lanka as offshore development centres. The industry projects export earning amounting to US\$ 1 billion in 2012 given the right environment. The Sri Lanka ICT Association (SLICTA) formed recently is working towards transforming Sri Lanka into a high value IT service centres. Open source also provides an opportunity for Sri Lanka. Of the 300 open source

committees 80 are based in Sri Lanka with the Lanka Software Foundation assisting developers.

The Business Process Outsourcing (BPO) industry is still in its infancy in Sri Lanka. However the several international companies that have set up operations in the country have shown good results and sufficient growth. High volume data processing, production of customised software, production of quality web sites and web-based solutions are being undertaken increasingly. The first call centre was commissioned in 2002 and now many multinational organisations from all parts of the world have transferred their call centres and telemarketing operations to Sri Lanka.

Sri Lanka is also attempting to provide third party business process services to India. It has the advantage of lower costs –in the range 20 per cent to 40 per cent, better infrastructure and skilled workers (IFS). According to ICTA whatever the predicted volume/figures for the industry, it is gigantic in the Sri Lankan context. E-commerce is still in an embryonic stage and a small advertising market helps sustain a few sites

Under the Sri Lanka Competitiveness Initiative international organisations such as the World Bank are supporting Sri Lankan entrepreneurs who are attempting to tap into the e-learning market. A market is also opening up in outsourcing author ware tasks, video transcription, translation, indexing, and abstracting.

In the government sector several significant developments have occurred in the educational sub sector. Teachers are being trained in using ICT for teaching and educational management. Computer facilities are available in a number of schools. The Ministry of Education has introduced Community Resource Centres across the country providing computer literacy to teachers and students during school vacations and post-examination months. The integration of IT with the general curriculum has not occurred yet although ‘activity rooms’ have started in some schools and IT was an optional subject for the GCE Ordinary Level examination in 2005.

The universities have made computer literacy compulsory for undergraduates. A range of high quality courses for those who do not have access to universities is being implemented

under an ADB funded distance education modernisation project. It is setting up a national network of over 100 tele-centres and affiliated facilities in existing and proposed university and community locations reaching remote areas. The network will be Asia's first educational network with capacities of 100-megabit trunks between major centres and 10-megabit trunks to less populated areas.

The government ministries and departments are going on-line. A Government Web Portal⁶ has been developed to make information on government ministries, departments, public statutory bodies including banks, and universities available from a single point. These sites provide basic and latest information on the activities of each organisation in Sinhala, Tamil and English. Government forms are also available on-line. The government policy is to make available all possible services through ICT, especially the web. While the quality of information varies across these agencies most of these sites are static. LakGovNet(KGN) connects all government departments, ministries and agencies. The UN (2004 and 2005) ranks Sri Lanka's e government readiness and the extent of e-participation at the 94th position among 191 countries in the UN system in 2005 moving up two positions from the previous year.

An area in which ICT are being used effectively is in natural resource management. Geographic Information Systems (GIS), aerial and satellite based remote sensing and mapping, Global Positioning Systems (GPS) and data base systems are being used in studying, mapping, monitoring, protecting the natural resource base, ecosystems and habitats. Geo spatial data are used by power and energy, telecommunications sectors, for irrigation and water resource management, urban planning, land use mapping and transportation. Of the government departments that use ICT are the Department of Forest, which established a GIS unit in early 1990s, and the Survey Department. The Department of Census and Statistics uses new ICT for data processing and dissemination of information.

Several NGOs use IT to achieve their objectives. NGOs and civil society groups working in such areas as human rights, environment, women's empowerment, and media use Internet and email extensively in their day to day work, for advocacy, information sharing, research,

connect with like minded groups, awareness raising, and network with regional and international groups. A few NGOs maintain web sites.

Gender and ICT in Sri Lanka

Lack of gender disaggregated data is a serious constraint in assessing gender differences in access to and use of new ICT. While national data gathering agencies have not given a sex breakdown of survey data by sex research studies on the sector focussing on gender are also very limited. As stated earlier training establishments, professional associations, and many employers also do not maintain disaggregated statistics. Consequently any assessment of women's use of ICT is necessarily based on the few micro studies and micro level data that are available.

Access, Usage, Awareness

Internet users had increased to 94,999 by end 2004. The rapidly increasing number of Internet users will also mean that the number of women users has been increasing over the years. However, the spread of telecommunication infrastructure is limited and Internet use is more or less restricted to Colombo, its suburbs and some of the major cities. Consequently, women who use the Internet are confined to urban areas and are a part of the educated urban elite that currently has connectivity.

Computers and the Internet could be used either from home, from the work place or from a public facility. The Department of Census and Statistics household survey (2004) showed that only 3.8 per cent of households had a computer. Email was accessed by 0.9, 0.7 per cent had access to the Internet and of those households that had a computer only 19.2 per cent had Internet facilities (ibid). An earlier study by CENWOR (2003) conducted within the Colombo Metropolitan area showed that only a minority were computer users and among them there were less women. While they owned less ICT equipment total usage was also lower.

Research elsewhere has shown that mainly male members of the household use home computers and in this instance too very few women may be using the home computer.

⁶ www.gov.lk

Access to the Internet from outside the home will be available from places of study, employment, and public access points. Many of the women who use computers and access the Internet do so from work places. Others do so while engaged in study and training. Few women use cyber cafes, tele-centres and other community facilities.

In Sri Lanka therefore IT use is mainly confined to the public sphere and within it to places of employment and training. The majority of women users of IT would be those women who are employed. The use of technology may range from office work and data entry to sophisticated production functions, jobs in the computer industry such as providing e-solutions in the service and manufacturing sectors, software development, and hardware maintenance among others. The technology is also used as a communication tool. Most of the women who are employed use ICT for software development and communication (Wanasundera, 2002).

Content

The use of Internet by women will be dependent on the type of content that is available and their comfort levels with the use of the dominant language of the Internet. Under the e-governance programme of the e-Sri Lanka initiative government information is to be made available in local languages and this would facilitate use if women have access to such information from the Internet. Content development however has not kept pace with technology diffusion. Content that would empower women is also not available and as such many rural women would find that accessing the Internet even when facilities are available would not be of much use to them. Hardly any women are involved in content development.

Employment

Although employment opportunities in the ICT sector has opened up relatively recently, gendered patterns of employment are already emerging. Women tend to be concentrated in lower skilled IT jobs related to word processing or data entry. Women who predominated as secretaries and typists in the pre-automation era find themselves upgraded as data entry operators in the computer age after acquiring the necessary computer training. (For example the Federation of Chambers of Commerce, Sri Lanka (2001) states in its handbook that while a minimum computer exposure is sufficient to train as data entry operators, what

is needed for such positions is good typing skills. A response received from a computer training institute shows that over 80 per cent of those enrolled in word processing and Internet/email courses are women while the numbers decline drastically to around 15 per cent in programming courses.

However there are indications that women are making inroads into higher levels of the IT workforce but currently they make up only a very small percentage of managerial, maintenance and design personnel in networks, operating systems, or software development. A study carried out by the Institute of Computer Technology, University of Colombo (2000) found that out of the 462 professionals employed in the 138 organisations only 96 or 20.8 per cent were women. The majority of women professionals were in the government sector while they were 17.9 per cent and 21.9 per cent respectively in the private sector, IT suppliers and private sector IT users. They are virtually absent from policy and decision-making levels.

Employer attitudes towards the recruitment of women in the private sector impact negatively on women's employment. An organisation that did not employ any women, stated that an un-stated policy of the company was to refrain from recruiting women (CENWOR, 2000). Apart from the availability of requisite educational and professional qualifications employers' perceptions that women were unable to work long hours due to their domestic responsibilities and their 'unsuitability' for technical tasks are some of the other reasons that could be attributed for the fewer number of women recruited into the private sector. In addition women themselves have difficulty in competing with men for top positions due to their diffidence and lack of assertiveness, lack of leadership skills and poor performance at interviews (Kumarawaduge, 2005⁷)

The ICT sector has a latent demand for skilled professionals that the country is finding it difficult to meet. The majority of IT related jobs would be in the private sector, which has been accorded a lead role in the economy and in the development of IT. Consequently, these negative attitudes towards the recruitment of women could impact adversely on women taking advantage of the opportunities in the industry. The private sector also

⁷ Actg. Director, SLIIT

demands long hours of work, grants fewer days of maternity leave as compared with the public sector, which makes it difficult for women to balance their domestic responsibilities with high pressure work. On the other hand the lack of attributes that the private sector is looking for in addition to professional skills also close the door on opportunities that are opening up in the ICT sector.

Women are also under represented in most of the universities that teach engineering and computer science. There were no women on the staff in the Department of Computer Science and Engineering of the University of Moratuwa. However half the teaching staff in the Department of Electronics and Telecommunications were women. In the Department of Electrical and Computer Engineering of the Open University there was one woman (12.5%) among eight staff members. In the Department of Statistics and Science of the Faculty of Science of the University of Colombo three (21%) of the 14 faculty members were women (UGC, 2001). An exception however was the Institute of Computer Technology, University of Colombo- 37.5 per cent of its academic staff were women.

Gendered processes, which have limited women's access to science and technology education and training, socialisation processes that make women followers rather than leaders, attitudes and workplace culture have led to very few women being in higher positions in public and private sectors and in academic institutions.

Education

One the most important determinants in the use of ICT by women and girls is education. Girls have equal access to education from primary to tertiary levels, retention rates for girls at both the primary and junior secondary levels are higher than for girls than for boys and the gender gap in literacy levels is minimal⁸. Educational opportunity is available to all socio-economic groups through a network of schools spread throughout the country.

Yet despite positive achievements in basic education, literacy and enrolment rates have stagnated in the 1980s and 90s, 18 per cent of students drop out after year 8 the majority of whom are from impoverished districts and conflict affected areas. Cut backs in educational

⁸ These achievements were brought about by the change of the medium of instruction from English to local languages, and the provision of a social welfare package comprising free education, availability of free health services and food at subsidised rates.

expenditure and low investment in the sector⁹ leading to a decline in the quality of education has implications for access to IT education. Disparities in the provision, utilisation and outcomes of education have emerged, persisted and widened. High repetition rates and low pass rates at ordinary and advanced level national examinations have accompanied the decline in educational standards. Only 40 per cent of ordinary level students qualify for the advanced levels, 50 per cent fail in Mathematics, and 70 per cent fail in English. Sex disaggregated data show that more girls than boys fail in mathematics and consequently are unable to enter the science stream at the advanced level limiting their access to graduate level studies at universities. Further, science education is available only in about six per cent of the schools. Twenty five per cent of these schools were in urban areas while in rural areas only four per cent of the senior secondary schools had science education (Jayaweera, 2004). The lack of facilities places the vast majority of students, mainly from non-urban areas at a disadvantage in studying science and technology related subjects and limits their prospects of remunerative employment. In the 1990s however attention was refocused on equity primarily in response to international conventions. The imperative of improving the quality of education and policies focused on reducing disparities in access to science, technology and improving English language skills gained the attention of policy makers.

The introduction of IT into state educational institutions has been affected by the slow development of ICT sector. However the education modernisation project that has been implemented attempts to rectify this situation by equipping 1500 selected schools with hardware and training teachers. Equipping 15 per cent of all primary schools with ICT labs within the next three years is to be undertaken under the e-Sri Lanka programme

The ongoing teacher-training programme will benefit mostly women who comprise about 60 per cent of the total teaching cadre in government schools. The capacity of pre-service and in-service teachers is being enhanced through 17 National Colleges of Education which have also been equipped with computer labs to introduce IT into teacher education programmes to create opportunities for system wide professional development. While the quality of such training is still to be evaluated, enhancing the capacity of female teachers to use IT would immediately increase the number of women who could access information,

⁹ Sri Lanka spends only 2.8% of its gross domestic product on education compared with the 3.5% average in Asia.

act as mentors and role models to schoolgirls and increase the capacity of the community through the computer resource centres that have been established. Earlier studies found that parental and teacher attitudes were constraints to the study of technology by women. If teacher attitudes towards technology are to be changed technology training needs to be accompanied with gender sensitisation programmes and awareness of the usefulness of IT to give women the opportunity to create a space for collaborative action.

Integration of IT or computer education into the formal curriculum in school education has occurred at the year 10 and 11 levels in combination with science. Teaching is limited to theory. The Educational Reforms Committee made strong recommendations for the incorporation of ICT as a subject into the school curriculum¹⁰ but still it is only an optional subject for the GCE (AL) examination. Sri Lanka has not made any headway in integrating IT into the curriculum or using it for teaching-learning purposes.

The integration of technology at an early age into education would be particularly advantageous to girls as that would dispel the perception that technology is for men and weaken gender role stereotyping. Equal access of girls to education and their higher retention rates will be an advantage to them in having access to computer literacy.

Ten of the 12 state universities offer professional courses in IT for internal and external students. However, equality in access to university education has not enabled women to study IT, science of engineering degrees due to the current subject requirements of physical science as a prerequisite for enrolment in IT degree courses. The enrolment of women in IT education-degree, higher diploma, diploma and certificate levels offered by private sector institutions is approximately 25 per cent but they are crowded at the certificate level.

The 25-year period 1966-2000 (University Grants Commission, 2002) has seen an increase of women in all the academic streams at universities. However, while the number of women in such fields as law, social sciences/humanities/education has recorded substantial increases despite high rates of unemployment among graduates of these disciplines, the engineering course recorded only a marginal increase over the same time period. This also

reflects enrolment trends in schools where Arts students who qualified to enter the university constituted 70 per cent of girls and students qualified in Physical Science comprised 3 per cent of girls. Thus despite gender equality in access to education, subject selection and poor performance disadvantage women in gaining entry into IT and engineering courses.

When strict entry requirements are relaxed enrolment rates of girls in IT have increased, as was the case of the Bachelor of Information Technology external degree offered by the University of Colombo School of Computing and the degree courses of the SLIIT. But other factors such as the lack facilities, lack of transport, late evening classes and high cost of access have acted as constraints leading to high drop out rates in the UCSC external degree programme among both girls and boys from the regions.

The democratisation of educational opportunity with the introduction of free education and the introduction of national languages benefitted girls more than boys as seen by overall enrolment rates. However, studies have shown that there is socio-economic differentiation in access to areas of study that leads to remunerative job opportunities and that women were the most disadvantaged by their low participation in technological education. Computer awareness programmes are being conducted in schools but no concerted effort has been made to eliminate gender role stereotypes. Private institutions offer a variety of training courses but there is little sensitivity to addressing gender issues.

The study carried out by (Wanasundera (2004) showed that education had a direct influence on ownership and use of ICT equipment. The use of more advanced forms of telecommunications appears to be a direct function of the degree of education. There was a strong correlation between education and skills in using PC applications and that education augments the productivity gains that can be harnessed from the use of computers.

Research in Sri Lanka (Gunawardena, 2004; Jayaweera, 2001) as well as elsewhere, suggests that the process of socialisation of girls and teacher attitudes that promote stereotypical behaviour among girls and boys result in girls being channelled into

¹⁰ The six-year strategic plan from 2002 to 2007 developed based on the National Policy on Information Technology in School Education (NAPITSE) also proposes IT literacy programmes with exposure to computer education from junior secondary level and as a

'appropriate' 'feminine' areas of study. Girls themselves have internalised gender roles and tend to select subjects that are consistent with their nurturing and servicing roles while boys take on technical subjects (Gunawardena, 2004; Jayaweera, 2002). This process of subject selection makes them continue with conventional courses at higher secondary and university levels and excludes them from acquiring skills in technology. It was also found that fewer women were aware of the importance of information and knowledge and less women than men were making attempts to obtain such information and knowledge. They were not convinced that information and knowledge could bring in high income jobs or that it would lead to a higher quality of life (Wanasundera, 2004). These perceptions could marginalise women in the information society.

Women in Decision-making Positions in the IT Sector

The representation of women in policy-making and programme implementation agencies in the ICT sector would reflect their status and the potential they have to influence policy.

A glaring absence of women is seen in all ICT decision-making structures including policy and regulatory institutions, ministries responsible for ICT, boards and senior management of private ICT companies. A few examples are given in the tables that follow (Table 17).

Table 1.2
Policy Makers in Selected Institutions by Sex

Institution	Total	Female	% Female
Telecommunications Regulatory Commission of Sri Lanka- Commission Members and Director General	4	0	0
Sri Lanka Telecom Ltd.-Chairman and Board of Directors	9	0	0
Information and Communication Technology Agency-Board of Directors	6	0	0
Sri Lanka Institute of Information Technology	12	1	
National S & T Commission	7	1	
National Science Foundation	10	1	

Source: www.icta.lk/www.nsf.ac.lk/www.nastec.lk (December 2005)

The top management of the Sri Lanka Telecom Ltd. consists of males except for the Chief Legal Officer and the Secretary to the Board (18.2%). In the Telecommunications Regulatory Commission there are two women at the level of director (legal affairs and the Chief Internal Auditor), the Secretary to the Commission, one Deputy director (compliance), and three assistance directors. At ICTA five (29%) of the 17 at the managerial level were women.

At the National Science Foundation one (25%) of the four IT staff members was a woman.

Similarly in the universities there were no women functioning as heads of faculties or departments related to science and technology and computing. However the Board of Management of the Arthur C. Clarke Centre for Modern Technologies included one woman.

At SLIIT all the professors are men, one of the four senior lecturers was a woman, two of the five lecturers were women but one was teaching English, and of the 12 Assistant Lecturers five were women.

In the private sector, the top management of the licensed telecommunications services, as is to be expected, comprised men.

Participation in Professional Activities

The Computer Society of Sri Lanka established as far back as 1976 is the apex body in the country for IT professionals. One of its main objectives is to maintain professional standards and provide recognition for IT professionals. Among the activities conducted by the CSSL are an annual conference and exhibition, national schools software competition, and the publication of a journal.

CSSL is a male dominated body. All the 12 members of its current Executive Council are men. Only five (2.9%) of its 175 members are women. There was only one woman (4.3%) among the 23 members in the seven committees that were appointed to organise the 20th National Information Technology Conference and ITEX 2001. Of the 169 presentations made at the 16th -20th National Information Technology Conference only nine (5.3%) were made by women. Such a low representation of women is not found in other professional categories and groups. For example, in the Sri Lanka Association for the Advancement of Science women are in substantial numbers in the membership and they have served in the Council and held the posts of sectional and general presidents. In the 2002 Council 10 (33.3%) of the 30 members are women.

Research on Gender Dimensions of IT

Gender issues in IT have not been a subject of research in Sri Lanka. The ICT report referred to earlier, which sought to identify the training needs of IT professionals does not analyse the differential impact of IT on men and women. It goes no further than stating that the IT industry is a male dominated one. A paper titled 'Experiences of Using the Internet and Web for Facilitation of Learning in Postgraduate Education in Sri Lanka' presented at the 20th National Conference conducted by CSSL studied the student utilisation of email and web based facilities in a group of post graduate students. Research conducted

elsewhere (Nawrttil 1999) on on-line learning shows that very often classroom behaviour of students is replicated on-line and that females are less active than males. However, this paper does not incorporate a gender analysis or even mention whether there is any difference in the learning styles and outcomes of females and males. Even in research fora that are specially open for gender studies such as the bi-annual National Convention on Women's Studies conducted by the Centre for Women's Research, papers on gender and IT were presented only in 2004. The IT Exchange, the Journal of the Computer Society of Sri Lanka includes no women on the editorial board and in the ten volumes published up to December 2001 only two women had contributed articles. The Computer Society of Sri Lanka has been conducting the National Schools Software Competition from 1990 to develop computer skills and to encourage creativity in problem solving among school children. The competition is open to all schools in the island. But in reality the overwhelming majority of schools that participate are boys schools. In 2001 of the 20 schools that entered the competition only two were girls schools. It is creditable however that a prize winner was from one of these two schools and that she was a member of the six-member team that represented Sri Lanka at the International Schools Software Competition held in New Zealand.

ICT Policy

The current ICT policy is the e-Sri Lanka initiative approved in 2002. It has the objective “of using ICT in all aspects for the benefit of the people of Sri Lanka and to further the socio economic development of the nation.” The policy is drafted in gender neutral terms.

The government takes a lead role and acts as a catalyst for change. The institutional framework envisaged for this purpose is the establishment of a lead agency –ICTA and the appointment of Chief Innovative Officers (CIO) in government departments and an ICT unit. There is no reference to the appointment of women.

The need to strengthen the regulatory and legal framework has been acknowledged. Data protection, intellectual property rights, electronic transactions and computer crimes have been identified. Although the Internet is used to perpetrate violence against women and children there is no reference to pornography, paedophilia and trafficking.

The second initiative deals with human resource development focusing on developing and strengthening management and professional ICT skills across the country. Considering the fact that a fewer number of women enter engineering and computer science courses at universities and the various impediments to women's equal access to training and skill development proactive policies are not in place to ensure that women are beneficiaries of this programme.

The telecommunications access and infrastructure development programme envisages the setting up of 1000 community centres for accessing information and services. There are no affirmative policies to ensure that women would own a minimum number of such centres.

The initiative on using ICT for poverty reduction and social development does refer to the empowerment of women. But women are lumped together with youth reflecting insensitivity to gender issues as well as to the problems that face youth.

The draft policy in its present form makes no mention of gender concerns or needs. There is no mention of the need to collect data disaggregated by sex and age. In fact this should be a mandatory requirement. The annual plan for monitoring does not have indicators for monitoring of services provided to women. Content development has no mention of information that is required by specific groups and especially women. This becomes particularly important in government web sites. Assuming that there was under representation of women in the ICT policy-making process, it is naturally not going to reflect women's needs and views. Ideally, a gender analysis should have been carried out and women should have been involved in the process of formulating the policy (i.e. gender-balanced teams, consultation with gender and ICT experts, etc).

Use of IT by Women's Organisations

There are a large number of NGOs and community based organisations involved in addressing the many critical issues that Sri Lankan women face. Some of these NGOs, which had been established before Sri Lanka attained political independence, were involved in political struggles. Others had a social service orientation. However it was the first UN Women's Conference that was the catalyst for the proliferation of women's NGOs

in the country. These NGOs vary in size, financial resources, availability of infrastructure facilities and the number of workers. Very few NGOs have branch offices. All NGOs endeavour to secure the rights of women either by focusing on specific issues or addressing issues that affect women in a holistic manner. Most groups engage in multiple activities.

The Sri Lanka Women's NGO Forum, is a loose apex body that came together for the Beijing Conference and decided to continue its activities. The Forum has 11 core members and nearly 60 affiliated members. In addition to the NGO Forum there are several other networks that have been formed for collective action especially around specific issues. Target groups vary in accordance with the overall objectives of each organisation. Research and advocacy primarily are aimed at government, people's representatives the media and community based organisations. The collaboration that exists between groups with diverse interests within and across borders on common issues is one of the positive features of the Sri Lankan women's movement. These groups have links with the global women's movement.

New ICT were introduced to women's groups in the late 1990s and since then most of the NGOs based in Colombo and a few other cities have computerised their office operations and have Internet access. While geographical location and availability of infrastructure are factors that largely mediate access and connectivity, financial capacity and availability of human resources also impact on ICT access and use. NGOs are primarily dependent on donor funds for their activities and the latter do not always support investments in ICT hardware and connectivity. The high recurrent costs also act as a barrier to extensive use of IT.

Most of the urban-based NGOs have replaced the typewriter with computers, use software packages for maintaining accounting records, and have access to the Internet. Very few NGOs use computers for data processing, to maintain databases, and for desktop publishing. Women have created electronic spaces for themselves to communicate across borders, gather information but the primary use is for correspondence. Email use is higher for international correspondence than for local correspondence. Access to email has made communication easier, faster and increased the efficiency of these NGOs. However email is hardly used for electronic discussion, exchange of information, advocacy or lobbying. Only

one NGO¹¹ and the Ministry of Women Empowerment maintain a web site, and one NGO moderates a discussion list but even the members of this list are passive.

As is to be expected there is a definite urban bias in ICT access. A few NGOs located in urban centres attempt to disseminate information to grass root organisations but outreach has not happened in any significant way.

The major barriers to ICT use by NGOs include external factors such as the poor or lack of infrastructure, high access cost and inadequate funding. Internal factors that act as barriers include the lack of computers due to high cost of hardware and software including virus protection, the inability to regularly upgrade or replace hardware and the difficulty in meeting the recurrent costs of telecommunication and Internet charges. A limited number computer literate personnel as well as those with higher skill levels, language difficulties (the development and use of Unicode should overcome this to an extent) organisational culture and attitudes, perceptions of new ICT as just an administrative tool, and time and resource constraints are some of the other barriers to access and use of ICT.

¹¹ Centre for Women's Research

2. The Study

The study on Information and Communication Technology (ICT) and Gender in Sri Lanka was conducted under the MIMAP – Gender Network (Phase III) Project, of the Institute of Social Studies Trust; New Delhi funded by the International Development Research Centre (IDRC), Canada.

The general objective of the project was to study the diffusion of new information and communication technologies in Sri Lanka from a gender perspective and the use of information technology in economic, social and political spheres.

The specific objectives of the study were to assess from a gender perspective the following dimensions of the issue.

Macro level

- ? Developments in national ICT industry and sector.
- ? The ICT policy environment, the institutional and regulatory frame work, and major programmes and projects that are being implemented or are planned for implementation.
- ? ICT education and training policy.

Meso level

- ? Gender differences in different types of establishments in the ICT sector including IT enabled services in terms of levels, and terms and conditions of employment in the sector.
- ? Identification and analysis of gender differentiated skill generation in selected training establishments (e.g. at schools and in the tertiary levels, in call centers, software and hardware engineering, etc.)

- ? Nature and extent of use of IT by the women's movement (women's groups) for the empowerment of women.

Micro Level

- ? Gender differentiated access, and use of ICT in households in geographical location (districts, urban, and rural areas).
- ? Awareness among children, youth and adults, of the emerging information society, and the interest in and need for access to ICT related skill acquisition.

Methodology

Policy documents, laws and programme documents, reports of key institutions and web sites were studied in order to make an assessment of the development of the industry in terms of policy, education and training and participation of women in availing themselves of education and employment opportunities.

- (i) Studies were conducted in eight districts – Anuradhapura, Ampara, Batticaloa, Colombo, Galle, Jaffna, Kurunegala and Moneragala. The districts were selected on the basis of current levels of availability and use and the growth potential due to urbanisation and expansion of economic activities. Other dimensions that were considered were affliction by conflict and presence of Universities.
- (ii) Meso level studies were conducted in each selected district to assess the development of ICT services and employment enterprises through
 - (a) Review of secondary data in documents
 - (b) Interviews with key informants with the use of an interview guide.
 - (c) Survey of (i) training and (ii) employment institutions - a maximum of 5 institutions in each category of institution was selected and in each of the selected institutions a senior member of the management staff and five trainees or employees were interviewed with the aid of a structured questionnaire.
- (iii) Micro level assessment studies were based on sample surveys of households in an urban and a rural location chosen in the districts, the sample in the Colombo city being chosen to represent three further sub-divisions, low, middle and high

income neighbourhoods. In all, 500 households were surveyed. The distribution of the households is as follows:

Table 2.1
Sample

District and Site	Urban	Rural
<u>Colombo District</u>		
<u>City</u>		
a) Upper Middle Income Neighbourhood (Colombo 7, Colombo 3 & Colombo 4)	20	
b) Middle Income Neighbourhood (Colombo 6 & Colombo 5)	40	
c) Low Income Neighbourhood (Colombo 10)	40	
<u>Semi-urban and rural</u>		
Hanwella	30	20
Galle District	30	20
Kurunegala District	30	20
Anuradhapura District	30	20
Moneragla District	30	20
Jaffna District	30	20
Batticaloa District	30	20
Ampara District	30	20
Total	340	160

Information relating to the demographic, socio economic background of the household, and awareness of exposure to computer education, access to ICT services and use of and ownership of ICT related assets were obtained through an interview with the most senior female member of the household and other members with the use of a structured questionnaire. In addition, the parents (father and mother) of the main family were interviewed separately to ascertain their attitudes and their parents attitudes regarding general education and their own attitudes towards ICT education and employment in the ICT field. The youth (aged 10 – 35 years) in the household were administered a questionnaire individually to ascertain their use of ICT facilities, how they learnt, time spent and purpose of use of computers and Internet facilities and gender perspective on treatment of children generally and specially in relation to ICT related activities.

Gender audits were conducted on six (6) leading institutions in the CT field to assess the degree of sensitivity to gender issues with regard to policies, provision of employment, and opportunities for promotion of women, in computer education, framing of policies and implementation of national programmes. The sixth institution was a leading NGO with an extensive island wide network and being engaged in promoting the use of information technology.

The survey period

The survey was conducted from April 2004 to December 2005. Some problems were encountered in conducting the micro level studies in the areas affected by the conflict – Jaffna, Batticaloa and Ampara and surveys were conducted later than in the other areas.

Collection and Processing of Data

Field researchers were employed to conduct the field interviews in all districts other than Ampara and Batticaloa. In Ampara and Batticaloa the data collection was done under the supervision of a Senior Lecturer in the South Eastern University and the Eastern University respectively. Statistics Unit of CENWOR carried out data processing.

3. Gender Audit

A Metropolitan State University

The oldest university in Colombo was also the first university to have a separate Institute for Information and Communication Technology. The institution pioneered ICT certificate level courses, and undergraduate and post graduate courses and introduced an external undergraduate programme preparing for a degree in Information Technology in order to increase its outreach. The most recent innovation in 2004 has been the Bachelor of Information and Communication Technology for students who have qualified to enter the university in any discipline – science, commerce or arts.

Gender Perspectives of the Policy Framework

This institution follows the national policy on admissions to universities, based on performance at the GCE Advanced Level examination in Grade 13 and on district based quotas. There are no barriers to the admission of women to higher education institutions and additional specific regulations have not imposed restrictions on the admission of women nor were special measures introduced to facilitate or increase the participation of women. However, the first Head of the institution, has been sensitive to gender issues, drawing attention from the inception of the technology related programmes to the wide gender differences in the participation of girls and women in these programmes. He has been aware also of the potential of the self study modality of the external degree programmes in Information Technology in meeting the needs of women who are confined to their homes by childcare and domestic responsibilities.

Gender Composition of Participants

Just over one half (53%) of the students admitted to the 14 universities in the country and around 51% of the total enrolment are women. Nevertheless, of those admitted to Information Technology courses only 27.4% have been women. This relatively low representation of women is characteristic also of the engineering courses (around 15%) in fact, all technology related courses.

Gender disaggregated enrolment data in specific courses was not easily available. From the data available it appears that 25% to 30% of students enrolled in certificate level,

undergraduate (internal and external) and postgraduate (Masters' level) courses are women. This percentage is higher than that in Engineering Faculties but is not satisfactory in the burgeoning area of Information and Communication Technology. A disturbing feature is the high dropout rate in the external degree examination – around 90% in the early years of the course, declining in 2004 to 57%. However, there is no gender difference in the dropout rates so that women do not seem to be particularly disadvantaged. Nevertheless, the co-ordinator of the external course stated that women students following the external degree course have complained that they find it difficult to follow late evening courses at the institutes accredited to the university institute.

It is the perception also of the senior staff that the low participation rates in these IT courses are the outcome of low enrolment at school level in physical science courses. It is a widely held assumption that technology, engineering, and physical science are domains of male excellence. Regrettably, Information Technology has been subsumed in this domain. The new degree course in ICT that has been introduced in the institution, invites applications from non physical science, non science i.e. arts, commerce and management students and will hopefully assist in bridging the gender gap. Key personnel in the institutions are sensitive to this gender issue.

The representation of women in senior staff positions is woefully low. The Advisor, Head, Deputy Head and three Department Heads are men and two of the five Managers of Centres are women. Overall, only 12% to 16% of senior level positions as well as of members of the Governing Board are women. The explanation offered is that due to late entry, most women members of the staff have not reached a level of seniority that qualifies them for management and leadership positions.

Gendered Norms and Attitudes

The institutions is nearly 20 years old and it appears that gender role stereotypes have been a factor that has militated against the increased participation of women and that they will continue to do so unless purposeful action is taken to counter the impact of stereotypical attitudes.

There is no gender focal point in the institution but there are gender sensitive staff members who can be pro-active in bridging the gender gap in enrolment and in high level positions. In fact those in decision making positions have been gender aware but there is a need for maintaining a mechanism that uses sex disaggregated data to facilitate relevant action to ensure gender equality in access to and use of Information and Communication Technology for upward career mobility and for functioning effectively in a knowledge based society.

A Private Sector Institute of Information Technology

This Institute of Information Technology established in 1999 is a degree awarding institution approved by the University Grants Commission. It comes within the purview of the Ministry of Science and Technology. At present it has three campuses located in Colombo, Malabe, and Kamburupitiya and two centres at Matara and Kandy. Its objectives range from providing education and training to IT professionals, providing IT consultancy services, software development services, promoting research and development in leading to specialised applications, services and innovative IT products, assisting and promoting IT enterprises, innovators and IT start-up companies, and expanding IT education to the regions.

The institute conducts programmes of studies leading to B. Sc. Degrees, B. Sc. Special Honours degrees, postgraduate diplomas, M.Sc degrees. The B Sc. degrees have three areas of specialisation – IT, Information Systems, and Computer Systems and Networking. Degree programmes are also conducted by SLIIT under agreement with several foreign universities in Australia, UK. It offers Continuing Professional Development Programmes in niche areas in IT.

It also has links with the IT industry and provides education in collaboration with the CISCO Regional Networking Academy, the Microsoft IT Academy and the IBM Authorised Centre for Education.

Gender Perspectives of the Policy Framework

Staff recruitment policy makes no reference to gender and all positions are filled in accordance with the required professional, educational and other qualifications that have

been laid down. Recruitment is on merit. Remuneration is based on a salary scale that has been approved and there is no gender discrimination in compensation. Participation in professional development, conferences, seminars in Sri Lanka and overseas is dependent on the type of opportunities that are available and on offer.

Differences in performance were attributed not to gender but ability. Both men and women are required to work to tight schedules, which often involve night work. Transport facilities are provided in such instances.

There is no gender bias in the admission of students to the courses conducted by SLIIT. Applicants are selected on the eligibility criteria that have been laid down. Yet, women constituted only 39% of current enrolment. It was the perception of the management that women have difficulty in following courses that required 'logical reasoning.' However the management was conscious of the fact that there were a lesser number of women and had attempted to encourage them by offering incentives. The entry requirement of Physics and Mathematics has also been changed to enable more students to follow computer science courses.

Gender Composition of Participants

The institution is managed by a Board of Directors that comprise five subscriber and six appointed members. All the members are males. The Managing Director/CEO is a member of the Board of Directors. Three Deans are responsible for academic affairs, student affairs and higher research. Males dominate both in respect of management and teaching and in student composition. The Dean for student affairs is a woman. Women hold approximately 35% of the managerial level positions. Two of the 24 members of the Board of Studies are women. Assistant lecturers and instructors are mostly women.

Gendered Norms and Attitudes

The management was aware of the lack or under representation of women at higher levels and this was attributed to the lesser number of who have graduated in IT and IT related disciplines and not to any overt form of discrimination. However, women do not always get remunerative jobs even though they have academic brilliance due to lack of assertiveness,

confidence, and leadership attributes. The institution had attempted to motivate women to enrol in courses by offering scholarships to them.

This campus differed from other university campuses as student unions were not allowed. Only staff-student interactive societies, which were more welfare oriented, had been organised. There is no ragging and in the six years that the functioned there were no strikes/agitation. There does not appear to be a policy on sexual harassment but no cases have been reported to the authorities.

The management was aware of the constraints that women face in obtaining and holding IT jobs. The reluctance of women to study mathematics, which was required for some areas of computer science and their diffidence in handling any thing technical was one factor. This was attributed to the cultural context in which women were socialised. Recognising this limitation awareness programmes are conducted to encourage women to enrol in IT courses.

The Apex Body for the Implementation of the eSri Lanka Programme

This institution is a government owned private company set up by an Act of Parliament in 2003. Its main responsibility is to function as the lead agency in implementing the eSri Lanka initiative.

Gender Perspectives of the Policy Framework

The eSri Lanka initiative has six main programmes that are expected to bring the benefits of ICT to all the people of Sri Lanka. Consequently the initiative focuses on developing implementation capacity, building the national information infrastructure and an enabling environment, developing ICT human resources, delivering citizen services and using ICT as a lever for economic and social development. Gender issues are not a major concern in the formulation of policy.

Gender Composition of Participants in Programmes

The programme for re-engineering government is a major initiative that aims at changing the way the government works. The appointment of Chief Innovative Officers (CIOs) is one strategy that has been identified to facilitate the introduction of new systems and IT

into government ministries and departments. The CIOs are at the second level of the organisational hierarchy with decision-making powers. Their major tasks are to promote and develop the use of ICT within the organisation and interface with interconnected organisations. In short, they are required to be 'champions.' At present, 25-30% of the CIOs are women. There is no specific requirements to qualify as a CIO and the number of women would depend on the number of women who are already at that level in government service.

One of the major programmes of the eSri Lanka initiative is the *Nana Sala* and e Library project. At present 100 such units have been set up. A policy decision had resulted in the location of some of these units in places of religious worship. Ownership of these centres is primarily in the hands of males as women own only five of these 100 centres while a husband/wife combination owns three. The location of some of these centres in places of religious worship could inhibit women from accessing the resources of the *Nana Sala*. It appears that gender issues have not been taken into consideration in setting up these knowledge centres.

The organisational structure is built around the programmes referred to earlier. A five member Board of Directors and the Managing Director, who is also the CEO, are in overall charge. Three Programme Directors are in charge of Operations/eleadership and policy, Information infrastructure and Re-engineering government. Seven programme managers have the responsibility for the public relations and media, information infrastructure (two), strategic communications, investment, private sector development and ICEP, esociety, and M&E, capacity building. Programme managers assist the programme heads. The structure includes four project coordinators. A gender breakdown shows that two programme managers, one programme head (who actually functions as the programme head though not designated as such), and two project coordinators are women (26%). All personal assistants are women.

Gendered Norms and Attitudes

Awareness of gender issues even among the female staff was low. This lack of awareness of gender issues is reflected in national policy documents formulated by the institution. A gender analysis has not preceded the formulation of this policy. For instance the

availability of human resources to drive the eSri Lanka initiative is critical. One programme of the initiative is to develop human resources. However given the low participation of women in IT education and training no proactive strategies have been identified to motivate women to enter the IT field. Law reforms proposed do not identify issues such as trafficking in women and children and paedophilia. Internal documents are in gender neutral language. However, the institution did recognise some of the constraints that women face including domestic responsibilities and their reluctance to work in the field of technology. Issues of sexual harassment have not been reported and there is no explicit policy related to it.

A Regulatory Body

This government statutory body was established in 1991. Its main responsibilities are to provide policy advice and license recommendations to the Minister in charge, as the sole manager to maintain spectrum resource in optimal condition, provide fair, prompt, transparent, effective decisions to operators, and safeguard consumers from the exercise of market power and information analysis.

Its major activities include managing the radio frequency spectrum, looking after consumers in terms service quality and price, assuring standardisation to telecommunication networks, enabling and encouraging the expansion of telecommunication networks and new services, ensuring that different parts of the network work together, safeguarding the public interest in telecommunications, and acting as an umpire for telecommunication operators.

The services provided include the issue of licenses and type approval for import of telecommunications equipment, the issue of licenses for radio communication equipment, conducting examinations for maritime and radio operators, and following up on complaints.

Gender Perspectives of the Policy Framework

The institution issued a national policy in 2002, which was approved by the Cabinet. However, this policy has been in abeyance due to the overlapping of certain powers with establishment of the apex body of the eSri Lanka initiative. Currently another policy is under preparation. Taking into account the constantly expanding telecommunication

environment the policy will be open and flexible to accommodate future developments in the sector. The aim of the policy is to provide unambiguous regulations that would ensure a return for companies by maximising opportunities for competition and preventing anti-competition practices especially by dominant operators. It was reported that attempts have been made to include gender issues in policy but the draft policy is still not available for comment.

The 2002 draft policy had recognised the need to provide new ICT facilities to remote areas and disadvantaged groups. Women had been identified as one such group. Consequently it is a condition in the license granted to fixed access and cellular service providers that they take the technology to these identified groups. Subsidies are also provided. For example a pay phone subsidy of US\$ 773 increased from US\$ 515 is given for each incremental payphone installed outside municipal and urban areas. By the end of 2004 operators had installed 260 pay phones under this scheme. Sri Lanka Telecom has set up caretaker pay phones, some of which have been given to women. It has established vocational training centres in Welisara, Moratuwa, Anuradhapura and Kandy to provide free training to disadvantaged groups. Cellular operators such as Lanka Bell and Suntel have implemented some projects. There is no special focus on women. Also there appears to be no monitoring of the setting up of such services.

The institution also undertakes projects for the benefit of rural and marginalised communities. It has commenced a project to provide telecommunication facilities to 590 rural sub post offices. A pilot programme in the Moneragala district saw the equipping of 41 sub-post offices. A project aimed at reaching women with disabilities has been implemented in Talawa in the Anuradhapura district. Titled eNable Project it has partnered with Sri Lanka Telecom and an NGO to provide an Internet Community Centre

Gender Composition of Participants

The top management of the institution comprises a Commission of four members, the Director General, two Directors and nine Deputy Directors. Of these one Director (in charge of economic and legal affairs) and three deputy directors are women (25%). Recruitment follows government procedures, and as graduate intakes are not confined to any particular discipline there are no barriers at entry. Opportunities for career

advancement are limited due to lateral entry. Training opportunities when they arise are given to both women and men according to the subjects they cover. Selections were considered to be very fair with equal opportunities being given to women and men. No cases of sexual harassment have been reported.

Gendered Norms and Attitudes

It appeared that while policy makers were keen on going the last mile to bring connectivity to marginalised communities there was no sensitivity to gender issues. The telecommunications policy that is under preparation refers to bringing benefits to “all Sri Lankans without any gender bias.” The only woman at the top management level appears to find it an uphill task for her to include even the words “gender bias” in the policy. The difficulty of comprehending how the very technical area of telecommunications could impact on gender equality is one of the problems that face policy makers. As such no proactive policies are identified to include women in the way that those with disabilities have been integrated in policy.

An Information Technology Services and Training Establishment in the Private Sector

The private sector establishment visited is one of the largest in the country and has eight subsidiaries/subsystems. Of these eight subsidiaries, the largest software company and the largest hardware company were selected for the study. The former also offers specific Certificate training courses to meet the needs of clients.

Gender Perspectives of the Policy Framework

According to the key personnel in these companies, the establishment is an ‘equal opportunity employer’ and the assumption is that there is no gender bias as ‘open access’ is offered to all training programmes. There is no pro active policy. However flexi time and the provision of transport for women employees to return home in the late evening are positive policies.

Gender Composition of Participants

Among the eight subsidiaries, one was said to be male dominated as the work was physically strenuous and very technical. Another is exclusively female and is concerned

with accounts. The other six have a mixed composition. In the software company around 40% to 45% of those enrolled in training programmes are estimated to be women although there is no sex disaggregated data base. Among the employees, however, women were concentrated in the posts of secretaries and receptionists and men were concentrated in managerial, and technical positions and among office aides. Thirty per cent of the software development team and only 5% of the management team and the professional technical staff were women while all the members of the Board of Management were men.

In the hardware subsidiary, only 11 employees (8.2%) were women – six secretaries and five financial officers. There were no women in technical jobs, no woman Head of a Department and no woman member of the Board of Directors.

Clearly therefore these establishments are male dominated and the leadership is exclusively male.

Gendered Norms and Attitudes

There were no hostile or negative attitudes to the participation of women in the IT industry: Nevertheless the status quo of gender imbalances was accepted uncritically by the management. The low participation of women was said to be due to high turnover of young women employees after marriage as a result of the opposition of spouses to their continuing to be employed. Travel outside Colombo and night shifts were also constraints despite the fact that safe transport was provided. One IT professional felt that the education process had not equipped women to participate in the industry, that the mathematics foundation provided in school was weak, and that concomitantly women were socialised by the school system to be 'feminine' and therefore to eschew what are normatively perceived to be 'masculine' domains.

These discussions indicated that managers in the IT industry are aware of some of the gender issues that affect women adversely. Nevertheless such awareness has not stimulated policies or programmes to motivate or support women to increase their participation. The IT industry, like any other private sector industry, demands long hours of work and strong commitment. The introduction of flexi time has been a positive step in supporting the multiple roles of women. But there is little awareness of the need for purposeful measures

to assist women to perform these roles without prejudice to the industry or to themselves. There is latent sympathy but overt action to change the status quo has yet to emerge.

Information Technology Unit in a NGO

The largest NGO in Sri Lanka is also perhaps the only NGO with an extensive ICT programme. In consonance with its development objective the ICT 'Networking Grassroots' Programme attempts to build an enabling environment for 'grassroots' or village communities to be connected with national and global development efforts by using ICT modalities interfaced with the delivery mechanism of social mobilisation for community development.

The Programme commenced in 1997 with the training of district staff in ICT techniques and the establishment of a pilot tele centre in one district. The programme received technical guidance from the School of Computing of the University in the metropolis and has since established linkages or partnerships with other organisations.

The Programme comprises currently –

- (i) seventeen tele centres at district level and 12 tele centres in village bank units.
- (ii) 162 village Information/Learning Centres (VICS).
- (iii) a Learning Resource Centre (LRCS) for non-formal education using ICT modalities as a part of the Global Network of 18 LRCS facilitated by UNESCO.
- (iv) a Mobile Multimedia Unit that operates through camps to reach remote rural locations.
- (v) participation in the e-Sri Lanka initiative of the government by establishing one of its pilot Vishva Grama Kendras or Nanasalas attached to one of its district tele centres.
- (vi) Participation with three partners – two universities and a women's research institution - in a pilot action research project to create a Virtual Village in two district centres.
- (vii) Organisation of awareness building and skills development in computer application at district tele centres for the following age groups
 - a. children - 4 – 8 years, 9 – 11 years and 12 – 14 years (Kid Smart Programme)

- b. students - 15 – 16 years
- c. youth and adults over 16 years of age

The Programme is co-ordinated by the Information Technology Unit located at the Headquarters of the NGO situated in a suburb of Colombo.

Gender Perspectives of Policy Framework

The Information Technology Unit claims to follow a policy of ‘gender neutrality’ Students are admitted to training programmes on a ‘first come – first served’ basis and members of the staff are recruited solely on skills, despite the fact that there are wide gender imbalances in skills development and in the use of IT. However, conscious efforts had been made to reduce these imbalances by motivating more women to participate in programmes by -

- (i) issuing more vouchers to women in selecting participants in the Visha Grama Kendra programme,
- (ii) persuading mothers who accompanied young children to programmes to participate in programmes.

The official document of the IT Unit, ‘Networking Grassroots’, states that ICT elements were incorporated in “other multi faceted community development programmes such as Pre-School Education, Environment, Biodiversity, micro finance etc. through the strategic partnerships created by the IT Unit with other specialised units within the organisation. The holistic nature of Networking Grassroots is made possible by such strategic partnerships’ (p.3). However, the organisation has also a ‘Women’s Movement or Women’s Unit and the exclusion of the unit from this official document appears to reflect the low priority given to gender issues and the absence of gender mainstreaming at policy and programme levels. The role that the Women’s Unit could have played in ensuring gender equality in participation and gender sensitivity in programme content has been overlooked in the conceptualisation, implementation and monitoring of the Information Technology Programme.

Gender Composition of Participants

Gender disaggregated data pertaining to participation in skills development programmes indicates that there is gender equality in participation as 54.1% of participants in

programmes and 52.9% of scholarship holders are girls and women.. At the operational level, only around 25% of the staff were women and only one woman was the manager of a programme. The situation is analogous to that in most IT related institutions and is an index to the low level of participation and representation of women in decision making in the field of Information Technology.

Gendered Norms and Attitudes

Clearly those in management level positions in the organisation were not sexist in their attitudes to the participation of women in these programmes or to the potential impact of these programmes on the life chances of women. They merely accepted the status quo in their programmes. As around 55% of participants in village level development programmes were women they did not see the need to be pro-active in promoting gender equality in access to technology. The fact that a woman's research institution was invited to be a partner in the new action research project, the 'Virtual Village', indicates greater recognition of the need to integrate gender issues in ICT related community based programmes.

Conclusion

The gender audit of these six leading institutions indicates that gender role stereotypes that tend to exclude women from technology related education and employment have determined their participation in the field of Information Technology. While all these institutions have the capacity to increase access to opportunities and are not averse to training more women, they tend to accept the status quo of wide gender imbalances in employment as an inevitable outcome of prevailing social norms and practice.

Consequently no institution has integrated gender in the conceptualisation of their policies. Gender issues appear to be lost in overarching policies such as 'equal opportunity' and 'gender neutrality.'

The degree of gender sensitivity at decision making level differed from institution to institution. The 'founder' of the IT Institute in the State University was the first senior IT professional to alert CENWOR to the gender digital divide and to the reluctance of female students and school leavers to opt for an IT career, and to co-operate with the centre in

motivational programmes to change attitudes that are influenced by norms internalised by girls and women. This institution also has an active woman IT professional who could well be a role model. In all the other institutions the leadership was not adequately aware of the potential contribution of women to the IT industry and the need to be pro-active in formulating policies and programmes. Some degree of awareness was reflected however in measures such as flexi time and provision of transport as well as financial incentives.

A constraint to undertaking a gender audit is the absence of comprehensive sex disaggregated data on enrolment in courses and in employment and management. According to the available data, around 25% to 30% of undergraduate and postgraduate IT students and 40% to 45% of those enrolled in certificate courses are women, a proportion that is higher than in the older discipline of engineering. It was also apparent that the percentage would be higher if IT was not assumed to be associated exclusively with physical sciences in which the percentage of girls and women enrolled is universally low.

The gender demarcation in the labour market is reflected clearly in the pattern of employment in these institutions. Most secretaries, receptionists and financial officers are women, and few women are employed in technical jobs. The exception is that 25 - 30% of the Chief Innovative Officers in the government agency are women. At the management or decision making level the 'glass ceiling' appears to limit upward mobility. No institution has a woman on its Board of Directors or Board of Management, and only 5% to 15% of the senior staff are women.

Most key personnel are aware of these gender differences but do not seem to see them as inequalities that limit the life chances of women in a burgeoning field of education and employment. They are aware of the constraints of women students and employees in terms of their mobility, multiple roles, particularly childcare responsibilities, and have provided some support to reduce these constraints. However, they have not been stimulated sufficiently to challenge these gendered norms from the perspective of individual aptitudes and human rights or even to counter social practices. Hence inequalities have been reinforced and there are few perceptible policy shifts that presage significant changes in the immediate future.

4. Access to Education and Training

The ability to take advantage of the ICT sector depends primarily on the skills that women and men possess. The expansion of the ICT sector saw the expansion of existing educational facilities and the emergence of a large number of training institutes. Currently seven of the state universities, and several private universities, some of which are affiliated to overseas universities offer diploma, degree and post-graduate level courses in IT. State run vocational training institutes provide certificate and diploma level courses as also private institutes.

Consequently the study included a survey of education and training institutes and trainees in these establishments. The study identified five training establishments from the districts of Anuradhapura, Kurunegala, Moneragala, Galle, Jaffna, Batticaloa, Ampara and Hanwella in the Colombo district. Ten were included from the Colombo metropolitan area. Five of the training establishments interviewed were state institutions – three in conflict affected areas and two in Colombo. Almost all these establishments had one or more branches. Five to ten female and male trainees from these institutions were interviewed.

A total of 159 instructors were employed as instructors of whom, 74 were men and 50 were women. The qualifications of instructors varied from post-graduate degree to certificate level qualifications with the majority (69%) having a diploma or an advanced diploma. Of the female instructors 80 per cent had a diploma or an advanced diploma while 62 per cent of the males had this qualification. There were more males than females who had graduate or post graduate qualification (Table 4.1). The training institutions in all the districts employed instructors with certificate level qualifications. The highest number of instructors with a University degree or a post graduate qualification was found in Colombo city, in Jaffna and Batticaloa, which is due to universities and private sector establishments affiliated with foreign universities (Table 4.2).

Table 4.1
Qualifications of Instructors

	Certific ate	Diploma	Advanced diploma	Degree	Post graduate	Total
Female	2	32	8	5	3	50
Male	8	30	16	11	9	74

Table 4.2
IT Qualifications of Instructors

Location	Certificate		Diploma/ Adv Diploma		Degree		Post Graduate	
Colombo City	1	3.8	20	55.5	11	30.5	4	15.3
Colombo District- Hanwella	-	-	15	93.7	1	6.25	-	-
Galle	3	10.0	24	80.0	2	6.7	1	3.3
Kurunegala								
Anuradhapura	3	12.0	21	84			1	4.0
Moneragala	2	20.0	6	60.0	2	20.0	-	-
Jaffna	1	5.9	10	58.8	5	29.6	1	5.3
Batticaloa	2	20.0	4	40.0	3	30.0	1	10.0
Ampara	4	26.7	9	60.0	2	13.3	-	-
Total	16		109		26		8	

The majority of training establishments stated that they have links with employers for the placement of students. However lack of follow up records did not make it possible to ascertain the number of trainees that had been found employment.

Trainees

Except in the Jaffna district and the Colombo city, the majority of female trainees was enrolled in certificate level courses. Enrolment of students in degree level courses was found in Jaffna, Batticaloa and Colombo where facilities for undertaking degree level studies were available (Table 4.3).

Table 4.3
Level of Courses Followed

Location	Certificate		Diploma		Degree		Total
		%		%		%	
Colombo City	6	15.8	10	26.3	22	57.9	38
Colombo district- Hanwella	4	66.7	2	33.3	-	-	6
Galle	2	33.3	4	66.7	-	-	6
Kurunegala	6	100	-	-	-	-	6
Anuradhapura	5	62.5	3	37.5	-	-	8
Moneragala							
Jaffna	2	22.2	5	45.5	2	22.2	9
Batticaloa	12	75.0	4	25.2	-	-	16
Ampara	12	80.0	3	20.0	-	-	15

The trainees had paid amounts ranging from less than Rs.1,000 to **Rs.800,000** depending on the level and duration of the course. The charge for a certificate level course was Rs.1,000-10,000 in all six districts. In Batticaloa a charitable association charged less than Rs.1,000 and in Jaffna a well-recognised institution charged Rs.30,000. The charge for a diploma level programme was between Rs.3,000 and Rs.10,000 with training establishments in the Colombo and Ampara and Batticaloa districts levying a fee of Rs.30,000 and Rs.50,000 respectively. The course fees for the degree had a range of Rs.30,000 to Rs.800,000. The higher amount was charged by a private sector institution with overseas affiliations (Table 4.4).

Table 4.4
Fees Paid by Level of Course (Rupees)

Location	Certificate	Diploma	Degree
Colombo City	3,000-10,000	5000-30,000	30,000-200,000
Colombo District- Hanwella	1,000- 10,000	3000-30,000	-
Galle	1,000- 10,000	3000-30,000	-
Kurunegala	5,000- 10,000	5,000- 10,000	-
Anuradhapura	1,000-5,000	3,000- 10,000	-
Moneragala	1,000-5,000	5,000- 10,000	-
Jaffna	1,000-30,000	1,000-10,000	300,000-400,000
Batticaloa	Less than 1,000- 10,000	30,000-50,000	30,000-50,000
Ampara	1,000-30,000	3,000-30,000	-

Over 50 per cent of the respondents stated that the facilities for study were very good but a third of the trainees in Galle were not satisfied with the facilities that they had. The overall rating of the instructors and the courses was also satisfactory, good or very good. There were no adverse comments on the course that the respondents followed.

According to the responses of the training establishments gender differences in enrolment, participation and performance were minimal. The entry requirement of Advanced Level passes in science and mathematics for enrolment in the degree courses had excluded many women. However the change of entry requirements to include any three passes in the Advanced Level had resulted in an increase in the number of women who enrolled for degree courses.

Other problems in enrolling in IT courses were cited as the inability to pay the course fees and meet other requirements due to lack of financial resources. Lack of guidance in selecting appropriate courses had been a problem for some. The women had a basic 'fear' of following IT courses especially hardware courses, lacked confidence and basic knowledge in computing. Consequently the tendency had been to follow the most popular

course. The difficulty in attending evening classes and transport problems were some of the other problems that were articulated. Several institutions had taken measures to mitigate these problems. These included the facility to pay course fees in instalments, the supply of course material at discounted rates or without a charge, adjusting the times to enable females to avoid evening classes, and motivating women.

The majority of training establishments in all the districts responded that the participation of women were either better than men or that there was no difference. However, the course structure had impacted adversely on women's participation in Jaffna but this constraint had been overcome when group work had been introduced. In Batticaloa there were no gender differences in participation at higher levels, but the participation of females in certificate courses was not as satisfactory as that of males. In Kurunegala and Galle female participation was lower than that of males at the certificate level. In Colombo a few of the females in the degree programme were rated as having a lower participation rate. The diffidence of women in facing interviews also impacted adversely on performance. No gender differences in participation were reported from Ampara. While gender differences in participation on the whole was negligible some training establishments had given guidance to women, paid individual attention to diffident students, and introduced additional courses for personality development.

The female trainees too articulated several other problems in following the training courses. These problems included travelling, difficulty of combining domestic responsibilities, employment and studies, inadequate explanations and consequent difficulty in comprehension. Difficulty in finding the financial resources required for following the course was also stated by women.

Attitudes of male trainers and male trainees towards female trainees were reported to be either friendly, good, positive or the same as that towards male trainees. However some stated that these attitudes are dependent mostly on the individual and that some male instructors tended to favour girls who were attractive. While female instructors did not treat them differently from the male trainees some stated that they encouraged them and were helpful.

Male trainees too did not treat them any differently and were said to be friendly, helpful, and willing to share information. Two women however stated that males do not respect women and three said that they were “bad.” Female trainees too had positive attitudes towards their male colleagues. But many women held the view that males were more knowledgeable than they were. Female trainees in Jaffna showed a determination to perform better than males and without their assistance.

5. Access to Information Technology (IT) Related Employment

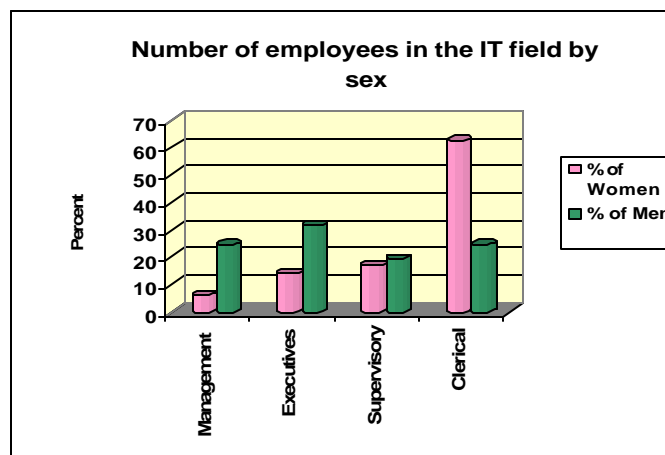
A. Employment Establishments

The labour market is a source of gender inequality and it is in this context that this study explored the situation in employment establishments in the eight districts – Colombo, Galle, Kurunegala, Anuradhapura, Monaragala, Jaffna, Batticaloa and Ampara. It was found that 41.4% of the 41 employment establishments were in the private sector and 12.2% in the banking sector while 39% were in the public sector in consonance with state efforts to extend **e-governance** to all local government units. Of these 41 establishments, 31.7% were IT institutions in the private sector with the exception of the state agency, Sri Lanka Telecom, and 51.2% had special IT units.

Employment Levels

The data pertaining to employment levels were consonant with the gender inequalities in the overall employment hierarchy, as women employees were 21.2% of those in management position, 32.5% at executive level, 48.4% at supervisory level and 72.8% at clerical jobs (Fig1).

Fig 1



Again, 6.3% of the women employees and 24.7% of the men were in management positions and 62.5% of the women and 24.7% of the men were in clerical jobs. The high percentage of women clerical employees reflects clearly the perpetuation of the concentration of women, including those with word processing skills, at this level in the labour market. Table 5.1

Table 5.1
Number of employees in the IT field by sex level

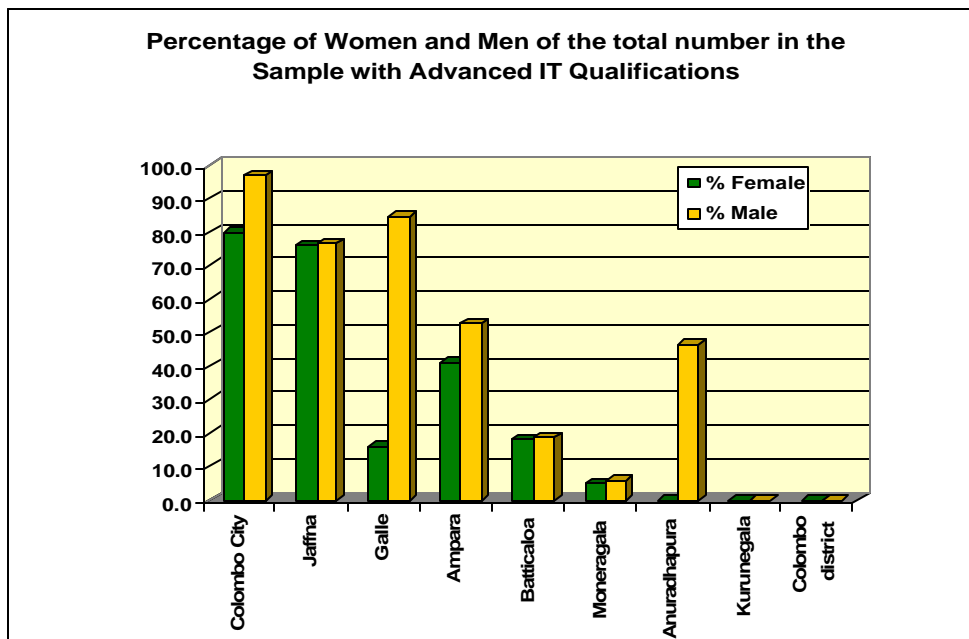
	Women		Men	
	No.	%	No.	%
Management	11	6.3	41	24.7
Executives	25	14.2	52	31.3
Supervisory	30	17.08	32	19.3
Clerical	110	62.5	41	24.7
Total	176	100	166	100

At the upper end, there were no women in management positions in the establishments in the Moneragala, Kurunegala and Galle districts and in Colombo district outside the city. In the establishments in the Colombo city, only 4% were women. However Jaffna and Batticaloa, the conflict districts, had relatively high percentages, 66.7% and 57.1% .

Information Technology (IT) Qualifications of Employees

IT qualifications possessed by employees in these establishments ranged from Certificate level to the Master’s degree. As in the employment hierarchy, the percentage of women declined with each higher qualification level – 53.4% at Certificate level, 43.1% Diploma, 28.5% Advanced Diploma, 23.4% Degree and 18.2% Master’s Degree levels. Gender inequality was reflected in the fact that 35.3% of women and 58.8% of men had an Advanced Diploma or higher qualification.

Fig 2.



District wise disparities were clearly visible as seen in the percentage of women and men with qualifications of an Advanced Diploma or a degree of the total number of female and male employees presented in Table 5.2.

Table 5.2
Percentages of Women and Men of the total number in the Sample in each district with advanced IT qualifications

Location	%F	%M
Colombo City	80.0	96.9
Jaffna	76.0	76.9
Galle	16.1	84.6
Ampara	41.3	52.6
Batticaloa	18.2	18.8
Moneragala	5.3	5.8
Anuradhapura	0.00	46.7
Kurunegala	0.0	0.0
Colombo district	0.0	0.0
Total	35.1	58.8

Colombo city and Jaffna had a high proportion of well qualified women and men IT professionals, and Kurunegala and Colombo district, the periphery of the capital city, had none. Almost all the establishments claimed that they provided staff training facilities. It appears however that these are limited to on-the-job short term courses or to training opportunities at professional level.

Attitudes and Perceptions of Employers

The perceptions of employers regarding women employed in IT jobs were explored as IT tends to be assumed to belong to the male dominant field of technology. The rating by employers of women employees vis-à-vis male employees in Table 5.3 however indicates that their perceptions are based on experience rather than on preconceived gender bias.

Table 5.3**Rating of the Women Staff in IT Division vis-à-vis men Staff – all Establishments**

	% Better	% Same	% worse	No Response
Attendance	39.0	51.2	4.9	4.9
Punctuality	29.3	58.5	7.3	4.9
Willingness to work after hours/week end	17.1	39.0	39.0	4.9
Willingness to travel within country	17.1	24.1	39.0	24.4
Willingness to travel overseas	7.3	21.9	4.5	29.3
Commitment	34.1	53.7	4.9	7.3
Responsibility	26.9	63.4	4.9	4.9
Meeting deadline	4.9	68.3	12.2	14.6
Initiative	4.9	63.4	12.2	4.9
Assertiveness	36.5	46.3	9.8	7.3
Interpersonal Relationships	34.1	60.9	-	4.9
Interaction with clients	51.2	39.0	2.4	7.3

Some employers have rated women employees as performing somewhat better than their male colleagues in interaction with clients, interpersonal relationships, attendance, punctuality, commitment, assertiveness, responsibility. Their perceptions are negative, however, regarding their willingness to work after hours or during weekends and to travel away from home on official work within the country, and their capacity to meet deadlines, - perhaps because the demands of the private and banking sectors in particular make little allowance for the family responsibilities of women employees in a context in which the gender division of labour within the households is inequitable. Regrettably, however, they do not have positive views regarding their initiative.

B. Employees

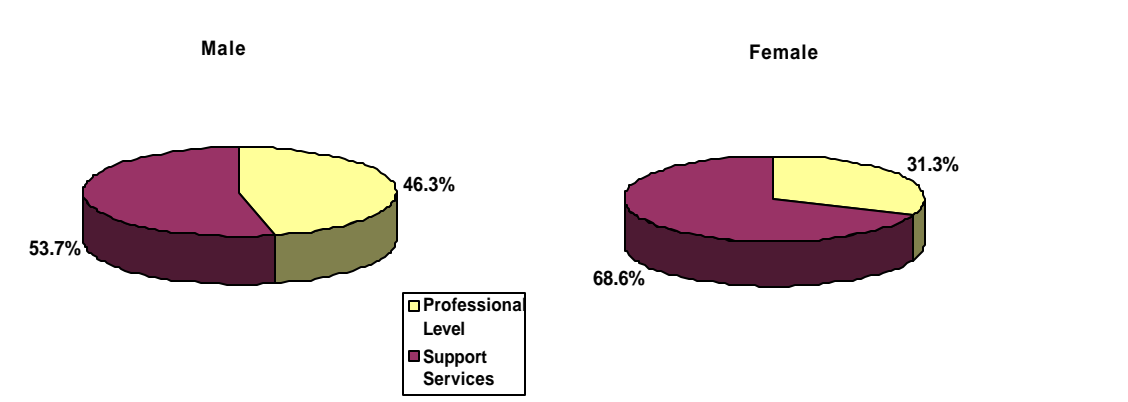
A sub-sample of 86 women and 41 men employees from all eight districts were selected to ascertain more information from a gender perspective regarding their professional and

educational profiles, and their working conditions as well as gendered attitudes in the workplace and the perceptions of the women themselves.

Professional and Educational Profiles

Age wise, the majority of both women and men employees – 59.3% and 56.1% - were 20 – 28 years old, while 29.1% and 26.8% were in their thirties and 9.3% and 14.6% in their forties and fifties. Hence the entry of these women and men into the IT field has been relatively recent.

**Fig 3.
Occupational Status of Employees**



It is seen from Table 5.4 that that there were gender differences in occupational status, with a higher proportion of men (46.3%) than women (31.3%) in professional jobs such as engineer, manager, systems analyst, and a higher proportion of women (68%) than men (53.7%) in support jobs such as computers and data entry operators.

The statistics in the Table point also to blatant disparities between districts with respect to both women and men. Only Colombo city and the conflict affected districts of Jaffna, Batticaloa and Ampara have substantial percentage of employees in professional jobs. On the other hand, there were no women or men in professional jobs in these establishments in Colombo and Kurunegala districts, no women in the Anuradhapura district and no men in Galle and Moneragala districts.

Table 5.4
Occupational Status of Employees

Location	Professional Level		Support Services	
	Female	Male	Female	Male
Colombo City	61.9	85.7	38.1	14.3
Colombo District	0.0	0.0	100.0	100.0
Galle	12.5	0.0	87.5	100.0
Kurunegala	0.0	0.0	100.0	100.0
Anuradhapura	0.0	66.7	100.0	33.1
Moneragala	22.2	0.0	77.8	100.0
Jaffna	55.6	0.0	44.4	100.0
Batticaloa	14.3	55.5	85.7	44.4
Ampara	40.0	40.0	60.0	60.0
Total	31.3	46.3	68.6	53.7

As in the national scenario, gender disparities are minimal in educational levels. Those with a higher education were chiefly in Colombo city and Jaffna and Moneragala was the most educationally disadvantaged districts. Overall, however, the majority – 62.8% women and 58.5% - had acquired a complete secondary education and had GCE A/L qualifications .

The majority – 81.3% women and 90.2% - had also formal IT qualifications. Some in Colombo city and Jaffna had IT degrees and around one third women and men had acquired a Diploma in Computer Studies or a Higher National Diploma. It has to be noted too that one third to over half of the households of those employees except in Colombo city had had no exposure computer education so that the home environment was not conducive to acquiring IT skills. Much depended on the availability of opportunities for computer education within or outside the formal education system.

Questions were asked also regarding their level of English proficiency, since English was the main language in IT education. One third of the women in Moneragala and Anuradhapura had said that their command of English was poor. Even if allowances are

made for overestimation of English proficiency levels in other districts there appears to be an association between English proficiency and higher level computer skills. Gender disparities however were not wide.

The Workplace

Inevitably as a corollary to the youthful age profile of employees, most women and men in this sample had been employed for less than 10 years and 61.9% women and 60.9% women for less than five years.

Employment status wise, a higher proportion of women (55.8%) than men (39.02%) had permanent jobs while 58.5% men and 27.9% women had temporary jobs and 15.1% of the women had contract jobs. The relatively high incidence of temporary and contract jobs vis-à-vis permanent jobs indicates instability in employment resulting perhaps in a high turnover. Juxtaposed with the fact that most women were in clerical employment, this aspect of their employment prospects is disturbing. IT is claimed to be a burgeoning area in the labour market but stable jobs do not appear to be adequate to meet needs.

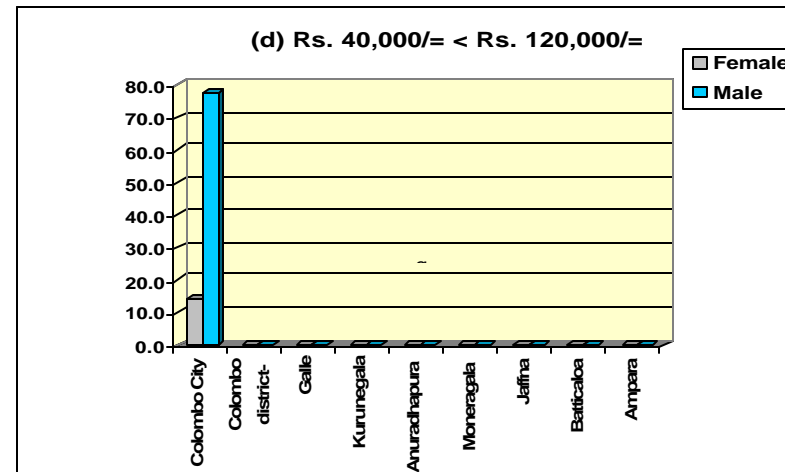
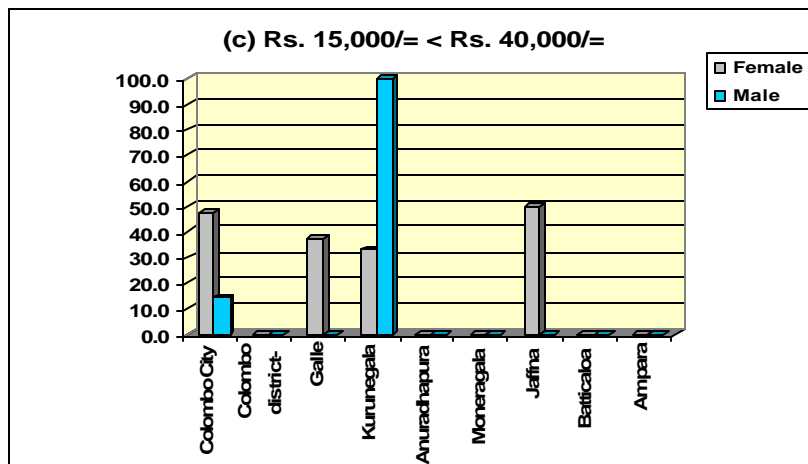
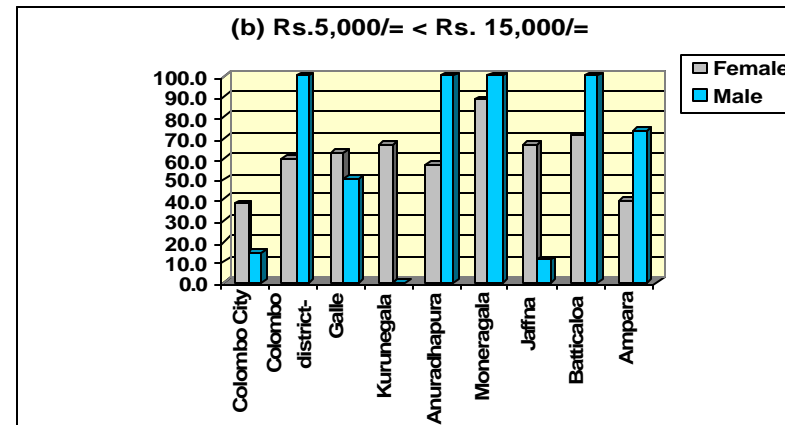
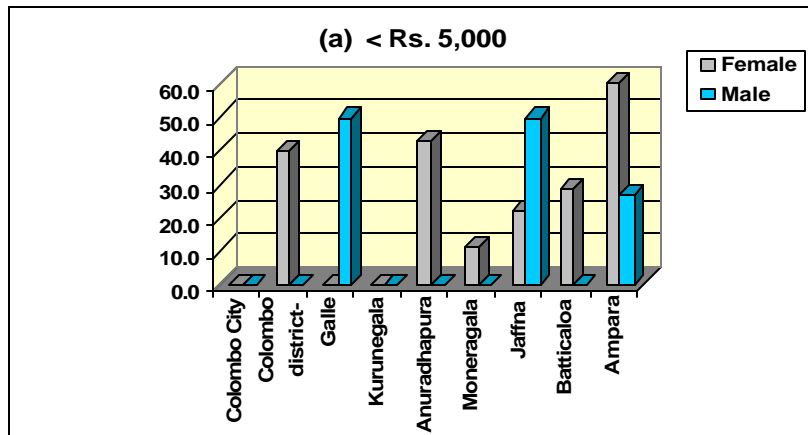
The pattern of remuneration which underscores wide disparities, compounds these problems (Table 5.5).

Table 5.5
Current monthly salaries of employees

Location	<5,000/-		5,000/- < 15,000		15,000/- - <40,000		40,000/- - 120,000	
	F	M	F	M	F	M	F	M
Colombo city	-	-	38.1	14.3	47.6	14.3	14.3	77.5
Colombo district Hangwelle	40.0	-	60.0	100.0	-	-	-	-
Galle	-	50.0	62.5	50.0	37.5	-	-	-
Kurunegala	-	-	66.7	-	33.0	100.0	-	-
Anuradhapura	42.9	-	57.2	100.0	-	-	-	-
Moneragala	11.1	-	88.9	100.0	-	-	-	-
Jaffna	22.2	50.0	66.7	11.1	50.0	-	-	-
Batticaloa	28.6	-	71.4	100.0	-	-	-	-
Ampara	60.0	26.7	40.0	73.3	-	-	-	-
Total	20.6	14.6	58.1	65.9	17.4	7.3	3.5	12.2

It is to be noted that only IT employees in Colombo city earned Rs.40,000 to Rs.120,000 a month and that gender differences are wide at this upper income level – 14.3% women and 77.5% men in the establishments in the Colombo city, and consequently, 3.5% of women and 12.2% of men employees in the total sample.

Fig 4
Current Monthly Salaries



In fact, gender differences are seen in salaries at other levels too – 47.6% women and 14.3% men receiving Rs.15,000 – 40,000, 38.1% women and 14.3% men Rs.5,000 to 15,000 in Colombo city. Such gender differences too are seen in other districts. More women than men earned less than Rs.5,000. The district wise differences in salaries reflect the wide disparities in resources between Colombo, a few major urban centres and the rural sector. In many districts, - Colombo district in the periphery, Anuradhapura, Moneragala, Batticaloa and Ampara - no women or men employee earned Rs.15,000 or above. Benefits were provided for those coming within labour legislation but the large number of temporary and contract workers evidently had no access to such benefits.

Other working conditions varied. Employees in most districts said they had access to training programmes but not many had participated in seminars and conferences. Most women in Colombo city and Galle and some in other districts believed that they had equal opportunity to participate in training programmes and services. Flexitime was permitted largely in Colombo city and in the conflict areas and hardly in Colombo district, Galle, Kurunegala ,and Anuradhapura. Women workers worked beyond working hours only in Colombo city. It is chiefly men who appear to travel outside their stations and they were provided with facilities.

Overall, there was job satisfaction articulated and workers said they were happy except in Anuradhapura. They were certain that there was a demand for their IT skills in the labour market but were pessimistic regarding career prospects in their workplace .(Table 5.6)

Table 5.6
Perception of Women

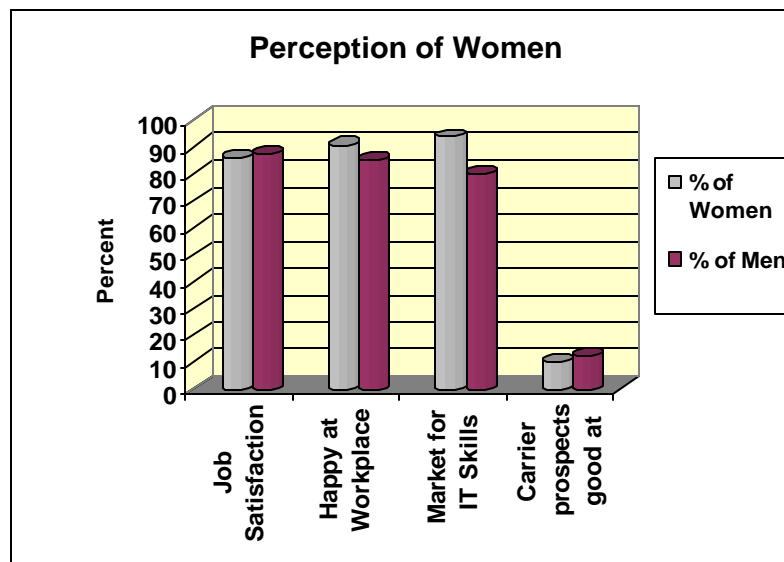
	Women		Men	
	No.	%	No.	%
Job Satisfaction	74	86.04	36	87.8
Happy at Workplace	78	90.7	39	85.2
Market for IT Skills	79	93.9	37	80.2
Carrier prospects good at workplace	9	10.5	5	12.2
Total	86	100	41	100

Gender specific Facets of Employee Experiences

There was no evidence of strong overt gender prejudices reflected in the attitudes of male colleagues or male employers of women workers according to the women in IT jobs. Most male employers had accepted their women colleagues on equal terms. A few men were reported to be openly resentful in Anuradhapura and Moneragala and a few were said to display nuances of hidden resentment in Jaffna. By and large men employees had not differentiated between men and women employees in their attitudes and overt action. A few women even claimed that they were given special concessions. Only a few in Colombo and Jaffna were aware of sexual harassment in the workplace

Fig 5

The majority of women and men employees had applied for jobs in the IT field because there were jobs available, they had skills, they were in need of a job or they had opted for jobs in this field. Not



many women had experienced problems in getting their jobs or in handling their jobs. Some in Colombo city, Galle and Jaffna had had problems in getting an IT job but only two women in Colombo gave a gender related reason, that preference was given to men in recruitment. In most districts, however, several women said that they had problems in combining their job and their family responsibilities. Only 8.1% of the women and 2.4% of the men had professed to be aware of incidents of sexual harassment in the work place.

The most interesting evidence of the influence of gendered norms is that the gender demarcation in the labour market was reproduced even within the IT sector. When the perceptions of women employees were explored regarding occupational tasks that they

considered to be suitable for each sex, it appeared that some jobs like management, programming, graphic design and operating a computer were viewed in gender neutral terms. However, women employees felt that teaching, software, data entry and word processing were appropriate jobs for women, and that engineering, hardware, networking, repairing and maintenance of equipment and statistics – in fact all culturally ascribed male areas of excellence – and for practical reasons, field work, were suitable jobs for men. As men employees shared the same views, it is clear that internalisation of gendered norms is likely to limit women’s access to a diverse range of jobs in the IT sector and thereby to affect their employment prospects adversely (Table 5.7 a & b).

Table 5.7a
Perceptions of appropriate IT jobs for men

Type of jobs	Females		Males	
	No.	%	No.	%
No difference	6	7.0	3	7.3
Any job if qualified	3	3.5	1	2.4
Hardware	33	38.4	9	22.0
Software	6	7.0	2	4.9
Engineering	2	2.3		
Graphic design	1	1.2		
Networking	4	4.7	2	4.9
Programming	1	1.2		
Mechanic and repair of equipment	13	15.1	2	4.9
Statistical officer	1	1.2		
Computer operator	2	2.3	1	2.4
Management			1	2.4
Field work	2	2.3	2	4.9
Work with digital camera	2	2.3		
Binding	1	1.2		
Unable to say	4	4.7	1	2.4
Total respondents	86		41	

Table 5.7b
Perceptions of appropriate IT jobs for Women

Type of jobs	Females		Males	
	No.	%	No.	%
No difference	6	7.0	1	2.4
Any job if qualified	2	2.3	2	4.9
Easy jobs	1	1.2		
Software	10	11.6	2	4.9
Graphic design	2	2.3		
Web design	1	1.2		
Programming	6	7.0	2	4.9
Networking	1	1.2		
Computer operator	4	4.7		
Data entry	21	24.4	5	12.2
Management	2	2.3	1	2.1
Teaching	12	14.0	3	7.3
Instructor			1	2.4
Quality control	1	1.2	2	4.9
User support	2	2.3		
Office work	2	2.3	1	2.4
Word processing	3	3.5	2	4.9
Unable to say	5	5.8	1	2.4
Total respondents	86		41	

Conclusion

The study confirms the national scenario of absence of gender disparities in access to education. The occupational related information pertaining to the relegation of women to the lower levels of the employment structure and to less remunerative jobs is clearly consonant with the overall situation. There was little evidence of gender bias in the workplace but the perpetuation of the influence of gender role stereotypes on occupational distribution in a relatively new employment field has negative implications for women's upward mobility in the labour market.

6. Access to Information Technology in Households in Selected Locations

The micro component of the study investigated the differential access of members of households in selected urban and rural locations in the eight districts. As stated in Chapter 2, these districts were representative of four types of scenarios – (i) the capital city, Colombo, and its semi urban and rural peripheral environment (ii) two ‘growth’ areas – Galle district in the South and Kurunegala district in the North Western Province (iii) relatively less developed districts in the hinterland – Anuradhapura in the North Central Province and the most economically disadvantaged district in the country, Moneragala, in the Uva Province and (iv) conflict affected districts in the North and East, Jaffna and the North and Batticaloa and Ampara in the east. The data collected through household based interviews pertained to the female and male population in all age groups. The sample comprised 500 households -100 households in Colombo city, and 30 urban and 20 rural households in Colombo district (outside the city) and in each of the other seven districts.

Socio-economic Status of the Households

Demographic Characteristics

As the Colombo city households were selected on the basis of a purposive sample from neighbourhoods reflecting three socio-economic levels, the sample was not a microcosm of Sri Lanka’s plural society. They comprised households from all ethnic group – Sinhalese, Tamils, Moors and Malays, and the small minority of Burghers (of Eurasian descent) and Buddhists, Hindus, Muslims and Christians - but had a majority of ethnic and religious minorities in reversal of the national ethnic composition. Colombo district outside the city, and Galle, Kurunegala, Anuradhapura and Moneragla had chiefly Sinhalese Buddhist households with a small number of Muslim households. Jaffna and Batticaloa districts had a majority of Tamil Hindu households and a minority of Tamil Christian households. The Ampara sample had chiefly Moor and Muslim households, and except in the urban households, had not captured the presence of Tamil and Sinhalese households in the district. Ethnicity, and religion however, were not important factors in the study as they were closely associated with the more critical factors of the district wise distribution of the population.

Household sizes was around four to 4.5 members except in affluent Colombo households where it was 3.7. The percentage of female heads of households was between 10% and 20% with however a much higher percentage in less affluent and rural Colombo households and a very low percentage in Batticaloa households in the east. The population below 18 years was on average below 30%.

Education Levels

As a consequence of the implementation of free education at primary, secondary and tertiary levels since 1945, and perhaps the introduction of more recent compulsory education regulations for the 5 – 14 age group in 1998, participation in school education of the age group was almost universal except among boys in the rural Moneragala households in the hinterland where it was 66.7% in the sample households. The participation rates of the 15 – 19 age group were consonant with or well over the national rates of 50% to 60% in most districts. They were however lower among boys in urban Galle, and in rural Batticola. Overall, the participation rates in the 15 – 17 age group were relatively high as compared with the steep increase in dropout rates after 17 years in the GCE Ordinary Level grade in the national data.

Among the youth and older population who were not in school, very few had never been to school, around half were secondary school dropouts and on average at least one third had the GCE Ordinary Level or GCE Advanced Level qualifications. At one end of the spectrum, 80% of men and around 75% of women in urban affluent households had a university degree or an equivalent professionals qualification while no one in the Colombo urban low middle class and rural Colombo, Moneragala, Jaffna and Batticaloa households had a tertiary level educational qualification.

Economic Status of Households

The economic status of households can be estimated in general in terms of employment, income and assets. In a country with a sizable proportion of the population in poverty (around 25% - 30%) and wide economic disparities, it is inevitable that the study findings reflect these differences.

Significant numbers of women and men in professional employment were found only in urban Colombo and in urban households in Kurunegala - 89.5% men and 95% women in affluent urban Colombo households, 25% women and 73% men in Colombo urban middle class households and 30% men in Kurunegala urban households. No woman has a job at this level in Colombo lower middle class and rural households or in rural Kurunegala, Moneragala and Ampara households. In the conflict areas (Jaffna and Batticaloa) most professionals have left the district or the country and a few continue in the urban areas. Only 5% to 20% are in professional employment in the other districts. Except in urban affluent houses, urban Galle, rural Jaffna and Batticaloa, 25% to 80% women and men are in middle level employment; and 50% to 80% men are skilled or unskilled workers in Colombo lower middle class and rural households and in urban and rural households in some districts

Employment from income (as other income sources were not revealed) reflect the same trends. Such incomes in affluent urban Colombo households ranged from Rs.15,000 to Rs.100,000 a month with around 75% declining to reveal their incomes. In urban middle class households incomes ranged from Rs.7,500 to Rs.100,000. Very few in any other district received an income of over Rs.15,000. In a country in which the national poverty line is estimated to be around Rs.7,500, 10% to 30% of households earned less than Rs.2,500 among women in Colombo rural Galle households, and among both women and men in the Kurunegala, Anuradhapura, Moneragala and Jaffna and Ampara districts .

Where assets were concerned most householders owned their houses, large and small, except in the Batticaloa district where house owners had been displaced as a consequence of the conflict. Most owned even a small plot of land except in urban Ampara. Houses differed in size. Affluent and middle class Colombo households had houses with tile roofs, terrazzo or tiled floors, water on tap and electricity and gas for cooking. In fact, it was found that most households had permanent housing, tile or asbestos roofs, brick walls and cement floors, and only a very small number in rural households in all districts had cadjan or tin roofs and mud floors. Significantly, electricity was the source of lighting in almost all households even in conflict areas. Taps within houses were observed chiefly in urban households, and the main source in households in many districts (except Colombo city) was a protected well. Unprotected wells were seen only in

around 10% of Galle, Anuradhapura and Moneragala rural households. Electricity and gas were used for cooking in urban affluent and middle class families in Colombo city, but gas was used also in around 40% of other urban households. Firewood was the major cooking fuel most rural households.

Ownership of vehicles depended on economic resources. Over 90% of urban affluent Colombo households, and 30% of Colombo urban middle class households and urban households in Kurunegala and Anuradhapura owned cars. Thirty to 70% of other households used bicycles and, in the case of a smaller number, motor cycles. The three districts in the conflict areas in the north, and east were totally dependent on cycles for transport for multiple reasons.

Air conditioners were owned not only by the majority of affluent Colombo households and a minority of urban middle class households but also by the majority of Jaffna urban households and Ampara rural households and some households in Batticaloa, rural Jaffna and Ampara households the conflict area. Washing machines were owned by most urban affluent and middle class households and by 10% - 40% of other households. Most households including those in conflict affected areas, had television and radios. Most affluent and middle class Colombo households and 50% to 70% of other households also owned cassette players or recorders. Even DVD players were owned by most affluent and middle class Colombo households and 65% - 70% of urban Jaffna and rural Ampara households and also by 5% to 30% of households in other districts including in conflict affected locations.

The picture that emerges is that of households in which most children under 18 years went to school, and an adult population with some exposure to secondary education and a substantial number with a complete secondary education and a more privileged socio-economic group with high level qualifications. There is gender equality in access to education but there are inequalities between the way women and men are positioned in the labour market and in their access to economic rewards. Most importantly, there appears to be a wider and an unconscionable gap between the economic status and life styles of the Colombo based elite and professionals in the sample and those of households in the periphery of the capital city in the other districts in the study. The

conflict areas bear the burden of violence and disruption in terms of economic activities but do not appear to be as disadvantaged as expected in access to education or to household assets except in some households in the Batticaloa district.

Access to Information and Communication Technology

The study examined access to ICT related knowledge and information, services and facilities and ownership of such facilities. A statistical analysis using tests of significance (Chi square at 5% level of significance) was carried out in order to present a clear and holistic picture of relationships between variables of sex, urban-rural residence and district and three facets of access to ICT

- (i) exposure to computer education
- (ii) use to ICT services and
- (iii) ownership of ICT facilities

Access to Computer Education

It will be seen in Table 6.1 that 60% to nearly 90% of the female and male members of urban and rural households, except in the Colombo urban affluent and middle class households and in urban Jaffna and rural Ampara households in the conflict affected areas did not have any exposure to computer education. On the other hand, only around 28% and 15% respectively of the female and male members in Colombo affluent and middle class households and one third to half in Jaffna and Batticaloa urban households and Ampara rural households did not have some computer skills. Age wise, the household members who did not have access belonged not only to the under 10 years and over 60 years population but also to other age groups who were in educational institutions or in employment. (Table 6.1 a)

Table 6.1
Exposure to Computer Education

		No Exposure		Basic knowledge - informal		Basic formal training		Intermediate level		Advanced level	
		F	M	F	M	F	M	F	M	F	M
Colombo	Urban affluent	27.0	15.2	18.9	21.2	27.2	9.0	16.2	36.4	10.8	12.1
	Urban middle class	28.7	15.9	27.6	29.0	14.9	11.6	11.5	23.2	3.4	8.7
	Urban lower middle class	76.2	76.2	11.9	18.2	3.6	5.7	1.2	-	3.6	-
	Semi urban	73.3	73.5	8.5	13.2	8.8	7.4	5.1	-	2.9	-
	Rural	77.3	73.8	4.5	2.0	9.1	7.1	2.3	2.4	-	-
Galle	Urban	88.8	82.2	9.5	5.5	1.2	2.1	1.2	6.8	1.4	-
	Rural	87.3	79.1	8.5	16.3	4.1	4.7	2.1	-	-	-
Kurunegala	Urban	65.3	66.7	27.8	29.4	1.4	-	4.2	-	1.4	3.9
	Rural	75.0	71.4	25.0	28.6	-	-	-	-	-	-
Anuradhapura	Urban	66.1	59.6	9.7	15.8	17.4	-	4.8	5.3	1.6	-
	Rural	80.9	70.5	7.1	9.1	19.3	11.4	-	6.8	-	-
Monaragala	Urban	80.0	79.2	6.7	11.3	10.0	5.7	3.3	3.8	-	-
	Rural	79.5	83.4	12.8	12.9	7.9	3.2	-	-	-	-
Jaffna	Urban	50.0	33.3	16.1	23.2	19.4	21.7	11.3	13.0	3.2	8.7
	Rural	72.5	57.8	20.0	24.4	2.5	6.7	2.5	6.7	3.5	4.4
Batticaloa	Urban	66.7	52.5	6.8	6.6	8.5	18.0	3.4	6.6	13.6	16.4
	Rural	78.9	81.2	10.5	10.3	10.5	7.7	-	-	-	-
Ampara	Urban	70.0	64.8	8.8	11.3	17.5	19.7	2.5	9.6	1.3	-
	Rural	50.0	37.2	19.2	18.6	21.2	25.6	1.4	12.6	2.8	-

Table 6.1a**Exposure to Computer Education**

(Chi square at 5% level of significance) -All households all levels)

		% exposed	Significance
Gender differences	Male	40.9	Significant
	Female	33.2	
Urban-rural differences	Urban	39.7	Significant
	Rural	30.5	
Location wise differences			Significant
Urban Colombo affluent and middle class		69.2	
Jaffna & Ampara		47.6	
Other districts		26.1	

Except in urban Colombo and the conflict areas, skills were acquired informally by most members of households in both urban and rural households, although some women in urban and rural households in the Anuradhapura district have had access to formal training in skills. Relatively small numbers even in well favoured districts had had training to intermediate and advanced levels. For instance, intermediate level skills had been acquired by 36.4% male and 16.2% female members in Colombo affluent households, 23.2% and 11.5% respectively in Colombo middle class households, 13.0% and 11.2% in urban Jaffna households and 12.6% men in Ampara rural households. Elsewhere, the percentages ranged chiefly from 1.2% to 6.8% - presumably members of the more economically advantaged members in households. Only around 10% to 16% of women and men in affluent Colombo and urban Batticaloa households in the east, and men in Colombo urban middle class and in urban Jaffna households had received training to an advanced or professional level.

It is seen also that no one in rural households in Colombo, Galle, Kurunegala, Anuradhapura, Moneragala, Batticaloa and Ampara districts, that is, in almost all rural households, had received training at advanced level, and no one in Kurunegala, Moneragala and Batticaloa rural households had received even intermediate level training. While it is not possible to generalise from this sample, district wise and

urban rural differences are clearly evident. Gender differences are not wide at the level of 'no exposure' but are wide at higher levels of training. (Table 6.1). Age wise only those in the 19 to 35 and 36 to 59 age groups had received advanced level training and even intermediate level training, with some exceptions in the 15 – 18 age group in urban households.

The issue of access depends on the availability of facilities. More information pertaining to access was forthcoming from the responses at the interviews with the sub sample of the 10 - 35 years old female and male population in the households. These responses pertained to two aspects of access.

Of the three modalities of instruction in computer skills it was found that around half of both sexes in the urban and rural sector had received training at Institutes organised for this purpose. Around a quarter had acquired their skills through informal learning or from schools. Informal learning was dominant in Colombo urban affluent households where computers were available in their homes to acquire skills from an early age. The 10– 19 age group had acquired skills through schools but urban – rural differences reflected the paucity of facilities in rural schools. Gender differences were seen chiefly in rural households.

The locations in which these respondents had access to the Internet were chiefly in the home, Internet cafes, workplaces and schools. Schools played a minor role and no girls in a rural household had had the opportunity of browsing the Internet in schools. Around a quarter of the respondents accessed the Internet in their homes, including 80% to 90% in Colombo affluent homes, and in rural Ampara households which had the advantage of having these facilities. More young men than women tended to use Internet cafes and more women were dependent on facilities in their workplace. Overall there were wide urban – rural differences and gender difference.

The usefulness of the internet depended on the services provided. it was found that the large percentage of women and men accessed educational programmes in both urban and rural households, followed by the search for general information and entertainment. The potential of job information and office work is yet to be tapped

adequately. Once again, urban – rural and gender differences were seen in the use of programmes reflecting the lower capacity of rural households and women to access ICT resources. These findings confirm the urban – rural and gender divide observed in the overall study.

Awareness of ICT Related Programmes

There was relatively widespread ignorance among the women respondents interviewed in households regarding the five programmes identified in the questionnaire – e-commerce, e-channelling, e-learning, e-governance and the e-Sri Lanka Programme. There was some awareness of e-commerce, e-channelling and e-learning among 30% to 40% in urban affluent households, 20% to 40% in urban Jaffna households, and around 40% to 60% in Kurunegala urban and rural households. Among 40% to 57% of Kurunegala households, and 10% to 30% in Colombo affluent and middle class families and rural Ampara households were aware of e-governance and the e-Sri Lanka Programme. Elsewhere there was minimum awareness of these programmes and total ignorance in Anuradhapura rural households.

On the other hand, interviews of a sub sample of parents of young persons 10 to 35 years old in these households indicated that a high percentage of parents, both mothers and fathers, were aware of the concept of ‘Information and Communication Technology’ and that awareness was limited to a minority of parents only in Galle and Batticaloa districts. However awareness of specific services and facilities such as computer and e-mail and Internet was high only among Colombo affluent and middle class parents and parents in Jaffna district. It was limited to a minority of parents even in these households with respect to less common services such as fax, videoing and voice mail, and to equipment such as digital camera. It appeared that awareness was limited, and was confined chiefly to services and equipment in relatively common use or to those that have wide publicity.

In this context, lack of awareness of the five programmes based on recent developments in the ‘field’ is inevitable.

Users of ICT Services

Efforts were made to investigate the availability and use of four ICT services – communication centres, telephone booths, teleshops and cyber cafes. With the exception of telephone booths these are new services even in urban areas and telephone booths have been historically unknown in the rural environment. Table 6.2 presents the percentage of women and men in the households in the sample who used these services.

Communication centres appear to be accessible to many urban and rural households in all districts other than Batticaloa and Ampara in the conflict areas. Telephone booths also appear to be a component of this new communication structure. Around 30% to 50% members of all households have used communication centres and telephone booths in all districts except in affluent homes (where private facilities are available), in rural households in Colombo district and in conflict affected Batticaloa district. On the other hand over 80% in urban households and 60% - 90% in rural Jaffna households use these facilities.

Teleshops and cyber cafes appear to be a rare presence in the rural environment. The services in teleshops were used by 30% men and 19% women in Colombo urban affluent households, 29% men and 7% women in Colombo urban middle class households, and 6% - 15% in Galle, Kurunegala and Ampara districts. They have not been used by anyone or by very few in households in other districts. Cyber cafes are used by even fewer members. Around 8% women and men in Colombo urban middle class and lower middle class and in Galle and Ampara households and women in Kurunegala have said that they use the services in cyber cafes while Colombo affluent households do not need to use these services. Elsewhere the issue seems to be the unavailability of teleshops and cyber cafes except in large urban centres. Moneragala district is the most disadvantaged (as it is in respect of other services) as no member of any household, urban or rural has used a teleshops or cyber cafe. (Table 6.2 a)

Table 6.2**Users of ICT Services
(percentages)**

		Communication centre		Telephone booth		Tele-shop		Cyber café		Total No.	
		F	M	F	M	F	M	F	M	F	M
Colombo	Urban affluent	21.6	9.1	5.4	0.0	18.9	30.3	0.0	6.1	37	33
	Urban middle class	33.3	39.7	33.3	33.7	7.4	29.4	9.9	20.6	81	68
	Urban lower middle class	45.8	42.0	26.2	36.4	4.8	5.7	1.2	2.3	84	88
	Semi urban	48.2	47.6	33.9	33.3	0.0	0.0	1.8	3.2	56	63
	Rural	0.0	6.1	0.0	0.0	0.0	0.0	0.0	6.1	40	33
Galle	Urban	34.2	34.1	29.1	34.3	6.3	10.0	1.3	2.9	79	70
	Rural	37.1	48.7	48.7	26.8	4.9	5.1	2.4	2.6	41	39
Kurunegala	Urban	43.3	29.8	35.8	27.6	5.9	6.4	0.0	0.0	67	47
	Rural	44.4	33.3	41.7	29.0	16.7	6.5	0.0	0.0	36	31
Anuradhapura	Urban	29.8	41.2	15.8	21.6	1.8	1.9	10.5	13.7	57	51
	Rural	40.5	65.8	24.3	50.0	0.0	0.0	0.6	7.9	37	38
Monaragala	Urban	13.3	53.3	7.7	22.2	0.0	0.0	0.0	0.0	52	25
	Rural	52.9	52.9	32.4	20.0	0.0	0.0	0.0	0.0	34	25
Jaffna	Urban	86.2	84.1	86.2	84.1	3.4	15.9	6.9	9.5	58	63
	Rural	61.2	89.7	58.1	89.7	0.0	2.6	0.0	5.1	31	39
Batticaloa	Urban	8.0	5.5	30.0	18.2	2.0	3.6	2.0	3.6	50	55
	Rural	3.1	2.9	6.3	8.8	3.1	5.9	0.0	0.0	32	34
Ampara	Urban	31.6	23.9	36.8	32.8	7.9	16.4	0.0	7.5	76	67
	Rural	2.1	12.5	2.1	12.5	2.1	5.0	2.1	0.0	48	40

Table 6.2a
Use of ICT Services
 Statistical Analysis of Differences

% Using	Gender Differences			Urban-Rural Differences		
	Male %	Female %	Significance	Urban %	Rural %	Significance
Communication Centres	34.4	30.1	Significant	37.3	21.0	Significant
Telephone booth			Significant	32.6	19.4	Significant
Teleshops	8.4	4.4	Significant	7.8	2.8	Significant
Cyber cafes	4.4	1.9	Significant	4.0	1.2	Significant

Ownership of ICT Facilities

The ownership of ICT facilities was used as an indicator of access to ICT as well as of gender equality as control of resources is a measure of empowerment. Table 6.3 presents a bleak picture of geographical, socio-economic and gender disparities.

Members of Colombo urban affluent households owned all the ten facilities listed – mobile teleshops (62.1% women and 75.8% men), land telephones, e-mail, internet, desk top computers, printers (around 15% - 18% women and 40% - 50% men), lap top computers, scanners, digital cameras (5% - 15% women and 30% - 40% men) and CD writers (18.9% women). Gender disparities in ownership are evident in the most prosperous and educated households. Members of Colombo urban, middle class households owned all these facilities in lesser numbers but with similar evidence of gender inequality in ownership of ICT resources

The next group in terms of ICT assets is the conflict affected districts of Jaffna, Batticaloa and Ampara where at least a percentage of men in urban Jaffna and Batticaloa and urban and rural Ampara owned all facilities except CD writers. Women are clearly disadvantaged in these districts also. In urban Galle and urban and rural Kurunegala, a few men chiefly own some of these facilities, and 15% to 25% men and a few women owned mobile phones. Semi urban and rural Colombo households and Ampara and Moneragala households owned chiefly telephones. The most deprived are the women and men in rural households in Anuradhapura and Moneragala districts who did not own any ICT related equipment.

The pattern of ownership therefore reflects markedly district, urban – rural and gender disparities. (Table 6.3 a) Age wise, most owners of these assets were in the 19 – 35 and 36 to 59 age group. In Colombo affluent and middle class households around one third of the young persons in the 10 to 18 age group also had mobiles phones and computers - clearly an indicator of the economic resources of households.

Table 6.3
Ownership of ICT Facilities

		Computer lap top		Printer		Scanner		CD writer		Digital camera	
		F	M	F	M	F	M	F	M	F	M
Colombo	Urban affluent	13.5	33.3	13.5	42.4	5.4	30.3	18.9		13.5	39.4
	Urban middle class	2.3	1.4	10.3	14.5	8.1	9.1	4.6	7.2	9.2	13.0
	Urban lower middle class									2.4	2.3
	Semi urban										
	Rural										
Galle	Urban		2.9		1.4						1.4
	Rural										
Kurunegalle	Urban				1.4		1.4				
	Rural				2.6						
Anuradhapura	Urban										
Monaragala	Rural										
	Urban										
	Rural										
Jaffna	Urban	1.7	4.8		4.8		1.6			8.6	11.1
	Rural										
Batticaloa	Urban	4.0	7.3	4.0	5.5	4.0	7.3				1.8
	Rural										
Ampara	Urban		1.5	1.3	1.5	1.3	1.5				
	Rural	2.1	2.5	2.1	15.0	2.1	12.5			2.1	5.0

Table 6.3
Ownership of ICT Facilities

Contd..

		Land telephone		Mobile telephone		Email		Internet		Computer desk top	
		F	M	F	M	F	M	F	M	F	M
Colombo	Urban affluent	18.9	45.5	62.1	75.8	18.1	45.5	18.9	42.4	16.2	51.5
	Urban middle class	17.2	44.9	20.7	36.2	2.4	11.6	4.6	13.0	9.2	24.6
	Urban lower middle class	7.1	19.3	13.1	15.9	2.4					
	Semi urban		12.7	8.9	25.4						
	Rural		18.2	7.5	18.2						
Galle	Urban	5.1	8.6	3.8	14.3		2.0		1.4	1.3	1.4
	Rural	2.4	5.1		10.3					2.4	
Kurunegala	Urban	5.9	46.8	7.5	29.7		6.4			1.5	12.7
	Rural		38.7		17.9		3.2				16.1
Anuradhapura	Urban	57.1	83.3		16.7						16.7
	Rural										
Monaragala	Urban	33.2	25.0								
	Rural										
Jaffna	Urban	1.7	9.5	10.3	28.6	5.2	3.2		5.2	3.4	7.9
	Rural			9.7	20.5						7.7
Batticaloa	Urban	10.0	21.8	6.0	18.2	4.0	7.3	2.0	7.3	6.0	10.9
	Rural			12.5	20.6						2.9
Ampara	Urban	2.6	13.4	7.9	2.9	1.3	2.9	1.3	2.9	1.3	4.5
	Rural			12.5	25.0	2.1	17.5	2.1	20.0	2.1	20.0

Table 6.3a
Ownership of ICT Equipment and Facilities

	Gender Differences			Urban-Rural Differences		
	Male %	Female %	Significance	Urban %	Rural %	Significance
Land phone	0.3	5.4	Significant	15.6	6.6	Significant
Mobile phones	21.8	10.0	Significant	17.6	11.4	Significant
Computer desk top	9.2	3.0	Significant	7.1	3.5	Significant
Computer lap top	2.4	1.1	Significant	2.4	0.3	Significant
Printer	5.2	1.8	Significant	4.2	1.7	Significant
Email	4.8	1.5	Significant	11.4	3.7	Significant
Internet	4.6	1.6	Significant	3.6	1.0	Not significant
Scanner	2.9	0.9	Significant	2.2	1.0	Not significant
CD Writer	3.5	1.3	Significant	3.0	0.9	Significant
Digital camera	4.1	2.1	Significant	4.0	0.9	Significant

This statistical analysis confirms therefore, that the gender gap is wide in access to Information Technology. It is disturbing that there appears to be an even wider urban-rural gap and that there is an enormous gap between access in affluent and middle class households, and households in other districts, except in Jaffna. Despite the conflict, these households had the imperative of communicating with their kinsfolk who had emigrated overseas during the decades of armed conflict. However, it is an indictment of the development process that rural households, and households in the least developed district, Moneragala, were excluded from the benefits of an ever expanding field of knowledge and employment

Gendered Norms and Attitudes and ICT

The study also explored the incidence of gender based positive or negative perceptions that could impinge on the degree of access of girls and women to ICT related skills. Information was sought at three generational points of time in a sub sample of members of households in the 10 – 35 age group and their parents. These households members were asked their perceptions of gender differentiation in attitudes to education and training of

- (i) grandparents to the education of parents as reported by parents in the household, and
- (ii) the attitudes of parents in the households to the education of their children, and
- (iii) the perceptions of the youth regarding gender differentiation in attitudes within the family.

Perceptions of Parents

With regard to the attitudes of grandparents, gender based differentiation to school education was reported only by a small percentage of parents in Colombo urban middle class and lower middle class and urban Galle households and in urban and rural households in Moneragala and Anuradhapura in the hinterland and Batticaloa in the east. Gender based differentiation in attitudes to the higher education of their sons and daughters was reported by a minority in the same households as well as in Jaffna households, particularly by a majority in rural Jaffna households. Gender differentiation was more evident with respect to technical education, as in addition, 8.3% of fathers (grandfathers) in Colombo urban affluent homes, and a substantial percentage in urban Galle households (56.7% women and 78.6% men) and 62.1% and 48.1% respectively in Jaffna urban households and all respondents in Jaffna rural households clearly did not favour technical education for girls. It is uncertain as to whether this bias would have been extended to computer education as typing, for instance, was accepted as a suitable occupation for girls.

Parents' own attitudes were not markedly different with respect to general education but gender differentiation in attitudes was reported also from a small percentage of mothers in Colombo affluent households and from a higher proportion of rural

households. There was much less gender bias regarding the access of daughters to technical education than in the case of the older generation although it was pervasive among a small percentage in all households. Computer education received greater acceptance as a path for daughters as only a minuscule number of parents in Colombo middle class and lower middle class, urban in Galle, Kurunegala, Anuradhapura, Jaffna and Batticaloa and in rural Jaffna perceived it as a gender issue. The responses regarding the attitudes of both grandparents and parents showed that gender bias was more evident among women than among men.

Perception of Youth (19 – 35 years)

The perceptions of the 10 – 35 age group in this sub sample of gender differentiation in attitudes within the family indicated that these young people did not perceive it as a problem in households in any district. According to these responses there was less gender bias in rural households than in urban households except in Jaffna district.

Parents' ICT related occupational expectations for their daughter

The second area in which gender bias was explored was in attitudes to the employment of daughters in ICT related jobs. As such jobs were not available in the time of the older generation, the inquiry was limited to parents of those in the 10 – 35 age group and the youth themselves.

Overall, the majority of parents in all households had aspirations that their daughters would be employed in ICT related jobs, aspirations reaching as high as over 80% in urban Galle, and Moneragala and Batticaloa households. These aspirations were articulated more strongly than for computer education, indicating perhaps that aspiration levels were influenced by prospects of employment.

Most parents had not specified the jobs they preferred for their daughters. Many spoke of 'good ICT related jobs', and the less affluent would accept 'any ICT related job'. A few ambitious parents in urban and middle class households in Colombo, Galle and Kurunegala wanted their daughters to be computer engineers or designers. A few parents in urban Jaffna households were even more specific in identifying jobs such as software engineers, hardware engineers, system analysts and lecturers. Other

parents were satisfied with jobs such as computer instructors, computer operators, data entry operators, information officers and even telephone operators.

It is evident that ICT related employment was seen as a potential and expanding field of employment in a country with a high incidence of unemployment and also a country which has started late but is making efforts to moving steadily upwards in the world of information and communication technology.

Perceptions of youth relating ICT employment

Young people in the 10 to 35 age group had positive perceptions of gender equality in access to ICT related employment. Except in Jaffna rural households, the majority, over 80% of both sexes in urban and rural households in some districts, held the view that both girls and boys, and women and men were equally suited for ICT jobs. The absence of gender stereotypical views regarding such technologies as an area of excellence for men was found in both urban and rural households and in what are identified as 'backward' districts - Moneragala and Anuradhapura.

The perception that there was gender equality in access to ICT related jobs was surprisingly stronger in rural households than in urban (even affluent Colombo) households. In some households this perception was stronger among women than among men. It is likely that there was more competition for jobs in the urban environment, particularly as it was seen earlier that access to ICT related skills was limited to a small percentage in the rural environment. Again, Jaffna district had a low level of concurrence with these views.

Perceptions of family attitudes to the employment of daughters in ICT related jobs were more negative than expected from parental responses. Very few males felt that there would be opposition from parents regarding their acceptance of such jobs but some girls and women, except in Moneragala households and in rural Colombo, Kurunegala and Ampara households, anticipated opposition from parents or spouses (Table 6.4).

Table 6.4
Gender Related Perceptions of Youth - % (10-35 years)

		Gender equality in aptitude for ICT jobs		Gender equality in access to ICT jobs	
		F	M	F	M
Colombo	Urban affluent	80.0	75.5	60.0	43.8
	Urban middle class	75.0	68.8	87.5	43.8
	Urban lower middle class	91.9	85.7	70.3	65.7
	Semi urban	74.1	78.1	63.0	50.0
	Rural	88.9	58.8	94.4	41.2
Galle	Urban	97.2	88.8	91.7	80.0
	Rural	100.0	100.0	100.0	100.0
Kurunegala	Urban	77.1	88.9	80.0	94.4
	Rural	60.0	45.5	86.7	81.8
Anuradhapura	Urban	76.9	60.0	57.7	48.0
	Rural	88.5	87.0	73.1	65.2
Monaragala	Urban	62.1	90.5	55.2	57.1
	Rural	82.6	86.7	73.9	66.7
Jaffna	Urban	73.9	33.3	26.4	50.0
	Rural	25.0	12.5	25.0	12.5
Batticaloa	Urban	88.9	80.0	100.0	90.0
	Rural	85.7	100.0	100.0	80.0
Ampara	Urban	100.0	83.3	92.9	91.7
	Rural	100.0	77.8	100.0	77.8

Conclusion

There was gender equality in access to education but there were both gender and district wise differences in the economic status of households. These differences are clearly reflected in the urban and rural and location differences in access to computer education, ICT services, and ICT assets juxtapose with gender differences. Overall, gender bias against the participation of women in Information and Communication Technology is not pervasive. Lack of opportunities for the acquisition of relevant skills appears to be a stronger constraint than gendered norms..

7. Conclusions & Issues

Sri Lanka has initiated action to extend ICT facilities and services and to maximise benefits for national development. The macro scenario presented in the study identifies gaps and resultant socio-economic and gender disparities. This study has confirmed the macro situational analysis and the findings of the few micro studies that are available.

The gender audit of leading institutions and the information that surfaced from the survey of training and employment establishments indicated that disparities had been reinforced rather than reduced as a consequence of lack of awareness of the need to be pro-active in promoting gender equality. Underpinning the absence of adequate sex disaggregated data, the relatively low representation of women in student enrolment and in employment, and the exclusion of women from the highest level in policy and management, are the gender stereotypes that have tended to subsume IT in physical sciences and technology and to exclude women from this 'male domain.' Juxtaposed is the absence of overt gender bias in educational institutions and work places.

The information that surfaced from the survey of training and employment establishments indicate that, in addition to district wise disparities in access, gender differences are wide in access to advance training and to professional IT employment. While there was no evidence of overt gender based discrimination in these educational institutions and employment establishments, there was clearly some impact of gender role stereotypes on choice of courses and employment opportunities. It is necessary to address the barriers that impede equal access to opportunities that are likely to expand in the immediate future and to facilitate upward mobility. A frontal attack need to be made on complacency in acceptances of the status quo and pro active policies need to be introduced such as the provision of support to women to combine their multiple roles and to overcome difficulties in special mobility.

The information from the study regarding (i) access to formal computer education, (ii) access to ICT services, particularly teleshops and cyber cafes and (iii) ownership of ICT related assets reflect the impact of interrelated factors such as location of

residence and economic status or prosperity vis-à-vis poverty as well as the gender digital divide in access to ICT.

These findings are particularly significant as access to secondary education was seen to be extensive. It is an indictment of the education system that schools have not been equipped, particularly in the rural environment, to provide access to ICT skills and thus compensate for the technological poverty of their home and neighbourhoods. It is likely that interventions made at the school level will reduce the gender gap as there is gender equality in access to education. It was seen in the study that some girls from non-affluent houses in the Colombo district had reached higher levels of proficiency in computer training than boys in such households. Currently donor funded projects are establishing Computer Learning Centres in secondary schools. It is hoped that such programmes are monitored to ensure that the gender gap in access to ICT is eliminated.

The wide gulf between the economic conditions in urban well-to-do households and the majority of households in other districts is seen to be mirrored in the differential access of households to computer education, ICT related services and ownership of ICT facilities. It appears that IT development has taken place chiefly in and around the capital city. The conflict affected areas are enmeshed in violence and resultant trauma which, however, has fortunately not affected the access of children to education. The relatively advantaged situation of households in conflict affected districts pertaining to IT as compared with other districts (except Colombo), could be the result of the interplay of a multiplicity of factors, including education, the breakdown of regular information channels and the need for contact with kinsfolk who have been displaced or have emigrated. These reasons have yet to be explored.

Galle and Kurunegala were identified in the study design as potential growth regions. From the evidence in the study, access to ICT in Kurunegala has expanded in recent years and urban Kurunegala appears to be poised for growth. The situation of Galle, (before the tsunami,) was disappointing but it is likely that the suburbs of Galle town are better developed with respect to access of households to ICT. However Ampara, which was assumed to be backward and especially rural Ampara, appear even after

the tsunami, to have the economic resources to move into the world of information technology.

In the two “backward” districts, urban. Anuradhapura appears to have entered a phase in IT development, drawing also perhaps on the resources of its urban large schools. Moneragala is clearly disadvantaged in access to ICT as the infrastructure required for ICT is also underdeveloped in the district. The interface of poverty and relative exclusion from the development process exacerbates the situation of households in accessing ICT in all these districts. The urban - rural gap is also wide, thereby reinforcing the disadvantaged status of rural households in an age of expanding technology. ‘Globalisation’ has hardly impinged on these rural locations in terms of modern techniques of communication. It is to be hoped that the establishment of the island wide network of knowledge centers (*Nana Sala*) and science and technology centers (*Vidatha*) will reduce this gap.

While it is not possible to generalise from the findings of this study the fact remains that gender, urban-rural and district wise differences were seen to be statistically significant. Together they form a formidable barrier to women in accessing the benefits of ICT, although younger women were optimistic regarding their future in the world of information technology. The gender gap in the ownership of ICT equipment, however, underscores the lack of resources that could empower women to control the direction of their lives. It is a matter for immediate concern that the urban-rural divide and the gap between affluent Colombo neighbourhoods, Jaffna and the rest of the country is unconscionably wide, indicating that existing disparities could be widened with the current expansion of ICT in the country. In this context, policy and action in the fields of education and training, employment, service delivery and gender sensitization at all levels are imperative from the perspectives of human rights, human development, social justice and gender equality.

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Appendix I – Access to Information Technology related Employment

Table 5(i)
Number of Employees in the IT Field by Sex and Level

	Management			Executive			Supervisory			Clerical		
	F	M	F as % of total	F	M	F as % of total	F	M	F as % of total	F	M	F as % of total
Anuradhapura	2	2	50.0	0	0	0.0	1	2	33.3	10	5	66.7
Moneragala	0	4	0.0	1	1	50.0	1	1	100.0	12	20	54.5
Kurunegala	0	0	0.0	0	0	0.0	0	0	0.0	1	1	50.0
Galle	0	0	0.0	8	0	100.0	13	0	100.0	23	0	100.0
Colombo -Hanwella	0	1	0.0	0	2	0.0	6	5	54.5	43	9	82.3
Colombo City	1	24	4.0	10	33	23.2	4	19	17.4	4	2	66.7
Jaffna	2	1	66.7									
Batticaloa	4	3	57.1	1	7	12.5	4	1	80.0	1	2	33.3
Ampara	2	6	25.0	5	9	35.7	1	4	20.0	16	2	88.9
Total	11	41	21.2	25	52	32.5	30	32	48.4	110	41	72.8

Table 5(ii)

IT Qualification of the Staff

	Phd			Masters degree			Degree			Advanced Diploma			Diploma			Certificate		
	F	M	F as % of total	F	M	F as % of total	F	M	F as % of total	F	M	F as % of total	F	M	F as % of total	F	M	F as % of total
Anuradhapura	0	0	0.0	0	1	0.0	0	6	0.0	0	0	0.0	1	6	14.3	5	2	71.4
Moneragala	0	0	0.0	0	0	0.0	0	2	0.0	1	1	50.0	2	3	40.0	16	30	34.8
Kurunegala	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	4	3	57.1
Galle	0	0	0.0	1	5	16.7	2	6	25.0	2	0	100.0	5	2	71.4	21	0	100.0
Colombo -Hanwella	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	1	2	33.3	0	0	0.0
Colombo City	0	0	0.0	0	2	0.0	2	16	11.1	6	46	11.5	2	2	50.0	0	0	0.0
Jaffna	0	0	0.0	1	1	50.0	11	11	50.0	7	11	38.8	6	7	46.2	0	0	0.0
Batticaloa	0	0	0.0	0	0	0.0	0	2	0.0	2	1	66.7	4	2	66.7	5	11	31.3
Ampara	0	0	0.0	0	0	0.0	0	6	0.0	19	34	35.8	23	34	40.4	4	2	66.7
Total	0	0	0	2	9	18.2	15	49	23.4	37	93	28.5	44	58	43.1	55	48	53.4

**Table 5(iii) a
Occupations of Employees**

Occupations	Colombo City		Colombo – Hangwella		Galle		Kurunegala		Anuradhapura		Moneragala	
	F	M	F	M	F	M	F	M	F	M	F	M
Director/Project Manager		2										
Executive	3	1									2	
Software Engineers/ Civil Engineers	3	2								1		
Team Leader/ Co-ordinator	1	1										
Asst. Manager	1											
System Analysts	2											
Solutions Designer	2											
Statistical Officer										1		
Software Programmer	1											
Programmer					1							
Instructor/Trainer	1	1										
Secretary	1							1				
Department Assistant										1		
Bank Assistant									2			
Computer Operators	5				3	2			1		2	
Data Entry Operators	1		1		1				1		1	
Customer Care Officers					1							
Clerks			2	1			1		2		3	1
Steno-Typists			2		2		1		1		1	
Book-keepers							1					
Total	21	7	5	1	8	2	3	1	7	3	9	1

Table 5(iii) b
Occupation of Employees

Occupation	Jaffna		Batticaloa		Ampara	
	F	M	F	M	F	M
Director/Manager			1	4	1	3
University Lecturer	3				3	3
Engineer				1		
Co-ordinator			1			
Programmer	2					
Technicians		1		1	1	
Instructors	4		11	1		2
Computer Operator				1		1
Computer Trainer					1	
Receptionists					3	1
Clerks		1	1	1	1	1
Printing Mechanic/ Video Operator						2
Lecturers						2
Total	9	2	14	9	10	15

Table 5(iv)
Educational Qualifications of Employees

	MSc.		Post-graduate Diploma		Degree		GCE/AL		GCE/OL		Not Reported		Total	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Colombo City	1	-	1	-	8	3	10	3			1	1	21	7
Colombo - Hanwella							4	1	1				5	1
Galle					1	-	3	2	3		1		8	2
Kurunegala							2	1			1		3	1
Anuradhapura					-	1	6	1	1	-		1	7	3
Moneragala					-	1	5		4				9	1
Jaffna					4	-	5	2					9	2
Batticaloa					1	1	10	7	3			1	14	9
Ampara							9	7	1	4		4	10	15
Total	1	-	1	-	14	6	54	24	13	4	3	7	86	41
%	1.2		1.2		16.3	14.6	62.8	58.5	15.1	9.8	3.5	17.1	100.0	100.0

Table 5(v)
IT Qualifications of Employees

	MSc.		BCS/ BMS		ACS		Higher National Diploma/ Diploma Computer Studies/ Diploma in Hardware		National Certificate		Certificate		Not Reported	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Colombo City	2	-	4	-	3	1	7	3	1	-	4	2		1
Colombo Hanwella							1	-						
Galle							5	1						
Kurunegala							1	-						
Anuradhapura							3	2						
Moneragala							6	1						
Jaffna			3	-			3	2			2		1	
Batticaloa							1	-			1		12	9
Ampara							2	4			1		7	11
Total	2	-	7	-	3	1	29	13	1	-	8	2	20	21
%	2.3		8.1		3.5	2.4	33.7	31.7	1.2		9.3	4.9	23.2	51.2

Table 5(vi)
Exposure of Household Members to Computer Education (5 years and above)

	No Exposures		Basic knowledge (No Training)		Basic knowledge (with Training)		Inter-mediate Level		Advanced Level		Not Reported		Total	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Colombo City	3.8	2.4	9.6	-	1.9	17.1					84.6	80.5	52	41
Colombo - Hanwella	50.0	66.7	10.0	16.7	30.0	-	10.0	8.3				8.3	10	12
Galle	36.8	44.0	26.3	52.0	26.3	4.0					10.5		19	25
Kurunegala	12.5	37.6	25.0	-	37.5	25.0					25.0	37.5	8	8
Anuradha-pura	34.6	41.7	34.6	8.3	19.2	16.7	7.7	8.3		8.3	3.8	16.7	26	12
Moneragala	48.0	65.0	16.0	20.0	24.0	15.0	12.0						25	20
Jaffna	50.0	47.1	9.1	5.9	-	-	9.1	5.0	9.1	11.8	22.7	29.4	22	17
Batticaloa	3.1	3.4	50.0	34.5	3.1	13.8					43.8	48.3	32	29
Ampara			26.5	15.9	6.1	14.3	2.0		61.2	68.7	4.1	11.1	49	63

Table 5(vii)
English Proficiency Levels of Employees

	Very Good		Good		Average		Poor		Total	
	F	M	F	M	F	M	F	M	F	M
Colombo City	5	3	10	4	6	-			21	7
Colombo-Hanwella			2	1	3	-			5	1
Galle			3	1	5	1			8	2
Kurunegala			2	1	1	-			3	1
Anuradhapura	-	1	1	-	4	2	2	-	7	3
Moneragala			3	-	3	1	3	-	9	1
Jaffna	1	-	6	2	2	-			9	2
Batticaloa	6	4	7	3	1	2			14	9
Ampara			6	7	4	5	-	3	10	15
Total	12	8	40	19	29	11	5	3	86	41
%	13.9	19.5	46.5	46.3	33.7	26.8	5.8	7.3	100.0	100.0

Table 5(viii)
Duration of Employment

	20-30 years		10-19 years		5-9 years		2-4 years		Not Reported		Total	
	F	M	F	M	F	M	F	M	F	M	F	M
Colombo City			3		8	3	9	4	1		21	7
Colombo-Hanwella			1		1	-	3	1			5	1
Galle	2	-	2		3	-	1	2			8	2
Kurunegala	-	1	3								3	1
Anuradhapura	-	1	2		1	2	4	-			7	3
Moneragala					2	1	7	-			9	1
Jaffna			1		1	1	7	1			9	2
Batticaloa					1	2	12	6	1	1	14	9
Ampara					-	4	10	11			10	15
Total	2	2	12	-	17	13	53	25	2	1	86	41
%	2.3	4.9	13.9	-	19.8	31.7	61.6	60.9	2.3	2.4	100.0	100.0

Table 5(ix)
Employment Status of Employees

	Permanent		Temporary		Contract		Casual		Trainee		Total	
	F	M	F	M	F	M	F	M	F	M	F	M
Colombo City	18	6	1	1	2						21	7
Colombo-Hanwella	4	1	1								5	1
Galle	8	-	-	1						1	8	2
Kurunegala	3	1									3	1
Anuradhapura	2	3	4		1						7	3
Moneragala	8	1					1				9	1
Jaffna	4	1	1	1	4						9	2
Batticaloa	1	1	7	8	6						14	9
Ampara		2	10	1.3							10	15
Total	48	16	2.4	2.4	13		1			1	86	41
%	55.8	39.02	27.9	58.5	15.1	-	1.2	-	-	2.4		

Table 5(x)
Current Monthly Salaries of Employees - % (Rs.)

	<5,000		5,000 – <10,000		10,000 <15,000		15,000- <20,000		20,000- <30,000		30,000- <40,000		40,000- <75,000		75,000 <120,000		Total	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Colombo City	-	-	33.3	-	4.8	14.3	-	-	23.8	-	23.8	14.3	9.5	28.6	4.8	42.9	21	7
Colombo- Hanwella	4.0		60.0			100.0											5	1
Galle		50.0	37.5	50.0	25.0		37.5										8	2
Kurunegala			66.7						33.3			100.0					3	1
Anuradhapura	42.9		57.2	66.7		33.3											7	3
Moneragala	11.1		77.8		11.1	100.0											9	1
Jaffna	22.2	50.0	33.3		33.3			50.0	11.1								9	2
Batticaloa	28.6		57.1	66.7	14.3	33.3											14	9
Ampara	60.0	26.7	40.0	66.7		6.7											10	15

Table 5(xi)
Access to Training

	Participated in Training Programmes		Participated in Seminars/Conferences		Equal opportunities for Participation of women	
	F	M	F	M	F	M
Colombo City	61.9	71.4	42.9	57.1	85.7	
Colombo-Hanwella	80.0	100.0	20.0		60.0	100.0
Galle	87.5		37.5		87.5	0.0
Kurunegala	100.0	100.0	66.7	100.0	33.3	0.0
Anuradhapura	57.1	100.0	14.3	100.0	57.1	66.7
Moneragala	77.8	100.0	44.4	100.0	55.6	0.0
Jaffna	77.8	0.0	88.9	0.0	N.A	
Batticaloa	85.7	33.3	7.1	22.2		
Ampara	10.0	6.7	0.0	0.0		

**Table 5(xii)
Working Conditions**

	Flexi time		Work outside working hours		Facilities provided for work out of hours		Travel out of station for work		Facilities for travel		Total No.	
	F	M	F	M	F	M	F	M	F	M	F	M
Colombo City	85.7	85.7	61.9	85.7	57.1	57.1	38.1	71.4	28.6	57.1	21	7
Colombo-Hanwella	0.0	0.0	20.0	0.0	20.0	NA	0.0	0.0	NA	NA	5	1
Galle	12.5	0.0	37.5	0.0	37.5	NA	12.5	0.0	12.5	NA	8	2
Kurunegale	33.3	100.0	0.0	100.0	NA	100.0	0.0	0.0	NA	NA	3	1
Anuradhapura	14.3	0.0	0.0	100.0	NA	100.0	0.0	100.0	NA	66.7	7	3
Moneragale	77.8	100.0	11.1	100.0	NA	100.0	0.0	100.0	NA	0.0	9	1
Jaffna	88.9	100.0	22.2	50.0	NR	NR	22.2	50.0	NR	NR	9	2
Bataloa	57.1	100.0	35.7	55.6	NR	NR	21.4	66.7	NR	NR	14	9
Ampare	100.0	100.0	10.0	13.3	NR	NR	10.0	20.0	NR	NR	10	15

Note: NA – Not Applicable NR – Not Reported

Table 5(xiii)
Perceptions of Women Workers of Employment

	Job satisfaction		Happy at work -place		Market for IT skills		Whether career prospects at work -place		Total No.	
	F	M	F	M	F	M	F	M	F	M
Colombo City	85.7	85.7	90.5	100.0	95.2	85.7	28.6	57.1	21	7
Colombo-Hanwella	100.0	100.0	100.0	100.0	100.0	100.0	0.0	0.0	5	1
Galle	87.5	100.0	87.5	100.0	100.0	100.0	0.0	50.0	8	2
Kurunegale	66.7	100.0	100.0	100.0	66.7	100.0	0.0	0.0	3	1
Anuradhapura	71.4	66.7	57.1	33.3	71.4	100.0	14.3	0.0	7	3
Moneragale	77.8	100.0	88.9	100.0	88.9	100.0	22.2	0.0	9	1
Jaffna	88.9	50.0	88.9	100.0	88.9	100.0	NR	NR	9	2
Bataloa	100.0	100.0	100.0	100.0	78.6	100.0	NR	NR	14	9
Ampare	80.0	86.7	100.0	100.0	90.0	80.0	NR	NR	10	15

Table 5(xiv)
Awareness of Sexual Harassment in Workplace

	Aware		Total No.	
	F	M	F	M
Colombo City	14.3	14.3	21	7
Colombo – Hanwella	0.0	0.0	5	1
Galle	0.0	0.0	8	2
Kurunegala	0.0	0.0	3	1
Anuradhapura	0.0	0.0	7	3
Moneragala	0.0	0.0	9	1
Jaffna	11.1	NR	9	2
Batticaloa	21.4	NR	14	9
Ampara	0.0	NR	10	15

Table 5(xv)
Reasons for Selecting for an IT Field

	Needed a Job		Followed a Course		Parent's Influence		Jobs were available		Higher Salary		Like it-hobby		Total No.	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Colombo City	4.8		23.8		4.8	14.3	19.0	14.3			38.1	57.1	21	7
Colombo-Hanwella	60.0	100.0	40.0										5	1
Galle	25.0		50.0	50.0							25.0	50.0	8	2
Kurunegala	66.7									100.0	33.7		3	1
Anuradhapura	42.9	66.7	28.6								28.6		7	3
Moneragala	33.3	100.0	44.4										9	1
Jaffna							55.6	50.0			44.4	50.0	9	2
Batticaloa		11.1					7.1	11.1			7.1	11.1	14	9
Ampara							70.0						10	15

NR-100% Ampara men

Table 5(xvi)
Problems Experienced as Women Employees

	Problems in getting jobs yes	Preference given to men in recruitment	Problem in combining jobs and Family responsibilities	Total No.
	F	F	F	F
Colombo City	28.6	9.5	38.1	21
Colombo-Hanwella	0.0		20.0	5
Galle	12.5		37.5	8
Kurunegala	0.0		0.0	3
Anuradhapura	0.0		14.3	7
Moneragala	0.0		22.2	9
Jaffna	66.7		44.4	9
Batticaloa	0.0		14.3	14
Ampara	0.0		30.0	10

Table 5(xvii) a
Perceptions of Gender Appropriate IT Jobs for Women

	Colombo City		Colombo-Hanwella		Galle		Kurunegala		Anuradhapura		Moneragala		Jaffna		Batticaloa		Ampara	
No difference women & men	14.3	14.3					66.7	100.0			11.1							
Any job if qualified		28.6	40.0															
Easy job	4.8																	
Software	14.3		60.0	100.0					14.3	33.3	33.3							
Graphic Design	4.8				12.5													
Web Design	4.8																	
Programming	28.6	28.6																
Networking	4.8																	
Computer operator	4.8								14.3		22.2							
Data Entry	19.0				87.5	50.0			14.3	66.7			44.4	50.0			30.0	
Management	9.6	14.3																
Teaching													66.7	50.0	42.9	22.2		
Instructors		14.3																
Quality Control	4.8	28.6																
User support	9.5																	
Office work																14.3	11.1	
Word Processing					37.5	100.0			14.3		11.1	100.0	44.4	50.0	14.3	11.1	30.0	
Unable to say	9.5							33.3				22.2						
Total No.	21	7	5	1	8	2	3	1	7	3	9	1						

Table 5(xvii) b
Perceptions of Gender Appropriate IT Jobs for Men

	Colombo City		Colombo – Hanwella		Galle		Kurunegala		Anuradhapura		Moneragala		Jaffna		Batticaloa		Ampara	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
No difference women/men	9.5	28.6					100.0	100.0	14.3									
Any job if qualified	14.3	14.3															60.0	
Hardware	42.9		60.0	100.0	87.5	100.0			28.6	66.7	44.4		66.7	100.0	14.3	22.2		
Software	23.8	28.6	20.0															
Engineering	9.5																	
Graphic Design					12.5													
Networking	19.0	28.6																
Programing	4.8																	
Mechanic-repair equipment			40.0								11.1		22.2		57.1	22.2		
Statistical offers											22.2							
Computer operators					12.5	50.0			14.3									
Management		14.3																
Field Work	4.8										11.1							
Total No.	21	7	5	1														

Appendix II – Access to Information Technology in Households

Table 6(i)
Education Participation Rates (5-19 Years)

		5-14 years		15-19 years		Total No. 5-14 years		Total No. 15-19 years	
		Female	Male	Female	Male	Female	Male	Female	Male
Colombo	Urban affluent	100.0	100.0	100.0	100.0	4	2	2	1
	Urban middle class	100.0	75.0	77.8	100.0	9	4	9	6
	Urban lower middle class	92.3	100.0	100.0	60.0	13	31	2	5
	Semi urban	100.0	100.0	80.0	100.0	8	11	5	6
	Rural	80.0	92.9	100.0	50.0	5	14	4	2
Galle	Urban	100.0	100.0	50.0	37.5	8	7	12	8
	Rural	100.0	100.0	66.7	50.0	8	13	3	4
Kurunegala	Urban	100.0	100.0	77.8	80.0	13	9	9	5
	Rural	100.0	100.0	100.0	75.0	8	6	8	4
Anuradhapura	Urban	100.0	100.0	80.0	81.8	14	13	5	11
	Rural	100.0	100.0	100.0	57.1	3	4	4	7
Monaragala	Urban	100.0	92.8	100.0	60.0	16	14	3	5
	Rural	87.5	66.7	66.7	100.0	3	5	3	1
Jaffna	Urban	100.0	100.0	90.0	100.0	6	10	10	7
	Rural	100.0	100.0	50.0	57.1	14	9	6	7
Batticaloa	Urban	100.0	100.0	100.0	75.0	10	15	3	8
	Rural	100.0	88.9	83.3	42.9	2	9	6	7
Ampara	Urban	83.8	100.0	50.0	78.5	12	10	14	14
	Rural	100.0	100.0	100.0	100.0	7	3	1	1

Table 6(ii) a
Education Level of the Household Population (not in school)
Colombo (5 years and over)

	Urban affluent				Urban middle-class				Urban lower middle-class				Semi urban				Rural				
	Female		Male		Female		Male		Female		Male		Female		Male		Female		Male		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
No schooling (Illiterate)	-	-	-	-	-	-	-	-	1	1.4	1	1.9	1	2.1	-	-	2	5.6	-	-	
No schooling (Literate)	2	6.1	-	-	-	-	-	-	-	-	-	-	-	1	2.1	-	-	-	-	-	-
Primary Education	-	-	2	6.3	5	6.6	-	-	10	14.1	3	5.6	1	2.1	1	2.0	5	13.9	4	13.8	
Incomplete secondary education	-	-	-	-	5	6.6	3	4.9	36	50.7	30	56.6	20	42.6	20	40.0	16	44.5	13	44.8	
GCE O/L	3	9.1	1	3.1	14	18.5	7	11.4	20	28.2	17	32.1	17	36.1	19	38.0	10	27.8	10	34.4	
GCE A/L	4	12.1	2	6.3	32	42.1	21	34.4	3	4.2	2	3.8	6	13.8	9	18.0	3	8.3	2	6.9	
Degree	13	39.4	17	53.1	12	15.8	22	36.1	1	1.4	-	-	1	2.1	1	2.0	-	-			
Professional/Equivalent	11	33.3	9	27.9	1	1.3	5	8.2	-	-	-	-									
NR			1	3.1	7	9.2	3	4.9	-	-	-	-									
Total	33	100.0	32	100.0	76	100.0	61	100.0	71	100.0	53	100.0	47	100.0	50	100.0	36	100.0	29	100.0	

Table 6(ii) b
Education Level of the Household Population (Not in School) - over 5 years
Galle and Kurunegala

	Galle								Kurunegala							
	Urban				Rural				Urban				Rural			
	Female		Male		Female		Male		Female		Male		Female		Male	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
No schooling (illiterate)	2	2.9	2	3.2	-	-	-	-	-	-	1	2.6	-	-	-	-
No schooling (literate)	-	-	-	-	1	2.7	-	-	-	-	-	-	-	-	-	-
Primary education	9	12.9	5	7.9	2	5.4	4	14.3	1	2.0	-	-	2	8.3	2	7.7
Incomplete secondary education	32	45.7	31	49.2	19	48.6	14	50.0	17	33.4	15	39.4	7	29.2	8	30.8
GCE O/L	19	27.2	11	17.4	9	24.3	5	17.9	16	31.4	11	29.0	9	37.5	8	30.7
GCE A/L	2	2.9	9	14.3	3	8.1	5	17.9	12	23.5	6	15.8	4	16.7	7	26.9
Degree	3	4.3	4	6.3	2	5.4	-	-	5	9.8	5	13.2	2	8.3	1	3.8
Not reported	3	4.3	1	1.6	1	2.7	-	-	-	-	-	-	-	-	-	-
Total	70	100.0	63	100.0	37	100.0	28	100.0	51	100.0	38	100.0	24	100.0	26	100.0

Table 6(ii) c
Education Level of the Household Population (Not in School) - over 5 years
Anuradhapura and Moneragala

	Anuradhapura								Monaragala							
	Urban				Rural				Urban				Rural			
	Female		Male		Female		Male		Female		Male		Female		Male	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
No schooling (Illiterate)	-		-		2	6.9	-		-		-		-	-	-	-
No schooling (Literate)	1	2.3	-		-		-		-		1	2.7	1	3.3	2	8.3
Primary education	2	4.5	1	2.9	2	6.9	2	7.1	3	7.5	1	2.7	1	3.3	3	12.5
Incomplete secondary education	13	29.6	7	20.0	13	44.8	17	60.7	20	50.0	18	48.8	10	33.3	7	29.3
GCE O/L	7	15.9	5	14.3	6	20.6	3	10.3	5	12.5	8	21.6	6	20.0	5	22.9
GCE A/L	18	40.0	15	42.9	4	13.8	4	14.2	7	17.5	4	10.8	11	36.7	6	25.0
Degree	3	6.8	7	20.0	1	3.4	-	-	4	10.0	4	10.8	-	-		
Not reported					1	3.4	2	7.1	1	2.5	1	3.7				
Total	44	100.0	35	100.0	29	100.0	28	100.0	40	100.0	37	100.0	29	100.0	23	100.0

Table 6(ii) d
Education Level of the Household Population (Not in School) - over 5 years
North and East

	Jaffna								Batticaloa								Ampara							
	Urban				Rural				Urban				Rural				Urban				Rural			
	Female		Male		Female		Male		Female		Male		Female		Male		Female		Male		Female		Male	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
No schooling (Illiterate)	3	6.4	3	5.8	1	4.2	-	-	-	-	1	2.4	1	3.6	3	5.1	1	1.6	1	2.8	-	-		
No schooling (Literate)	2	4.3	4	7.7	1	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Primary education	3	6.4	1	1.8	3	12.5	1	3.1	2	4.3	1	2.4	6	21.4	16	27.1	11	17.7	6	12.2	7	15.2	6	13.2
Incomplete secondary education	13	27.7	9	17.3	13	54.1	21	65.7	11	23.9	10	23.8	20	71.4	31	52.5	32	51.6	30	61.3	10	21.7	4	10.3
GCE O/L	7	14.9	9	17.3	3	12.5	2	6.3	11	23.9	9	21.4	-	-	4	6.8	9	14.5	8	16.3	8	17.3	9	23.7
GCE A/L	13	27.7	19	36.5	2	8.3	8	25.0	19	41.3	13	31.0	1	3.6	4	6.8	5	8.1	-	-	20	43.5	16	42.1
Degree	6	12.8	7	13.5	1	4.2	-	-	3	6.5	8	19.0	-	-	1	1.7	4	6.5	4	8.2	1	2.2	4	10.5
Total	47	100.0	52	100.0	24	100.0	32	100.0	46	100.0	42	100.0	28	100.0	59	100.0	62	100.0	49	100.0	46	100.0	38	100.0

- Number

Table 6(iii)
Employment Status (percentages)

		Professional level		Middle level		Skilled and unskilled workers		Total No.	
		Female	Male	Female	Male	Female	Male	Female	Male
Colombo	Urban affluent	89.5	95.0	10.5			5.0	19	20
	Urban middle class	25.0	72.7	75.0	27.3			20	44
	Urban lower middle class		6.8	42.9	36.4	57.1	56.8	14	44
	Semi urban	9.1	2.6	45.5	31.6	45.5	65.8	11	38
	Rural		4.8	28.6	23.8	71.4	71.4	7	21
Galle	Urban	4.8	9.3	19.0	11.6	76.2	79.1	21	43
	Rural	8.3	11.8	33.3	5.9	58.3	82.4	17	16
Kurunegala	Urban	12.5	30.0	68.8	43.3	18.8	26.7	16	30
	Rural		4.5	75.0	27.3	25.0	68.1	8	22
Anuradhapura	Urban	11.1	18.5	55.5	59.3	33.3	22.2	18	27
	Rural		9.1	27.3	18.2	72.7	72.7	11	22
Monaragala	Urban	10.0	10.7	90.0	25.0		64.3	10	28
	Rural	20.0	10.0	80.0	30.0		60.0	10	20
Jaffna	Urban	3.6	8.1	35.7	48.6	53.6	37.8	28	37
	Rural			21.1	11.1	78.9	88.9	19	27
Batticaloa	Urban	3.1	16.7	21.8	16.7	53.1	50.0	32	24
	Rural	6.7		6.7	11.8	80.0	82.3	15	17
Ampara	Urban	14.3	7.1	42.8	19.0	42.8	69.0	7	42
	Rural		14.3	76.5	60.7	17.1	25.0	17	28

Note: Not reported Jaffna Urban 7.2 F, 5.4 M Batticaloa Urban 21.8 F 16.7 M Rural 6.7 F 5.9 M Ampara Urban 4.8 M Rural 5.9 F

Table 6(iv)
Employment Income (Rs.)
(percentages)

Rs.		<2,500		2,500-<7,500		7,500-<15,000		15,000-<25,000		25,000-<40,000		40,000-<100,000		100,000		Not reported		Total	
		F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Colombo	Urban affluent							5.3		15.8	10.0		10.0	5.3	5.0	73.7	75.0	19	20
	Urban middle class					35.0	9.1	35.0	11.4	5.0	18.2		31.8		6.8	25.0	22.7	20	44
	Urban lower middle class	7.1	4.5	64.2	40.9	21.4	34.1	7.1	18.2								2.3	14	44
	Semi urban	9.1	7.9	54.5	60.5	18.2	21.0	9.1	5.3		2.6					9.1	2.6	11	38
	Rural	28.6		71.4	23.8		66.7		4.8								4.8	7	21
Galle	Urban	23.8	4.7	38.1	60.5	14.3	13.9	14.3	11.6		4.7					4.5	4.7	21	43
	Rural	8.5		58.3	64.7	16.7	23.5				5.9					16.7	5.9	12	17
Kurunegala	Urban		13.3	18.8	6.7	62.5	56.7	6.3	23.3							12.5		16	30
	Rural	12.5	22.7	25.0	36.4	62.5	22.7		9.1		4.5				4.5			8	22
Anuradhapura	Urban	16.7	11.1	11.2	25.9	60.8	44.4		18.5							11.1		18	27
	Rural	27.3	22.7	36.9	50.0	9.1	27.3									27.3		11	22
Monaragala	Urban	20.0	17.9		42.9	80.0	17.9		3.6		10.7					7.1		10	28
	Rural	10.0		40.0	60.0	50.0	35.0		18.5		5.0							10	20
Jaffna	Urban	7.7	8.1	30.8	29.7	46.2	51.4		8.1							15.4	2.7	13	37
	Rural	60.0	59.3	20.0	29.6	20.0	7.4				3.7							5	27
Batticaloa	Urban			6.7	33.3	13.3	16.7	6.7	12.5							73.3	37.5	15	24
	Rural			50.0	6.3		31.3									50.0	62.5	4	16
Ampara	Urban	57.1		14.3	21.9	28.6	41.5		26.8		4.9						4.9	7	41
	Rural	5.9	3.7	35.2	11.1	52.9	44.4		25.9		7.4					5.9	4.4	17	27

Table 6(v)
Mode of Acquisition of Computer Skills (% of 10 – 35 age groups)

		Self learning/ informal				School				Institute			
		10-19 years		20-35 years		10-19 years		20-35 years		10-18 year		20-35 year	
		F	M	F	M	F	M	F	M	F	M	F	M
Colombo	Urban affluent	100.0	66.7	25.0	69.2		50.0		7.7		50.0	75.0	53.8
	Urban middle class		20.0	25.0	37.5	66.7	40.0		12.5	33.3	80.0	75.0	62.5
	Urban lower middle class				25.0	14.3			50.0			85.7	33.3
	Semi urban	100.0			100.0	100.0							
	Rural				100.0			100.0					
Galle	Urban		33.3		25.0	50.0	66.7			50.0	33.3	100.0	75.0
	Rural	50.0	33.3	25.0		50.0	33.3	50.0		50.0	50.0	50.0	100.0
Kurunegala	Urban	55.6	28.6	30.8	33.3	33.3	14.3	28.6		14.3	42.8	61.5	
	Rural	40.0	50.0		100.0	60.0				60.0	50.0	100.0	
Anuradhapura	Urban	25.0	11.1	33.3	50.0	25.0	22.2	33.3		50.0	66.7	50.0	50.0
	Rural		50.0			100.0					100.0	100.0	
Monaragala	Urban		33.3	33.3			33.3			100.0	33.3	66.7	
	Rural	100.0		50.0			100.0			100.0		50.0	
Jaffna	Urban	25.0	10.0	18.2	16.7	75.0	90.0	9.1	16.7	16.7	0.0	63.6	61.1
	Rural	28.6	33.3	50.0	20.0	50.0	16.7	0.0	0.0	16.7	33.3	50.0	60.0
Batticaloa	Urban	33.3	40.0	25.0					33.3	66.7	60.0	100.0	66.7
	Rural		50.0				50.0				50.0		
Ampara	Urban	0.0	0.0	0.0	0.0	14.3	20.0	0.0	0.0	71.4	80.0	100.0	75.0
	Rural	0.0	0.0	25.0	28.6	0.0	0.0	0.0	0.0	0.0	100.0	75.0	71.4

Table 6(vi)
Access to Computer Skills and to Internet (10 – 35 years)

Services		Urban				Rural			
		Female		Male		Female		Male	
		No.	%	No.	%	No.	%	No.	%
Computer Skills	Self learning / informal learning	28	25.9	37	30.3	9	28.1	16	40.0
	School	28	25.9	31	25.4	12	27.5	6	15.0
	Institute	62	57.4	63	51.6	16	50.0	23	57.5
	Total	108	100.0	122	100.0	32	100.0	40	100.0
Use of internet	Internet café	8	13.1	17	21.5	1	4.8	5	18.5
	School / institute	3	4.9	6	7.6	0	0.0	2	7.4
	Home	14	22.9	21	26.6	1	4.8	7	25.9
	Work place	10	16.4	16	20.3	4	19.0	2	7.4
	Friends' home	2	3.3	7	8.9	1	4.8	2	7.4
	Total	61	100.0	79	100.0	21	100.0	27	100.0

Table 6(vii) a
Purpose of Using Internet-Colombo (%)

	Urban affluent		Urban middle class		Urban lower middle class		Semi urban		Rural	
	F	M	F	M	F	M	F	M	F	M
10-18 years										
General information	80.0	73.3	80.0	25.0	50.0					
Education, Knowledge	80.0	53.3	80.0	75.0	25.0	100.0				
Mailing, communication, chatting	100.0	66.7	60.0	87.5						
Entertainment	80.0	60.0	40.0	37.5	50.0					
Job information	20.0			12.5	75.0					
Official work	20.0	6.7	20.0	12.5	75.0			100.0		100.0
Personal services	20.0	20.0		12.5				100.0		
Total	5	15	5	8	4	1		1		1

Table 6(vii) b
Purpose of Using Internet-Galle, Kurunegala, Anuradhapura and Moneragala (%)

	Galle				Kurunegala				Anuradhapura				Monaragala			
	Urban		Rural		Urban		Rural		Urban		Rural		Urban		Rural	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
General information										75.0						
Education, Knowledge		50.0		100.0	44.4	50.0	66.7	100.0	100.0	75.0		100.0			50.0	
Mailing, communication, chatting					11.1	25.0									50.0	
Entertainment		50.0			33.3		33.3								50.0	
Job information					11.1	25.0	33.3		50.0							
Official work		75.0			11.1		33.3								50.0	
Personal services		25.0											50.0			
Total		4		1	9	4	3	2	2	4		1	2		2	

Table 6(vii) c
Purpose of Using Internet-North and East (%)

	Jaffna				Batticaloa				Ampara			
	Urban		Rural		Urban		Rural		Urban		Rural	
	F	M	F	M	F	M	F	M	F	M	F	M
General information		13.8		7.7					20.0	33.3	16.7	28.6
Education, Knowledge	27.3	37.8	22.2	46.2		42.9		50.0	20.0	33.3		57.1
Mailing, communication, chatting	18.2	20.7		30.8	14.3	14.3			20.0	33.3	33.3	57.1
Entertainment		3.4		15.4					40.0	66.7	16.7	7.4
Job information		3.4		7.7	14.3						16.7	14.3
Official work					28.6							
Not reported	68.2	55.2	77.8	46.2	71.4	42.9	100.0	50.0	60.0	16.7	66.7	14.3
Total	22	29	9	13	7	7	1	2	5	6	6	7

Table 6(viii)
Awareness of Women Respondents in Households on ICT Related Programmes

		e-commerce		e-channeling		e-learning		e-governance		e Sri Lanka programme		Total
		No.	%	No.	%	No.	%	No.	%	No.	%	No.
Colombo	Urban affluent	18	90.0	17	85.0	14	70.0	6	30.0	3	15.0	20
	Urban middle class	12	30.0	16	40.0	13	32.5	6	15.0	6	15.0	40
	Urban lower middle class	3	7.5	6	15.0	7	17.5	2	5.0	2	5.0	40
	Semi urban	0	0.0	1	3.3	2	6.7	0	0.0	0	0.0	30
	Rural	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	20
Galle	Urban	2	6.7	3	10.0	2	6.7	0	0.0	2	6.7	30
	Rural	1	5.0	6	30.0	1	5.0	1	5.0	1	5.0	20
Kurunegala	Urban	18	60.0	18	60.0	19	63.3	17	56.7	17	56.7	30
	Rural	9	45.0	8	40.0	9	45.0	8	40.0	8	40.0	20
Anuradhapura	Urban	3	10.0	3	10.0	2	6.7	0	0.0	0	0.0	30
	Rural	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	20
Monaragala	Urban	4	13.0	6	20.0	2	6.7	0	0.0	0	0.0	30
	Rural	3	15.0	4	20.0	2	10.0	0	0.0	0	0.0	20
Jaffna	Urban	13	43.3	6	20.0	13	43.3	2	6.7	2	6.7	30
	Rural	2	10.0	1	5.0	4	20.0	0	0.0	0	0.0	20
Batticola	Urban	4	13.3	2	6.7	5	16.7	1	3.3	1	3.3	30
	Rural	1	5.0	1	5.0	1	5.0	1	5.0	1	50.0	20
Ampara	Urban	5	17.2	1	3.4	1	3.4	1	3.4	1	3.4	30
	Rural	8	40.0	3	15.0	2	10.0	2	10.0	6	30.0	20

Table 6(ix) a
Parents Aspiration for ICT Jobs for Daughters – Colombo (%)

	Urban affluent		Urban middle class		Urban lower middle class		Semi urban		Rural	
	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father
ICT Jobs	62.5	65.7	35.1	20.0	66.7	72.4	60.0	56.0	45.0	46.2
Type of Job										
Good job related to ICT	20.0	12.5	-	14.3	3.4	4.8	-	-	-	-
Any job related to ICT	-	-	-	-	3.4	4.9	11.1	-	56.6	-
Data entry / Computer operator	-	-	15.4	14.3	15.1	33.3	16.7	-	-	21.4
Designing/Planning	-	-	7.7	14.3	-	-	-	-	-	-
Computer instructor	-	-	15.4	28.6	3.8	-	5.3	-	-	-
Computer engineering	-	12.5	7.7	-	19.2	9.5	-	-	-	-
Information officer	-	-	-	-	15.4	9.5	16.7	-	-	28.6
Telephone operator	-	-	-	-	-	-	-	-	-	-
Work in TV channels	-	-	-	-	-	-	-	-	-	-
Announcer	-	-	-	-	-	-	-	-	-	-
Not applicable/ Not reported	80.0	75.0	69.2	53.8	38.5	38.1	50.0	50.0	44.0	50.0
Total	10	8	13	7	26	21	18	14	9	6

Table 6(ix) b
Parents Aspiration for ICT Jobs for Daughters
Galle, Kurunegala, Anuradhapura and Moneragala (%)

	Galle				Kurunegala				Anuradhapura				Moneragala			
	Urban		Rural		Urban		Rural		Urban		Rural		Urban		Rural	
	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father
ICT Jobs	90.0	85.7	78.9	71.4	62.1	77.3	75.0	61.1	53.3	54.2	70.0	68.4	76.7	73.9	80.0	77.8
Type of Job																
Good job related to ICT	11.1	-	-	-	11.1	5.9	40.0	18.2	31.3	7.7	7.1	-	8.7	11.8	-	-
Any job related to ICT	-	4.2	13.3	-	-	-	-	-	31.3	46.2	36.7	30.8	8.7	5.9	-	14.3
Data entry /computer operator	-	29.2	-	10.6	5.6	11.8	-	-	6.3	15.4	14.3	-	43.5	23.5	50.0	42.9
Designing/ Planning	3.7	-	-	-	-	-	-	-	-	-	-	-	8.7	-	6.3	7.1
Computer instructor	-	4.2	-	-	-	-	-	-	6.3	-	-	-	-	-	6.3	-
Computer engineering	7.4	12.5	6.7	20.0	5.6	-	6.7	9.1	-	-	-	-	-	-	-	-
Information officer	-	-	1.5	-	-	-	-	-	6.3	-	-	15.4	-	5.9	-	-
Telephone operator	-	-	-	-	-	-	-	-	6.3	-	-	-	13.0	17.6	6.3	-
Work in TV channels	-	-	-	-	-	-	-	-	6.3	-	-	-	8.7	-	6.3	-
Announcer	-	-	-	-	-	-	-	-	-	-	-	-	-	5.9	6.3	7.1
Not applicable	-	-	-	-	77.8	70.6	46.7	72.7	12.5	30.8	50.0	52.9	17.3	29.5	31.3	35.7
Not reported	77.8	62.5	86.7	70.0	-	-	-	-	-	-	-	-	-	-	-	-
Total	27	24	15	10	18	17	15	11	16	13	14	13	23	17	16	14

Table 6(ix) c
Parents Aspiration for ICT Jobs for Daughters
North and East (%)

	Jaffna				Batticaloa				Ampara			
	Urban		Rural		Urban		Rural		Urban		Rural	
	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father
ICT jobs	62.1	77.8	42.1	52.6	73.3	60.7	85.0	80.0	69.2	66.7	68.4	70.6
Type of jobs												
Soft wear engineering	1.7	1.9				1.9						
Hardware engineering	1.7	1.9										
System analysts		1.9	2.6									
Computer operator	10.3	21.2	10.5	13.2					1.7	3.8		
Data entry operator		1.9	2.6	2.6								2.6
All computer related work	1.7	1.9		2.6							5.3	2.6
Technician	13.8	19.2	15.8	15.8							7.9	7.9
Announcer	1.7	1.8							3.4		5.3	5.3
Telephone operator	1.7	1.9							3.4	1.9	2.6	
IT trainer		1.9										
IT coordinator										2.6		2.6
NR	6.9	5.8			100.0	94.1	100.0	100.0	72.2	78.6	10.6	25.0
Total	18	21	8	10	22	17	17	16	18	14	XXXX	XXXX