Enhancing Women Empowerment through Information and Communication Technology

A Report

Submitted to

Department of Women & Child Development
Ministry of HRD
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by

VOLUNTARY ASSOCIATION FOR PEOPLE SERVICE (VAPS)
Reg. Office: 130,C / 1, Madura Coats Compound, Katcheri Road, Virudhunagar, Tamil Nadu.
Training and Research Centre: 39, Besant Road, Chokkikulam,(Behind PTR Mahal), Madurai -625 002.

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Chapter-1
Introduction

1.0 INTRODUCTION

Across the globe, countries have recognized Information and Communication Technology (ICT) as an effective tool in catalyzing the economic activity in efficient governance, and in developing human resources. There is a growing recognition of the newer and wider possibilities that technology presents before the society in the modern times. IT together with Communication Technologies has brought about unprecedented changes in the way people communicate; conduct business, pleasure and social interaction. The evolution of new forms of technologies and imaginative forms of applications of the new and older technologies makes the lives of the people better and more comfortable in several ways. There is even greater realization that instead of a single-track technology, lateral integration of technologies can deliver startling results and the world seems to be moving towards such converged systems. With the emergence of IT on the national agenda and the announcement of ICT policies by various state governments have recognized the "Convergence of core technologies and E-Governance" as the tool for good governance, sustainable development, globalization of economy and social empowerment. Information is the key to democracy. With the advent of ICT, it has become possible for the common man to access global information. The realm of electronic communication encompasses telecommunication, broadcasting, information technology, enabled services and industries, to undergo profound changes leading to a Global Information Infrastructure (GII), which will be capable of carrying any type of information, be it text, data, voice or video. Information is now broadly defined to embrace voice in telephony, text in fax and newspapers, images in video and television broadcasting, and data in computers. All information can be digitized, transported, stored, retrieved, modified, and then distributed. All

of these are getting transportable over common infrastructure viz. high-speed, broadcast, digital electronic highways. Emerging digital techniques, new network alternatives (Intelligent Networks), high bandwidth communication technology, and state-of-the-art software for network functions and services, are the new technology trends evident in the development of electronic communication systems.

The convergence of Information and Communication Technology (ICT) involve not only the integration of carriage and content but also of the industry. In such convergence, instances of conflicting interests might surface and it may trigger a competition and end up with the survival of the fittest industries and of sustainable applications. It may also be realised that converged applications have a lot of bearing on e-governance, which, people perceive as means to 'good governance'.

Initiatives of the government and the private sector to adopt standards develop interconnection and accounting systems and to deploy infrastructures, due to liberalization policies, have seen the growth of satellite systems and regional WANs (Wide Area Networks) in India. Emergence of ICT on the national agenda and announcement of ICT policies by several state governments has strengthened India's position in the software-driven ICT sector in the world. For example states of Tamil Nadu, Andhra Pradesh, Delhi, Goa, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Orissa, Punjab, Rajasthan, Sikkim, Uttar Pradesh, West Bengal, Pondicherry etc. announced several ICT policies in their respective states.

1.1 WOMEN AND ICT

A large group of workingwomen of India is in the rural and unorganized sectors. Socially the majorities of Indian women are still tradition bound and are in a disadvantageous position. Inequality in women's access to and participation in all

communications systems, especially the media, and their insufficient mobilization to promote women's contribution to society.

Since globalisation is opening up the Indian economy suddenly at a very high speed, during the past decades, advances in information technology have facilitated a global communications network that transcends national boundaries and has an impact on public policy, private attitudes and behaviour, especially of children and young adults. Everywhere the potential exists for the media to make a far greater contribution to the advancement of women.

More women are involved in careers in the communications sector, but few have attained positions at the decision-making level or serve on governing boards and bodies that influence media policy. The lack of gender sensitivity in the media is evidenced by the failure to eliminate the gender-based stereotyping that can be found in public and private local, national and international media organizations. The continued projection of negative and degrading images of women in media communications - electronic, print, visual and audio - must be changed. Print and electronic media in most countries do not provide a balanced picture of women's diverse lives and contributions to society in a changing world. In addition, violent and degrading or pornographic media products [are also negatively affecting] women and their participation in society. Programming that reinforces women's traditional roles can be equally limiting. The worldwide trend towards consumerism has created a climate in which advertisements and commercial messages often portray women primarily as consumers and target girls and women of all ages inappropriately.

1.2 ABOUT THE STUDY

According to Blanca, ICTs have created new jobs in the field of information processing for baking, insurance, printing and publishing specially for women. To mention, UNCTAD report 2002 says women in Asia & Latin American countries hold more than 20 percent of professional jobs in software services. If one goes by statistics, there are about 8 million internet user women in China & 2 million in India. Further, projections indicate that over 3,50,000 women are expected to be working in remote data processing by 2008 in India as one million jobs are expected to be created in call center alone by 2007. However, it depends on availability of good telecom infrastructure, IT training in and out of school, training in marketing and business development supported by conducive policies of the government.

Women and girls are exposed to great discrimination in economic, education, health and social services access worldwide. On the other hand the range of women's economic activities in developing countries is very broad. It includes formal sector and informal sector employment, as well as self-employment in farming, trading and crafts production etc. There are numerous possibilities for ICTs to improve women's economic activities in the field of trade, governance, education, health, crafts , employment in formal as well as informal sector. ICT's bring lot of opportunities to women in the work situations and small business. Teleporting, flexi time and work from home arrangements are some of the gender dimensions of ICT's usages. Keeping these facts in mind, the proposed study identified the needs of infrastructure and policy intervention to make ICT sector to contribute towards enhancing empowerment of women in India which has been discussed in *subsequent chapters.*

Chapter-2
Objectives & Methodologies

2.0 SCOPE OF THE STUDY

Women are the equal beneficiaries to the advantages offered by technology, and the products and processes, which are by product of the technology use. However, it should not be confined to elite group of society but to flow to the other segments of women in Indian society. The study wanted to know about infrastructure (social, economical, educational, etc) available to different segments of the women and social freedom and opportunities in rural and urban areas. The applicability may invite government intervention to stop digital divide among women and also to more empowerment for women with ICT usage.

2.1 OBJECTIVES OF THE STUDY

- To assess ICT infrastructure in rural areas vis-a vis in urban areas for women empowerment.
- To assess the impact of economic/social/academic background of women workforce in ICT.
- To assess the status of ICT in education in terms of policies of scholarships, reservations, business development programmes for self-employment for women.
- To assess social and health implication of ICT with reference to women workers.

These objectives have been attempted during the course of the completion of the study which has been discussed in the study findings chapter.

2.2 RESEARCH QUESTIONS

Besides, some research questions have been answered in the study findings. These are:

- ✍ The rural women folk are deprived of ICT infrastructures;
- ✍ Entry of women workforce in ICT Industry is affected by their social, economic and educational background;
- ✍ Impact on health of women working in ICT sector in relation to stress, working in shift, during odd hours, working culture etc;
- ✍ There is sufficient support from the government institution to provide ICT education to women in study areas;
- ✍ The ICT contribution in providing employment to women in rural and urban areas.

2.3 METHODOLOGY

2.3.1 Conceptual Framework

While designing methodology the study objectives, as specified in the Research Proposal titled "Enhancing Women Empowerment through Information and Communication Technology" were strictly followed. The study has been conducted in all *five major corporations of State of Tamilnadu. ie. Chennai, Thiruchirappali, Madurai, Coimbatore, Thirunelveli. T*he five corporation in the state of Tamilnadu has been chosen because most of the IT organizations are situated in Chennai and other Municipal corporations. In addition, in these cities comparatively, efficient telecom infrastructure is being made available by government and private service providers. For the purpose of this study, the areas classified by Census 2001 were selected randomly to identify the women folks as respondents. The total sample size was 500. The women includes: working women, house wife who have exposure in information and communication technology and work as part time, Women employees who work in the area of information

technology in government and private organizations, members of self help group who also has exposure in the field of information technology and communication. The sampling units were selected using stratified random sampling scheme, as it is evident from the methodology. To channelise the research work, an extensive review of the literature on the topic was discussed in the *review of literature* chapter.

2.3.2 Secondary Data

The secondary data was collected from the Corporation commissioner's office about the government sponsored schemes for promoting women participation in ICT based services and jobs. The information about different schemes related to ICTs was also collected through personal interviews with planners, implementations and beneficiaries of these programmes.

2.3.3 Primary Data

Besides secondary data, the primary data was collected using structured questionnaire. The questionnaire includes all aspects of socio-economic background of the respondent, their educating, trading, income generation activities, constraints, benefits etc.

2.3.4 Data Analysis

After the data collected from the field, it was processed in computer through the use of Statistical Package for Social Science (SPSS), excel and other soft ware packages. These packages are used in order to make the analysis easy and clear. The package also helped the cross tabulation of the data.

Chapter-3

Review of Literature

3.0 INFORMATION COMMUNICATION AND TECHNOLOGY

The explosion of ownership and ever-increasing performance capabilities of personal computers, mobile phones and other information communication technology (ICT) devices, the development of satellite, cable and other networks, as well as increased bandwidth, have spawned new forms of distribution through which media and entertainment products and services are made available. The restructuring of the media and entertainment industries and their inclusion in a trend towards an integrated information industry is driven to a large extent by these major developments in technology, for which the term convergence is widely used. *(Media Perspektive* 1999) This convergence is based on technological innovations in microelectronics, computers and telecommunications. Through digitalization, all kinds of data -- irrespective of origin can be manipulated and integrated on the basis of their common informational structure. In addition, the development of optical fibre and satellite technology has created the possibility for rapid transmission of increasing amounts of information per second. The development of integrated circuits and the exponentially increasing capacity of microchips have also been crucial for data communication and integrating different kinds of electronic communication.

The computer and the modem, along with many other ICT hardware and software innovations and services, have placed us at a highpoint of a very significant stage of development in the history of human communications, often called "the information society", and have transformed the way many men and women work in the media and entertainment industries. The foundations of the information superhighway were laid years ago, because its base is the whole

system of television, radio, cable, satellites and computer networks, microwave, wireless digital, telephone systems, cellular and mobile radio networks and other systems that transmit information, data, audiovisual material and communications. Every day people receive, store, process, display and send a variety of texts, sound and images, including films, television and radio programmes across the country and around the world. A major challenge is to integrate these diverse and disparate elements into a high-speed, interactive, broadband, digital, seamless whole to complete the highway, ensuring that it reaches all parts of the world where it is needed, and is made available to as many people as possible.

As one observed, "The streaming technology has already started a revolution in the way we hear and buy recorded music. It has shaken the foundations of the recording and music industry, and it may well promote new developments in digital television and holography". (*Walter Durling, 1999).* In a more general sense, multimedia convergence could be leading towards turning the home in many industrialized countries into a much more direct centre of consumption of goods and services than before - through e-commerce, telebanking, interactive television, the internet, and so on. This trend towards business based on multimedia convergence lies behind many of the mergers and acquisitions now taking place in the media and entertainment industries.

The impact of information communication technologies and the related synergy effects and increased efficiency "have influenced the numbers and structure of the workforce and significantly changed working conditions and occupational patterns. They have also increasingly and this is a relatively new development affected the status of workers, especially in recent years. In the medium term, hardly any jobs will remain unaffected by it". *(Federal Ministry of Labour and Social Affairs: 1999).*

3.1 WOMEN AND ICT

It is a commonly held view that women are less engaged with Information and Communication Technologies (ICTs) than men. Information and Communication Technologies are for everyone and women have to be an equal beneficiary to the advantages offered by the technology, and the products and processes, which emerge from their use. The benefits accrued from the synergy of knowledge and ICT need not be restricted to the upper strata of the society but have to freely flow to all segments of the female population. The gamut of areas in which ICT can put a greater control in the hands of women is wide and continuously expanding, from man - aging water distribution at the village-level to standing for local elections and having access to lifelong learning opportunities. ICT in convergence with other forms of communication have the potential to reach those women who hitherto have not been reached by any other media, thereby empowering them to participate in economic and social progress, and make informed decision on issues that affect them.

3.2 KNOWLEDGE

The world is in the midst of a knowledge revolution, complemented by opening up entirely new vistas in communication technologies. Recent developments in the field of information and communication technology are indeed revolutionary in nature. Hundreds of millions of dollars are being spent on Information and Communication technologies, reflecting a powerful global belief in the technologies. By definition, Information and Communication Technologies are a diverse set of technological tools and resources to create, disseminate, store, bring value-addition and manage information. Interestingly, ICT, when used as a broad tool for amalgamating local knowledge incubated by the communities with information existing in remote databases and in public domain, heralds the

formation of a new class of society - the Knowledge Society. Knowledge thereby becomes the fundamental resource for all economic and developmental activities in the knowledge society of which women form an equal part. The process of synthesis of knowledge possessed across communities, by men and women, with the global pool of knowledge with the scope for further enrichment lays the genesis for knowledge networking. Knowledge networking opens up a new way of interactive communication between government bodies, NGOs, academic and research institutions, and the civil society. It helps communities, both men and women, to take appropriate steps to recognize and document the knowledge they possess and in reflecting this knowledge in a wider social domain for directed change through the use of information and communication technologies.

The one resource that liberates people from poverty and empowers them is knowledge. Possessing knowledge is empowering, while the lack of knowledge is debilitating. The World Bank organized a forum called "Voices of Poor", which got feedback from 60,000 people in 60 countries, which concluded that people wanted access to knowledge and opportunities instead of charity to fight conditions leading to poverty.*(World Bank, 2000).* And Knowledge is not a scarce resource - it is infinitely expansible and proliferates with its use...."the capacity to acquire and generate knowledge in all its forms, including the recovery and upgrading of traditional knowledge, is perhaps the most important factor in the improvement of human condition." *(Benzason and Sagasti, 1995)*

In the context of knowledge sphere, the issues of gender equality, equity and empowerment of women become even more significant as women have a strategic role in incubation and transfer of critical knowledge, which often forms the blue print of survival for communities to adapt and minimize their risk in adverse circumstances. Women, because of their biological and social roles, are generally more rooted than men in the confines of their locality. They are therefore more

aware than men of the social, economic and environmental needs of their own communities *(Miller, 2000).*

3.3 GLOBALIZATION AND ICT

The swift emergence of a global "information society" is changing the way people live, learn, work and relate. An explosion in the free flow of information and ideas has brought knowledge and its myriad applications to many millions of people, creating a number new choices and opportunities in some of the most vital realms of human endeavour. Yet too most of the world's population remains untouched by this revolution. The "digital divide" threatens to exacerbate wide gaps between rich and poor, within and among countries. The stakes are high indeed. Timely access to news and information can promote trade, education, employment, health and wealth. One of the hallmarks of the information society openness is a crucial ingredient of democracy and good governance. Information and knowledge are at the heart of efforts to strengthen tolerance, mutual understanding and respect for diversity. To bridge the digital divide, the only sustainable route is to reduce poverty. In the long run governments need to do much by enhancing access to education and health care through distance learning and telemedicine. ICT can improve the quality of life for poor rural communities who do not have access to these facilities.

3.4 INFORMATION TECHNOLOGY IN INDIA

Information is power. The less informed are those who have poor access to information and are, therefore, powerless. Women fall into this category, as their information on many matters is restricted for cultural, social, economic and geographic reasons. The primary reason for women's poor access to information is illiteracy and lack of proper education. A great deal of information available through print media and books is lost to women and men who cannot read. Over 50% of women in India are illiterate, and this illiteracy is a barrier to the acquisition

of knowledge on various matters relating to their lives. After much research, several surveys and the cumulative experience of implementing a variety of social development programmes in recent times, two realizations have emerged strongly. The first is that, in many ways, the current system of education is irrelevant and, therefore, there is no great incentive to send girls to school. The second—and this should be stressed—is that women's most urgent need is awareness through dissemination of information, irrespective of whether they are literate or not. Where life skills are concerned, schooling is both necessary and desirable because it enhances knowledge, but it is not essential. For instance, the example of infant care. Today, the major cause of high infant mortality and malnutrition has more to do with lack of knowledge about feeding than insufficient food because of poverty. Misinformation on infant nutrition is rife, and it begins with the pregnant woman's diet. The distortion of traditional customs has led to practices that harm both young infants and pregnant women. One such belief is that pregnant women should eat less to avoid gaining weight and to have an easy labour. Other poor practices affect the nutrition of infants. In many parts of the country, solid foods are given long after malnutrition sets in. The answer to the problem would be to start infants on solids from the fourth month, to promote better growth and effectively raise their nutritional status. Thus, it is equally crucial to inform and involve not only women, but also the whole family and community, if to bring about a change in the nutritional and health status of women. Inadequate information has led to the establishment of misguided traditions. Surely education is an urgent requirement in affected areas.

3.5 WOMEN AND TECHNOLOGY

The inevitable course of action is to convene a gender perspective on technology. "Any technology that is not appropriate for women is not truly appropriate technology." The concern raised in this expression is applicable to all walks of life

where technology is an eminent and powerful tool that can bring about a change. The gender and technology concept comprises many dimensions, (Goonawardena Chandra (ed) 1995) :

- ? Technology to facilitate women's productivity
- ? Technology to reduce women's drudgery
- ? Technology to empower women
- ? Technology to remove hurdles to women's growth
- ? Role of women in technological fields
- ? Familiarity of women in handling technology
- ? Decision-making capacity of women in technology-related issues
- ? Exposure of women to technological scenarios at national and international levels
- ? Gender sensitivity in technological aspects

A nation that wants to progress cannot afford to ignore capacity building and empowerment of women. Gender sensitivity is the prerequisite that must prevail and be strengthened at all levels. Women's development is now inextricably linked with technology. Thus, technological intervention assumes a greater and more vital role, especially when viewed globally. Its potential to sweep across political, geographical, economic and social barriers is just the leverage that women need to build for themselves a new identity and a more honourable place in society.

As has been experienced the world over, women have limited access to technologies in India. However, there are now enough experiences to show that when women are trained, they show remarkable understanding and control in using technologies effectively. In India, women comprise a large portion of the rural population and play a substantial role in the rural sector. Their involvement in a number of productive activities is generally overlooked. The experience of women

in the field of animal husbandry—particularly dairying—is a case in point. Women have expressed their helplessness in looking after cows, diagnosing various ailments and providing immediate care. The reasons cited were their ignorance of modern veterinarian care, on the one hand, and the lapse of traditional methods of care on the other. A study of the situation in different parts of the country resulted in the proliferation of a whole range of manuals for animal husbandry workers. But technical information was presented in such complicated terms that it mystified even technical workers. It is from the United Nations Fund for Women's Development (UNIFEM), an expert team of veterinarians worked on simplifying the manuals and drawing up pictorial charts. The manuals and charts listed the do's and don'ts for practitioners in the field. Large groups of women in the dairy industry welcomed this information as it empowered them with relevant knowledge, bypassing the otherwise prerequisite need for schooling and literacy.

In Himachal Pradesh, women mid-school dropouts repair water pumps and manage computer data for the maintenance of the pumps. The rural women of SEWA/DDS use audio and video equipment to communicate effectively. It is pertinent to point out that women in India have a thirst for knowledge and access to the new technologies. Flower vendors in Tamil Nadu, though illiterate, were aware of technological advances in many fields. Their question was whether they could be informed of methods by which they could keep flowers fresh for a longer period of time. Of course, there were scientific methods that they needed to learn. In another case, a group of women who saw videotapes in their village asked for worthwhile technology transfer through programmes that could teach them and help upgrade their skills. While they knew nothing of the teach-yourself series, what they demanded wasn't any different.

3.6 ROLE OF COMMUNICATION TECHNOLOGY

Information technology is the common denominator that links people, irrespective of caste, class, sex, religion, race or political alignments. This is why it becomes even more important to evaluate and assess the role of communication technology in empowering women, particularly from the point of view of access and utilisation. Gender equality presupposes elimination of all kinds of bias against women, and communication technology intervention can accelerate the pace of equality through gender sensitisation. Communication technology can be used to impart information, and that in turn will lead to motivation, mobilisation and action. Communication technology can encompass different approaches–welfare, participatory and catalyst approaches with women as change agents. Information, reinforced with success stories, can motivate women to adopt healthy lifestyles. For instance, information on immunisation, child mortality, maternal mortality, sanitation, nutritional awareness and causes, prevention and treatment of disease can be disseminated far and wide via communication technology. Although computers and the Internet are altering the way we work, communicate, learn and play, the possibility of installing personal computers (PCs) in Indian villages is still fairly remote. Most villages are still without roads usable by cars, nor do they have a stable electricity supply.

3.7 COMMUNICATION TECHNOLOGY AND EDUCATION FOR WOMEN

In the last 30 years, communication technologies have been used in a number of educational and developmental applications. While many of the projects have been promising, in the long run they have been uneven in performance and impact. Despite the vast range of experiences, there is little conviction in the education sector that communication technologies can be designed to effectively address the problems of education. The former Secretary for Human Resource Development was pleasantly surprised when teachers demanded the extensive use of video for

training, (HRD, 1990). The national policy on education, 1986, observed that modern communication technologies have the potential to bypass several stages and sequences in the process of development, encountered in earlier decades. Both the constraints of time and distance become manageable at once. Further, in the policy document there are directives to encourage the enrolment of girls. Consequent to experiences gained during SITE, the Ministry of Human Resource Development put in considerable effort to utilise technologies in the primary school sector. These technology schemes envisaged distribution of audio cassette players and television sets in primary schools. In addition, there were special schemes to provide primary teachers' training through video and television. In the last few years there have been special schemes and campaigns to encourage girls to attend school and, thus, elevate their status in the family. However, no special policy or schemes have been formulated to encourage women in tertiary education, particularly in the areas of science, information and communication technologies.

Information networks spanning the length and breadth of the country provide wide coverage. (All India Radio has over 200 radio stations and 300 transmitters and Doordarshan has 600 transmitters.) With this service provision at national, regional, and local levels, there should be no delay in harnessing networks for better education. In fact, both All India Radio and Doordarshan are powerful tools with which to disseminate information in a country the size of India. They are being used for this purpose, particularly by the University Grants Commission (UGC), but in a limited manner. Plans are in the works to use these services more extensively. They need to be carefully yet urgently worked out and implemented.

3.8 WOMEN AND TECHNICAL EDUCATION

Distance education has come to stay in this country. It holds great promise for the future with emphasis on quick training and communication of information. The Department of Women and Child Development has made a modest start with small

experiments in educating people at the grassroots level on procedures for obtaining loans from the Rashtriya Mahila Yojana (RMK) for micro-enterprises. The distance mode has also been used for nutrition education and organization of women's groups under the Indira Mahila Yojana (IMY) on an experimental basis. The status of women in distance learning, according to the *UGC Annual Report, 1990-91*, the enrolment of women for Distant Learning was 37.06%. In 1998, the enrolment of women in Indira Gandhi National Open University (IGNOU) was 28.4%. The enrolment of women in IGNOU is considerably lower than the national average, and an analysis shows that women continue to enroll in courses which fall in the domain of women's work and extending home skills. The enrollment in the various university shows that the perceived relationship between technology and masculinity is so entrenched that women are excluded from technical education and, hence, from technical jobs. The fault lies in gender stereotyping and is further compounded by the fact that technology is not included in school curricula. Since it is a subject exclusive to higher education, it is projected as abstract and complex.

The present under-representation of women in science and technology requires a larger awareness that encompasses parents and other authority figures and educates them on the debilitating effects of gender bias within the family, society and nation at large. The women enrollment in science, technology and vocational courses, such as the B.Sc., B.A., M.C.A. and M.B.A. offered by distance learning is below 30%. There are a few studies that focus on aspects of gender in distance learning. In one, "Problems of Women Students in Distance Education," Rathore, Singh and Dubey list many problems that, though they are common to male students too, become more acute in the case of women. The most severe of these are irregular and unsystematic tutorial help, supply of reading material and lack of study centres. They concluded that women "reelect the concern about their learning and academic achievements." (***Rathore, Singh and Dubey***)

3.9 CONSTRAINTS OF INDIAN WOMEN OVER THE AGES

- ? Patriarchy and social pressures.
- ? Gender inequality
- ? Caste based discrimination and social restrictions
- ? Inadequate access to productive resources
- ? Poverty
- ? Insufficient advancement facilities and
- ? Powerlessness

The above problems have plagued the lives of Indian women with little respite. But in the new circumstances created by Structural Adjustment Programmes (SAP) for globalization are diverse and encompass all aspects of women's lives in India. It has affected both the quantity and the quality of work available to the majority of women in India. The traditional role of women in agriculture, livestock and animal husbandry, Khadi and village industries including handicrafts, handlooms fisheries, etc, is being undermined because mechanization and automation is becoming prevalent in the market based economy.

3.10 WOMEN AND GLOBALIZATION

As far as Indian women are concerned, globalization is a double-edged process. On the one hand, majority of women in India find themselves stripped off the benefit of social security, government subsidy protection of labour rights and than safety nets. On the other hand there are possibilities of better education facilities and opportunities at the transnational sense, which are very attractive to the privileged few. It is however necessary to understand that effective development requires full integration of women in the development process as agents of change as well as beneficiaries because Indian women can be utilized as development resources in many ways.

3.11 ICT AND ITS ACCESS

India is a major contributor and developed nation in terms of ICT infrastructure. The reduced tariff of telephones, the charges had drastically reduced attracting many users on to the mobile era. These reduced charges had brought a revolution towards mobile phones and internet access by bringing more people on to the network. After identifying the need to develop the rural area, India had taken major steps towards the development of rural people. Community Internet centers was established all over the country, connecting the isolated villagers to the knowledge base. Government of India had established 487 community information centers in the northeast India, which is geographically isolated. The infrastructure of India for the year 2000 according to the *World Bank (2000)* is as follows: Telephone land lines per 1000 people is 32, mobile phones is 4, daily newspapers 48, Radios 121 and television sets 78, (*World Bank Report - 2000)*

3.12 GROWTH OF INTERNET IN INDIA

The last two-decades has seen the birth and growth of internet in India as a phenomenon that has transformed the life of the people in several respects. Its presence has been universal. The following table shows the yearly data of the number of internet connections as well as internet users estimated.

Year	Internet connections	Internet users	Direct exchange lines (DELs)
1996	0.05	0.25	11.98
1997	0.09	0.45	14.54
1998	0.14	0.70	17.80
1999	0.28	1.40	21.61
2000	0.90	2.80	26.65
2001	2.30	7.00	32.71
2002	4.50	13.50	40.53
2003	10.0	30.00	48.40

(*Figures in Millions)*

3.13 CONVERGENCE OF COMPUTING AND TELECOMMUNICATIONS

The term “convergence” commonly refers to the provision of different kind of services over the existing infrastructure and the enhancement of existing technologies so as to provide a wide variety of new services. Convergence of computing and telecommunications was perceived as one of the most important trends in ICT. Since the early nineties, computer networks were widely used, and increasingly contributed to the globalization of economic activities. Computer networks in convergence with telecommunications, commonly referred to as “Information Infrastructures”, are now viewed as fundamental and critical bases for future economic and social development. The convergence of carriage and content, along with imaginative applications open up tremendous possibilities for delivering a big basket to the consumer empowering them to choose, use and control voice data and images delivered through a common device. However, it is not so easy or simple to bring the dream of convergence applications to the user with the existing organization of industry and other structures. Convergence involves vertical as well as horizontal integration of various entities. Convergence applications go much beyond the three segments of information and entertainment and have a capacity to change the system of governance and delivery of services in the total electronically networked environment.

In India, broadcasting has been a state monopoly with the stress shifting in recent years from expansion of network to technology upgradation. The telecommunication sector, on the other hand, witnessed in the last decade a radical transformation from monopoly of operations to a situation of vigorous competition with fast track liberalization of services and infrastructure. Internet, the latest entrant to the field, acquired tremendous acceptance within a short span with a fast and impressive growth. These three different “product lines”, namely, Broadcasting, Telephony and Internet are now in a position to converge through wired and wireless media. This process involves major changes in the structures of the

computer industry, information and content industry, and the communication industry.

3.14 E-GOVERNANCE IN INDIA

The initiatives towards ICT at various stages of development/implementation of central government includes: India Portal, National Institute of e-governance, central repository of data, dissemination of information relating to best practices/innovations in e-governance, awards for best websites and innovative use of IT in the delivery of public services. In addition citizen service centers were set up for one stop and non-stop delivery of services to the public. India Portal is a user- friendly portal of all government web sites for providing information and delivery of services.

Several state governments have taken various innovative steps to promote e-governance. One of the most popular as well as significant measures has been Chief Minister's Information System (e.g. Andhra Pradesh, Madhya Pradesh and Rajasthan), which monitors a range of activities from developmental programmes to redress public grievances. The Andhra Pradesh Development Monitoring System (based on a multipurpose household survey) has a database with spatial as well as non-spatial parameters of the entire population (75 million) of the state. Similarly, Vikas Darpan (mirror of development) of Rajasthan envisages GIS-based planning and decision support system. Andhra Pradesh has also introduced APSWAN (Andhra Pradesh State Wide Area Network), a state wide network for voice, data and video communication, which is the basic information highway for improving government-citizen and government - industry interface. The Secretariat Knowledge Information Management System (SKIMS) of Andhra Pradesh efficiently manages information in the secretariat. The Disaster Management System in Gujarat maintains communication during natural disasters. In Karnataka, computerization of treasuries captures every single transaction at all district and taluk (sub-district) treasuries.

In Gujarat, VIDYUTNET, India's first VSAT-based communication network supports real time data applications for power generation and distribution. The Government of Kerala has introduced the RD Net project (Information Kerala Mission) to connect all the 152 block offices in the state with a view to transform local bodies into genuine institutions of self-governance. Office of Controller of Entrance Examinations has been automated to bring about transparency in allocation of colleges to successful students in Kerala. In Maharashtra, the Connectivity Project has networked 3000 offices.

3.15 THE NEED ICT FOR WOMEN

Information needs of women in the new globalized environment are as diverse as the socio- economic scenario. Treating women, as a monolithic group will over simplify their information needs. Within women's group itself, globalisation has created the haves and the have nots i.e those who are in an advantageous position due to globalisation and those relegated further into disadvantaged position under the new economic policy. The
information needs will also differ accordingly.

3.15.1 Urban women and ICT

The urban educated women need information mainly pertaining to:

- Research
- Educational opportunities including prospects abroad
- Career advancement facilities
- Job / employment prospects in India and abroad
- Matrimonials
- Fashion and market values
- Health and child care facilities which includes sexual and reproduction activity
- Information

- Art and entertainment
- Social support system for working women
- Legal rights and provisions

The urban lower middle class women however, specially need information on:

- Expensive educational facilities
- Career advancement and job opportunities in the city itself
- Matrimonial within the restrictions of caste and class
- Inexpensive health and childcare
- Inexpensive social support systems for working women
- Legal rights and provisions against social injustice, domestic violence,
- Dowry system etc.

A large chunk of women who have been adversely affected by the globalization process are the poor urban slum dwellers and women. To say the least they are the most marginalised people in the urban sector. Their information needs are only for subsistence. They may need information on the following ground:

- Health services and child care facilities which are available free of cost.
- Job opportunities in the low paid informal sector including domestic services
- Housing availability specially in slums
- Free educational facilities for their children specially for boys
- Information regarding government programmes for the poor and how to deal with the procedure
- Legal provisions against sexual harassment, domestic violence and social injustice.

3.15.2 Rural women and ICT

Like urban-rural disparity, the women also divided on the basis of economic and social positions in the rural society to understand their information needs. Elite women in the rural sector are mainly from the

landed gentry class or from the highly sophisticated politically important families. They are also usually from the upper castes. Their information needs are akin to that of the urban elite women excepting for the fact that they often are passive viewers in the changing socio-economic scenario because they are bound by the upper caste traditions where patriarchy rules supreme. The rural educated middle class women are more prone to change. They are in the process of gradually breaking the caste and class barriers and are working towards better education and economic independence. They are in urgent need of information regarding their new entitlements:

- Educational opportunities outside the village
- Job opportunities in both formal and informal sectors
- Government assistance programs for career advancement within the restriction of traditions
- Health services including sexual reproductive health
- Modern child care facilities
- Legal provisions to counter sexual harassment, domestic violence and social injustice.

The largest group, which has been marginalized from getting any need based information is the rural poor. Though this is the most active group of women in the rural sector, they have never been specially considered for information dissemination. Information system specially designed for the rural poor has to be need based because this group has been worst affected by the process of globalisation. Their information needs will encompass their economic, social and familial roles.

As Nath pointed out by focusing on the improved use of information and communication technologies, women can broaden the scope of their actions and address issues which were previously beyond their capacity. For example, knowledge networking for influencing decision-making strengthens the democratic processes and brings recognition to the power of women community as it enables the decision-making mechanism to perpetuate right below to involve women at the grassroots level without being concerned to the bureaucratic straitjacketed approach

of the more formal institutions. Alternative mechanisms to carry out these tasks would take a lot more time, resources and efforts. *(Nath, V. 2000.*

3.16 WOMEN AND ICT EMPLOYMENT

ICT makes the role of time and distance less significant in organizing business and production related activities. As a result of the technology, a high proportion of jobs outsourced by big firms are going to women. Women therefore can work from anywhere and at anytime and raise that extra income to become more financially independent and empowered. Recently, companies like Ford and General Electric have come to Asia and employ a large number of women workers having basic information technology and data management skills. New areas of employment such as telemarketing, medical transcriptions etc. have also opened up tremendous job opportunities for women. These jobs are definitely underpaid and fall at the lower segment of ICT jobs; nevertheless, they are opening up avenues where none existed before. Significantly, the process of initiating knowledge networking by itself creates jobs in developing countries. Knowledge networking requires skilled and trained knowledge workers who can perform specific tasks of understanding, compiling, analysing, searching, providing value addition and disseminating information etc. A number of women get employed in such jobs. *(Nath, V. 2001).*

3.17 WOMEN ENTREPRENEUR AND ICT

One of the most powerful applications of ICT in the domain of knowledge networking is electronic commerce. Electronic commerce refers not just to selling products and services on-line but also to the promotion of a new class of ICT-savvy women entrepreneurs in both rural and urban areas. Women over time have learned the advantages offered by ICT and its potential in opening up windows to the

outside world. This has put them in a greater control over the activities performed by them laying the foundation for entrepreneurship development.

3.18 WOMEN AND GOVERNANCE

One of the main functions of the government is to provide information with regards to policies, rules and regulations, administrative and service delivery matters, etc. This information forms the basis of informed participation of the civil society in matters relating to governance. The newly elected women members of the *Panchayat* have started demanding proper training for capacity-building in order to understand the functioning of *panchayats*, budget operation and the method of executing works. They are very aware of their inadequacies resulting from lack of literacy and exposure. Nevertheless, they are determined to overcome these stumbling blocks and believe that with training and exposure they will be further enabled. Systems of training are given priority in all departments dealing with social development. These schemes are to be intensified both for technology transfer in improving lifestyles and for upgrading skills to achieve greater productivity. More than anything, training is essential in capacity building and empowerment of women so that they can improve their status in society. Women, who are considered agents of change, can perform this role adequately only if they are empowered with the skills and knowledge to bring about change. The transformation has to be originated with the training of catalysts–the army of workers responsible for implementing a variety of programmes. Only then it will become possible to pass on information and create the necessary awareness of change. New technologies have to come to the rescue of vast numbers who have been deprived for so long.

In Dhar district of Madhya Pradesh, Gyandoot is an intranet project which connects 21 rural cyber cafes called Soochanalayas. Each Soochanalayas provides services to about 10 to 15 Gram Panchayats, 20 to 30 villages, 20 000 to 30 000 in population. Women benefit from such interventions as now they have a greater

understanding and control over the local processes. They may file complaints regarding common public grievances through the net and an e-mail reply is assured within seven days. Provision of this basic information to the women communities would imply their greater awareness and interest about governance issues leading to their greater

The project "Inter-city marketing network for women micro-entrepreneurs through cell phone" launched by *Foundation of Occupation Development* (FOOD) in Tamilnadu has established a closed user group communication network for community based women's organizations (CBO) to promote inter city direct sales of products made by them. This has been accomplished by providing the CBO's with communications links by the way of cellular phones that enables them to network for marketing their products. FOOD has organized 200 CBO's in such a way that they can interchange their produce for marketing. That is, products made by one CBO are sent to a CBO in another area for marketing. Products being produced and marketed by the women groups include cleaning liquid, soap oil, bath soap, washing powder, washing soap, rice, papads, pickles, juice, masala powders, incense sticks, candles, skirts for kids, gents & ladies wear etc. In this process, the production cost is almost 50% less compared to the same product produced in other cities. This is achieved because the raw materials are locally available and the products are home made, which does not involve much investment towards infrastructure. Further the entire family works at a time that is convenient to them. This helps them to maintain their family and at the same time make use of their leisure time more productively.

3.19 STATUS OF WOMEN IN ICT

According to the all surveys conducted in 1996, 1997 and 1998, by *BMRB international*:

- ✍ The number of women who have used a PC at some time has increased since 1996 but is still below that of men (51% compared with 66%).

- Women are less likely than men to have access to or use a PC either at home or at work.
- It is found that women's use of the internet / web still lags behind men. The latest figures suggest that only 40% of internet users are women.
- Women are less likely to feel that PCs and the internet / web would be useful to them in their daily lives. Women are also more concerned about making a fool of themselves when trying to learn about new technology and are more worried that technology is leaving them behind.
- Women appear to be less confident in the computer skills.
- As it is defined in ICT Industry, women are underrepresented in all sectors, accounting for around 30% of employees.
- Women are also underrepresented on higher education courses relevant to the ICT sector - both in computer science and electronic engineering.
- Evidence from the US suggests women entrepreneurs are more likely to adopt the internet and new technologies for business growth than men.
- There is very little readily available data comparing attitudes to ICTs, employment in the ICT sector and qualifications across countries.
- There are examples of successful women working in the ICT sector in the UK, which could provide very useful role models to encourage women to consider careers in ICTs.

3.20 WOMEN EMPOWERMENT THROUGH ICT

Barriers to engendering knowledge networking processes with the inception of ICT and convergence technologies, it is possible to bring up a significant fraction of women communities in a more symbiotic digital network which focuses on localized information and customized solutions, and works on the theme of Global Technologies for Local Use. Women, however, are still very much in a minority among the beneficiaries of knowledge networking. Women still face huge

imbalances in the ownership, control and regulation of these new information technologies, similar to those faced in other areas. *(New York Times, 2000).*

3.21 SPECIFIC DETRIMENTS TO THE ICT

3.21.1 Awareness

Governments and civil society organizations have still not fully absorbed the full potential of ICT in gender development and therefore are far from the stage of creating enabling frameworks and spaces for the growth of engendered ICT-models. This is often because the use of ICT in knowledge networking is a fairly new process and requires a modicum of sensitization and belief in the technology which is a factor of time as well as the willingness to adopt.

3.21.2 Access issues

The new technology comes at a financial cost, which hinders its penetration to the individual and sometimes even at the community level. The problem is even more compounded by the fact that women in developing countries have little control over the household income and do not have the decision-making power to invest in these technologies. Further, there are associated physical and infrastructure requirements such as electricity, telephone lines, spare parts, and internet gateways etc., which are unevenly distributed in developing countries and add to the cost of initiating knowledge networking. The availability of ICT in these countries is therefore skewed towards the urban areas and women in rural areas constitute one of the main marginalized groups.

3.21.3 Capacity and skills

Initiating knowledge networking processes and benefiting from them requires a threshold level of capacity and trained human resource power to handle technology and networking issues. Women because of their backward position, are,

therefore, at an even more disadvantaged position than men in developing countries to fully benefit from knowledge networking.

3.21.4 Linguistic barriers

Ironically, much of the knowledge present in the global pool is in the English language, which is not understood by the poorest communities. There is very little content in the global pool in the vernacular language of non-English speaking communities. This makes the amalgamation of local knowledge of women with the global knowledge a difficult task.

3.21.5 Key issues

It is fact that the majority of the poor are women; they experience vulnerability and powerlessness to a much higher degree than men. Equitable access to ICT technology and the autonomy to receive and produce the information relevant to their concerns and perspectives are therefore critical issues for women. ICT strategies and models can succeed in bridging the poverty gap only if there is a concerted effort towards formulation of enabling policy frameworks and avenues; these create opportunities and incentives for women to participate and benefit from the networking processes. Recent important international policy documents have recognized the gender implications of the new technologies. The “Platform for Action of the Fourth World Conference on

Women'” states that, “women should be empowered by enhancing their skills, knowledge and access to information technology. This will strengthen their ability to combat negative portrayals of women internationally and to challenge instances of abuse of power of an increasingly important industry”, *(Platform for action of the fourth world Conference on women 2000).*

3.22 CREATION OF INTERMEDIARY ORGANIZATIONS

The starting point for any successful gender-entrenched knowledge net-

working approach is the development of relationships that make it easier for women to talk about their needs, share information, and work together. This is where the intermediary organizations can provide a platform for women to get actively involved within the processes. These organizations have a significant role to play in managing the rapidly growing body of knowledge about development, and in building the capacities of women communities to transform information and knowledge into ingredients of empowerment and equitable development through outreach and training of direct beneficiaries.

The personal ownership of ICT for the vast majority of women in developing countries is not feasible for the foreseeable future, which implies that the question of where and how they can gain access to ICT becomes central to the knowledge networking processes. The intermediary organizations can facilitate in bridging the "last mile'" of connectivity by providing community based technological interface for the networking process. Intermediary organizations can ensure that e-mail accounts, bulletin boards, search engines, mailing lists, list serves and other useful functions serve as communication, networking and collaboration channels among the women's group, and between women and the external sphere. Intermediary organizations could also contribute to building capacities of women by providing them training in basic computer literacy skills, Internet access and access to information via Internet, desktop publishing, web-site creation and e-commerce.

3.23 IMPARTING TECHNICAL SKILLS AND EDUCATION

The potential of ICT for women in developing countries is highly dependent upon their levels of technical skill and education, and is the principal requirement for accessing knowledge from the global pool. The sophistication of any ICT infrastructure introduced into any environment becomes meaningless if women don't have the skills to operate the system and use it to their best advantage. This implies that the government and the NGOs need to focus on interventions, which

lead to skill development and a rise in educational levels among women. It could be done through imparting of technical education on the use of ICT as a part of both formal and informal educational systems and initiating distant-learning and vocational courses on the same. Further, start-up CD-ROMs could be created for women communities having access to ICT. These start-up kits should contain the elementary tools of web-site designing, and designing software, search engine codes, guestbook and counter codes, links to sites providing free web-space, translation / transliteration software, image file compressor software etc.

3.24 CREATING VIRTUAL NETWORKS AND REMOTE VOLUNTEERS

ICT offers an unprecedented potential of providing help to local women communities through virtual networks backed by team of ICT volunteers and professionals working from any part of the globe. Virtual networks can help build technical capacities of women groups to use ICT to their advantage and can help them get linked with other communities sharing similar interests. These networks could capture institutional learning and knowledge products, and build a database of which ICT models work under what conditions, and later enable sharing of these products with different women groups. Remote volunteers could bring about a transfer of expertise to these women groups and also facilitate in trouble shooting and sourcing relevant software and codes for their use. The United Nations Information Technology Services (UNITeS) of the United Nations Volunteer (UNV) is already working in this direction. Through the mobilization of volunteers, both on-line and on-site, UNITeS provides training on the use and opportunities of information and communication technology (ICT). The programme intends to foster the participation of developing country nationals as volunteers to the greatest possible extent and will give priority to South-South exchanges.

3.25 SETTING UP PROTOTYPE ICT MODELS

Women will not be able to benefit from knowledge networking processes unless specific ICT-models are created which are targeted to the needs of the local women community. This learning could then be disseminated by creations of start-up CD-ROMs or web-sites that contain KnowNet Initiative. The initiative centres on propagating ICT models for creating an open system for recognizing, valuing and sharing local knowledge, in parallel with building of human capacities. It envisages creating a team of ICT-volunteers to train one person in each rural village to open up a two-way communication channel for extracting and hosting information on the net. It has created some simple and easy to use on-line resources to enable communities and individuals to take full advantage of the ICT revolution.

Quite a few organizations and individuals have benefited from this service. Information and the necessary software tools for setting up simple ICT-models those women can initiate at the community level. For example, prototype models of a web-site which displays e-mail and postal addresses of all the local district level government officials could be created so that women could use e-mail or e-mail-to-fax technologies to influence local area governance. Models may also be created on the lines of setting up virtual shops for marketing of local handicraft and skills or on how to search for information pertinent to the local women community such as on health issues, horticultural information etc. Further, emphasis needs to be given to the creation of gender sensitive local content portals which would encourage local participation and lead to generation of knowledge relevant to local communities.

The women have used the information communication and technology for their greater betterment. It makes a difference in their way of living, adapting the modern technology. It makes their life more easier than before. The state of Tamlnadu also presents a similar picture which is discussed in the study findings

chapter.

Chapter-4

Study Findings

The above study was carried out in the state of Tamil Nadu, one of the economically and technologically advanced states. In the recent years, through the implementation of various ICT related projects, the state is successful. By seeing its growth in this sector, the potential work force in the state, various foreign agencies, government of India and other non governmental agencies are seriously involved for the further development of this sector. Their mission is to reach where no one had reached before. There are also many projects for the greater involvement of women and more particularly poor and rural women. The main object is to make the women both economically and socially strong.

The study is carried out in the five municipal corporations of Tamilnadu including that of capital city – Chennai. The areas selected for the study were taken keeping in mind their location, access to ICT, population and literacy. The five study areas are: 1. Coimbatore, 2. Madurai, 3. Chennai, 4. Tiruchirappalli and 5. Thirunelveli.

4.0 STATE PROFILE

Tamilnadu State is situated at the South Eastern extremity of the Indian Peninsula bounded on the north by Karnataka and Andhra Pradesh, on the east by Bay of Bengal, on the South by the Indian Ocean and on the West by Kerala State. It lies between 8 5' and 13 35' of northern latitude and 76 15' and 80 20' of eastern longitude with an area of 1,30,058 square kilometres. It is the 11th state in India in area forming 4.11 percent of the Union areas.

4.1 LAND

The State is broadly divided into two natural divisions - the Coastal plains of South India and the hilly western area. Parallel to the coast and gradually rising from it is the broad strip of plain country. It can further be subdivided into coromandal plains comprising the districts of Kancheepuram, Thiruvallur, Cuddalore and Vellore. The alluvial plains of the Cauvery Delta extending over Thanjavur and part of Tiruchirapally districts and dry southern plains in Madurai, Dindigul, Ramanathapuram, Sivaganga, Virudhnagar, Tirunelveli and Tuticorin districts. It extends a little beyond Western Ghats in Kanyakumari district. The Eastern Ghats enter the state from Andhra Pradesh in the north cut across the state and merge with The Nilgiris Hills on the Western Ghats. The region is bounded on South-West by the crest of the Cardamom hills and on the North-West by the slopes of the plateau. The state has an uninterrupted coastline of 922 kms, which includes the Coastline of Pondicherry and Karaikkal. The coastline is a lengthy boundary on the east. Madras City has an artificial harbour is also a major Port.

4.2 HILLS

The Western Ghats averaging 3000 to 8000 feet height run along the western part with the hill group of the Nilgiris and Anaimalai on either side of it. Palani Hills, Varushanad and Andipatti ranges are the major off-shoots of the Ghat. The other prominent hill group comprises the Javadir, the Shevaroys, the Kalrayan and the Pachaimalai. These ranges continue south of the river Cauvery.

4.3 RIVERS

The Western ghats form complete water shed and no river pierces through them. The main stream viz., Paralliyar and Vattaseri Phazhayar are 37 and 23 miles respectively in length and fall in the Arabian Sea. All the other rivers are east

flowing rivers. The Eastern Ghats are not a complete watershed and as a result the river pierce through them and notable among them is the river Cauvery.

4.4 CLIMATE AND TEMPERATURE

The Tamilnadu has an equatorial, tropical climate in the inland and an equatorial, maritime climate in its coastal regions. In the inland, the temperature may go to extreme in some places while it tends to be moderate in the coastal areas. By and large, the average temperature for most parts of the state range between 28 C and 40 C in the summer season and between 18 C and 26 C in the short-lived winter seasons. In the more hilly terrain, the maximum temperature may be as low as 26 C and the minimum temperature may go down to 3 C. The normal rainfall is 945.0 mm.

4.5 POPULATION

According to the 2001 census, the population of India is 1,027,015,247 comprising of 531,277,078 males and 495,738,169 females. The population of Tamil Nadu stood at 62,110,839 comprising of 31,268,654 males and 30,842,185 females. The population of Tamil Nadu constitutes 6.05% of the India's total population. It ranks 6th among the States / Union Territories. The population, which was 55,858,946 in 1991, has gone up by 6,251,893 over the last ten years. This represents an increase of 11.19% during the period 1991-2001 as against the growth rate of 15.39% during the period 1981-91. The density of population per Sq. Km. Is 478 in 2001 as against 429 in 1991.

4.6 LITERACY RATE

Literacy standard in Tamilnadu as per 2001 census is 73.47% as against 62.66% in 1991 census. This shows the good growth rate in literacy. This growth rate is in tune with All India growth rates and literacy population is 65.38% in 2001 Census as against 52.21% in 1991 Census. The state's literacy rate is always high in

comparison with the national average, as for example, in 1981, the state's literacy rate is 46.76 per cent as against the national average 36.23.

4.7 ECONOMY

The Gross Domestic Product prices which was at Rs.70513 crores in 1996-97 has increased to Rs.90760 crores in 2000-2001 registering an annual average growth of 6.21%. During this period, the primary sector consisting of agriculture and allied activities, forestry, fishing and mining and quarrying has registered an annual average increase of 2.54%. However, in 1999-2000 the performance of these sectors have a negative growth rate and registering near about 5%. The value added by the Secondary Sector consisting of manufacturing, construction, electricity, gas and water supply has been satisfactory. The sub groups of the entire tertiary sector have performed well during the period from 1996-97 to 2000-2001. Trade, transport, storage and communication sectors have recorded a high growth in 1999-2000 as 8.36 per cent and a minimum of 3.48 per cent in 2000-01. Banking and insurance, real estates and business services sectors have registered a maximum growth of 21.80 per cent in 1996-97 and a minimum growth of 8.00% in 1998-99.

4.8 AGRICULTURE

Tamilnadu is gifted with 33 river basins, the largest one's being, Cauvery, Pennaiaru, Vaigai and Tamaraparani. Of the total areas in the state, 59.2% is under cultivation (excluding forestlands). Rice and various pulses are grown extensively here. The annual food grain production exceeds 10 million tonnes, with rice alone contributing average 8 million tonnes. The main cash crops grown in the state are sugarcane, tobacco, chillies, and cotton, giving rich scope for the growth and development of the sugar, alcohol-based and textile industries. Other state sponsored schemes include the large-scale cultivation of spices and oil seeds particularly groundnut, seasmum, castor and coconut. Sunflower has become

increasingly popular in recent times. The diverse Agro-ecological conditions also make this land ideal for growing fruits and vegetables. The state ranks first in the yield of mangoes and fourth in bananas and grapes.

4.9 MINERALS

Minerals like limestone, lignite, granite, clay, gypsum, feldspar and graphite found abundantly in Tamilnadu. Besides these, small quantities of gold, copper, magnesite, kaolin, bauxite, asbestos, etc. are also found. Many industrial units have been set up for optimum utilisation of these mineral resources. The total area under forest cover is 17%. Of the 22,742.42 sq.km. of forest, timber and sandal wood are the main produce while tea, wattle bark and cashew are some of the minor products.

4.10 MARINE

Tamilnadu has a 1000 km. long coastline with its equatorial climate permitting year round conducive fishery and farming. Tamilnadu has 362 fish landing centres and annual fish catch is around 0.5 million mt. The state has a fairly stable presence in this sector with abundant skilled labour available, over 200 registered exporters of marine products, 29 freezing plants and 36 cold storages. Investment opportunities in this sector include, shrimp farming and processing, crab culture, seaweed culture, etc., in addition to opportunities in infrastructure like air freight services, cold storage facilities, freezing plant, etc.

4.11 INDUSTRY

Traditionally, Tamilnadu is one of the well-developed states in terms of industrial development. In the post-liberalisation era, Tamilnadu has emerged as one of the front-runners by attracting a large number of investment proposals particularly in recent times. Today, Tamilnadu is the third largest economy in India and its current state Domestic Product is well over US $ 23 billion. It has a well-

diversified industrial base. It has a lion's share at all India level in production of number of products.

4.12 TELECOMMUNICATION

Tamilnadu is part of the global telecom network. It has 1,603 telecom exchange with over 1.4 million lines with integrated communication facilities linking it to all parts of the world. The entry of international giants like US Wheat and Skycell into the market gave the much needed boost to this sector and provide basic and value added services in the state. Cellular and radio-paging services have been recently introduced in major cities like Chennai, Coimbatore and also to the remote part of the state.

4.13 SOFTWARE INDUSTRY IN TAMILNADU

The growth of the software industry in Tamil Nadu has been spectacular:

Fiscal Year	No. of Companies	Exports (Rs. Crores)
1993-94	10	2
1994-95	23	12
1995-96	34	37
1996-97	69	161
1997-98	108	393
1998-99	166	1246
1999-00	596	1914
2000-01	766	3116
2001-02	866	5223
2002-03	936	6316

Hardware exports from Tamil Nadu during 2001-2002 have been Rs.482 crores.

Studies by Harvard University, USA have predicted that Tamil Nadu is well poised to emerge as the top IT State in India as well as a gateway to SE Asia.

4.14 STUDY AREA PROFILE

4.14 CHENNAI

Chennai is the capital city of the State. It is one of the metropolises of India and serves as the gateway of the culture of South India. In spite of being the capital, it has emerged as a cosmopolitan city playing an important role in the historical, cultural and intellectual development of India, representing still the distinct components of the highest form of Dravidian civilisation. In addition, it holds out an interesting fare of South Indian architecture, music, dance, drama, sculpture and other arts and crafts. It is situated on the north-east end of Tamilnadu on the coast of Bay of Bengal. It lies between 12* 9' and 13* 9' of the northern latitude and 80* 12' and 80* 19' of the southern longitude on a sandy shelving breaker swept beach. It stretches nearly 25.60 km along the Bay coast from Thiruvanmiyur in the south to Thiruvottiyur in the north and runs inland in a rugged semi-circular fashion. It symbolises the rise of British power in South India by setting up and consolidation of the East India Company in the seventeenth century with its headquarters at Fort St. George in Chennai as a trading centre. The growth of the city is significant and closely linked with the development of British Institutions and administration. Chennai city has acted as an important centre of culture and education in South India and has been the cradle of many movements which have played an important role in the history of the sub-continent. The port provides trade links with Japan, Singapore, Malaysia, Burma, Bangladesh, Ceylon and other far eastern countries. As a district of the **s**tate, it ranks third after Coimbatore and Salem in so far as the number of factories is concerned but stands at the top in case of employment and productive capital and first in revenue. It, however, ranks second in terms of industrial out-put next to Chengalpattu.

4.14.2 Area and population

Total area of the district is 178.20 sqkm. As per 2001 census the population of this district is 42,16,268 and male constitutes 21,61,605 and female is 20,54,663. As per 2001 census, 80% are literate (male – 84.71% and female 75.32%). The total literate population is 30,79,004.

4.15 MADURAI

Madurai district is situated in the South of Tamil Nadu state. It is bounded on the North by the districts of Dindigul, Thiruchirapalli and on the East by Sivagangai and on the West by Theni and South by Virudhunagar. It lies between 9*30.00 and 10*30.00 of the northern latitude and between 77*00.00 and 78*30.00 of the eastlatitude.

4.15.1 Area & Population

Total area of the district is 3741.73178.20 sqkm. As per 2001 census the population of this district is 25,62,279 which constitute of males 12,95,124 and females 12,76,155.Density of population is 733 per s.q.k.m. Number of rural population is 11,29,028 where as urban population is14,33,251, out of which 17,95,751 people are literate. Tamil, Telegu, Sourashtra, English, Hindi are the major languages spoken by its inhabitants.

4.16 COIMBATORE

Coimbatore, popularly known as Manchester of South India, is situated in the western part of the state of Tamil Nadu. Coimbatore City is the district head quarter. Coimbatore is well known for its textile industries and has excellent potential for industrial growth. Because of its proximity to the hills of the Western Ghats, Coimbatore enjoys an excellent climate throughout the year. It is well connected with other parts of the country by air, railways and an excellent road network. An international airport is serving the city, which is located on Avinashi road at

approximately 10 kms from the city center. It is also well connected with rail service to various parts of the country. The city is connected by an excellent road network with Kerala and Karnataka. The National Highway no.47 passes through the city. The queen of hills stations, Ooty is only 90 kms from the city and is well connected by road and mountain rail service throughout the year.

4.16.1 Area and population

The population of the city as per 2001 census is 18,44,993.Covering an extent of 932.02 Sq Kms. It resides in the latitude of 110144N and 770235E of longitude.

4.17 TIRUCHIRAPPALLI

Tiruchirappalli, situated on the banks of the river Cauvery is the fourth largest city in Tamil Nadu. It was one of the main centers around which the wars of the Carnatic were fought in the 18th century during the British-French struggle for supremacy in India. The city is a thriving commercial centre in Tamil Nadu and is famous for artificial diamonds, cigars, handloom cloth, glass bangles and wooden and clay toys. People speak both Tamil and English.

4.17.1 Area and population

Tiruchirappalli covers an area of 146.90 sq. kilometers. The total population is 21,96,473 as per the 1991 census.

4.18 TIRUNELVELI

Tirunelveli is the penultimate southern most district of Tamil Nadu. It is described as a microcosm of the State, owing to its mosaic and diverse geographical and physical features such as lofty mountains and low plains, dry Teri structures, rivers and cascades, seacoast and thick inland forest,

sandy soils and fertile alluvium, a variety of flora, fauna, and protected wild life.

4.18.1Area and population

The Tirunelveli District is located between 08° 8' and 09° 23' latitude and 77° 09' and 77° 54' longitude. The total geographical area of the district is 6,823 sq. km. The district is surrounded by the State of Kerala, Gulf of Mannar and the districts of Virudhunagar, Thoothukudi and Kanniyakumari. Total population of the district is 28,01,194 and total male population is 13, 72,082 and total female is 14,29,112 according to the 2001 census. The total literate population is 19,17,238 (68.44%) and the total male literate is 10,41,964 (75.94%) and female is 8,75,274 (61.12%).

4.19 RESPONDENT PROFILE

In the five study areas, a total of 500 women respondents were interviewed by the researchers of **VAPS**. In each area, the respondents are one hundred. All the respondents are women which includes those who are working in the ICT sector, other sector, student, etc. Out of 500 respondents, the highest number are interviewed are the age group of 324 followed by the age group of below 17 years. 44 respondents below the age group of 17 years are from Chennai and Madurai represents 27, highest in the age group of above 35 years out of five-study area. For detail see table 4.19.1. Majority of the respondents are college educated (374) followed by school education (57), technical education (44) and literate or no schooling (19). For area wise distribution, see table 4.19.2. Those who are interviewed by the researchers of the organization, 192 are salaried employees, 160

respondents are students, 61 and 33 are unemployed and business persons respectively. For detail, see- 4.19.3. 271 respondents belong to the income group of above Rs. 5,000/ - and highest from the Chennai (90) followed by Tiruchirappalli (65) and Thirunelveli (49). 173 respondents belong to the Rs. 2,000/- to Rs. 5,000/- income group. Only one respondent interviewed from Chennai in the income of Rs. 2,000/- below. Table- 4.19.4

4.20 ICT AND WOMEN'S LIFE

It is true that ICT made life easier for both women and men. Though men enjoyed this few decades before, but now a substantial number of women has stepped into this sector and enjoy the fruits. When asked whether the introduction of ICT made life easier, more than half of the respondents (284) viewed they are strongly agree, followed by 169 some what agree. Only 24 and 19 respondents said that they do not know or can not say respectively where as only 3 respondents said they are not agree with the idea. In all the area, the research found that the respondents are equally divided with any of the idea. The trend shows that this sector helped the women to increase their awareness about the world and it also allowed them to participate in all the affairs of their work. See table - 4.20

4.21 PROPER FACILITY OF ICT

The rapid expansion of IT has reached to all sections and almost all area of India. Though rural and remote areas still lagged behind that of the urban areas, still IT marked a remarkable presence in all areas. Table 4.21 shows that 224 respondents said information and communication technology is available easily in their area. But near about same number (200) somewhat agree that it is available easily. 23 respondents disagree with availability of ICT in their area. 39 and 13 said that they don't know or cannot say respectively. The highest 56 of those who are interviewed out of hundred in Madurai said they are strongly agree the easy

availability of the ICT and the lowest 37 from Tiruchirappalli said they are strongly agree the idea of proper availability of ICT in their area. For area wise distribution, please see the table- 4.21

4.22 USE OF ICT

The ICT is not limited to a particular purpose. It enabled its users for the variety of purposes. Out of the six options presented to the respondents, for the purpose of the use of ICT, 416 respondents said they use it for the Communication purpose. It made clear that most of the ICT users use for the purpose of communication. Only 30 respondents said they use for the information, 12 for the Booking of tickets, 27 to get information in different aspects of life and 5 persons said they use it for the purpose of banking and insurance. In all the five study areas, more or less equal number of persons gave the same opinion about the purpose of use of the ICT. For the detail, see table – 4.22

4.23 SOURCE OF INFORMATION

In the age of advanced technology, people get the information through various sources like television, internet, radio, print media, etc. The persons contacted during the investigation, more than half (262) said the best source of getting information is Television. In every study area, more than half or near about the half of the respondents choose Television except 31 respondents from Chennai opted for Television. It shows other source of information is easily available in Chennai in comparison to the other areas. 40 respondents said from Chennai that they get information from the print media which is easily available. Out of the 500 respondents, 111 said they get information from the internet which shows that internet is easily available in their locality. They also revealed that it is easier for them to get a wide variety of information from the internet which is not possible to get from other sources. Among the respondents, most of them are students. A total of 90 respondents said print media, 33 said radio, which shows that radio is popular

among the small section of population. Those who opted for radio, they revealed that it is economical and also it is easier to carry with them and also useful for the entertainment. They said, after the office work, they have to work in house, they don't get time to watch television or read paper, but radio they listen even if they busy. Please see table – 4.23

4.24 INTERNET USER

Among the other information technology, internet is also easily available to its user and they make its variety use. When asked whether the introduction of internet made it for them to get information easily, near about half (233) strongly agreed and also near about same number (223) some what agreed with the idea. It shows from the table that the use of internet is more familiar in the area. The respondents are more or less equally divided with their opinion about the utility of internet for them in all the study area. 19 and 13 respondents said they don't know or can not say respectively. 11 respondents totally disagreed with the idea which is a very small number in comparison with those who agreed. For the area wise knowledge, please see table 4.24

4.25 ACCESS TO INTERNET

In all parts of the world, internet is easily available and a good number of population use it very easily. Women also have easy access to internet facility. Out of the 500 respondents, 388 said there is easy availability of internet in their locality. The highest out of 100, 90 respondents from Chennai said there is easy availability of internet in their locality and the lowest 68 from Madurai said there is easy availability of internet in their area. The figure shows that in Chennai, there are more internet users and easy accesses to internet in compare to other area. The data shows that there is easy availability of internet in all the study areas. Only 111

respondents said there is no easy access to the use of internet. Only 2 persons did not say anything. Please see table – 4.25

4.26 SOURCES OF ACCESSES

In India, there are also variety of sources of the availability of internet. Tamilnadu is not lagged behind. The respondents those who said there is easy availability of the use of the internet, the highest 170 said they prefer Cybercafe. According to them, it is easily available in their locality. 116 said they use it in the office for both the office purposes and personal work. Among those (77) who use internet at their home, for them, it is cheaper to use at home instead of other place and they also revealed that the introduction of the various companies in the market, it is now easily available and also cheapest in comparison to other source of use. Only 25 respondents said their use of internet is not limited to a particular source of internet instead they use it according to the means of availability and need of the time. For details, see Table – 4.26

4.27 FREQUENCY OF USE OF INTERNET

In Tamilnadu, the internet users use internet according to their need. The respondents from the study area said that they use it according to their need but only 103 said that they use it almost regularly. 118 respondents said they use it once a week where as 88 said that they use it when they feel necessary. 66 said they use it very rarely and also made a point that it is not necessary for them to use internet daily or for the unnecessary purposes. 48 said that they never use internet. It is also clear that the people of Tamil Nadu is more popular in the use of internet. The respondents from all the areas are equally divided in their opinion in the use of internet. For the area wise distribution, please see table – 4.27

4.28 REASONS FOR NOT HAVING EASY ACCESSES

Like any other developing and technologically backward country, India is not able to easily provide the use of internet to all sections of the society. The state of Tamil Nadu is no exceptional. It is also more difficult for the women users. The respondents those who said there is no easy availability of the use of internet in their locality, 126 said that the use of cyber cafe is costly and 97 said that there is also limited number of cyber cafe in their locality. 93 respondents did not specify there is no one cause for not easy availability of internet. There is also 77 respondents said there is no cyber cafe in their area. It can be said that there should be more cyber cafe in the area. But interestingly only 6 respondents from Chennai said there is no cyber cafe, which shows that the accesses of internet is more in comparison to the other area of study. For detail, see table – 4.28

4.29 PURPOSES OF INTERNET USE

There are also a large number of E.mail users in the state of Tamilnadu. They use internet more frequently for the e.mail in compare to other use of the internet. They use it because to share information which is more easier and quicker than any other source of communication. 351 respondents said they use internet for the E.Mail purposes whereas only 66 said they use it for the various news. They also use it for the study purposes like getting various materials for their study related subjects. Though, it is very small number (44) to use internet for the study purpose but it is more familiar among the students. Only 5 respondents said they use it for the Booking ticket purposes and 9 respondents did not opt for any single cause. For the area wise, please see table- 4.29

4.30 FACILITY OF CABLE TELEVISION

Cable television is spread to all the areas of India except some remote rural areas. There is also easy availability of cable television in the sate of Tamilnadu. Though it is area wise differ for its availability, but there is easy availability of cable television. In the facility of cable television, 410 respondents out of a 500 said that there is easy availability of television and they also said they have got the Television

and also cable connections. Only 90 respondents said there is no easy availability of cable television. 33 respondents from the Thirunelveli said there is no easy availability of cable television. For detail see table – 4.30

4.31 PROGRAMMES WATCHED IN TV

The various programmes in television are very popular among all strata of the society. Among these programmes, the family serial is very popular among the respondents. Near about half (212) respondents said they watch family serials than any other programmes. 99 also watch both movies and news. Music programmes in the television is also popular among the Tamils. Those who are interviewed, 34 said they watch music programmes in television. 26 also said they use it for the education purposes. Almost all the programmes are available in the area. For the detail, please see table- 4.31

4.32 USE OF CHANNELS FOR NEWS AND EDUCATIONAL PURPOSES

There are also people who frequently use cable channels for the study and news purpose. They watch frequently news and educational channel for the news and educational purposes. For the details, please see table 4.32.

4.33 THE NECESSITY OF ICT IN JOB SECTOR

In a technological advanced society, the use of ICT is an essential part in the job sector. Out of the five hundred respondents, 376 said it is essential in job. Those who said no are constitute only 120. In area wise, it is Chennai, where 84 out of 100 said it is inevitable in job sector. 35 and 31 in Tiruchiappalli and Thirunelveli respectively said it is not necessary in the job sector. Mostly those who revealed it is necessary in the job sector, they said it is useful in the IT job related. For the detail, please see table – 4.33

4.34 TRAINING OR EXPOSURE IN THE FIELD OF COMPUTER

There is also exposure to the women in the field of computer or computer training. Most of them are familiar in the use of computer. They have got expose either through computer training or by trying themselves. 335 respondents said they are used to computer or computer related activities. It is necessary for their daily use either of office job or of personal work. 117 said either they have not got computer training or not exposed to the use of computer. Chennai marginally leads the table in the use of computer over the other study area. For the area wise, please see table – 4.34.1. In Tamilnadu, there is also good facility for the computer training. Out of the total respondents, 299 have got formal computer training. For the area wise training in computer, please see table – 4.34.2

4.35 REASON FOR NOT GETTING EMPLOYED

Those who are contacted and not able to get a job, revealed many mixed reactions. 104 said there are no good remunerations, very less opportunity in their place (69). 30 and 37 respondents said there is family restriction and not interested in job respectively. Some respondents said that there is also household work through which they do not free to work. For the detail, please see table – 4.35

4.36 NATURE OF JOB

Most of the persons those who are contacted by the researcher found that they are working in the ICT related sector, which shows that there is an increase participation or women in the ICT sector. For the details the women working in the IT related sector, please see table – 4.36

4.37 SATISFACTION WITH WORK CULTURE

The state of Tamilnadu is a gender-neutrality state. Unlike many other part of India, the work place is same for both the workers. The study also revealed that there is no gender biased or harassement in office for the women workers. Though there is some study which shows that there is harassement in the peak hours of bus

journey, still, office or work environment provides a good place for the co-workers. 311 respondents said that they are satisfied in their work culture. Instead existence of a good work culture, 189 respondents said they are not satisfied in their work culture,

4.38 PROBLEMS FACED AT WORK PLACE

The gender neutrality world cannot be realized without giving a haven to the women. Despite the existence of several conventions, there is still growing number of harassment to the co-workers. Though it is decreasing with constitutional act, but still it is prevailing almost all parts of world. But Tamilnadu presents gender-neutrality in their work culture. Out of the respondents who faced problem at work place, 70 said that there is burden of work whereas others like (60) revealed that there is high demand performance of work. From the table 4.38, it is clearly evident that though the female workers are not satisfied with the office work culture, but they are not sexually victimized.

4.39 DO YOU GET LEISURE TO LOOK AFTER YOUR FAMILY

Like the tradition of our typical society, women have to perform the household work, to look after the child and husband and other family members of the in-laws house. In a globalize economy, women constitute a substantial part in the gross domestic product but though small in comparison to their male counterpart, but still they enjoy their work which includes both office work and household chores. Out of the total respondents, 310 said they have enough time to look after their household works and even look after their children. But a very lesser number said they either do not have enough time to relax or to look after their household works. For the detail, please see table 4.39.

4.40 FREEDOM OF DECISION MAKING IN FAMILY MATTERS

According to the tradition of India, the women played a secondary role to their male counter parts. In modern India, women play an important role in the decision making process in their in-laws house. They try to involve in their family activities like schooling of children, expenditure of family and in the decision making of their male counterpart. In the advance of modern technology and in the phase of globalization, they have not left their work for which they are meant. The study found that a large number (365) participate in the decision making of their household activities. Only 57 said that they are still in a position where they are subservient to their male counterparts in the family. Its still shows that the society in a some extent functions in the dictation of male members of the family. For the detail, please see table-4.40

4.41 GOVERNMENT IS GIVING SUFFICIENT SUPPORT TO PROVIDE ICT EDUCATION TO THE WOMEN IN YOUR AREA

When the respondents were asked about their opinion of the government's allocation of fund in the development ICT, the respondents are disagreed. Only 143 revealed that they are strongly agree about this idea. Also 163 those who are interviewed said they are also some extent agrees that both the government of India and state government are providing sufficient fund for the development of these sectors. 64 respondents disagree that the government is taking for the promotion of these sectors. 76 and 44 said either they do not know or cannot say respectively. For the area wise response, please see the table – 4.41

4.42 ICT HAS PROVIDED THE WOMEN OPPORTUNITY TO WORK FROM HOME AND EARN

ICT has also allowed the women employee to work from their residence. The sphere of ICT has spread to such an extent that it enabled the people to operate from their home. With the facility of working from home, 215 respondents said they are some extent provide to work from the home. Also 132 strongly agreed with the

facility provided by the ICT to work from one's home. 62 and 24 respectively said they donot know or can not say. Only 22 said they strongly reject the idea that ICT has made people to work from their residence. For the area wise, please see table – 4.42

4.43 WORKING FROM HOME HAVE RESULTED IN CURBING THE LEISURE HOURS OF THE WOMEN

As women are able to operate or work from their home, it took away their leisure time which they are relaxing after a long hour of boring household chore. A total of 204 respondents said it took away women's relaxing time. 166 also some what agreed with the idea. But 27 strongly disagreed with the idea. The table 4.43 shows that it really makes the women to work more hours after involved in ICT related activity than before.

4.44 ICT HAS HELPED WOMEN FOLK IN INDIA ABOUT WHAT IS HAPPENING IN THE COUNTRY AND OUT SIDE

The wide spread of ICT knowledge among all sections of the society and as a gender neutral activity, it enabled the weaker sections of the society particularly women those who are marginalized in the mainstream of work force allowed them to participate more effectively than before. It also allowed them aware about the world and more particularly what is happening in India. It also encouraged them to take effective steps to maintain a gender neutrality society. With the introduction of ICT and their involvement in the sector, 234 respondents said they are strongly agree that it has made the women to know what is happening across the globe more easily. Only 28 said it has not made any change about the development of knowledge of women. For the detail, please see table – 4.44

4.45 RURAL WOMEN FOLK IS DEPRIVED OF ICT INFRASTRUCTURE

The ICT has made a global impact across the world. Like any other sector, the rural women are the sufferers in this sector. Though ICT has impacted in the rural sector, but still it is insignificant in compare to their counterparts in cities. This is the area where the government, NGOs working in the rural areas, and civil society should work appropriately. It is also found from the survey that they are deprived sections of the society. 218 and 104 strongly and somewhat agreed respectively. 31 respondents said that they are equally enjoying the ICT benefits like their counterparts in the urban areas. For the detail, please see table – 4.45

4.46 WOMEN STILL WANT TO MAKE USE OF ICT FOR THEIR NEXT GENERATION DEVELOPMENT

Like any other sections of the society, women also want to carry forward the ICT for their next generation. According to them, it is useful for their day-to-day life and it made easier for them to cope with a male dominated society. Most of them said it is a weapon for the women to walk along with their male counterparts. They want the girl child should not be victim of the society in the coming days. As asked, do you want to make use of ICT for the next generation development, more than majority (258) strongly agreed and 142 somewhat agreed with the idea. But 34 respondents disagreed with the idea. For the detail, please see table – 4.46

4.47 ENTRY OF WOMEN WORKFORCE IN ICT INDUSTRY IS AFFECTED BY THEIR SOCIO-ECONOMIC AND EDUCATIONAL BACKGROUND

The ICT is also affected by the socio-economic condition of the work force. And it is more appropriate in case of women workforce. 191 and 198 strongly and some what agreed respectively that the entry of women work force in ICT is affected by their socio-economic and educational background. But 29 disagreed with the above idea. They said that most women's low education and economic background is a cause for them to participate effectively in the ICT sector. For the area wise acceptance of the opinion, please see table – 4.47

4.48 IMPACT OF ICTS ON URBAN/RURAL WOMEN THROUGH SELF HELP GROUPS(SHGS)

We live in the age of information. Targets like Mission 2007 of M. S. Swaminathan: "Every village a Knowledge Centre" movement is very near. The mission aims in bringing about an ICT - led rural knowledge revolution in India, and emphasis the need for a civil society – led multi stakeholder alliance to work towards making India a knowledge centre in every village. Our Honorable President Dr. A P J Abdul Kalam calls this revolution of information as a nationwide movement to make India a superpower by using ICTs in both rural and urban areas. The development and proliferation of electronically communicated information has accelerated economic and social change across all areas of human activity worldwide – and it continues to do so at a rapid pace. While the use of information and communication technologies (ICTs) remains concentrated largely in the developed world, ICT diffusion is beginning to reach developing countries, including poor rural areas, bringing with it high hopes of positive development outcomes. Strong inequity still remains. The rapid growth of ICTs in developing countries is partly a result of very low initial access, and therefore in absolute terms developing countries are still well behind the developed world in access to ICTs. Here is a detailed report of evolution of an attempt to reach the facilities at doorsteps of the rural poor by means of establishing Village Information Centre (VICs) and its impact and success stories.

ICTs are unique in having an impact beyond the individual user's welfare. ICTs enable interactive communication unhindered by distance, volume, medium, or time. They promote greater inclusion of individuals within networks and, even more important, increase the diversity of participants by overcoming the barriers of physical distance and social standing. The immediacy and reach of ICTs also

promote faster, more efficient, and ultimately better decision making across all fields of endeavors.

After 3 years of ICT service in rural villages, the kiosks or VICs has turned into a resource centre for that and neighboring villages. For every need the needy villagers who know about our kiosks' services approach the kiosk now. But the day in which every one in the village knows about the services and comes to our kiosk is not so far.

First, ICT has enormous potential value to enrich the lives of people everywhere-regardless of any instrumental role it may play in meeting broader development needs. These technologies can help bring ideas and experience to even the most isolated, opening to them the world outside their village, town, and country – including family members and friends who have moved away. It also allows their experience to be shared with the world at large, at the tap of a key stroke. The case for including information technology in development strategies would be strong even if it contributed little to explicit development goals. ICT can also empower individuals to participate in the social and political institutions of the community, giving voice to those who have traditionally been excluded. Here are some of the remarkable impacts found among the users of the kiosk.

4.48.1 Quality of Education is Increased

Almost every kiosk is a gift to the concerned village. All kiosks invariably produce students at two levels – CCA and DCA completed students who equip themselves with computer knowledge. When the students are school or college goers, they are the **outstanding students** in their respective classes. Their performance is better than others. Their performance in their curriculum is also found to have improved than before as the difficult part of the subjects are taught and made easy with the help of e-school and offline content for the regular courses.

This is recognized and approved by both the parents and the teachers and the recommend the other students also to get the benefit from the kiosk. As a result the school dropouts have greatly reduced in such villages.

The students who were playing or wasting time after school hours, after enrolling themselves to the kiosk courses, they actively attend the classes as they playfully learn even the very tough mathematics and science lessons. Tuitions are also given to students in kiosks, the students are willing to attend this and the parents are convinced by the performance of their children.

Case study No: 1 A failed candidate emerges out with flying colors

Angaleswari aged 18 is a girl hailing from Kottakudi. She failed in her 10th examination. She and her family lost hope about her education. She happened to hear about kiosk and computer education from the operator Ms. Jeevitha. She convinced her parents to enroll her in the course, DCA. She optimistically fared well. Then applied to clear her arrears in 10th class, and she cleared it and she wants to join 11th class that too in computer group. The girl who had first experience with computer and lost hope in education is emerging with bright new hopes to achieve.

4.48.2 Inspired to take computer related course

Students who had their maiden experience with computer in our kiosk and the interest in computers made them to complete computer courses from our kiosk, selecting B. Sc. Computer Science, B.E. Computer Technology or MCA is common. They attend the college and use the kiosk for practicing what they have learnt in the college. In college the time give to practice is very less. As the kiosk is very near to their resident, they reach kiosk to practice and run programs to get expertise in that particular language or software. This again makes them toppers in their colleges.

Students of other college are using this as a supplemental means of education. One student, Kumaran, from Therkutheru have heard about computer in school, but never had a chance to touch. Due to the VICs he could learn more about computer, and debut experience with computers and the excitement made him to select Bachelors degree in Computer Science, again he comes to VICs for references, to do practical works, and programming C languages, which he could not else where in

this village. Two more students from Mangalampatti got inspiration to join MCA and they are placed in better jobs in Chennai.

Case study No: 2 Student excels in 10th standard and aspires to be a computer engineer

Damodaran aged 16 is the elder son of Sengutvan (45) and Mangaiammal (35). Eldest of the family is a daughter, Karthika finished her 12th and she is at home due to poverty, then is Damodaran, next is Divakar (13) studying 8th class. Damodaran was a sincere, hard working student. When the kiosk offered him both games and offline content related to his subjects for 10th class, he preferred to use only the offline content. He used to practice objective type questions, model question papers for all the subjects. The result was he emerged as a school topper. There was a competition for all students in kiosk villages. In that exam too he emerged as topper securing 99 %. The first prize announced was a free DCA course in our kiosk. As he stood first, he is now studying DCA course, which he would finish in a month's time. Now he is doing his 11th class, in computer group and inspires to become a computer engineer in future. The parents are very happy about the kiosk, which is enriching their son's education.

4.48.3. Getting better job opportunities with higher salary

The other villagers who are not students also take courses from the kiosk. Their aim is to get better job. This is a very common phenomenon where people join DCA courses, after completion of the course they are either recruited as kiosk operators, data entry operators or other computer oriented jobs with higher salary. One of the student Sivakumar from Karungalakudi says - " we would have joined any workshop or in some other shops to do petty jobs with meager income but the kiosk have turned our live in a very positive way and we are getting many job opportunities related to computers, which we would have never imagined in our life. Our first opportunity to see and touch the computer is through the kiosk only that too at a very affordable price whereas other computer centers charge very high fees for the same course and duration but the time given for the practical or hands on computer are very less." Sivakumar was idle after completing his 10th class, the kiosk operator identified and asked him to join the course and after completion of the course he also learns hardware and other higher courses from our kiosks and our IT team members to assemble computers. In the meantime he also goes for data

entry works at his free time and earns a considerable amount. He also teaches in the kiosk when the kiosk operator goes on leave.

Few persons completed our course got good computer oriented jobs and settled in Chennai, and other cities. They also thank our kiosk for giving a good opening to their career. They are also helping the other students who complete courses here to secure good jobs and placement in and around their work place.

Some villagers used the kiosk for browsing job seeking websites. Few got opportunities in nearby cities and one got placement in Muscat as a drawing teacher. He thanks the operator and is thankful to the kiosk which gave him the lifetime opportunity. There are many similar cases.

Case Study No: 3 A carpenter turns to be a Computer Assistant in Dubai

Prakash, a student of Ulaganathapuram kiosk, an ICT group member studied DCA and hardware course so he was well versed in both software and hardware, he was supporting our kiosk works in a very efficient manner. He was a carpenter by profession, as he was the responsible person in the family to support his deserted mother. He tried to get a job as a carpenter and got one in Dubai. He flew to join the job. There he worked sincerely as a carpenter. On one day the computer in the company where Prakash was working struck up with some problem. As he had computer knowledge, requested the owner to give him a chance to repair the computer. The owner agreed to it, he successfully completed the task and the computer was recovered. Then he explained that he have completed a computer course and knew both software and hardware. The owner was very impressed by the performance of Prakash and he elevated his job as a computer Assistant. The salary is also greatly increased. He sends enough money to his family and once in a week he comes on line to talk with his family members. The family members are very happy to see him face to face even though he is miles apart.

The computer education also gives life to some persons as mentioned below:

Case Study No: 4 Computer gives live to a girl

Nalliammal, 25 years old, was from Old Sukkampatti. She was educated till 10th standard. She was constantly irritated by her family members citing "sevvai dosham", an orthodox belief about destiny which prohibits marriage. Kiosk was opened in that village and the operator, Mr. M. K. Palani, convinced her parents to enroll her in the DCA course in the kiosk. After many hesitations, her parents agreed. She successfully completed the course, and she was placed as a kiosk operator, in one of the neighboring village. The salary was good. After some time the parents were very happy about her nature of work – a duty to help the needy. This brought her a good spouse. She is now happily settled in family. The entire family is thankful to the kiosk which gave her a new life who lost all hope.

4.48.4. Literacy level and awareness is increased

Many villagers who were illiterate and had less awareness, especially women had to be escorted by some men to visit nearby towns for even shopping to do other works are now literate able to read and write and aware of many things, confidence level is increased and going independently and performing many activities even in cities. They learnt the alphabets from Adult Literacy Programme (ALP) in a more interactive mode. Learning was not a difficult process to them with the help of computer, they could learn after they have finished their house hold works.

Case study No: 5 An Illiterate wants to pursue higher education

Sinnadaikan, a 15 years old boy was an illiterate; he was denied education due to poverty. He lives in a village called Malampatti. He never regretted for being an illiterate. After the kiosk was opened in the village, and many school going children were rushing to the kiosks to learn in a playful way. He too approached the kiosks to see whether kiosk can help an illiterate like him. The operator encouraged him saying he too can learn reading and wring both in English and Tamil using computer in the kiosk. He was excited and immediately convinced his parents to enroll him in the kiosk. Adult Literacy Program (ALP) software was used to teach alphabets in Tamil and the boy was very learning every thing with lots of interest, as schools have closed the doors for his education and it was impossible for him to get admitted in a primary school at this age. Now after 3 months of ALP program he could very well read and write Tamil, he wishes to pursue his higher education. He would take up English classes too and compete soon, as his interest is more. If possible he would do some distant education courses.

Similar cases are many. Those who never attended schools are now reading, writing, and doing many challenging jobs independently, it may be traveling to distant places or demanding for their rights. When the beneficiary is a women their husbands, sons, daughters and every relative could find the difference in them and appreciate the kiosk for doing a noble job of enlightening ones' life – the enabling process of the kiosk.

4.48.5. E-governance

Kiosks are providing the service of taking birth certificates, income certificates and all certificates from Tasildar's office and Collector's office. Petitions are sent from kiosk to C. M.'s office and Collector's office. This service has greatly reduced the burdens of the people. The cost of getting the required certificates is less than half the amount which they would have spent by traditional means. Previously they have obtained the birth and other certificates by traditional methods of traveling to Melur, Singamapuneri or Madurai (any other place where the birth has taken place), apply for same and get only after atleast 2 – 3 visits and paying bribes to the authorities. This have causes loss for wages for 2 – 3 days also. The total cost would be Rs. 700 to 800. But now they are getting the same certificate in the same

village, without traveling, loss of wage and bribes at a cost of maximum Rs. 80 - 100. The villagers are very happy as they are getting the required certificate from their village itself at a cheaper cost. The villagers also write petitions about their water, electricity, road and many other civic, social problems. Many of their complaints reached the higher officials and their problems have been solved. Checking the passport status, examination results and information about the state government schemes are the common uses enjoyed by the rural public.

Case study No: 6 With E-Governance a girl get school admission

Shilpa Devi (6) is now studying in first standard. Her parents were Maleswari and Sahadevan. Her father had to leave to Delhi for job. When the operator of Ulaganathapuram, Ms. Astalakshmi went for canvassing about e-governance, explaining the importance of birth certificate for her only child to Maleswari, she did not lend her ears to the operator. When it was the time of school admission, the school denied to enroll Shilpa, but did not object her from attending classes. She was not provided with free books and notes or any other facilities as a student. The mother then approached the operator for help to get the birth certificate. She did not remember the exact date of birth of her child. Then the operator asked for the details of any other child which was born at the same period of time. After 2 days the mother brought the detail of a neighboring child which was born in the same week of her daughter's birth. As the operator had a good rapport with the municipal's office especially the birth registration section, owing to her contribution to get many birth certificates– all children (under 15) in her kiosk area have obtained their birth certificate, she could trace the exact date of birth and successfully obtained the birth certificate for Shilpa Devi. Only after producing the certificate to the school she was enrolled and books and other facilities were provided to her like other children. The mother feels without the timely help of the operator, the education of her daughter would have been a question mark.

4.48.6. Communication

Emails, chat and Voice over Internet Protocol (VoIP) are boons to the villages. Many villagers have their kith and kin in abroad. They remain connected only by means of these services of the kiosk only as many of the villages do not have phone facilities also. Some villages are using these facilities to get employment opportunities in abroad. 2 children from one of the village called Boodmangalam went to Baroda for higher studies; one was a student of our kiosk. He used talk to our kiosk to talk with their parents. They used to visit our kiosk to talk with their son. Where as the other could not contact his parents regularly. This village is a remote village having no other mode of communication like phone. As the kiosk is available in the village itself, women especially Islam women who restrict themselves to their houses now-a-days freely come to the kiosk for utilizing many

services of the kiosk, particularly speaking to their family members who are in abroad. They prefer this as they could talk as well as see them, even show their children. This is not possible through the telephone booths. When the operator is a girl, the Islam women community approach freely to use the services and learn computer courses also. The very same girls avoided such facilities provided by a male kiosk operator from n-Logue of their own community in Keelavalavu.

Kottakudi is the pioneer village to bridge the separated families whose husband is working in a foreign country, using web camera. The operator, Ms. Jeevitha, convinced the wives to learn minimum computer working knowledge like email ID creation, and to speak with their husbands in an alien land. The joy in the face of the wife here gives her lots of satisfaction and excitement to do such a help oriented work.

4.48.7. *Getting timely information using video conferencing*

Being agriculture based villages; most of the villagers are from agrarian background. The villages which are far off from the busy world full of information especially contact with experts of different field like agriculture, veterinary, health, eye care and Astrology would have been a very distant goal whose reach is not possible was their thought and belief. Whenever, they have any doubt about pest, disease, agronomical practices, unpredicted land or water problem in field, video – conferencing. An agricultural expert from Vayalagam, or from Agriculture College or university would be solving their doubts and problems. But these thoughts are shattered by the entry of Videoconferencing and iSee software by which treatment to health and eye problems were a matter of just walkable distance. Likewise it is done for getting agricultural and veterinary suggestions from experts of relevant field.

Video conferencing with the doctors in Aravind Eye Hospital, Madurai is the most used service of the kiosk. Invariably all kiosk have at least a handful of people who have treated using the videoconferencing, many patients got free eye surgery. The process is like this – the patient would be seen by the doctor in hospital, and the patient from the village itself, on-line treatment is given for minor ailments, for

severe ailments they are called to the hospital and they are given free treatment in hospitals.

Case study No: 7 Kiosk opened the eyes of a boy

Bhoopathi aged 8 is the second son of Kannan (32) and Kamatchi (28). While playing with boys, accidentally a boy poked his left eye with a needle. The father of the former took the later to hospital and gave first aid. It was just a temporary heal. After few days there was pus accumulation in eye and his left eye vision was completely lost. They are from washer men community earning just to meet both the ends. When their relatives took the boy to Aravind Eye Hospital at Melur, the surgery to replace lens was a must and referred to Aravind Eye Hospital at Madurai. There the cost of surgery estimated was Rs. 5, 500. This was too heavy for the family. At that time some of their neighbors told the mother about videoconferencing for eye care. The mother took her son to the kiosk. The operator, Radhika saw Bhoopathi's eye which was sunken and closed - reddish could not open the eye, where as he was managing with right eye. Radhika took him to Aravind Hospital, Madurai and met Dr. Shaanawaas. After a series of checkups it was later declared the surgery was a must, which cost Rs. 5, 500. When the operator explained the plight of the family, the doctor agreed for surgery with only the cost of the lens to bear at Rs. 1,000 (cost of the lens alone). The family agreed and the next day surgery was conducted successfully and the boy was discharged on the third day. Now after 3 months of surgery, he is regularly attending school with 100 % good vision in both eyes. The family is very thankful to the operator in person and kiosk in general.

Note: Very vital information like details about competitive exams, procedure to apply for the posts, preparing for the exams and ensuring the hall tickets and conducting model exams are also done here. Few villagers have benefited by this service and secured government posts (both at state and central). Similar services are very useful to the villagers, as the information never reaches my traditional means. Availability of Employment News (both English and Tamil) is very limited, even if one or two purchase when they go to town, they limit to themselves and their family members. When such information is available to the kiosk, it is disseminated to all the kiosks in turn to all villagers. Many eligible candidates participate and atleast few succeed. But through traditional means, only few would have participated and their probability of success is remote.

4.48.8. Timely Service to save money and time

Operators' service is extended to pay the electricity bills. The operator gets the details of the meter readings of the villagers' utility and the amount to be paid by the villagers from the Electricity Department. It is printed in a sheet and it is available with the operator. The villager who should pay the electricity bill approaches the operator to get details about the amount to be paid. The amount due with a service charge of five Rupees is handed over to the operator. She waits till 13th of every month and in turn would pay the bills when many villagers have paid. This saves the time and loss of wages for the days spent for paying the bill. When some villagers could not pay before 13th, the EB department have acknowledged our service and have given one alternate day (for us only – without fine) 16th, the operator can collect the remaining villagers due amount and pays in the EB Department. This is an innovative method identified by the operator of Mangalampatti, Ms. Amutha rani. This effort of hers have greatly reduced the drudgery of traveling the whole day to reach the EB office and standing in queue to pay the bills and return, every thing done at the expense of one day wage and traveling charges. They can pay her Rs. 5 as service charge and can proceed with their day-to-day activities and get their work done with ease and get the EB receipt in the same day evening itself.

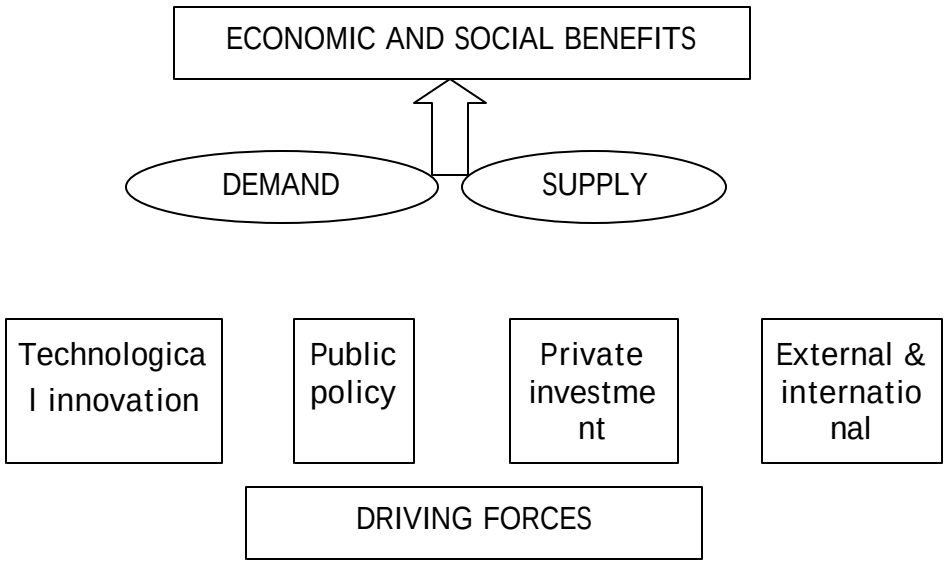
In some kiosk, the service is modified to suite their village. The EB office may be not too far like the previous example, but needs some travel to reach that place. The service may be to collect the meter readings and details about the amount to be paid by the villagers are collected by the operator and the money is given to the operator. Few may have work in place near EB office so they may use only the meter reading details to know the exact amount to be paid, to avoid unnecessary travel if they run short of money according to their assumption. This service is free of cost; service charge is collected only when the bill is paid through the operator.

4.48.9. Kiosk is place to get all problems solved

The villagers get all their problems solved. They have used the kiosk to get vital information, computer education and all services including tuition for school children. For general public, kiosk is a place where they can share their problems and if possible to it will be solved using the internet. Here is an example of how the kiosk helped a poor lady to get back her ration card, which she lost in a bus.

Case Study No: 8 A Poor women get her lost ration card

Karupayee, a 40 years old widow, a agricultural coolie worker is supported by a son and a daughter. Before 3 months she was traveling from Melur to Mangulam in a bus. Due to heavy rush in the bus she could not manage her belongings. In the travel she lost her family card when she came to know only when she reached her home in Soorakundu. Immediately she informed VAO's office about her loss and placed a request to trace it or get a new card. She also informed Chakra Cable TV operators to advertise in the TV programmes. Then she accidentally met the operator of our kiosk Ms. Dhanalakshmi. She immediately informed all kiosk operators (covering 40 villages) about the loss and to trace the card using yahoo messenger chat. When the operator asked Karupayee about the bus route she was traveling, when she lost the card. Based on the information the search was concentrated in Mangulam kiosk alone where Amsu is the operator. She could trace it in no time and the recovered card was handed over to Karupayee within 15 days of complaining to the kiosk. Karupayee felt very happy because she was suffering a lot without the card, as she could not get anything like rice, kerosene, sugar etc, which were the basic needs to the family. Purchasing the same was very expensive for the family. After she saw the lost card she felt as if she got a treasure.



This figure tries to conceptualize how the driving forces behind ICT adoption translate into economic and social benefits. Few people hold much more skeptical views of the benefits of ICTs for development. They argue that access to ICTs largely depends on education, income, inappropriate language skills, or lack of resources could prevent disadvantaged segments of the population from accessing ICTs, ultimately exacerbating information gaps and increasing income inequity between and within countries. It is argued that developing countries have other, more pressing investment priorities, such as food safe water, education, and public health, and that devoting limited resources to ICTs must be justified on the basis of its opportunity costs relative to other development agendas. ICT can assist in meeting development challenges and addressing development goals, the adoption of ICT in these areas is often not as advanced. The deployment of ICT can assist with enhancing the transparency and accountability of government and other institutions, facilitate public participation in decision – making and easier access to public services; create economic opportunities both in the ICT sectors as well as in other sectors as result of integration into the global networked economy, assist in bridging the rural – urban divide, enhance reach and reduce cost of providing micro-finance, increase viability and reach of small and medium businesses, reduce cost of health care delivery and tracking of disease, enhance social equity and competitiveness and economic positioning in the global networked economy.[3]

4.49 INFORMATION AND COMMUNICATION FOR THE POOR

Here is a different story where people give first priority to savings and credit, then to the other civic interventions. They have used ICT as a tool for developing inspite of limited education and resources. By their very nature, ICTs have the potential to quickly reduce the digital divide among countries and regions. As a result they have emerged out successful with the resources available to them.

Sl. No.	Name of the Village	Name of the operator	Educational qualification	No. of services provided
1	Therkutheru	Jeyanthi	+2, DCA	9
2	Mangalampatti	Amudha Rani		11***
3	Kunnarampatti	Ilami		3*
4	Samuthirapatti	Silambarasan	+2, DCA,	4*
5	V. Pudur	Sangeetha		10 **
6	Sekkipatti	Raji	+2, B. Com (cores), DCA, Hardware, C, C ++	11
7	Pattur	Latha		7
8	Karungalakudi	Venikala	+2, DCA, Hardware	8
9	Chokkalinga puram	Tamil Selvi	B. Sc. DCA	7
10	Kirungakottai	Rajashekar	B. Com, DCA with Tally, HDCA	8***
11	Vanji Nagaram	Roopa	B. A. Tamil, DCA	10
12	Katchirayan patti	Arul Selvi	+2, DCA	9
13	Thumbaipatti	Subangi	+2, DCA, B. Com (cores)	7
14	Attapatti	Sumathi	+2, DCA	5
15	Boodamangalam	Bhuvana	+2, DCA, B. Com (cores)	10 ***
16	Navinipatti	Karthik Priya	B. Sc. Maths	6
17	Keelayur	Gunaseelan	D (Ag.), B.A (cores), COBA	8 Digital Photo Printing
18	Keelavalavu	Panju	B.A (Hist), PGDCA, Tally, HTML	7
19	Koothappanpatti	Anita	10th, DCA, hardware, DTP	All 11 services
20	Ulaganathapuram	Ambika	10th, DCA	All 11 services
21	Malampatti	Vasuki	10th, DCA, VB	All 11 services
22	Kottainathampatti	M. K. Palani	PGDCA, MA	6
23	Pathinettankudi	Parvathi	+2, DCA	8
24	Kottakudi	Jeevitha	+2, DCA, hardware	All 11 services
25	Thiruvadavur	Radhika	10th, DCA	All 11 services
26	Kattayanpatti	Mahalakshmi	10th, DCA	All 11 services
27	Kalampatti	Viji	BA (cores), DCA	8
28	Narasingampatti	Selvakumar	+2, HDCA, DTP	10 Digital Photo Printing
29	Vellaripatti	Malayayee	10th, DCA,	8
30	Kathapatti	Nadhiya	+2, DCA, hardware	7
31	Mangulam	Amsu	+2, DCA, HTML	8
32	A. Vallalapatti	Saranya	+2, DCA	8
33	Etimangalam	Jyothi	+2, DCA	8
34	Melavalavu	Alagu	B. Sc., DCA	8
35	Poosaripatti			
36	Kallampatti	Viji	+2, DCA, DTP	All services

37	Soorakundu	Dhanalakshmi	B. Com, DCA	All services
38	Vanji Nagaram	Roopa	+2, DCA	All services
39	Kottampatti	Andiammal	B. A. DCA, ADJP, DAST	All services

* Very new kiosk
** All the services except e-legal as there was no demand
*** With EB bill payment

Specialties of these VICs

1. More detailed teaching and more time for hands on experience or practical
2. Availability of Tamil Typing facility
3. Online resource consultations for eye care, agriculture, astronomy
4. Results of exams, passport status checking,
5. E-Governance for birth, death and Old Age Pension etc.
6. Projects can be done here for their college curriculum e.g. B. Sc. Computer Science
7. References for programming can be accessed in village itself (if not have to travel to Madurai or nearby town)
8. Content reference is available from 1st to 12th class and special kids media material is available for kids for learning through play
9. Downloaded games

4.49.1 Expectations from VICs:

There is only one VIC in each village. Each VIC has only one computer and a printer. There is a great rush at evening hours and on weekend days. Students and others rush to VICs at such hours. In day hours the usage of the available computer is efficiently used for teaching the computer courses and students who used to practice the programmes for their forthcoming exams. But during evening the people in demand are high. It becomes difficult to prioritize. Students of the VIC feel that there should be an exclusive computer for their class and practical and a separate PC should be available for email, browsing and other services being provided by the VIC. If there is an extra computer, the viability and efficiency of the usage of the two or more computers should be judged by the operator alone.

As school going student and many villagers could come to VICs only in the evening, the demand for computers are more at such peak hours. When the operator is from a different village she closes the VIC at 7 or 7.30 pm; if the operator is from

the same village, the VIC is available for the villager even at light hours with the cooperation of the operators' family members.

Students also expect some higher courses like hardware, other than the basic course they learn from the VIC. They say it is good to have a basic course to learn for beginners especially for villagers it would be a boon, as many villagers would have a maiden opportunity to learn computers. For the benefit of the students who have completed the basic courses and for some students who have opted computers as their major in their college due to the impact of the VIC, being villager accessibility to higher end courses is less hence higher courses gains demand.

Similar is the demand for a Xerox machine. Almost every village have a school, it may be primary, middle, high or higher secondary school. There is demand for taking photo copies by school staff and by the students. Villagers have to travel around 15 – 20 kms to get Xerox copies. Apart from school, Panchayat office, stamp paper / document writers and the general public are placing high demand for a Xerox machine.

40% of the families have atleast one of their family members in abroad; speaking to them was very costly through telephone booths. Half rates are available only after 10 at night. So women prefer coming to kiosk to speak with their family members living in a distant land as this is cheaper (Rs. 25 / hour). But the cost of speaking to persons living abroad especially feels very expensive (approximately Rs. 300) as they should also be online in some browsing café for one hour. They prefer net to phone facility which would cause only one way cost from this side which is again cheaper than the telephone booth.

Villagers are expecting kiosks should be the point where they can get all the benefits for the poor. They believe, in traditional way the government schemes and

facilities never reach the villages. Even if it reaches, the government officials in the name of bribe limit the access to poor. The villagers believe, after seeing the positive results like getting birth certificates in an easier manner and at affordable price, kiosks can provide all government schemes to the villagers without any bribes.

As our kiosks are providing many services, they want some entrepreneurship trainings to start a business ventures, and expects the kiosks should be the bridge for marketing their products also.

4.49.2 Challenges

The presence of one computer in a kiosk is often not enough. To start with one PC may be enough, but when the operator is found to be optimistic and find many avenues to bring villagers, students of the village to the kiosk, it becomes very difficult to manage with only one computer. The number of students enrolling for the e-education (CCA and DCA courses) is high and people using for browsing and other services are increasing, the time given for the students for hands on experience is restricted to 5 to 10 minutes at peak hours like evenings and weekends. The time is freely available to people at afternoons and school hours but not at the peak hours. When the demand is high, the kiosk can increase the number of PCs in their kiosk to meet the demand. When there is no computer in school the operator have to teach the e-school programs in school only in lunch hours. One operator, Ms. Roopa of Vanji Nagaram is carrying the system to the school which is 1.5 Kms away from the kiosk for the benefit of the school pupils and carries back the system and provides other services to the rural public. This is done by taking so much pain because of the dedication and the interest she has on the benefit of the society. Her works should be rewarded. The school staff are appreciating her for all her efforts. Inspite of all these the system available with her is not working properly.

Language localization – this is a frequently asked for the future. Some percentage of villagers can read in their local language, but are less comfortable with English. Even where the operator understands English, the operators request language localized versions of software for the sake of other villagers. Transliteration is often found in chats. Spelling the local language in English for better understanding and to feel comfortable than in English words.

PC management – most of the operators have minimal training with PC management, there is a need for security features, system-lockdown capability, and portable profile management. In case of system software or hardware problems, the operator is left helpless till she contacts the responsible persons to repair or correct the errors. Already some training is given; they should be given training atleast once in three months or so to overcome such troubles and to update their knowledge.

4.5.0 Impact of information dissemination on the urban-rural women through SHGs

4.5.1 Women SHGs

Self Help Groups (SHGs) has emerged as the most vital instrument in the process of participatory development and women empowerment. The rural women are the marginalized groups in the society because of socio-economic constraints. They remain backward and in the lower position of the social hierarchical ladder. They can lift themselves from the morass of poverty and stagnation through micro-finance, Information and Communication Technologies and formation of Self Help Groups. So credit is a crucial input for socio-economic development of rural poor, but the institutional sources of credit to rural poor are still inadequate. As a result the moneylenders and landlords provide credit to the needy borrowers and particularly the depressed sections of the society charging an exorbitant rate of interest. This non-institutional source of rural finance has various exploitative practices. The debtor-creditor relationship gives birth to master-slave relationship as

the debtor mortgage his labour with creditor. The lack of knowledge further added the fuel to the fire. In a country like India, more than 90 per cent women constitute the SHG groups. They lack knowledge in the proper channelisation of their products and selection of entrepreneurship. Through various development projects financed by the international developmental organizations, banks and the government of India supported their cause. But taking into account their poor knowledge and illiteracy level, most of the SHGs failed in the womb before seeing the light. But in southern India, like Andhra Pradesh and Kerla, SHGs in Tamil Nadu is progressing as per the objectives. To support their cause, various organizations have started the use of ICT for their further development.

4.5.2 Sustainable Livelihoods of Women SHGs

Sustainable livelihoods approaches are people centered recognizing the capital assets of the poor and the influence of policies and institutions on their livelihood strategies. In order to improve the decision-making of the poor it is necessary for those attempting to assist them to recognize the heterogeneity of their local contexts. In this way one-size fits-all development solutions become less important paving the way for more pluralistic approaches. Rural livelihoods in particular are increasingly understood to involve a diverse range of strategies both within and outside the agricultural sector. The role of women and youth in household income generation must also be considered to be one of growing complexity including non-farm incomes such as remittances and wages from rural-urban migration of family members. It is clear that for information and communication to benefit the rural poor it needs to be relevant in the context of the choices available to them and to assist them to make decisions that lead to improved livelihood strategies.

4.5.3 ICT and Women SHGs

Information and Communication Technologies (ICT) are for everyone and women have to be an equal beneficiary to the advantages offered by the technology, and the products and processes which emerge from their use. The benefits accrued from the synergy of knowledge and ICT need not be restricted to the upper strata of the society but have to freely flow to all segments of the female population. The gamut of areas in which ICT can put a greater control in the hands of women is wide and continuously expanding, from managing water distribution at the village-level to standing for local elections and having access to lifelong learning opportunities. ICT in convergence with other forms of communication have the potential to reach those women who hitherto have not been reached by any other media, thereby empowering them to participate in economic and social progress and make informed decision on issues that affect them.

4.5.4 ICT and Women SHGs in Tamil Nadu

In Tamil Nadu, the study found that various SHGs have been formed and involved in the various types of work but the sole aim is the income generation. These SHGs have opened various centres which focused on computers, there are significant media linkages, all of different types. For example, firstly the presence of peripheral equipment\particularly digital cameras, telephone, and printer/scanner/photocopier have gradually made an impact comparable to computer itself, particularly in the must rural groups who have had least access to modern paraphernalia. The experiences of answering the phone for the first time or using it to phone, a technician at the local technical partner, can not be separated from the experience of using the computer themselves. They were part of the same conception at the centre as a space of modern techonologies with multiple and sometimes confusing or problematic, functions. Use of the printer was a significant technical achievement for some users, and it became a technical and social focus in its own right, not just an adjunct to the computer. In Tamil Nadu, there is considerable excitement about visual multimedia – computer drawing, digital

photographs and use of power point. It can be argued that some SHGs divide the computer itself into multiple technologies: it is both a tool for learning essential modern skills and at the same time it is a visual medium for personal expression and enjoyment through activities such as drawing and watching DVDs.

4.5.5 ICT and Women SHGs: Capacity Building and Income Generation

Communities used the knowledge centres as a catalyst for capacity building and income generating livelihood diversification.

Case Studies

i) Mellur Village of Madurai District (Semi Urban)

Melur village based at Madurai provides a focus for capacity building and income generating activities based on demonstrating ecological natural resource management approaches. The Melur village provides women with training on techniques for improved horticulture, floriculture, aquaculture and fodder crop production for livestock. The ecological focus aims to ensure value addition from all the activities to improve both the environment and the amount of income generated as shown. Training at the Melur Village is based on demonstration and practical experience of the techniques involved and close collaboration with the villagers of the surrounding communities to help them adapt their own activities in similar ways. The staff at the Melur Village also manage a knowledge centre on site to help coordinate the training materials and events. Following this, in Mellur block, out of 300 SHGs spreading across 22 villages to implement some of the activities demonstrated at the Melur village with loans from the State Bank of India and other financial institutions involved in the development of SHGs. The SHGs are trained to use local language accounting software to manage the business planning for their enterprise and loan repayment. Many women are only employed as wage labourers for 70-80 days a year and therefore these enterprises offer them a chance to supplement their income significantly for the rest of the year.

ii) Perungudi Village in Madurai district (Rural)

In Perungudi village in Madurai district a self help group (Kalasam) consisting of 15 women has started to produce a biopesticide to control seed borne pathogens. Covenant Centre for Development, a grass root level NGO working in the area arranged for two members of the group to spend a week on a special course in Tamil at the Department of Plant Pathology of the Tamil Nadu Agricultural University in Coimbatore. The SHG is now producing the biopesticide Pseudomonas fluorescens for sale to local farmers and companies further afield in Trichy and Chennai. In Sevanakarayanpatty village the Jhansirani SHG is producing paper and board from banana waste. The pseudo stems that are discarded by local farmers are collected and used as pulp for a small scale paper mill installed in the village. They further received the training to produce high quality paper from banana waster. Now they are able to produce paper of high quality. Another SHG in Amudham, in Thiruverambur village of Trichy district is using a knowledge centre to provide adult literacy training. This programme uses a touch screen PC with a CD writer. In this multimedia prgramme a digital camera is used to integrate photographs of familiar people such as family members and household objects into the learning software. The trainers can then teach each person with an individualized programme. The photographs are burnt on a CD and the description (in Tamil, the local language) is written below using Flash and ach letter and the full word articulated in clear voice by one of the literate members of the family / the trainer. When the individual places his / her CD in the computer the images appear on the screen and when an image is touched the words start forming and the voice is activated. According to the SHG spokes person, these types of capacity building and income generating activities provide a greater range of choices for people's rural livelihoods. Women receive only about half the daily rate of men for agricultural labour and often have less formal education than men so they can benefit more from

these types of opportunities. She also further added that the knowledge on ICT and its applicability should be spread further.

4.5.6 Gender Entrepreneurship & ICT

The knowledge centers also showcased how technology used appropriately could empower women. In many of the knowledge centers of Madurai district, women were at the helm as volunteers, knowledge workers, information gatherers and disseminators, managers and as beneficiaries. Not just that, these women, were able to use the information to bring larger benefits to their communities and not just to themselves. In most of the centers, the women at the helm are sourcing information, providing computer education, forming SHGs and are using the loans to educate their children and start cottage industries. The knowledge centre is fully managed by women who have been recognized as neutral players above the caste and political machinations that plagued the centre in its initial days. Now, these women members of SHG, who had only basic level of education and no computer training, are facilitating computer courses and even running family counseling centers in the evening. They are also using the SHG accounting software developed by the experts of grass roots NGOs in these areas and are encouraging women from neighbouring villages set up such SHGs.

Handling computers and computing and providing information to the entire village have given the women a new confidence and status that was not possible at all, said one respondent. Without this knowledge centre we would have been ten years behind in opportunities and awareness. One of the participants asked the women how they felt at being given this power by their men folk. The women were quick to retort with confidence, in the presence of the men present there, “we were not given these opportunities; we took them and showed the way to the men!” The

village men also acknowledged the fact with a smile. It's not just about confidence but also sustenance. The knowledge centres have helped women set up self-help groups and starting micro-enterprises. These SHGs were happy with their success and are of homogenous compositions. In Melur village, the hub of bio village activities, the women SHGs, supported by grass roots level NGOs, were sourcing loans and training facilities to help their members with economic opportunities through organic farming, horticulture, floriculture, and mushroom farming.

4.6.0 Role of SHGs in Application of ICT

Since ICT revolution took place in early 1990s in India, along with the literate and urban people middle and high class group, people in the rural areas were also highly benefited from this. During the initial years, ICT's application was only limited to the selected few, but with the intervention of International agencies along with the birth of liberalized economy by the then Finance Minsiter, Dr. Manmohan Singh, ICT spread its avenues to the rural areas. To alleviate poverty which was prevailing among the rural masses, central government with some planned economy started various rural development schemes to benefit the rural poor people. Among them, one scheme created by the central government was Sampoorna Grameen Rojgar Yojana (SGSY) was meant for the women though men create SHGs. Following the model from Bangladesh, this scheme worked well in the initial years in the states like Andhra Pradesh, Tamil Nadu and Kerala while it totally failed in the northern India. However, this model also got stereotyped in south India without further knowledge. The SHG-bank linkage programme was not sufficient for the SHG members to run the entrepreneurship for a long time. To overcome the various shortcoming associated in the running of SHGs, further knowledge was required to smoothen the process. During that time, ICT intervened in the SHG sector and helped them to gain more knowledge on the area.

Through the successful strategies by government of India, concerned state government along with the intervention of SHGs, now women (poor and illiterate) women have been highly benefited by ICT. VAPS field researchers were able to evaluate some of the SHGs composed mainly by women in five districts of Tamil Nadu namely, Chennai, Coimbatore, Madurai, Tiruchirapalli and Tirunelveli and the benefit they received form the application of ICT.

4.6.1 Benefits Received by SHGs

1. In Palladam village of Coimbatore, a milk production village, women were at the helm of managing the centre and a leading milk cooperative. Like other centres, they provide information on cattle care, education and employment and local farming information as well. The women are using ICTs to ensure strict quality control of their milk produce. For instance they use technology to measure and record the volume and fat content of the milk brought in by members and for maintaining accounts and calculating monthly payments. They also send information on fat content to the central milk co-operative to ensure that there is no dilution of milk in transit.
2. Women of Kadayanallur village of Tirunelveli district provided one of the most inspiring examples of horticulture. With the inspiration from local NGOs, SHGs members set up their own micro-enterprise. The SHG composed of 15 members and raised the money. Some of them took training from the Department of Plant Pathology of the State Agricultural University, and set up an enterprise to produce a biopesticide – Pseudomonas fluorescence – to control seed-borne pathogens. Their product is not just a success but is now being marketed to local farmers, and companies in Tirunelveli and other districts. These women, who have only elementary education, have also developed a five-year business plan.
3. In Tambram in Chennai, a group of women have set up one SHG, named after Mother Teresa, to produce hand-made paper products from banana

waste. Here again, it was the knowledge centre enabled information and handholding support by local NGOs that helped them take a loan, set up the small scale paper mill. The women are using the ICT facilities offered by the nearby knowledge centre to market their produce. They have even opened an email account to handle the product related queries. These women have repaid most of their loans taken from the bank and financial institutions. They too have a business plan and put their earnings back in business. The only money they take home is for their family sustenance.

The study clearly found that the poor illiterate and semi-literate were immensely benefited from the use of ICT. ICT has made a tremendous impact in imparting knowledge on modern technology and its use. Study also found that SHGs consisting of some 12-20 members have been highly using the ICT in their entrepreneurship, keeping data, bank transaction, bank interest, expenditure and allowances, etc. Most of the semi-literate women in SHGs are now able to handle the computer for their basic purpose. They can run PCOs, Television Channels, Computer centres and along with this, they are using improved technologies in the agriculture sectors. Their income has now significantly increased. According to some of them, they are now able to sustain the family economically without the support their male counter part.

They also praised their male counterparts in allowing them to intervene / work in this sector. Through the advanced knowledge of their counterpart, they also able to learn many things form them particularly the bank transaction process, savings, handling of computer, internet, etc. In a nutshell, it can be said that ICT helped immensely to the SHG members to come out from their traditional household works and their role has been changed from the supporting actor to main bread earner. All of the respondents also wanted the use of ICT to be spread further towards the remote areas where there is communication facility for the girl and women. They are

totally ignorant of the modern technology and they are the mercy of their male counterpart.

Chapter-5
Conclusion & Suggestions

Today, information technology has changed the communication paradigm, making it no longer difficult to reach a large number of people more or less at the same time; and that too enable them to respond, interact as well as obtain a copy of the information within a low-cost. Information Communication Technologies (ICTs) apart from sensitising people against this heinous crime and helping them in general to change their opinion about a girl child, can also play a highly interventionist role by proactively pursuing cases against erring doctors, booking them under the law of the land.

The use of ICT helps to bridge the gap between people's opportunities for self-employment in the informal economy and the high growth sectors of the world economy. In an informal sector, workers can gain easy access to the Internet through tele-centers and obtain information about markets or administrative procedures, and to publicise their services to a wider clientele. SEWA has started using telecommunications as a tool for capacity building among the rural population. SEWA uses a combination of landline and satellite communication to conduct educational programmes on community development by distance learning. The community development themes covered in the education programs delivered include: organizing, leadership building, forestry, water conservation, health education, child development, the Panchayati Raj System and financial services.

It can be concluded that the women of Tamilnadu is empowered through the help of information and communication technology. It has changed their position from the past. Tamilnadu as a technologically advanced state in India is also doing a lot of projects for the women in general and village and illiterate women in particular. It has also taken several steps and implemented various plans and policies along with government of India to eradicate poverty and bring the women into the IT related industry. NGOs working in the field, multinational agencies and other private agencies have also extended their help to promote IT among the women. The development of IT has enabled the women section to participate in the daily affairs of the state, which range from the household work to local governance.

5.0 SUGGESTIONS

? The continued projection of negative and degrading images of women in media communications - electronic, print, visual and audio - must be changed. Violent and degrading or pornographic media products [can also negatively affect] women and their participation in society. The worldwide trend towards consumerism has created a climate in which advertisements and commercial messages often portray women primarily as consumers and target girls and women of all ages inappropriately.

? Women should be empowered by enhancing their skills, knowledge and access to information technology. This will strengthen their ability to combat negative portrayals of women internationally and regionally to challenge instances of abuse of the power of an increasingly important industry.

? Self-regulatory mechanisms for the media need to be created and strengthened and approaches developed to eliminate gender-biased programming.

? Women need to be involved in decision-making regarding the development of the new technologies in order to participate fully in their growth and impact.

? Governments and other actors should promote an active and visible policy of mainstreaming a gender perspective in policies and programmes to address the issue of the mobilization of the media.

? To provide accessibility to masses in all parts of the country and more particularly to countryside women, in order to derive the benefits from converged applications like tele-education, telemedicine and world wide web access, government should set up Multifunctional Converged Applications Community Centres (MCACs) at *panchayat* level.

? It is the need of the hour that the MCACs should facilitate the Telecommunication services such as Local/ STD/ISD PCO, Fax, computing services like E-mail and Internet access, Information about local data base and creating awareness about governments programmes and also to exchange of social and cultural heritage across the country.

? The NGOs and the government should come together to make poverty alleviation programmes successful through women centric initiatives in which poor women have been organized to circumvent the problems of liberal development processes.

? There has been a great deal of interest in the potential benefits community networking may offer the developing world. This is particularly true of rural information and communication technology (ICT) projects that seek to bring emerging technologies like low cost computing and Internet access to rural households, social institutions and governments.

? Furthermore, there is no 'one-size fits all' design for rural ICT networks; communities vary greatly in their social, economic, and political organization, and therefore information needs, and the design of the most appropriate and relevant community networking system, will vary from place to place and over time within a given area. For successful community networking, the design and implementation of projects should be driven by the specific needs of communities.

? There is a large need (and by extension, market) for basic communication services in the rural areas of this region. ICT are currently used primarily for news, entertainment and communication with family and friends. Rural households, even the poor, are willing to spend significant portions of their income on communication and media. In fact, need and circumstance, not income, seem to be the primary determinants of ICT usage and expenditure. The implications of this demand (and the fact that even poor people are willing to spend) are threefold.

? One, ICT interventions may start their operations by first focusing on providing basic communication and information services rather than more sophisticated applications. Two, kiosk services can be provided more cheaply than currently available, then the kiosks can improve standards of living for the poor; less expensive access will directly impact disposable incomes. Three, this demand and the willingness to pay show promise for the economic sustainability of such projects.

? The opportunities to improve agricultural technical efficiency through ICT kiosks are more, but do not support investment of resources in methods to enhance efficiency. Despite greater access to ICT, farmers also have information needs that, if met effectively, may have substantial impacts on their well-being and agricultural productivity. There is a demand (and market) for expert advice.

Improvements in technical efficiency require information on agricultural pests and diseases, new seeds, and techniques. ICT kiosks may provide some of these extension services, and foster existing agricultural diffusion and support networks, especially where agricultural extension has not been given a sufficiently high priority by government.

? Farmers suffer information and communication deficits. We cannot still predict if ICTs will be a sufficient, cost-effective, or appropriate answer to these problems. It is difficult to anticipate the ways in which farmers will appropriate the technology, or how will they harness the opportunity to make the ICTs work for them. These questions remain open and need an answer.

? There needs to be a continuous monitoring of farmers' adoption of the ICT interventions. The needs of farmers are not static, and changing needs and demands must be monitored in order to feedback into change in ICT interventions. Studies show that certain kind of information is of great value to farmers, and they spend the energy and money necessary to seek and obtain that information, mostly in informal ways. We have to find out all means to find out the extent of farmers willing to adopt ICT innovations and help maintain the facility with financial and social support (how potential rewards are able to counterbalance possible risks and initial reticence).

Suggestions - based on observations

? An exclusive computer should be allotted to students and another system is required for other services for the public. Likewise **a system should be allotted to the school** (either by school or through kiosk to facilitate E-School for the benefit for the children who are foundation of the future society. A kiosk should have two systems in kiosk – one system for students who learn computer course, another computer for public for providing other services through kiosks. Apart from these, a separate computer should be used for schools.

? All systems, either in school or kiosks should be working properly. When the students or public come to get some service and the computer is not working it would give a bad impression, if the visitor is a new comer, the impression becomes the first impression.

? English is the language used in the computers, the villagers are mostly illiterate, and who do not know English. They use Tanglish (or transliteration of Tamil) for chatting by operator and convey that in turn to the villagers. Tamil fonts are used only job typing Tamil materials. The user interface in Tamil and familiarizing it to public is a distant goal to reach.

? The operators should by given training for PC management though they have completed DCA course, they should be given hardware training, problem solving and trouble shooting to avoid cutting a sorry figure before the rural public or students when some problem arise in computer. They should have the confidence to overcome all practical troubles they face in the kiosk and provided the service to the public in a more satisfied manner.

? Some school is not having computers, or even electricity connection. We can request the school administration to get computer from government itself, if they could not do so, they should provide space and freedom to our operators to place a computer in school premises. Few schools which do not have electricity have taken steps to get electricity connection; this can be followed by all similar institutions.

? Relevant areas of interest need to be developed to bring women to ICTs so that they can then use these ICT tools to enhance their capabilities. It further requires to take some effective steps:

- *The technology must take into account the limited free time available to many women.*
- *Content must be pertinent and one's regional language and environment that is comfortable and gender-sensitive.*
- *Women must have the opportunity to develop competency on all ICTs.*
- *In developing women's capabilities, the focus of ICT policy and planning is important.*
- *Women need to be encouraged and trained to become producers on all ICTs.*
- *Clear engendered ICT policy needs to be developed.*

The choice of appropriate communication channels should not be reduced to computer and the Internet. The high rate of illiteracy, the popularity of television and radio, and the rich oral tradition of the villagers, underline the opportunities of an integrative multimedia approach, whenever possible. As documented by many years of development communication projects in the developing world, the potential of media such as video and even audio cassettes should not be underestimated. Additionally, this option is enhanced by the increasing possibilities for convergence of Internet with video and radio.

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Table: 4.19.1 : Age

Location	Below 17	18-35	Above 35
Coimbatore	4	79	17
Madurai	4	69	27
Chennai	44	54	2
Tiruchirappalli	27	65	8
Thirunelveli	22	57	19
Total	101	324	73

Table: 4.19.2 : Education

Location	Illiterate 1	Literate/no schooling 2	School education 3	College education 4	Technical/ Vocational 5	Others 6
Coimbatore	0	2	12	74	11	1
Madurai	0	17	0	75	8	0
Chennai	0	1	4	80	15	0
Tiruchirappalli	0	0	27	67	4	2
Thirunelveli	0	0	14	78	6	2
Total	0	19	57	374	44	5

Table: 4.19.3 : Occupation

Location	Housewife 1	Unemployed 2	Student 3	Salaried employee 4	Business 5	Farmer 6	Labours 7	Others 8
Coimbatore	4	3	5	81	5	1	0	1
Madurai	0	17	20	55	8	0	0	0
Chennai	0	15	37	13	5	1	0	0
Tiruchirappalli	0	21	44	18	11	0	0	6
Thirunelveli	0	5	54	35	4	0	0	2
Total	4	61	160	192	33	2	0	9

Table: 4.19.4 : Monthly Income

Location	Below Rs2000/- 1	2000-5,000/- 2	Above Rs.5, 000 3
Coimbatore	18	50	32
Madurai	17	48	35
Chennai	1	9	90
Tiruchirappalli	16	19	65
Thirunelveli	14	47	49
Total	66	173	271

Table: 4.20 : ICT Made Life Easier

Location	Strongly Agree 1	Somewhat agree 2	We do not know 3	Disagree 4	Can't say 5
Coimbatore	53	40	3	1	3
Madurai	66	29	3	0	2
Chennai	50	36	6	0	7
Tiruchirappalli	60	31	5	0	4
Thirunelveli	55	33	7	2	3
Total	284	169	24	3	19

Table: 4.21 : Availability of Proper Facility of ICT in Your Locality

Locality	Strongly Agree 1	Somewhat Agree 2	Do not know 3	Disagree 4	Can't say 5
Coimbatore	48	37	5	2	8
Madurai	56	32	7	4	1
Chennai	44	46	8	0	1
Tiruchirappalli	37	44	9	9	1
Thirunelveli	39	41	10	8	2
Total	224	200	39	23	13

Table: 4.22 : Use of ICT

Locality	Communication 1	Information 2	Booking Tickets 3	Information in different aspects 4	Banking & Insurance purpose 5	Any other 6
Coimbatore	78	10	2	8	0	1
Madurai	84	4	1	5	1	1
Chennai	95	2	0	1	1	0
Tiruchirappalli	81	7	4	6	1	1
Thirunelveli	78	7	5	7	2	1
Total	416	30	12	27	5	4

Table: 4.23 : Best source of getting information

Location	TV 1	Internet 2	Print media 3	Radio 4	Any other 5
Coimbatore	61	12	7	18	2
Madurai	47	41	10	2	0
Chennai	31	24	40	4	0
Tiruchirappalli	66	19	10	5	0
Thirunelveli	57	15	23	4	1
Total	262	111	90	33	3

Table: 4.24 : Internet made life easier

Location	Strongly Agree 1	Somewhat Agree 2	Do not know 3	Disagree 4	Can't say 5
Coimbatore	42	40	9	3	6
Madurai	53	32	8	4	3
Chennai	37	61	0	0	1
Tiruchirappalli	44	50	2	3	1
Thirunelveli	57	40	0	1	2
Total	233	223	19	11	13

Table: 4.25 : Easy Access to Internet

Location	Yes	No
Coimbatore	68	32
Madurai	83	17
Chennai	90	9
Tiruchirappalli	75	25
Thirunelveli	72	28
Total	388	111

Table: 4.26 : Sources of Accesses

Location	Home 1	Office 2	Cyber café 3	Any other 4
Coimbatore	10	24	27	7
Madurai	23	23	34	3
Chennai	17	27	40	6
Tiruchirappalli	11	22	37	5
Thirunelveli	16	20	32	4
Total	77	116	170	25

Table: 4.27 : Frequency of use of Internet

Location	Rarely 1	Once a week 2	Daily 3	When Necessary 4	Never 5
Coimbatore	11	24	32	23	9
Madurai	15	35	29	3	1
Chennai	6	11	18	25	30
Tiruchirappalli	18	12	10	30	5
Thirunelveli	12	36	14	7	3
Total	62	118	103	88	48

Table: 4.28 : Reasons for not having easy accesses

Locality	No Cyber cafe 1	Limited Cyber cafe 2	Cyber cafe Costly 3	Any other please specify 4
Coimbatore	22	38	23	10
Madurai	12	18	24	15
Chennai	6	11	18	21
Tiruchirappalli	18	12	27	23
Thirunelveli	19	18	34	24
Total	77	97	126	93

Table: 4.29 : Purpose of use of Internet

Locality	E-mail 1	News 2	Study 3	Shopping 4	Booking Tickets 5	Any other 6
Coimbatore	71	9	3	1	0	5
Madurai	83	3	6	0	0	3
Chennai	56	30	16	8	0	0
Tiruchirappalli	68	17	10	4	1	0
Thirunelveli	73	7	9	6	4	1
Total	351	66	44	19	5	9

Table: 4.30 : Facility of Cable Television

Location	Yes	No
Coimbatore	96	4
Madurai	85	15
Chennai	84	16
Tiruchirappalli	78	22
Thirunelveli	67	33
Total	410	90

Table: 4.31 : Programmes you watch in TV

Location	Family serials 1	Movies 2	News 3	Sports 4	Education 5	Music 6	Any other 7
Coimbatore	41	22	18	4	2	12	1
Madurai	31	18	21	5	7	14	1
Chennai	38	19	22	3	8	5	4
Tiruchirappalli	52	18	20	2	5	2	1
Thirunelveli	50	22	18	3	4	1	2
Total	212	99	99	17	26	34	9

Table: 4.32 : Use of channels for news and educational purposes

Location	Rarely	Once a week	Daily	Never
Coimbatore	24	21	54	0
Madurai	26	13	57	3
Chennai	35	12	48	4
Tiruchirappalli	15	28	55	2
Thirunelveli	19	27	52	2
Total	119	101	266	11

Table: 4.33 : The necessity of ICT in Job Sector

Location	Yes	No
Coimbatore	79	21
Madurai	79	17
Chennai	84	16
Tiruchirappalli	65	35
Thirunelveli	69	31
Total	376	120

Table: 4.34.1 : Training or exposure in the field of Computer

Location	Yes	No
Coimbatore	70	29
Madurai	71	27
Chennai	75	8
Tiruchirappalli	62	21
Thirunelveli	57	32
Total	335	117

Table: 4.34.2 : Computer Training

Location	Formal	Informal	Not applicable
Coimbatore	51	28	21
Madurai	52	18	30
Chennai	78	16	5
Tiruchirappalli	55	35	10
Thirunelveli	63	31	6
Total	299	98	72

Table: 4.35 : Reason for not getting employed

Locality	Not interested	Not able to get a good remunerative job	No opportunity in my place	Family restriction	Overburdened with house hold activities	Any other
Coimbatore	15	22	5	5	1	7
Madurai	3	16	6	5	2	4
Chennai	13	16	13	12	0	3
Tiruchirappalli	9	23	21	4	1	2
Thirunelveli	7	27	24	4	1	3
Total	37	104	69	30	5	19

Table: 4.36 : Nature of Job

Locality	Data entry	Working in call center	Running a PCO	Working in pvt. Tele center	Banking	Insurance	Printing /publishing	Documentation work	Electronic media	Print media	Any other
Coimbatore	10	2	10	15	8	2	8	10	4	1	29
Madurai	11	2	0	6	3	1	2	6	2	0	35
Chennai	18	8	0	0	11	0	0	17	0	1	44
Tiruchirappalli	19	7	9	5	12	8	4	9	7	3	17
Thirunelveli	14	8	15	4	14	7	6	7	11	2	12
Total	72	27	34	30	48	18	20	49	24	7	137

Table: 4.37 : Satisfied with the work culture

Location	Yes	No
Coimbatore	67	33
Madurai	70	30
Chennai	65	35
Tiruchirappalli	54	46
Thirunelveli	55	45
Total	311	189

Table: 4.38 : Problems faced at work place

Location	Sexual harassment	Burden of work	Demand for performance	Any other
Coimbatore	5	12	11	5
Madurai	3	9	7	11
Chennai	2	13	11	9
Tiruchirappalli	2	18	14	12
Thirunelveli	3	18	17	7
Total	15	70	60	44

Table: 4.39 : Do you get leisure to look after your family

Locality	Yes	No
Coimbatore	86	12
Madurai	87	12
Chennai	66	32
Tiruchirappalli	65	35
Thirunelveli	61	39
Total	310	130

Table: 4.40 : Freedom of decision making in family matters

Locality	Yes	No
Coimbatore	89	11
Madurai	89	10
Chennai	93	4

Tiruchirappalli	86	14
Thirunelveli	82	18
Total	365	57

Table: 4.41 : Government is giving sufficient support to provide ICT education to the women in your area

Locality	Strongly agree	Somewhat agree	Do not know	Disagree	Cannot say
Coimbatore	38	32	8	8	14
Madurai	22	34	11	24	9
Chennai	26	54	9	6	5
Tiruchirappalli	33	18	19	8	12
Thirunelveli	24	25	29	18	4
Total	143	163	76	64	44

Table: 4.42 : ICT has provided the women opportunity to work from home and earn

Locality	Strongly agree	Somewhat agree	Do not know	Disagree	Cannot say
Coimbatore	45	35	17	1	2
Madurai	29	45	10	7	8
Chennai	43	49	6	0	1
Tiruchirappalli	27	44	13	9	7
Thirunelveli	31	42	16	5	6
Total	132	215	62	22	24

Table: 4.43 : Working from home have resulted in curbing the leisure hours of the women

Locality	Strongly agree	Somewhat agree	Do not know	Disagree	Cannot say
Coimbatore	37	36	22	4	1
Madurai	15	37	22	14	10
Chennai	60	36	0	3	0
Tiruchirappalli	41	30	29	0	0
Thirunelveli	51	27	11	6	5
Total	204	166	64	27	16

Table: 4.44 : ICT has helped women folk in India about what is happening in the country and out side

Locality	Strongly agree	Somewhat agree	Do not know	Disagree	Cannot say

Coimbatore	58	32	7	2	1
Madurai	32	42	11	4	11
Chennai	50	26	9	10	4
Tiruchirappalli	49	30	12	6	3
Thirunelveli	45	36	9	6	4
Total	234	166	48	28	23

Table: 4.45 : Rural women folk is deprived of ICT infrastructure

Locality	Strongly agree	Somewhat agree	Do not know	Disagree	Cannot say
Coimbatore	44	32	15	2	7
Madurai	34	24	10	8	22
Chennai	28	25	26	5	18
Tiruchirappalli	55	20	9	9	7
Thirunelveli	57	23	8	7	5
Total	218	104	68	31	59

Table: 4.46 : Women still want to make use of ICT for their next generation development

Locality	Strongly agree	Somewhat agree	Do not know	Disagree	Cannot say
Coimbatore	66	25	1	8	0
Madurai	64	25	5	2	4
Chennai	29	35	17	8	10
Tiruchirappalli	51	28	11	6	4
Thirunelveli	48	29	13	10	10
Total	258	142	47	34	28

Table: 4.47 : Entry of women workforce in ICT industry is affected by their socio-economic and educational background

Locality	Strongly agree	Somewhat agree	Do not know	Disagree	Cannot say
Coimbatore	32	45	12	10	1
Madurai	30	38	8	16	8
Chennai	36	36	24	1	2
Tiruchirappalli	44	38	16	1	1
Thirunelveli	49	41	8	1	1
Total	191	198	68	29	13

ENHANCING WOMEN EMPOWERMENT THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY

INTERVIEW SCHEDULE

I am from VAPS, a leading Action Research Agency conducting a study on the above.. Please give your opinions on the following.

Name	Code		Code
Location:		Location: 1. Urban 2. Rural	

Q1. Name & Address of the Respondent:

_____

_____

_____

_____

1a. Marital Status 1. Married 2. Unmarried 3. Divorcee 4. Separated 5. Widow

1b. Monthly HH Income 1. Below 5000 2. 5001-10000 3. Above 10000

Q2. Details of Family members

S.No .	Name	Relation	Age	Sex	Occupation	Education
1		Self		2		
2						
3						
4						
5						
6						
7						
8						
9						
10						

Code

Relationship

1. Husband 2. Wife 3. Father 4. Mother 5. Son

6. Daughter 7. Daughter in law 8. Grand father 9. Grandmother
10.Grandson 11. Granddaughter 12. Others

Age

(1) Below 1Yrs (2) 1-17 Yrs (3) 18-35 Yrs (4) Above 35Yrs

Sex

(1) Male (2) Female

Occupation

(1) Housewife (2) Unemployed (3) Student (4) Salaried employee
(5) Trade/Business/Self employed (6) Farmer (7) Labourer (8) Others

Education

(1) Illiterate (2) Literate, no schooling (3) School educated
(4) College educated (5) Technical/Vocational (6) Others

3. Do you agree the development of ICT and it applications in day to day life in the office, home and market has made your life more easier than earlier.
   1. Strongly agree 2. Some what agree 3. Neither agree nor disagree 4. Disagree
   5. Cannot say

4. Are you getting the proper facility of applications of ICT in the form of telecommunications, Internet, electronic media, print media, etc in your locality?
   1. Strongly agree 2. Some what agree 3. Neither agree nor disagree 4. Disagree
   5. Cannot say

5. What are the purposes for which you take the help of ICT in your daily life (multiple answer).
   1. For communication with friends, relatives and clients.
   2. To get information on the market and for shopping
   3. Booking the tickets for traveling.
   4. To get information on different subject of interest
   5. For banking and insurance purposes
   6. Any other purposes, please specify _____

6.. What is for you the best source of getting information about your state, country and about the world.?
   1. Television 2. Internet 3. Print media 4. Radio
   5. Any other please specify _____

7. The use of internet has made everyone's life more easier.
   1. Strongly agree 2. Some what agree 3. Neither agree nor disagree 4. Disagree
   5. Cannot say

8. Do you have easy access to internet at your place?
   1. Yes 2. No

9. If yes, where do you access the service for internet?
1. Home 2. Office 3. Cyber Café 4. Any other please specify _____

10. How often you use internet for yourself?
1. Rarely 2. Once a week 3. Daily 4. As and when necessary 5. Never

11. what are the reasons for not having easy access to internet?
1. No cyber cafe at my locality 2. Less number of cyber cafes
3. Cyber cafes are costly 4. Any other please specify_____

12. Why do you use Internet?
1. E-mails. 2. News 3. Study 4. Shopping
5. Booking tickets for traveling/ movies, etc 6. Any other, please mention _____

13. Do you have the facility of cable television?
i. Yes ii. No

14. What are the kind of programmes that you love to watch?
1. Family serials 2. Movies 3. News 4. Sports 5. Education
6. Music 7. Any other please specify _____

15. How often you watch news and educational channels in different TV channels.
1. Rarely 2. Once a week 3. Daily 4. Never

16. in which sector are you working?
1.Government 2. Private 3. NGO 4. Sole proprietorship

17. Do your job needs the application of ICT ?
1. Yes 2. No

18. Have you taken any kind of training or exposure in the field of computers?
1. Yes 2. No

19. If Yes, whether your training is formal or non formal?
1. Formal 2. Non-Formal

20. If formal, then please specify the details of your training?

Name of the institute	Name of the degree / diploma	Duration of the training	Private or government institute	Cost of the training

21. If non-formal, what is the source of your training?

Name of the institute	Name of the degree / diploma	Duration of the training	Private or government institute	Cost of the training

22. After your training did you applied for any jobs?
1. Yes 2. No

23. After your training how long you remained unemployed?

(Please specify the period)

_____

_____

24. What is the reason for not getting any employment?

1. Not interested.
2. Not able to find a good remunerative job.
3. No opportunity in my town/ village
4. Family restriction.
5. Overburdened with household activities.
6. Any other, please specify_____.

25. Currently are you working in any kind of Pvt. / Govt. organizations or have started any private firm of your own in the field of ICT.

1. Yes 2. No

26a. If private firm then please specify_____

27. Are you working as a full timer or part timer?

1. Full timer 2. Part timer

28. Please specifies the nature of job you are doing?

1. Data entry
2. Working in call center
3. Running a PCO
4. Working in private telecom sector
5. Banking
6. Insurance
7. Printing and publishing
8. Documentation work
9. Electronic media
10. Print media
11. Any other please specify_____

29. In what position you serving your office.

1. Management and decision making authority
2. Mere employee
3. Sole proprietor
4. Self employed
5. Any other please mention _____

30. Are you satisfied with the work culture of your office.

1. Yes 2. No

31. If no, what kind of problems you are facing at your working place.

1. Sexual harassment 2. Burden of work 3. Demand for performance
4. Any other please specify_____

32. what have you done to solve your problem?

_____

_____

_____

_____

33. What is your monthly / annual income in Rupees?

1. Less than 2000 2. 2000 – 5000 3. Above 5000

34. Being an employed woman are you getting leisure to look after your family and your health?
1. Yes 2. No

35. Are you suffering from any kind of illness due to your job profile, please mention.

_____

_____

_____

_____

36. Being an employed women are you getting the freedom in the decision making of your family?
1. Yes 2. No

37. Please give your opinion on the following statements.
1. Strongly agree 2. Some what agree 3. Neither agree nor disagree 4. Disagree
5. Cannot say

Statement	Code
37.a. The government is giving sufficient support to provide ICT education to the women in your area	
37.b. ICT has provided the women opportunity to work from home and earn.	
37.c. Working from home have resulted in curbing the leisure hours of the women	
37.d. ICT has helped women folk in India about what is happening in the country and out side	
37.e. Rural women folk is deprived of ICT infrastructure	
37.f. Women still want to make use of ICT for their next generation development	
37.g. Entry of women workforce in ICT Industry is affected by their socio-economic and educational background	

Name of the interviewer _____

Checked by _____

Place _____

Date _____

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