



THE COMMONWEALTH *of* LEARNING

Barriers to Information and Communication Technologies Encountered by Women

Sponsored by The Commonwealth of Learning and
the British Council
November 26 – 28, 1998
New Delhi, INDIA

SUMMARY REPORT



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Organised by: Commonwealth Educational Media Centre for Asia
The British Council, New Delhi
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CONTENTS

List of abbreviations	iii	
Foreword	1	
Preface	1	
Acknowledgements	1	
1. Introduction and background	3	
1.1 Background	3	
1.2 Rationale	3	
1.3 Project methodology	3	
1.4 Meeting outputs	4	
1.5 Beneficiaries	4	
2. Report on the Asian regional meeting	5	
2.1 Background to the meeting	5	
2.2 Profile of participants	5	
2.3 Summary of meeting agenda and methodology	5	
2.4 Opening remarks	6	
2.5 An overview of the policy framework	6	
3. Highlights of country reports	11	
3.1 Bangladesh	11	
3.2 India	11	
3.3 Malaysia	13	
3.4 Pakistan	13	
3.5 Sri Lanka	14	
3.6 Main discussion points arising from presentations	15	
3.7 Summary of small group deliberations	16	
4. Proposed follow-up activities, recommendations and conclusions	21	
4.1 Follow-up recommendations to the meeting	21	
4.2 Project outlines proposed by working groups		21
4.3 Closing session	25	
4.4 Lessons learned for future regional meetings	26	
Appendices:		
Appendix I	Asia regional meeting: participant list	27
Appendix II	Asia regional meeting: programme	33
Appendix III	Asia regional meeting: summary of participant expectations	35
Appendix IV	Literacy and telecommunications access: some comparative indicators	37
Appendix V	Distance Education in Commonwealth Asia: A Survey of Gender Differentials in Access to Information and Communication Technologies	39

LIST OF ABBREVIATIONS

COL	COMMONWEALTH OF LEARNING
DE	DISTANCE EDUCATION
EMPC	ELECTRONIC MEDIA PRODUCTION CENTRE
HP	HEWLETT PACKARD
ICT	INFORMATION AND COMMUNICATION TECHNOLOGIES
IGNOU	INDIRA GANDHI NATIONAL OPEN UNIVERSITY
IDRC	INTERNATIONAL DEVELOPMENT RESEARCH COUNCIL
ISP	INTERNET SERVICE PROVIDER
ITU	INTERNATIONAL TELECOMMUNICATIONS UNION
NFE	NON-FORMAL EDUCATION
ODL	OPEN AND DISTANCE LEARNING
PC	PERSONAL COMPUTER
WIGSAT	WOMEN IN GENDER, SCIENCE AND TECHNOLOGY

Foreword

Education and training opportunities by distance and open learning are one of the few educational areas in which women in the developing world are well represented. Open/distance learning helps to overcome some of the challenges that women and girls face when the only other opportunities for education are provided through conventional means. However with the onslaught of the new communications and information technologies to deliver distance/open learning, it is feared that this trend may be reversed, and that women may become marginalised in accessing education delivered by distance methodologies due to issues relating to the use of these technologies.

Further, the influx of the new technologies may have an impact on the staff employed to work in distance teaching environments. If women are disadvantaged with respect to accessing and using the new technologies, this may influence the type of positions for which they are employed.

In order to further explore these concerns, The Commonwealth of Learning (COL) contracted with a consultant to carry out an environmental scan on the research and information available on issues pertaining to women and the access to Information and Communications Technologies (ICTs), with particular regard to open and distance learning. The consultant found that there was little research to be found in this area, although there was acknowledgement that there are barriers that women may encounter when accessing ICTs, especially in parts of the developing world.

In view of this, COL took the decision to support activities which would provide information and research data that would assist institutions delivering education and training through distance modes, organisations and agencies concerned with women's access to ICTs, government agencies and others working in the field, in order to help ensure equal access regardless of the gender of potential users.

Preface

In November 1998, the Commonwealth of Learning, in collaboration with the British Council regional office in Delhi, organised and ran a regional expert group meeting for distance education providers in the Commonwealth Asian countries. The meeting was the first in a planned series of regional expert group meetings whose focus is on the new information and communication technologies and the opportunities and challenges they create for women in distance education. Participants from Pakistan, Sri Lanka, Malaysia, Bangladesh and India were invited to meet in Delhi at the Indira Gandhi National Open University over three days.

The meeting proposed to draw upon the experience and knowledge of participants who were involved in distance education provision, or in uses of ICTs with women, or both. Apart from enabling participants to develop concrete strategies and project proposals to address the needs of women in distance education using ICTs, the meeting provided a valuable forum for distance education workers to consult with each other, to share their experiences and expertise, to understand the policy implications of the liberalisation of the telecommunications sector and to build their own awareness of the issues that women face. The meeting is expected to have a multiplier effect, both through participants' working together during the meeting and in eventual follow up activities.

Acknowledgements

The Commonwealth of Learning is grateful for the assistance and support provided by a number of individuals and organisations without which this meeting would not have been the successful and worthwhile activity that it was. Specifically, COL would like to acknowledge and express its gratitude to:

The regional British Council office in Delhi, as well as local British Council offices in Malaysia and Bangladesh for providing support for the costs associated with convening the meeting.

The Vice Chancellor and Staff at the Indira Gandhi National Open University (IGNOU) for the support provided during the initial conception stages of the meeting as well as during the actual meeting time, and for the use of the Electronic Media Production Centre as the meeting venue.

Staff at the Commonwealth Educational Media Centre for Asia (CEMCA) for their help in organising and providing administrative support for the meeting.

The meeting participants – thanks to all who gave their time to attend and provide insightful and interesting contributions to the proceedings.

Ms Nidhi Tandon, the consultant who completed the environmental scan, assisted in the facilitation of the meeting, and drafted the final report of the proceedings.

1. Introduction and background

1.1 Background

In 1998, following discussions with various interested and concerned parties, the Commonwealth of Learning (COL) proposed to work with other agencies to develop strategies to increase the "comfort level" of women's uses of the new information and communication technologies (ICTs) in the open and distance learning arena. This initiative arose out of subsequent discussions, it proposes a series of activities that would address the specific issues that women face in the use of ICTs and suggests strategies through which these obstacles might be overcome.

1.2 Rationale

Education and training by distance and open learning is one of the few educational areas in which women are well represented. This is particularly true in those countries where the characteristics of distance education help to overcome some of the challenges that women and girls face when education provision is limited to conventional institutions. With the increased opportunities offered by the new ICTs to deliver distance/open learning, however, it is possible that this trend could be reversed. Women could become disadvantaged in accessing education delivered by distance methodologies due to a variety of issues relating to the use of or access to these new technologies.

Additionally, the introduction of new ICTs has implications for staff employed to work in distance teaching environments. If women are disadvantaged with respect to accessing and using the new technologies, this may influence the types of positions for which they are employed, or decrease their chances of being hired for certain positions.

1.3 Project methodology

1.3.1 Phase I: Regional surveys

In the first phase of this initiative, preliminary regional surveys covering each of the four regions of the Commonwealth were commissioned to outline the uses of information technologies by women for distance learning in Commonwealth developing countries. The regional survey for Commonwealth Asia, comprising Bangladesh, India, Malaysia, Pakistan and Sri Lanka is appended in Appendix VI. Each regional survey also identified a series of questions intended to guide the content of country reports that were to form the background to discussions at subsequent regional meetings (see Section 6: Questions that country reports need to cover: national issues, Appendix VI).

1.3.2 Phase II: Regional Meetings

The regional expert-group meetings comprise the second phase of the project. It is anticipated that regional meetings will be held in each of the four developing geographical regions of the Commonwealth, i.e. Africa, Asia, the Caribbean and the Pacific regions. The expert group meetings are expected to identify the spectrum of ICTs that are becoming prevalent regionally for the delivery of education, and outline the barriers to their uses vis-à-vis women and girl distance educators and distance learners. The meetings are also expected to deliberate on and identify possible strategies that can be used to overcome these barriers and recommend courses of action to assist women in accessing and using the new ICTs.

Invited participants will have a background in either distance education and / or educational technologies / mediums. Key participants will be identified to compile and present a country report addressing the list of questions posed in the regional survey prior to the meeting. It is anticipated that the country reports will cover:

- barriers to the uses of ICTs experienced by women in distance education;
- ways in which these barriers have been overcome;
- examples of the effects of the implementation of technologies on female learners;
- "lessons learned" as a result of these innovations;
- implications of national telecommunication policy for women's access to ICTs.

A specialist in the field of ICTs and women will also be invited to attend the meetings to provide insights and suggestions regarding "best practices" models that have evolved over the last few years. This consultant will act as a resource person and facilitator for the course of the meetings. This document is a report on the first regional meeting, which was held in Delhi, India in November 1998.

1.3.3 Phase III: Publication of findings

A likely third phase of the project will involve consolidation of the four reports from the regional meetings into a publication outlining the current situation and strategies to increase the access by women and girls to education and training which uses ICTs. It is anticipated that a final document will include examples of best practices from Commonwealth countries as a means of demonstrating initiatives which could be adapted in various parts of the world. The document will be made available to:

- distance education providers in Commonwealth (and other) countries;
- organisations and agencies interested in ICT issues for women;
- institutions involved in education provision to girls and women in developing countries;
- international women's organisations' resource centres.

Key findings and recommendations arising from the overall project will also be made available on the COL web site (www.col.org)

1.4 Meeting outputs

The main output will be a report from each of the four regional meetings which summarises the discussions, identifies barriers to the use of ICTs by women and outlines strategies to assist in overcoming these barriers. The reports will also include proposed activities and lessons learned from the regions in terms of educational initiatives using ICTs.

It is anticipated that the regional meetings will also help to forge linkages between and among persons, institutions and agencies working with women and girls, and using open and distance learning techniques and methodologies, as well as information and communications technologies.

1.5 Beneficiaries

- Women and girls in the developing Commonwealth who must, or who would prefer to, undertake their education through alternative means such as distance / open learning.
- Professional women distance educators (trainers, tutors, managers, course developers, etc.) who work, or are seeking work, in an educational environment employing the new information and communications technologies.
- Policy decision makers interested in the interface between education goals, telecommunications policies and gender development.

2. Summary report on the Asia regional meeting

2.1 Background to the meeting

In November 1998, the Commonwealth of Learning organised and ran a regional expert group meeting of distance education providers in the Commonwealth Asian countries. This meeting was organised in partnership with the British Council and was the first in a planned series of regional group meetings whose focus is on the new ICTs and the opportunities and challenges they create for women in distance education. Participants from Pakistan, Sri Lanka, Malaysia, Bangladesh and India were invited to meet at the Indira Gandhi National Open University in Delhi, India for three days.

The meeting proposed to draw upon the experience and knowledge of participants who were involved in distance education provision, or uses of ICTs with women, or both. The meeting provided participants with a valuable forum for consultation with each other, for examining the policy implications of the liberalisation of the telecommunications sector and for understanding some of the issues that women face. The meeting is expected to have a multiplier effect, both through participants' working together during the meeting and in eventual follow up activities.

2.2 Profile of participants

Invited participants had a background in either distance education and/or educational technologies and mediums. Key participants from each country were identified to compile and present a country report covering the list of questions presented in the regional survey that they received prior to the meeting.

In the case of Malaysia, the two participants were co-authors of the country report that most closely followed these questions. One of the Malaysian participants was from the national telecommunications policy body and the other, from the national distance education institution. The two participants from Pakistan were also country report authors, and both were from the Allama Iqbal Open University. The single participant from Sri Lanka was from the Open University of Sri Lanka and was the country paper author. The two participants from Bangladesh had no direct experience with distance education provision but the country paper covered some of the relevant issues and was presented by a member of Grameen communications. A range of participants from different regions in India presented a spectrum of perspectives of women at different levels of literacy and income. As well, two of the three authors of the country paper participated and presented at the meeting.

Although private sector representatives had been invited to the meeting, there were no participants from this sector, either with ICT or distance education interests. A complete list of participants is appended as Appendix I.

2.3 Summary of meeting agenda and methodology

The regional meeting proceedings were expected to identify the spectrum of ICTs prevalent in the regions for the delivery of education, and the barriers to their use vis-à-vis women and girl distance educators and distance learners. The meeting was also expected to deliberate on and identify possible strategies to overcome these barriers and recommend courses of action to assist women in accessing and using the new ICTs. In order to keep the meeting deliberations focused and manageable, participant numbers were kept deliberately low.

A copy of the meeting programme is attached as Appendix II. The meeting was opened promptly on the morning of November 26th (see 2.4) followed by a contextual introduction to the broad policy issues (see 2.5). With the framework and objectives of the meeting thus laid out, participants were invited to note down their own expectations of the meeting, and these are summarised in Appendix III. Given the

limited time within which participants were working, presenters of country reports were asked to summarise and highlight the key observations and responses to the questions posed by the regional survey. All the country reports were presented at plenary sessions, as were the discussions that followed. All participants received a copy of each of the country reports presented.

Some of the country paper authors were asked to outline the methodologies they used to access information needed to respond to the regional survey questionnaire. These are outlined in section 3 and are evidence that comprehensive information on the uses of ICTs by women for distance education are, for the most part, not easily accessible or are non-existent. The afternoon of the second day and most of the third and final day were devoted to active working groups with the express objectives of defining the obstacles that women might face in accessing and using ICTs and then suggesting workable proposals that might address these obstacles.

It was difficult to strike a fair balance between country details and regional proposals, given the potential range of topics, interests of participants and the time limitations. Nonetheless the methodology worked well in terms of imparting a sense of the issues at the regional level and suggesting a few ways in which organisations like the COL and the British Council might assist in taking things further.

2.4 Opening remarks

Dr. Usha Vyasulu Reddi, Director of CEMCA, opened the workshop with a few welcoming words. This was followed by an introductory presentation by Ms. Susan Phillips from the Commonwealth of Learning who summarised the background to and reasons for holding this meeting. Dr. Abdul Khan, the Vice Chancellor of Indira Gandhi National Open University delivered the key address, pointing out the future implications and opportunities offered by the developments of ICTs for distance education. Dr. Dhanarajan, the President of COL, acknowledged the support of the British Council in collaborating with COL and in identifying this as an important issue on which to join hands. Ms. Kamal Singh from the British Council gave a vote of thanks.

2.5 An overview of the policy framework

Ms Nidhi Tandon laid out the policy framework within which the discussions would be taking place and the key variables relevant to those discussions. Linking together three aspects of the evolving information and communication technologies, participants were taken through the implications of ICTs for:

- i) **distance education provision** and for the changing nature of education in general;
- ii) the negotiating **responsibilities of governments** in national telecommunication policies and why that is critical to distance education;
- iii) **marginalised groups**, in this case particularly women and their access to ICTs.

Ms Tandon's over-riding caution was that the discussions might run the risk of over-focusing on the technologies to the detriment of more fundamental issues such as the specific objectives of distance education programmes. She suggested that the issues at stake are as much about the technologies used as they are about the educative processes and delivery systems that adapt these technologies to meet the needs of women learners. She summarised the key trends in ICT developments as follows:

i) Trends in communication technologies

- relative strengths of various technologies as **synchronous** and/or **asynchronous** communications channels and workspaces
- technological **convergence**: digital technology allows both traditional and new communication services to be provided over many different networks
- rapid growth of **wireless** component

Given these trends, ICT tools can be adapted and used to:

- improve the effectiveness of education;
- increase efficiency through lower-cost alternatives to conventional instruction;
- extend access to geographically, economically or socially isolated learners;
- produce students with heightened capacity to adapt to technological change and innovation.

In defining the term **convergence**, Ms Tandon explained that it is the term used to capture the notion of the ability of different network platforms to carry similar kinds of services, or the coming together of consumer devices such as the telephone, the television and the personal computer. Ms Tandon explained that convergence could have many implications for education - the key one being that there could be more competition between computer, telecommunications and broadcasting industries for the control of future education delivery. She then addressed the broad trends in education provision.

ii) Broad future trends in education

- provision of education has shifted over time from family and community to government and state
- the next shift will be from public to private sector
- life-long learning implies that one's skills may be obsolete by the time one is employed
- therefore employers are more likely to assume the mantle of responsibility for education and skills upgrading

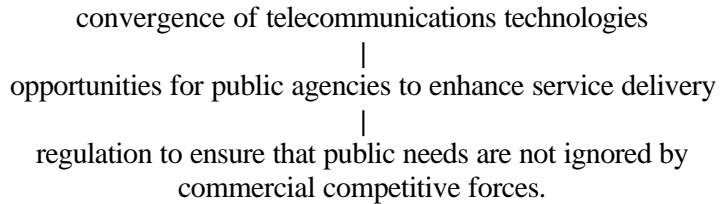
In most countries in the developed world, the commercial sector is ahead of the traditional academic sector in education delivery at all levels. What will be sent through the "pipeline" to communities is more than likely to be what will be commercially produced and delivered. In developing countries, as governments struggle to build the infrastructure, vested interests, far more experienced in delivery and with very different motives are capable of providing content in a manner far more attractive to the public than what the academic community is proposing. The academic community needs to realise that it may be losing its hegemony on education at all levels and that the terrain is changing.

When developing countries open their markets to foreign investors, there is a tendency for investors to flock to the high value-added end of the market (such as mobile phones) and show little commitment to long-term investment in the expansion of basic telephone and telegraphy services to rural or remote areas. For the most part, national regulators will have considerable latitude in determining the *mix of decisions* on many different technological choices. In an ideal situation, they can encourage greater or lesser development of different alternatives and their integration with other established and emerging

technologies. Governments do have an interest, not only in promoting infrastructure and service development, but also in making use of telecommunications to support traditional public and social services.

iii) The regulatory framework

Network and services systems are undergoing fundamental changes, primarily through the application of digital technology, and this has consequences for policy and regulation.



Ms Tandon then pointed out that at the international level, substantive documentation addressing the gender considerations to telecommunications development does now exist. One of the recent ITU telecommunication policy frameworks brought to the attention of participants was a paper entitled "Gender Equity, Telecommunication Development and the ITU". This document is reproduced and attached as Annex I to the regional survey in Appendix VI, and it is also available at http://www.itu.int/itudoc/itud/wtdc/wtdc98/doc/128_e_70958.doc

Broadly speaking, the barriers to women's use of ICTs were summarised as falling into the following categories:

- Access to the technologies
- General literacy and language
- Costs
- Lack of technical training
- Institutional barriers
- Infrastructural barriers

Many of these barriers arise directly from the status of national illiteracy levels and national connectivity infrastructure. A table comparing the literacy and connectivity statistics for each country was presented to illustrate how the broader systemic problems of general illiteracy and infrastructural barriers combine to work against women. The statistics are reproduced in Appendix IV: Literacy and telecommunications access; some comparative indicators.

Ms Tandon concluded with her perspective on the "ABC's of distance education" suggesting that national policy priorities had to focus on:

Access: the physical proximity to the mediums of education delivery, or connectivity - a case of 'you cannot teach them if you cannot reach them'. However, even if women are ideally located to the mediums or technologies, they may not be able to use them because they do not have the capacity;

Bandwidth: the lack of affordable and technically viable media for the delivery of course content in most developing countries means that cheaper technology solutions need to be adapted to suit different situations and contexts;

Content: the content delivered by the technologies needs to be made locally, linguistically and culturally relevant. This will enable women not only to use the content but also to contribute to the knowledge base of that content source.

The presentation was concluded with a suggested framework within which distance education providers should ideally be working - reproduced in Figure I: Policy framework – spheres of influence.

3. Highlights of country reports

All the country reports and other written presentations were made available to the participants over the course of the meeting. Country report authors were invited to present the key points of their findings as determined by the questionnaire sent out with the regional survey. The country report highlights are summarised below.

3.1 Bangladesh

Ms Nazneen Sultana from Grameen Communications, presented the country report for Bangladesh. Open and distance learning in Bangladesh is mainly provided by the Bangladesh Open University. Its enrolment figures reflect not only a strong female presence (40% women in secondary education courses) but also higher female success rates - 60% of students in the merit list are women. The open university system offers 19 formal education courses and 200 non-formal programmes, the latter address interests such as agricultural and home management related topics. Print materials, electronic media such as radio, television and audio videocassettes are commonly combined to deliver education programmes. Television broadcasting in particular is available to approximately 92% of the population and currently carries an educational service of 40 minutes six days a week.

Ms Sultana explained the objectives behind Grameen Education, an enterprise of Grameen Bank, which seeks to develop strategies that meet the education and information needs of Grameen Bank members who have not benefited yet from any Government adult education programme.

Ms Sultana also gave an account of an initiative called Grameen Telecom which enables women in Grameen villages to draw loans to purchase mobile telephones which they then use to service other village and community members. She also informed the meeting that there were plans afoot to set up electronic commerce for some craft artisans to sell their products. Most of these plans (Grameen Education and Grameen Telecom) however, are still at the drawing board stage.

3.2 India

The country report for India, which had been edited by Professor Prabha Chawla, was presented to the meeting by Ms Jai Chandiram from the Indira Gandhi Centre for the Arts and by Ms Sarala Gopalan. The paper opens with examples of how women have been empowered to use a whole range of technologies when the training has been specifically directed towards them. While there has been some headway both to introduce and use some of the more traditional ICTs at primary school level, and to promote the enrolment of girls into school at that level, there appears to be no specific policy nor scheme to interest or encourage women students into the areas of science or computer sciences at the tertiary levels. The paper acknowledges and proposes that the existing national radio network capacity could be better harnessed for the delivery of education across the country.

Enrolment figures for distance education courses from IGNOU indicate that a significantly higher percentage of women students continue to opt into "traditional" subjects such as early child care, nutrition and nursing. In 1998, however, 51.3% of students enrolling for the master's degree in library and information science were women, and this might be an indication of a growing trend in the importance of this subject for women.

The paper also offers a few examples of non-formal education (NFE) experiments that have been used to reach children who are outside the formal system of education. The Indira Mahila Yojana initiative, for instance, seeks to provide comprehensive education programmes that combine micro-credit, health education and literacy for women.

Dr. K.S. Lyngdoh presented a paper from the North Eastern region of India outlining the general education scenario for tribal peoples there. She argued that:

"most villages in the north east today are still without motorable roads (or) electricity supply. In the absence of such basic infrastructure, even physical installation of the new ICTs becomes problematic. Use of ICTs in the education of rural women ... has to proceed side-by-side with general progress in the development of infrastructure, markets and income levels in the region".

Three case situation presentations and papers followed the more general country presentations:

- *Deccan Development Society*, by Mr. P.V. Satheesh
- *Self-Employed Women's Association (SEWA)*, by Ms Namrata Bali
- *Lok Jumbish Parishad Programme to Spread Primary Education to Girls in Rural Areas*, by Dr. Lalit Kishore

Unfortunately a fourth presentation by Father George Ponodath of the Educational Media Research Centre in Calcutta could not be made due to programme time limitations.

It appears from these papers and the discussions that followed, that some of the telecommunication and ICT issues in India are less about gender and more about income. At the same time, while there are cases of women excelling in the use of ICTs, one finds, by and large, that women seem to be at the receiving end rather than at the policy or decision-making end. The disparities between the haves and have-nots in India are so acute that any attempt to draw up a national picture on access to ICTs must necessarily have two very distinct sides to it. This was reflected in the number of participants around the table who were working with grassroots communities in India and who felt strongly that the newer ICTs were well beyond the reach of these communities for the foreseeable future, not just in terms of physical access, but also in terms of content and language.

This sentiment is echoed in a recent article appearing in "The Hindu" 24-11-1998, on the preconditions for spread of IT in India:

'Since inexpensive technology that will permit illiterates to use computers by touching icons on the screen of computers is some distance away, a renewed emphasis on basic education is essential for increasing computer literacy - though there are more important reasons for ending illiteracy than a facilitation of computer use. Even if IT itself is used - through distance education - for raising literacy, much of the responsibility for attaining this objective will have to be borne by the blackboard. Yet, the ability to read and write will not by itself do since the language of IT in India is English, with which no more than 5 per cent of Indians are conversant. While countries where English is not commonly spoken have managed to develop computer software in the local language, there has sadly been very little movement in that direction in India. Developing software that can eventually be used by a majority of the population is doubly difficult because of the multiplicity of languages in India. But there is no reason why the localisation of software cannot be done with government funding of research on development of standard codes for software in Indian languages. The alternative is the perpetuation of the current elitism of the Indian IT sector.'

3.3 Malaysia

The country report for Malaysia was co-authored by Dr. Gan Siowk Lee from the Institute for Distance Education and Learning (IDEAL) at Universiti Putra Malaysia and Ms Rinalia Abdul Rahim from the National Information Technology Council (NITC). The methodology used to compile the report included:

- web searches for policies on women, telecommunications and education;
- survey questionnaires sent out to representatives of government, women's organisations and educators;
- survey questionnaires sent out to known public-education institutions with ODL programmes at the tertiary level;
- statistics culled from the UNDP Human Development Report's social statistics bulletin;
- requests for subscription data broken down by gender from two Malaysian ISPs;
- data from the Computer Industry Association of Malaysia on the total computer sales to gauge PC penetration and the cost of hardware and software.

The key issues brought out in the country report were:

Issues of access:

- lack of access to hardware, software and connections;
- cost of connections still high for the lower income women;
- general "technophobia" among women;
- social and cultural barriers - women are still the primary care-takers for their children and carry the bulk of household responsibilities, therefore have less time to explore the uses of new ICTs;
- full internet access is limited in the academic sector and in corporations to those who hold managerial and/or technical posts, and the number of women in these positions is relatively small compared to men.

Issues relating to national policy:

- Malaysia's development policies are gender neutral. There is nevertheless sensitivity to gender issues manifested through the National Policy on Women and the Action Plan for Women's Development;
- the Action Plan for Women's Development has thirteen sections, one of which is "Women and Education and Training". Information and communication technologies are not specified nor reflected in any of the thirteen sections;
- telecommunications policies serve to support national development and national aspirations, specifically VISION 2020 and the National Information Technology Agenda (NITA);
- NITA provides an opportunity to address gender differentials in the education sector;
- policy-makers across sectors tend to collaborate and align their policies with regards to information and communication technologies.

3.4 Pakistan

The country report was put together by Ms Aisha Akbar, Faculty of Education, Allama Iqbal Open University and Ms Yameena Tamkeen from the Institute of Educational Technology, Allama Iqbal Open University. The methodology used to compile the report included:

- study of various policies, plans and economic surveys issued by the government every year;
- enrolment rates for various years and courses obtained from the computer centre, AIOU;
- discussions with senior staff at the Planning Commission, Education section on the reasons for the failure of plans and policies in achieving desired objectives;
- research studies conducted by the research cell at the AIOU and relevant research on the "effectiveness of media";
- telephone survey of 93 tutors in Islamabad on the use of the telephone as a medium of instruction;
- interview of the PM's Literacy Commission to find out how far they had gone in achieving objective of setting up 75,000 non-formal schools to enhance literacy rates. The number is expected to be equal for both girls and boys;
- no records were available on ICT distribution in rural or urban areas or on male or female bases;
- held discussions with some women's NGOs, such as the Aurat Foundation, the Sultana Foundation (intending to set up low-cost schools in rural areas of Pakistan) and the Tameer-e-Millat (planning stages of teacher training through DE).

The presenters also noted that the AIOU research department is intending to conduct a study on the use of media by female students. The key points covered in the presentation noted that despite several policy papers and recommendations, results were for the most part, disappointing. Reasons offered included:

- poor databases;
- plans being based on opinions, not on research;
- overly ambitious targets;
- lack of political will;
- poor resource backup.

As in the Indian country report, the Pakistan report relied on enrolment statistics to show that women tended to take "women-related courses" such as house management. It was pointed out that women were often barred from professional courses, such as computer courses, because of the high fees and that socio-economic norms meant that women were not deemed worthy of such "investment". Those courses with a high success rate included those that offered women a functional (rather than a formal) education, such as health care.

The Allama Iqbal Open University is the first university in Pakistan which employs the open learning/distance education mode of delivery and, as yet, the use of ICTs is limited. Efforts are, however, being made to acquire and establish computer networks for an organised and systematic use of ICT at AIOU. Presently, radio and television broadcasts and non-broadcast programmes are extensively used for direct text-based education. Nearly 230 television programmes, each of 25 minutes duration, and 700 radio programmes, each of 15 minutes duration, are put on air during one six month semester. The data regarding the number of women registering and completing programmes through distance education at AIOU is available but there is no data available regarding the use of ICTs by women for distance learning.

3.5 Sri Lanka

The country report was written and presented by Professor Uma Coomaraswamy from the Open University of Sri Lanka. The Open University of Sri Lanka (OUSL) is eight years old, has a central campus, four regional centres and a network of 16 study centres located throughout the island. A

multi-media delivery system is used which combines discussion classes, audio-visual aids, and laboratory and field work. The paper pointed out that employers, particularly in the private sector, consider the current education system to be inadequate and this has resulted in a series of proposals recently being introduced to promote greater flexibility and content relevance to employment needs.

While there are no visible barriers to distance education and a general policy of equal opportunity to all, gender stereotyping in course selection by women is common. Professor Coomaraswamy reported that 2% of the G.N.P. is allocated to education and proceeded to present enrolment statistics which indicated that women learners tended to opt for "softer" subjects - a very small proportion of women take up veterinary, engineering or computer science courses, for example. In the cases where science enrolment figures reflected a high number of women, these tended to be in the biological sciences. So, although at face value it would appear that both men and women have equal enrolment figures at institutions of higher education, a closer look shows that there is a gendered demarcation in terms of choice of subject. Data alone cannot account for this difference and it would appear that socio-cultural notions of what is "appropriate" for female students to study are difficult to change.

Very little comprehensive research on gender issues, ICTs and distance education has been done in Sri Lanka. The use of ICT for education and training in Sri Lanka is limited by resource restrictions. While the overall national telecommunications objective is to increase telephone connectivity across the country, Professor Coomaraswamy reported that the telecommunication policy makers seemed to be unaware of the recent ITU resolutions on gender equity and that she intended to make these documents available to them on her return to Sri Lanka.

3.6 Main discussion points arising from presentations

After each country paper presentation, participants took over the session. The range of topics was wide and the debate lively. The panelists were peppered with many questions and short testimonials about activities in distance education in the region, and the roles of government, NGOs and distance education providers and the needs of women. It became clear over the course of the meeting that there was a risk of categorising women into one homogeneous group when, in fact, their education needs are very different depending on their circumstances, and their income levels.

There was substantive debate about education content, ranging from the over-importance given to "mainstreaming literacy" at all costs, to the risks of domesticating women further by engaging them in certain subjects (i.e. promoting the status quo), to the importance of relating content to future employment trends and life-long learning for women.

Questions were raised about the "gender neutrality" of national policies. Participants argued quite strongly that, by and large, policies risked not addressing gender differences at all to the detriment of different needs. A participant provided concrete examples in India to show that no policy could be gender neutral even when it professed to be so.

There was also some discussion about how policy change is created and how this change should not just be quantitative but one that takes into account attitudinal changes in terms of teaching and instruction.

Presenters were asked to throw some light on the situation of rural women in Malaysia which reflected the concern that rural communities are being left behind in Malaysia's quest for development. The response was that there were some attempts being made to introduce computers at the village level and that through individual project initiatives the production of software was being encouraged that would benefit rural populations.

One participant was concerned that the entire Malaysian presentation and its emphasis on "development" as being linked to the new ICTs might devalue indigenous and traditional knowledge systems and exclude people outside the ambit of these technologies. He also raised questions on a related issue regarding electronic commerce and the use of the "shopping mall" on the internet as yet another way of intensifying the monetization and commercialisation (and exploitation) of people.

Other issues raised focused around the importance of appropriate and relevant content, and the power structures that controlled both the technologies and the content being sent down the pipelines.

3.7 Summary of small group deliberations

The meeting then broke into two working groups with the express objective of defining the obstacles that women might face in accessing and using ICTs. A sequence of questions served as the framework for the working group discussions. These were:

1. What are the defining characteristics of the target community?
2. What are their training, education and content needs? Are these needs being met? If not, why not?
3. Mediums of delivery - how might their needs be met and where might ICTs be appropriate?
4. Adaptation - what are the means to making these technologies interactive?
5. Resources required - what are the cost implications of using technologies for education and training purposes?
6. What strategies might assist in meeting these needs?

Participants were also reminded to bear in mind crosscutting issues such as:

- telecommunications and education policies
- connectivity and infrastructure - cost and speed
- research and development issues and gaps
- content relevance and appropriateness
- socio-economic and cultural norms

The number of participants working with rural communities outweighed those working with educated, urban or professional women and this determined the way in which the groups divided. Six participants came together to discuss the issues facing urban educated women, while the remaining participants focused on rural and urban poor women. The first group had no participants from Pakistan and the latter had none from Malaysia. This is partly an indication of national priorities and partly reflects the interests of the participants present at this meeting.

This was a useful session but one that did not generate firm recommendations that could easily be implemented. The discussions tended to generalise, but upon close examination, each situation was quite different and required local finesse and knowledge. Nonetheless the beginnings of selective information about the distinct education needs of different women in the distance education market were beginning to be identified. The main points of the working group discussions are summarised in the following table. While the focus of the discussions were quite different, there were substantial parallels that could be drawn regarding capacity building for women when accessing and using ICTs.

Summary of Small Group Deliberations

	GROUP I: Rural & Urban Poor Women	GROUP II: (Educated) Women in the urban areas
What are the defining characteristics of women in identified target community?	Poor women who are defined in terms of their poverty - in both rural and urban communities. Their poverty varies from year to year and season to season, can be defined in terms of income, access to land, purchasing power.	Includes women who could have one or more of the following characteristics: Educated (formal or informal) Employed, self-employed or unemployed Women with vocational skills, entrepreneurial skills and / or other qualifications Women seeking to upgrade their skills or to re-enter the employment market after some absence, Entrepreneurs, micro-entrepreneurs or vendors.
What are their training, education and content needs? Are these needs being met?	The working group refrained from defining the needs of rural women on their behalves - suggesting that rural women be given a channel to voice their needs. Any education has to be relevant to their lives and needs and it was agreed that comprehensive training that provides an interface between literacy and income-generating schemes were ideal. It was felt that traditional formal education systems were not meeting the needs of these women.	Training and education needs depend upon where the women are in their self-development or in their employability. For instance, women re-entering the workforce might require specific refresher courses, while women in the service sectors, might require particular and regular up-grading of skills. Some of these needs are being met by Govt. training (e.g. teacher training in Sri Lanka) and some by the private sector. The overall picture remains unclear, more data is required. In most cases it was felt that women initiated their own access to training and information - there were few support mechanisms for women.
If the needs are not being met, why not?	People have not had the opportunity to determine the kinds of training that would be most relevant to their livelihoods, e.g. there are few vocational schools which cater to non-traditional needs such as water-harvesting. Education policy has to shift to address these needs.	It is difficult to access information about relevant DE courses - whether for women entrepreneurs or for women looking for refresher courses. There is an apparent lack of awareness or support mechanisms to pro-actively encourage women to access DE. At the same time, women who have had ICTs introduced through their work experiences, have embraced ICTs with few problems. This suggests that it is the initial capacity building that enables women to use ICTs that is critical.

<p>Mediums of delivery - how might these needs be met and where might ICTs be used in an appropriate fashion?</p>	<p>Technologies can be used appropriately by keeping in view the region's diversity in geographical and physical conditions. Combinations of a variety of media are dependent on and should build upon available facilities and infrastructure.</p>	<p>It was felt that as telephone and fax was prevalent in all urban areas in the region and that radio and TV were accessible to most people in urban areas, the combination of these technologies would provide the most common medium for DE. Where computers are being introduced as a medium for teaching, it was felt that the minimal function choices should be relevant to the needs of the student.</p>
<p>Adaptation: what are the means to making these technologies interactive?</p>	<p>It was felt that the most appropriate media comes in the form of broadcasting: both radio and television. Battery-operated devices or uses of other energy sources, such as solar energy, are viable for those areas without electricity supply. Training in equipment maintenance must be built-in to enable and empower women to maintain systems. A multiple system of delivery and a bottom-up approach would be the first means to making these technologies interactive.</p>	<p>Interactivity goes hand in hand with capacity-building. Women's responsiveness to ICT uses has a direct bearing on the different levels of interaction offered by combinations of ICTs. Responsiveness to ICTs is determined, amongst other things by overall awareness, by demystifying the technologies, building user-confidence, using gender sensitive training methodologies, and raising awareness about life-long learning. Nonetheless more gender-sensitive content is being developed on the Net - this should continue and be supported.</p>
<p>Resources required: what are the cost implications of using technologies for education and training purposes?</p>	<p>It was considered that radio is the least expensive medium - costs would depend on whether radio broadcasts were localised, regional or centralised. A cost-effective approach suggested linking in small community-based/localised radio stations to larger centres such as IGNOU in India.</p> <p>Setting up a large centre for use by multiple users would, in the long run, reduce costs.</p>	<p>While the trends indicate that connectivity costs will fall over time, the issues around costs and the allocation of resources in a far-thinking manner are critical. With this in mind, it was felt that matching current learner-needs with minimum technology levels in terms of costs or resources is key. While ownership of the technology is not a priority - access is - and learning centres that enable first hand experience of ICT uses should be supported. This is influenced to some extent by the mediums currently used by the ODL provider and by development trends of the national telecommunications infrastructure.</p>

<p>What strategies might assist in meeting these needs?</p>	<p>Small community based radio stations should be encouraged as a response to access issues. Transmission may be free and participatory. Communities may be encouraged to sustain their own radio stations. Clearing houses could be set up to increase accessibility to programmes produced by different cultures.</p> <p>Strategic plans should ensure that decisions be made from the grassroots level, should recognise that requirements may differ in different areas and levels, and that diverse technologies will be used to meet diverse needs. Regional centres could be used for networking between and support of smaller/local centres.</p> <p>Content needs to be need-based and derive from the people themselves. Technology must be simplified, made user-friendly and use local languages. All related research must be participatory and involve the input of beneficiaries.</p>	<p>Lobby for national budgets to make education and distance learning a priority and to set aside resources for ICT use and development in these contexts.</p> <p>Identify potential partners in the private sector (telecoms, software and hardware companies) who might work with ODL providers on developing relevant content, sharing hardware resources and providing learning centres with hardware and software support.</p> <p>Support more co-ordination between ODL providers, policy makers and women's organisations that might represent the interests of women distance learners.</p> <p>More comprehensive data collection and study on the qualitative and quantitative trends vis-à-vis women's uses of ICTs for distance education.</p>
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4. Proposed follow-up activities, recommendations and proposals

4.1 Follow-up recommendations to the meeting

Participants were invited to suggest follow-up actions arising from discussions held during this meeting. This was done in an informal manner and as a result, a whole spectrum of recommendations was made. An attempt has been made to put these into some order.

4.1.1 Awareness raising through:

- support and use of appropriate platforms (e.g. capable women's organisations) to create awareness of ICTs and their uses (including through mentoring);
- making findings of this meeting available to others through COL and the British Council web-sites with links to other international women's websites;
- encouraging distance education providers in the region to research and make available information on the problems of, and programmes for women in their countries;
- making available information on the uses of ICTs at all future (relevant) meetings;
- support of a central (institutional) depository of information about women, ODL and ICTs used;
- support of a (regional) clearing-house for all audio-visual and diskette (CD) materials for dissemination - collection, cataloguing for access by women's groups, distance educators and policy makers alike;
- compiling and making available success stories in ODL and ICT use;
- promoting awareness amongst women about continuous and life-long learning;
- raising the profile of women using ICTs in learning and in work;
- making available information on financial sources and scholarships for women distance learners to tap.

4.1.2 Capacity building through the support of:

- local group initiatives relating to gender issues and ICTs;
- more outreach programmes for women with hands-on training in ICT use, design and maintenance;
- project development of air/radio stations through developing training capacity;
- the three draft project outlines proposed by the meeting participants;
- grass-root groups holding discussions on the merits and uses of different ICTs.

4.1.3 Subsequent regional meetings need to:

- be more pro-active in including private sector participation and resources;
- invite representatives from Asian regional meeting to act as resource persons in the next regional meetings;
- build upon annual regional conventions of organisations (NGOs, GOs and private sector) working in areas of distance learning, ICTs and women's development;
- encourage consultation of public, private and non-governmental sectors in decision-making on distance education and ICT use;
- find out about unused potential resources that could be tapped by disadvantaged women's groups.

4.2 Project outlines proposed by working groups

Participants were then invited, in light of their working group discussions, to suggest proposals that might address some of the needs that they had identified as key to women distance learners. Three draft outlines were pulled together, one by the rural women's group, and two by the urban women's group. One fairly detailed proposal on developing community radio stations was presented by the

working group on rural and urban poor women. Two somewhat more general proposals were presented by the second working group; one concerning further data collection and research on open and distance learning for women and one proposing a regional training workshop that would bring together distance education providers and women distance learners. The outlines for the proposals presented follow.

4.2.1 **PROPOSAL 1: Developing Community Radio Stations**

Rationale:

In the countries of the South Asian region, the impact and the feasibility of radio as a meaningful technological medium has long been recognised, but there have not been many efforts to harness and explore the medium for women. Radio has the capacity to reach the unreachable. It is cheaper for use by larger groups. Most rural areas have access to radio. Even where electricity is not available, there is a possibility of using radio. It is an easy to use, simple technology.

Needs fulfilled:

In this age of information explosion and the expansion of the market place, it becomes essential for disadvantaged women, urban and rural, to access their own radios. This access will facilitate quick transmission of information related to their work. In the information age, where everyone is jockeying for a position in the media, it is the rich and powerful, and mostly the articulate urban people who have captured the media. The voices of disadvantaged women do not find place in the mainstream media nor does it reflect their concerns. Therefore they must have a medium of their own.

Over-arching goal:

This medium will have content designed and programmed by women themselves, content which will service their own needs and build their own capacities. To borrow a McLuhan phrase, this could become a Tribal Drum to organise women into sustainable groups. The content will be aimed at training, education and literacy of the women.

Key Objectives/Outcomes:

- create a radio service which can cater to women's own information needs;
- help women access information that they need through a network of information kiosks;
- build a generation of women who will be able to speak horizontally among themselves while simultaneously networking themselves with the larger outside communication and ODL systems;
- critique the government programmes and mould them to their own needs;
- capacity building for maintenance of the technology by themselves;
- sharing and exchange of information;
- contribute and participate in the existing networks being developed by open universities and other institutions;
- create a clearinghouse of information.

Target Audience:

- Rural poor women
- Urban poor women
- Rural and urban adolescent girls
- People who have been pushed out of the social security net

Beneficiaries will be able to:

- participate in the democratic governance of their country;
- influence the policies of their own countries;

- become better decision-makers;
- have better control over their lives;
- run better micro enterprises;
- sustain projects themselves.

Methodology:

There shall be three different players in this project:

1. The national broadcasting systems
 2. National open distance learning systems
 3. Grassroots organisations working with women
- the grassroots organisations will establish their own radio production and broadcasting systems to produce the content for the women;
 - the national open distance learning systems will interact and network with the grassroots systems;
 - a task force will be constituted with all the stakeholders, to work out a strategic plan;
 - the National Open Universities in India and Pakistan will take the lead in setting up the task force and conduct training;
 - training will be conducted at various levels to start a phased implementation of the programme involving all the stakeholders.

Timing:

Approximately two years.

Approximate cost:

Plan preparation - 3 months	US\$ 10,000
Establishment of facilities - 1 year	US\$ 300,000
Training phase - 3 months	US\$ 60,000
Research/information sharing	US\$ 30,000
Midterm reviews (two)	US\$ 10,000
Recommendations workshop	US\$ 20,000
TOTAL	US\$ 430,000

4.2.2. PROPOSAL 2: National Surveys on ODL for Women

Rationale:

Inadequate comprehensive data available on the different needs of women learners, current ODL provision and associated technologies used for distance learning.

Needs fulfilled:

Comprehensive data will be gathered on:

- the range of national ODL providers - public, private, informal and formal - and how many women learners are being targeted by these providers;
- the specific needs of women ODL learners, including those who wish to re-enter the employment market;
- relevance and quality of content in meeting the needs of different education levels of women distance learners;
- local capacities of ODL providers and the constraints they face in education delivery;
- obstacles faced by women in accessing ODL and the ICTs used by the ODL systems;

- ICTs being used by distance learners and their related costs;
- appropriateness of ICTs being used in the national context;
- qualitative needs of public/private sectors of learners.

Over-arching goal:

To achieve:

- data on distance education provision for women that will inform education policies and resource allocation for ODL;
- data on content that will lead to improved content to meet the needs of women distance learners;
- data that will lead to focused ODL course programmes with local content.

Key Objectives/Outcomes:

- better understanding of varying target audiences (e.g. through the drawing up of women distance learner profiles) and their specific needs;
- enhanced learning opportunities through using ICTs that women can easily access;
- more private sector accountability for the delivery of content to women distance learners;
- promotion of ideas and plans associated with life-long learning.

Target Audience and Beneficiaries:

- women distance learners - rural, urban, professional, non-professional, all levels of income;
- ODL institutions, private and public sectors, rural and urban based, formal and informal;
- other content providers, such as local software companies and curriculum policy makers.

Methodology:

An external agency should ensure that all relevant parties are consulted in the design of a survey and that all parties are involved in the completion of these surveys.

- a sample survey could be carried out nationally through questionnaires and face-to-face interviews;
- suggested tri-partite survey: private, public and non-governmental;
- or the next population census could incorporate these issues for national results.

Timing:

One year

Approximate cost:

Would range from country to country.

4.2.3 PROPOSAL 3: Regional Training Workshop for Distance Education Providers and Women Distance Learners

Rationale:

No or little co-ordination between and among women's organisations and open and distance learning (ODL) providers.

Needs fulfilled:

- Education awareness and empowerment for women and women trainers;
- Enabling ODLs to understand women's training needs and some of their difficulties with accessing ICTs;
- Some hands-on training and demonstrations of the kinds of media being used by national and private sector ODL systems.

Over-arching goal:

To bring together ODL providers and women learners from all sectors to meet face to face and discuss needs, problems, trends and prospects.

Key Objectives/Outcomes:

- raise awareness amongst women and women's organisations of the importance and implications of life-long learning;
- improved ODL course content to reflect the education needs of women;
- raise awareness amongst women of the ICTs being used in the region for education delivery and discuss strategies for increasing their access to ICTs;
- where changes in national policies are required, discuss strategies for presenting these to government bodies in the education, telecommunications and gender and development sectors;
- identification of research needs in the area of distance education and women;
- provide findings and workshop methodology to other developing countries and to international development forum such as the Global Knowledge conference scheduled for March 2000 in Malaysia

Target Audience and Beneficiaries:

- ODL providers from the formal and informal sectors, national and public sector providers, subject specific and private sector providers;
- National women's organisations representing the interests of women learners;
- National education and telecommunication policy-makers;
- Women distance learners.

Methodology:

National and regional women's organisations and network co-ordinators, (e.g. FemiNet Malaysia and FemiNet Asia) would identify participants representative of the spectrum of women distance learners in this region. ODL providers would be identified to participate in this platform for dialogue and exchange of ideas and information.

The workshop could involve participation from countries such as Bangladesh, India, Malaysia, Pakistan, Sri Lanka, China, Korea, Mongolia and the Philippines, primarily because FemiNet Asia already has a network of members from the last four countries and are conducting web-based training for women in these countries.

A strong co-ordinator would be required to ensure that a fair balance of all the elements required for a successful dialogue are identified and brought together.

Timing:

One year for research by national and regional women's organisations.
One week for actual workshop.

Approximate cost:

US\$30,000.00. Depends to a large extent on the number of countries participating and other related logistics.

4.3 Closing session

The closing session was addressed by Professor Desai, Chair of the University Grants Commission in

India. Ms. Tandon presented a brief summary of the meeting's progress and key recommendations. Professor Desai spoke about the developments in distance education and the steps that had been taken over the years to encourage and increase women enrolments. Ms. Susan Phillips closed the meeting with words of thanks to the presenters and organisers.

4.4 Lessons learned for future regional meetings

A lot of ground was covered in a very short period of time, and as is often the case in a regional meeting such as this one, much of the discussion was at a general level. Some of the participants were of the view that future regional meetings should attempt to:

1. keep the group very focused while ensuring a balance between sectorial interests;
2. bring in private sector input and resources throughout the meeting;
3. ensure a common quality in all the country papers - this implies more lead-time for country report writing with time for editing. It was apparent that while the questions posed in the regional survey had served as a guideline for the country papers, the authors tended to concentrate on the statistics and information that they could easily access, such as national development plans and enrolment data. It is also evident from some of the methodologies used to compile the country papers, that this is groundbreaking research with very few secondary sources of information;
4. increase the time proportion allotted for concrete planning and proposal sessions during the meeting programme, and less time on country paper presentations. Again, this suggests that the country papers be prepared well in advance in order to send out to participants prior to the meeting.

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APPENDIX II ASIA REGIONAL MEETING: PROGRAMME

Day 1: November 26, 1998

10:00-11:00	Welcome	<i>Dr. Usha Vyasulu Reddi, Director, CEMCA</i>
	Introduction to symposium	<i>Ms. Susan Phillips, COL</i>
	Presidential Address	<i>Dr. A.W. Khan, VC, IGNOU</i>
	Introductory Remarks	<i>Dr. G. Dhanarajan, President, COL</i>
	Vote of Thanks	<i>Ms. Kamal Singh, the British Council</i>
11:00- 11:30	<i>Tea Break</i>	
11:30-12:30	Participant self-introductions	<i>Prof. Uma Coomaraswamy, Chairperson</i>
	Presentation on policy framework	<i>Ms. Nidhi Tandon</i>
	Expectations exercise	
	Discussions	
12:30-1:30	Presentation of country papers and case studies: BANGLADESH followed by discussion	<i>Prof. Kerma Lyngdoh, Chairperson</i>
1:30-2:30	<i>Lunch Break</i>	
2:30-3:45	Presentation of Country papers and case studies: MALAYSIA followed by discussion	<i>Prof. Prabha Chawla, Chairperson</i>
3:45-4:00	<i>Tea Break</i>	
4:00-5:00	Presentation of Country papers and case studies: PAKISTAN followed by discussion	<i>Ms. Susan Phillips</i>

Day 2: November 27, 1998

- 10:00-11:30 Presentation of Country papers and case studies: SRI LANKA followed by discussion *Ms. Rinalia Abdul Rahim, Chairperson*
- 12:00-1:00 Presentation of Country papers and case studies: INDIA followed by discussion *Prof. Prabha Chawla, Chairperson*
- 1:00-2:00 Lunch Break**
- 2:00-3:00 Summary of issues and barriers identified: Ms. Nidhi Tandon and presentation of guideline questions for discussion by working groups *Dr. Rajammal Devadas, Chairperson*
- 3:00-4:00 Small group discussions continue
- 4:00-4:30 Plenary summary presentations by small working groups

Day 3, November 28, 1998

- 10:00-12:00 Working groups meet to discuss and recommend follow-up proposals
- 12L00-1:00 Working group presentations on recommended proposals *Mr. S. Krishnan, Chairperson*
- 1:00-2:00 Lunch Break**
- 2:00-3:30 Small group presentations and Finalisation of Action Plan (Two Groups) *Father George Ponodath, Chairperson*
- 4:00-5:00 Open session
- Summary presentation of meeting's findings and recommendations *Prof. Armaity Desai, Chairperson, UGC, India*
- Chairperson's remarks *Ms. Susan Phillips, Chairperson*
- Vote of thanks *Ms. Nidhi Tandon*

APPENDIX III ASIA REGIONAL MEETING: SUMMARY OF PARTICIPANT EXPECTATIONS

The following expectations were listed by order of priority:

An overwhelming proportion of participants hoped to initiate research collaboration and partnerships following the meeting. Some of the potential areas for collaboration mentioned included:

- networking on participatory development communication
- working together to make ICTs and related training more user-friendly
- learning more about what international organisations are doing in this field and on how ICTs are being used globally
- networking to promote women's education
- building CEMCA into a potential resource centre for rural women

More than half the participants expected to look into the issues around grassroots access to ICTs, including specific strategies to address exposure, awareness building and training, alternatives to libraries and considerations for women prisoners.

About five participants saw the meeting as an opportunity to share information and experiences about case studies which promoted women's distance learning through the uses of ICTs, specific methodologies, successful training examples, and the compiling of these into some kind of training manual.

A couple of participants mentioned an expectation to better understand the co-ordination of national policy and the interface between gender, education and telecommunications. What are women's needs in order to develop national policy and how can these be addressed?

Two participants expected to learn about the range of ICTs and their uses for distance education.

APPENDIX IV: LITERACY AND TELECOMMUNICATIONS ACCESS: SOME COMPARATIVE INDICATORS

	POPULATION and LITERACY*	COMMUNICATIONS
BANGLADESH	<p>Population: 125,340,261 (July 1997 est.)</p> <p>Literacy: total population: 38.1% male: 49.4% female : 26.1% (1995 est.)</p>	<ul style="list-style-type: none"> • Telephones: 249,800 (1994 est.) • Telephone system: poor domestic telephone service international : satellite earth stations - 2 Intelsat (Indian Ocean); international radio telephone communications and landline service to neighbouring countries • Radio broadcast stations: AM 9, FM 6, short-wave 0 • Radios: NA • Television broadcast stations: 11 • Televisions: 350,000 (1993 est.)
INDIA	<p>Population: 966,783,171 (July 1997 est.)</p> <p>Literacy: total population: 52% male: 65.5% female: 37.7% (1995 est.)</p>	<ul style="list-style-type: none"> • Telephones: 9.8 million (1995) • Telephone system: probably the least adequate telephone system of any of the industrialising countries; 3 of every 4 villages have no telephone service; only 5% of India's villages have long-distance service; poor telephone service significantly impedes commercial and industrial growth and penalises India in global markets; slow improvement is taking place with the recent admission of private and private-public investors, but demand for communication services is also growing rapidly. • Local service is provided mostly by open wire and obsolete electro mechanical and manual switchboard systems; within the last 10 years a substantial amount of digital switch gear has been introduced for local service; long-distance traffic is carried mostly by open wire, coaxial cable, and low-capacity microwave radio relay. Since 1985, however, significant trunk capacity has been added in the form of fiber-optic cable and a domestic satellite system with over 100 earth stations international : satellite earth stations - 8 Intelsat (Indian Ocean) and 1 Inmarsat (Indian Ocean Region); submarine cables to Malaysia and UAE • Radio broadcast stations: AM 96, FM 4, shortwave 0 • Radios: 70 million (1992 est.) • Television broadcast stations: 274 (government controlled) • Televisions: 33 million (1992 est.)

<p>MALAYSIA</p>	<p>Population: 20,491,303 (July 1997 est.)</p> <p>Literacy: total population: 83.5% male: 89.1% female : 78.1% (1995 est.)</p>	<ul style="list-style-type: none"> • Telephones: 2,550,957 (1992 est.) • Telephone system: international service good. Good intercity service provided on Peninsular Malaysia mainly by microwave radio relay; adequate intercity microwave radio relay network between Sabah and Sarawak via Brunei; domestic satellite system with 2 earth stations. International submarine cables to India, Hong Kong and Singapore; satellite earth stations - 2 Intelsat (1 Indian Ocean and 1 Pacific Ocean) • Radio broadcast stations: AM 28, FM 3, shortwave 0 • Radios: 8.08 million (1992 est.) • Television broadcast stations: 33 • Televisions: 2 million (1993 est.)
<p>PAKISTAN</p>	<p>Population: 132,185,299 (July 1997 est.)</p> <p>Literacy: total population : 37.8% male: 50% female: 24.4% (1995 est.)</p>	<ul style="list-style-type: none"> • Telephones: 1.572 million (1993 est.) • Telephone system: the domestic system is mediocre, but adequate for government and business use, in part because major businesses have established their own private systems; since 1988, the government has promoted investment in the national telecommunications system on a priority basis; despite major improvements in trunk and urban systems, telecommunication services are still not readily available to the major portion of the population. Domestic: microwave radio relay international: satellite earth stations - 3 Intelsat (1 Atlantic Ocean and 2 Indian Ocean); microwave radio relay to neighbouring countries • Radio broadcast stations: AM 26, FM 8, short-wave 11 • Radios: 11.3 million (1992 est.) • Television broadcast stations: 29 • Televisions: 2.08 million (1993 est.)
<p>SRI LANKA</p>	<p>Population: 18,721,178 (July 1997 est.)</p> <p>Literacy: total population: 90.2% male: 93.4% female: 87.2% (1995 est.)</p>	<ul style="list-style-type: none"> • Telephones: 175,000 (1991 est.) • Telephone system: very inadequate domestic service, good international service - submarine cables to Indonesia and Djibouti; satellite earth stations - 2 Intelsat (Indian Ocean) • Radio broadcast stations: AM 12, FM 5, short-wave 0 • Radios: 3.525 million (1992 est.) • Television broadcast stations: 5 • Televisions: 865,000 (1992 est.)

- Literacy definition: age 15 and over can read and write

Source: The Network Startup Resource Centre <http://www.nsrc.org> maintains a database of "international networking developments and Internet connectivity providers". The information on South Asian countries is available on <http://www.nsrc.org/ASIA/asia.html>.

APPENDIX V

**DISTANCE EDUCATION IN THE COMMONWEALTH COUNTRIES
OF ASIA**

**A Survey on Gender Differentials in Access to Information and
Communication Technologies**

Compiled by: Ms. Nidhi Tandon

Distance Education in Commonwealth Asia
A survey of Gender Differentials in Access to Information and
Communication Technologies

Table of Contents

	Introduction	1
1	Some preliminary notes	3
	Trends in education	3
	Telecommunication policies and gender equity - new resolutions	3
	ICTs are no quick fix	5
	The technology is constantly evolving	5
	Characteristics of ICTs in developing countries	7
	Aspects of "access"	9
2	Profile and growth trends of ICTs available for education delivery in Asia	10
3	Gender differences in access to ICTs, reasons and short term trends	12
4	Barriers to women's use of ICTs, strategies to redress these	13
	Access to the technologies	14
	General literacy as a first step	15
	Cost	15
	Technical training	16
	Institutional barriers	16
	Infrastructural barriers	17
5	How and why women are using ICTs with particular reference to electronic communications	17
	What current research shows	17
	Particular advantages of ICTs for women distance learners	17
	Existing data on ICTs being used for distance education	18
6	Questions that country reports need to cover: national issues	18
	Impact of ICTs on distance learning - a gendered status report	18
	Widening women's access to ICTs for education purposes	19
	Training and capacity building	20
	Is public policy working for women?	20
7	Questions that regional meetings need to address: the wider issues	20
	Infrastructural framework	20
	Regional integration	20
	Potential of ICTs in the region	21
8	Some key web site references, forthcoming meetings and ongoing projects of interest.	21

References and Further Reading	23
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Tables:

Table 1: Gender Disparities, 1993	4
Table 2: Education Trends	6
Table 3: Information Technology Access	8

Annex 1:

International Telecommunication Union, Telecommunication Development Bureau: World Telecommunication Development Conference (WTDC 1998) - Proposal for the adoption of a resolution addressing gender and telecommunications policy in developing countries. March 1998

Annex 2:

Glossary of terms

Introduction

This report is one in a series of four regional surveys of the uses of ICTs in the delivery of distance education programme, and the particular gender considerations around access to these technologies.

While ICT has emerged as a common acronym for Information and Communication Technologies, in fact the range of technologies covered by the term is very much open to interpretation. Technologies are usually defined in terms of their properties, and can also be defined in terms of their appropriateness to specific contexts - which implies that the definition of technologies is reflected in their specific contexts and uses. If there are two defining characteristics of ICTs, they are:¹

- the relative strengths of the various technologies (telephones, radios, television, pagers, the Internet) as synchronous and/or asynchronous communications channels and workspaces; and
- the rapid growth of the wireless component (such as wireless phone systems).

For the purposes of this report, references to ICTs will focus primarily on the "new information and communication technologies". These include the developing technologies of telecommunications, computing and microelectronics and their convergence which has created a range of new possibilities for information collection, manipulation, transmission, storage and presentation and through these possibilities have created a whole new industry in the service of education and training. Current developments in digital communications and the convergence of telecommunications technologies exemplified by international standards such as ISDN² make audio, video, graphic and data communication available through an ordinary telephone line on a desk top computer. Older technologies, such as television and radio, which are used in innovative ways through their combination with newer devices are called "user devices" - these include optical and video disks.

There is a seamless spectrum of communication technologies which are progressively converging and integrating with each other to serve distance education needs - computer mediated communications (CMCs); low lying satellites; radio and television broadcasting; telnet; and technologies using alternative sources of energy. Some of these uses of information technology will be mentioned in the series of reports as examples of the adaptability of the new technological wave of ICTs.

¹ Sam Lanfranco, lanfran@bellanet.org - Senior Program Specialist, Bellanet International Secretariat, Canada, June 1998

² Integrated Services Digital Network

1 Some Preliminary Notes

1.1 Trends in Education

World-wide demand for education by working adults is growing exponentially, it is being driven by a number of factors including globalisation, the need for continual re-training, and the complexity of employment requirements in the age of Information.

"In 1997, the 74 business schools in Asia-Pacific ... reported a record 170,000 applications for the 11,000 full time MBA degrees in English that they will award in 1999".³

In response to this need, academic and private sector initiatives are burgeoning everywhere to capitalise on the use of communication technologies to link courses and trainers with the largest possible number of students. In most cases, the easiest and most profitable way to do this is to link "established brand-name" universities with technology firms who then cater for students already in the education pipeline.

The market for education, however, is very large and fragmented with only a fraction of demand for education being met by current educational systems. Within that fraction, even less attention is directed towards girls and women. Given its experience and its commitment to a whole range of education and skills development for Commonwealth citizens, the Commonwealth of Learning needs to consider where its own capacities lie in order to address some of the specific needs of people who might otherwise be marginalised by both

- the new education and information technologies, and
- the course content delivered through this medium.

Women who have been cut off from educational resources in the past, have an uncertain future on the Internet. If men continue to dominate the computer labs, access to computer skills and related employment opportunities - which is a likely scenario since men are mostly the gatekeepers, the future of women in the Information Age may suffer. (see Table I: Gender Disparities).

1.2 Telecommunication Policies and Gender Equity - New Resolutions

There now exists substantive documentation addressing the gender policy issues related to the evolving information technologies. Notable amongst these are:

- *Gender Equity, Telecommunication Development and the ITU* (International Telecommunication Union) - submission to the Session on Gender Issues, in conjunction with ITU's WTDC 98, March 23-April 1998, prepared by CIDA
- *Gender and Telecommunications, an Agenda for Policy* prepared by the United Nations University Institute for New Technologies UN/INTECH and the United Nations Development Fund for Women (UNIFEM).

The first paper notes that

"...in order for telecommunications to contribute most effectively to its broader purpose of increasing socio-economic development, the needs and priorities of both women and men have to be taken into account, as well as a recognition of the different, gender-based constraints on access to and benefits from technologies"

³ Asia Inc.' Sept. 1997 - there were no statistics for proportion of women students

Table 1: Gender Disparities, 1993

Region	Adult Literacy rate (%)		Gross enrollment rate, all educational levels (%)		Earned income share (%)	
	Female	Male	Female	Male	Female	Male
Sub-Saharan Africa	45.4	64.7	37.2	45.9	35.6	64.4
East Asia and Pacific (a)	71.9	89.1	55.0	61.0	37.5	63.5
South Asia	35.0	61.7	43.2	59.6	23.9	76.1
Latin America and Caribbean	84.2	87.0	68.2	68.9	26.1	73.9

(a) includes all of Southeast Asia, East Asia and the Pacific

Source: UNDP (1996)

Both of these papers were fed into the most recent ITU conference which held a special session on gender issues and telecommunications. As a result of the gender session, the main conference adopted a detailed resolution addressing gender and telecommunications policy in developing countries. A task force will be established within the ITU with representatives from Member States and others including NGOs (see Annex I).

The members of the task force are expected to participate in ITU-Development activities to ensure that a gender equity perspective is included in its policies and work programmes, including human resource development activities, study groups, seminars, conferences and workshops. Their focus will be two-fold:

- ensuring that the benefits of telecommunications and the emerging Information Society are made available to all women and men in developing countries on a fair and equitable basis; and
- encouraging the recruitment, employment, training and advancement of women throughout the telecommunications field.

1.3 ICTs are no Quick Fix

While the new wave of developments following the evolving information and communication technologies (ICTs) are exciting and hold great potential, the technologies themselves do not present a quick fix to deep entrenched development problems. ICT tools are important when they serve to overcome physical, material and technical obstacles to teaching and learning, but in themselves are insufficient as tools aimed at improving the quality of education and its output.

It is sometimes difficult to distinguish between problems that may follow in the wake of a new technology and problems that existed before the technology was introduced. An assessment of access issues that prevent women from using one form of education delivery system cannot be isolated from an assessment of the overall system that limits women's education opportunities in the first instance. In other words, access to ICTs is only a small aspect of a much deeper and systemic problem around the provision of education to girls and women (see Table 2: Education Trends).

As well, ICTs are just one of the tools of education delivery, the benefits of introducing expensive ICT tools need to be carefully evaluated on a country by country basis. Where it is too expensive to be efficient, then concentration on enhancing current delivery systems is just as, if not more, important in the short term.

As such, this report's focus, which is on the gender differentials to ICT access, while important is narrow and needs to be read with the wider context in mind.

1.4 The Technology is Constantly Evolving

As the Web matures, the technical aspects tend to be far more advanced than what exists on the Net. This suggests that any strategy on the technical capacity building side to things needs to be as far sighted as possible. As an example, one research survey in Africa found that even during the first year of the survey, there was a major migration of subscribers of the former Fidonet nodes toward providers of full Internet access. Within the same year, full Internet access, and even competing commercial providers of access, had appeared in two countries, Uganda and Zambia, and were emerging in a third one, Senegal. Originally, the survey had intended to consider exclusively the use of electronic mail through store-and-forward systems. Mid-way through the survey however, the scene of electronic communications had transformed, electronic mail was now possible with a much more powerful technology, thus transforming the users' experience and possibly their appreciation of

Table 2: Education trends

Region	Primary enrollment rate (a)(%)			Secondary enrollment rate (%)		Adult illiteracy	
	Total			1965		1992	
	1965	1992	1965	1992	1965	1992	1995 (%)
Sub-Saharan Africa	41	67	31	60	4	18	43
East Asia and Pacific (b)	88	117	-	113	-	52	17
South Asia	68	94	52	82	24	39	50
Europe	102	99	97	-	45	-	-
Latin America and Caribbean	99	106	97	105	20	45	13
Middle East and North Africa	61	97	43	89	17	56	39

- = not available

(a) for some countries with universal primary education, gross enrollment ratios may exceed 100% because some pupils are younger or older than the country's standard primary school age.

(b) includes all of Southeast Asia, East Asia and the Pacific

(c) includes Europe and Central Asia for 1992 data.

Source: World Bank (*World Development Reports 1992, 1995 and 1996*)

the outcomes.⁴ Even in a country like Australia, where education institutions recognise the importance of having an information technology plan, it is difficult to keep the plan up to date due to the rapid changes occurring in the technology field.⁵

It pays to know what the range in options of technology are - a comprehensive overview of the structure and basic function of telecommunications such as satellite technology, electrical information access networks, telephony, wireless radio, and other multimedia such as television, audio/video reproduction is needed. Particularly important is an update assessment of the availability of basic connectivity through electronic mail. Communities are better equipped then to make an informed choice about which of the options most closely relates to their immediate needs and what options might be open to them in the future.

1.5 Characteristics of ICTs in Developing Countries

At the drawing board level, it is expected that the convergence of broadcasting technology with telephony will open up all kinds of opportunities for education development. It is also expected that the benefits of economies of scale in running all types of communications through the same "pipe" are especially realisable in Commonwealth developing countries where the bulk of population has still to be wired for television and telephones.

At the ground level, however, the rate of change in ICT development ranges from country to country - much depending on the supporting infrastructure base. Historically, technological developments have tended to have both positive effects on, say production, in terms of rate of growth and cost reduction, and negative effects through marginalising or excluding whole sections of the population from those benefits. In the case of the information and communication technologies (ICTs), this is particularly true in developing countries because most telecommunications infrastructure or connectivity is inherently urban-biased. For instance, Kampala, the capital city of Uganda has 4% of the nation's population but 60% of the share of all telephone lines. This urban bias especially affects women because they usually constitute the majority in rural areas.

"In a context of large disparities of wealth and access to services - the introduction of new technologies is likely to benefit those who are already privileged and thus deepen the gaps between the haves and have-nots. Access to electricity, phone lines, money and security play a major role in determining who can enjoy the advantages of the new opportunities opened by technology".⁶

The rationale for using educational technologies is different for developed and developing countries. Developed countries have well established schooling systems and high enrolment levels. They primarily use technologies to improve the effectiveness of teaching and learning, to individually tailor instruction, and to provide specialised education to small groups of learners. In developing countries, on the other hand, where good schools are affordable only to the relative few, policy makers seek alternatives that make significant improvements in educational and research effectiveness, while at the same time increasing access to education, particularly at the secondary and tertiary levels, at lower cost per student.

⁴ ECA/IDRC ongoing research project: Electronic communications in African development: tracking their impact (1st phase) <http://www.bellnet.org/partners/aisi>

⁵ Delaney, Bernadette and Dyson, Chloe. Women: Creating the Connection, Women and Information Technology in the Vocational Education and Training Sector, Dept of Education, Australia. 1998

⁶ Ran Greenstein - on-line narrative report on ICT and Education, Education Policy Unit, University of Witwatersrand, South Africa, 1997

Distance Education in Commonwealth Asia
A survey of Gender Differentials in Access to Information and Communication Technologies

Table 3: Information technology access

	INTERNET				Estimated P.C.s	
	Hosts: Total 1995	Per 1 million inhabitants	Estimated users: Total 1995	Per 1m. inhab.	Total (k) 1995	Per 100 inhabitants
Low income countries(a)						
Ghana	6	0.35	60	3.51	20	0.12
India	788	0.85	10000	10.76	1200	0.13
Kenya	17	0.64	200	7.49	18	0.07
Sri Lanka	6	0.33	60	3.27	20	0.11
Uganda	58	3.05	600	31.54	10	0.05
Zambia	69	7.34	800	85.05	....	....
Zimbabwe	93	8.45	900	81.74	33	0.3
Lower Middle Income (b)						
Belize	1	4.63	10	46.3	6	2.78
Fiji	52	66.33	70	89.29	....	....
Jamaica	164	64.95	1600	633.66	....	....
Namibia	11	7.09	110	70.88	....	....
Senegal	6	0.72	60	7.19	60	0.72
Swaziland	1	1.06	10	10.62	....	....
Tonga	1	10.2	10	102.04	....	....
Upper Middle Income						
Antigua & Barbuda	160	2424.24	1500	22727.27	....	....
Barbados	2	7.66	20	76.63	15	5.75
Malaysia	4194	208.39	40000	1987.48	800	3.97
Mauritius	....	....	....	....	36	3.19
South Africa	48277	1164.51	460000	11095.83	1100	2.65
St Lucia	1	6.02	450	2710.84	....	....
Trinidad & Tobago	55	42.15	1960	1501.92	25	1.92
High Income						
Australia	309562	17146.45	1000000	55389.39	4979	27.58
Bahamas	276	989.25	2700	9677.42	....	....
Brunei	156	549.3	834	2936.62	8	2.87
Canada	372891	12595.07	1220000	41207.72	5700	19.25
New Zealand	53610	14923.17	180000	50105.78	800	22.27
Singapore	22769	7623.97	90000	30135.61	515	17.24
United Kingdom	439732	7512.55	1500000	25626.57	10900	18.62

Notes:

- (a) No data available for Bangladesh, the Gambia, Guyana, Malawi, Mozambique, Nigeria, Sierra Leone and Togo
(b) No data available for Angola, Botswana, Grenada, PNG, Vanuatu or Western Samoa.

Source: ITU and Internet Society

The managerial and technical capacity for implementing educational innovations has increased in many developing countries. In addition, the infrastructure necessary for using more sophisticated technologies is steadily being strengthened. Availability of electricity, telecommunications, and computers is generally on the increase. Therefore, in spite of educational and technological differences between low- and high-income areas, the introduction of interactive educational technologies will ultimately become more feasible in developing countries.⁷ It is a question of time.

Table 3: Information Technology Access, gives the most recent figures that show the disparities in computer access and Internet connectivity within various countries. For example, in the Caribbean, Guyana - a low income country, has no available data on either internet service providers (hosts) or estimated users of the Internet. In Trinidad and Tobago, an upper middle income country, there are 55 hosts, just under 2000 Internet users and just under two computers available for every 100 people. Somewhere in between the two countries, lies Jamaica, a lower middle income country, which has more hosts per population but only 1600 users.

What these figures show is that developing countries are at very different levels of internet connectivity and one has to be careful about making generalisations even at a regional level. The figures by themselves probably need to be combined with the socio-economic data of each country to present the actual distribution and spread of computer access. This extends to an analysis of women's access to ICTs as a middle income country is more likely to have a higher literacy rate and a higher proportion of women taking up education and employment opportunities - than in a low income country.

In *Nattering on the Net*, Spender notes that women's marginalisation from the new communication technologies is "less to do with women and more to do with computers" which she argues are the sites of wealth, power and influence.⁸ I would suggest that this is probably true to varying degrees in developing countries. In the Cook Islands, for instance, it is apparent that a majority of the women who participate in distance education, come from households where the amenities and telecommunication technologies are modern. Their higher standard of living is also reflected by the fact that the vast majority are employed and thus have a considerable degree of economic independence. In addition, many come from relatively "smaller" families, in the sense that the extended family concept is a diminishing phenomenon.⁹

Suffice it to say here, that even if we agree that there are very specific gender differences in access to and use of ICTs, these differences will probably be somewhat modified or influenced by national infrastructure and national income levels.

1.6 Aspects of "Access"

I suggest that there are three aspects to the term **access**. One is the physical proximity to the technologies, or connectivity - a case of 'you cannot teach them if you cannot reach them'. Then even once women are ideally located to the technologies, they may not be able to use them because they do not have the capacity. This implies that women need to be encouraged and trained to use, and to adapt, ICTs for their own purposes - or in the case of telephone and radio use they need to be

⁷ Bojana, Boh. *Interactive Educational Technologies in Higher Education*, ESP Discussion Paper Series, Education and Social Policy Department, The World Bank, 1994

⁸ Spender, Dale. *Nattering on the Net - Women, Power and Cyberspace*, 1995

⁹ COL and University of South Pacific - *South Pacific women in distance education*, 1995

able to afford to own the technology. The third aspect is about access to affect content - which suggests that women are not just receivers of information and knowledge, but are agents of influence and can help change the content delivered by the technologies to make it more culturally or otherwise relevant.

In this report, most of the statistical evidence is only available for the first aspect of access, i.e., connectivity. There are a few anecdotal examples of how women's capacities to use or adapt the technologies are being enhanced. I was not able to find evaluations of women's access to designing course content and left this aspect out altogether.

2 Regional Profiles and Growth Trends of ICTs Available for Education Delivery

There can be no question that the education sector is one of the potentially most important beneficiaries of ICTs. The whole area of application of interactive technologies to education, however, is relatively new and still at an experimental/developmental stage. As such, it is difficult to draw any distinctive conclusions or evidence on the growth trends of ICTs in distance education other than to note their growing popularity and adaptability for use in different contexts. It is also evident that where there is research on the use of ICTs in distance education, very little exists on the specific needs or interests of women. COL's initiatives in this area therefore, are timely.

The U.S. National Centre for Education Statistics has just released a major survey on Distance Learning in Higher Education in the USA in which it was recorded that 57% of distance education was delivered by two-way interactive video, and 52% by one-way pre-recorded video. Only about 25% of the institutions used two-way audio with one-way video, and computer-based technologies other than two-way on-line interactions (e.g. the Internet). Three quarters of the institutions surveyed reported that they were planning to offer distance education courses with increased use of computer-based technologies in the next three years.¹⁰ This is of relevance to this report - because even in North America, where the telecommunications infrastructure "backbone" is well established and extensive, ICTs are still the relatively unexplored phenomena in distance education delivery.

According to a survey by International Data Corporation (IDC) Asia is poised to be the next region for large-scale expansion in electronic connectivity, driven mainly by E-commerce. Between 1997 and 2001, the number of WWW users is expected to increase nearly six fold in the region to 49 million. At the same time, although India ranks low¹¹ in Asia in terms of telephones and computer density, its US\$200 million software industry is viewed by many analysts to rank India at an emerging IT superpower.¹² In the area of telecommunications development, telecommunication indicators show that over the last decade, the Asian-Pacific region has experienced a steady growth of 7% per year which has led to an increase of 70% in the number of main lines. In recent years, main lines growth in the dynamic Asian economies of Hong Kong, Singapore and the Republic of Korea has been twice this rate at around 14%. The data for international telephone traffic confirm the growing importance of trading links within the region. For instance, within-region calling

¹⁰ "Distance Education in Higher Education Institutions" by the US Department of Education. 100 page PDF file. Available at: <http://nces.ed.gov/pubs98/distance/index.html>

¹¹ Teledensity in India today is about 1.5 lines per 100 persons. Till 1994, it was less than one per 100 persons. Most of the telephones are concentrated in the metropolitan cities. Many universities do not have Email or Internet facilities

¹² Rao, Madanmohan. Education and research in the Virtual University: The Internet Challenge for DC's. Information Technology in Developing Countries, Newsletter of IFIP Working Group 9.4 and Commonwealth Network for Information Technology, January 1997

accounts for around 55 per cent of all traffic originating in Asia-Pacific. This is higher than for the North American Free Trade Area (NAFTA) and is the same as the European Community (EC) despite the larger distances in the Asia-Pacific region.

These figures may be misleading, however, as Asia-Pacific is a region of great contrasts: between large continent-sized nations and tiny Pacific atolls; between rapidly expanding cities and remote rural areas; between free-enterprise city-states and centrally-planned republics. For instance, the three Member countries of the OECD in the region account for 70 per cent of the wealth (expressed in terms of GDP) and more than 50 per cent of the telephone lines, even though their population is just 5 per cent of the total. Equally, two countries (China and India) account for just 12 per cent of the wealth and telephone lines while having two-thirds of the region's population. The investment required in the lower income countries to reach a teledensity of 10 lines per 100 inhabitants (a medium teledensity for Asia-Pacific) would be almost US\$ 400 billion.¹³

Some governments have committed to take a proactive approach to upgrade their information systems. Malaysia's plan for a Multimedia Super Corridor, for instance, features open access to the Internet. Nonetheless, Malaysian experience with distance education only really began in earnest in 1996 with new education acts, which greatly liberalised the further and higher education sectors - hence the paucity of materials despite Malaysia's super corridor. There are national-scale plans afoot to establish "smart schools", a commitment to convert all the country's schools to smart school status by 2010 which will be electronically interconnected and enhanced.¹⁴

A collaborative venture between community colleges in the United States and the Centre for Vocational Education (CVE) in India might serve as an example of the slow but deliberate development of ICT use in India. The project, funded by USAID, began in 1992. Its goal was to develop a structure to bring together training curricula, trainers, funding sources, and other resources to create training programs for rural and urban poor, women with limited opportunities, and early school-leavers in India. A second goal was to give American community-college faculty members the means to enrich their classroom activities and broaden the perspectives of their students through an international experience. The project was one of 41 University Development Linkages Projects (UDLPs) that link a university in the United States with a university in a developing country. Internet was not even a consideration in 1991 when the project was first designed.

By the summer of 1996, however, the Internet was available in Madras. Difficulties that had to be resolved in India included limitations in the technology of telephone lines and the requirement of a license to purchase a modem use the Internet. During August 1996, the cost of licenses and hookup with a service provider for 500 hours or one year of Internet use (whichever came first) was approximately \$1,500. Some project participants balked at Internet costs that were higher than the

13 ITU : The dawning of the Pacific telecommunications century, April 1993

14 It should be noted, however that much of this forecast development in the region hangs in a balance now with the current Asian economic crisis. For instance, although the Malaysian government continues to repeat its commitment to the MSC, the recent economic downturn in Asia has taken a severe toll on all sectors of the public economy which have suffered severe budget cuts. To illustrate the status of some of the MSC initiatives, the Smart School project, one of 7 "flagship applications" has had its financing reduced by more than 75%. The emphasis of this particular application is in danger of remaining in a handful of urban show-case schools which are being custom-built around IT, whilst the extent of resources which are to be allocated to the rural schools which serve the bulk of the population remains uncertain. One ministry quote is that "while the project would undoubtedly still be carried out, it would be done more conservatively and at a much slower pace." Email correspondence from Dr. Roger Harris, Faculty of Information Technology, UNIMAS - Universiti Malaysia Sarawak, Sarawak, Malaysia, June 1998

cost of a three-month vocational training program for 25 people. The long-term benefits, however, were persuasive enough to justify Internet hookup, and a Pentium 133 computer, monitor, and 28.8 modem were purchased. At the time, the service provider estimated that in August 1996, there were approximately 1,500 Internet users in Madras, a city of eight million people.¹⁵

3 Gender Differences in Access to ICTs, Reasons and Short Term Trends

Understanding the gendered nature of the social, economic, policy and technology systems which frame opportunities for women is key to assessing and promoting women's access to and use of ICTs. Women's needs for information are often influenced by their gendered roles and responsibilities, which in turn affects their use of and response to ICTs.

Compared to Africa, progress in women's education in Asia has been substantial. About 35% of adult women in South Asia are literate - eight out of ten girls in South Asia went to primary school in 1992. In East Asia, female enrolment in primary education is much higher. Nonetheless, women still tend to have less access to education and training at all levels, and those who continue in school tend to keep to socially accepted or peer-group non-technological streams - all this has long term implications for continued gender differences in access to and use of ICTs.

While it is difficult to find the statistics to support evidence of a seeming trend towards increased access to ICT, the odd isolated numbers show that female students continue to range at the 50% or lower level of total students. The Australian Computer Society accreditation in Sri Lanka, for instance, records 22 males and 12 females graduating with ACS qualifications in 1995.¹⁶

In Bangladesh, a computer costs more than half a year's salary of an average professional. An NGO in Dhaka, Drik, acts as the leading, though unofficial, email provider. With low cost, albeit low bandwidth, connectivity, it acts as an electronic post office, offering cheap solutions to the needs for information and communication at an affordable price. An oft cited example from Bangladesh is the Grameen Phone Company in Dhaka which enables women to access a Grameen loan to sell telephone services in her community. This is an example of empowering women in a commercial sense but finding a parallel example in the education sector has proven difficult.

In India, export-oriented information processing jobs have without doubt opened up new opportunities for women. In the Bangalore Science Park, twenty per cent of the programmers are women. In data entry jobs, the proportion is even higher. However, the question remains as to whether they can sustain their place in the coming round of technological changes. It is in this context that the experiment with telecommuting becomes important. Women often drop out of the workforce, not only because they cannot keep up with the requirements of continuous skill changes, but they do so also because it is often difficult for them to combine the demands of childcare with that of careers related to cognitive skills.¹⁷ Another example is offered in the National Institute of Information Technology (NIIT), a private for-profit firm using IT for training. Of its total staff of

¹⁵ A project Web site can be viewed at <http://www.sinclair.edu/communit/udlp>

¹⁶ E-mail correspondence with Dr David Lindley, Charles Sturt University, Australia
dlindley@csu.edu.au June 1998

¹⁷ Mitter, S and Bastos, M. (Eds) "Europe and the Developing World in the Globalised Information Economy: Employment and Distance Education" Routledge, (to be published) London, February 1999

3300 people 40% are women.¹⁸ Whether the arguments for distance education for women hold the same as telecommuting and teleworking remain to be seen.

Those women with lower per capita income face huge waiting lists just for a new phone connection, and it has been suggested that one response would be to give some kind of priority for women in allotment of phones. While this facility may be misused in the beginning, the woman still becomes the owner of the phone and this ownership and listing in a telephone directory has potential positive impact. Also it has been suggested that with the socio-cultural segregation of men and women in public places, the setting up of Women Public Call Offices might enable women to use telephones more frequently.¹⁹

There is the language issue too which until addressed, runs the risk of excluding whole sections of population. Malaysia for instance, consists of two physical units, East and West, separated by 500 miles of the South China Sea. This fact alone hampers communication. East Malaysia, which consists of the states of Sarawak and Sabah, is located on the island of Borneo, where there are few roads, and where rivers form the main form of communication for the bulk of the population. In Sarawak alone, there are more than 26 identifiable ethnic communities, many of which speak their own language and many of these are not mutually understandable. Although Malay is widely spoken throughout the country and English is also understood in the urban centres, trickle-down benefits from IT, and from any other development medium, are inhibited by language differences.

4 Barriers to Women's Use of ICTs, Strategies to Redress These

Due to limited mobility, double workload, and lower education levels, women are traditionally not the first to gain access to, use and experiment with available technologies.²⁰ Cost-related issues also impede progress and discriminate against non-elite women who have less financial resources than men. According to the 1997 APC Women's Networking Support Program survey²¹ on women's experiences with electronic networking, lack of training and the cost of equipment to get connected rank highest as barriers to women getting on-line. The specific barriers women face vary regionally, southern participants listed poor infrastructure, recurring charges for E-mail or Internet usage and lack of appropriate training and support systems.

Women also identify the lack of time and human resources as common barriers. As one woman wrote: "in some ways the Internet is a tool for those with lives of leisure." Another recurring theme relates to the issue of one computer and/or one modem per office which means that competition for existing technology becomes a limiting factor.

18 This figure could be misleading as it is not clear what proportion of the women staff hold support positions and what proportion are in management positions

19 India : Gender Issues, Agenda Item 1.3 - World Telecommunication Development Conference, 1998

20 Gender and Telecommunications, an Agenda for Policy prepared by the United Nations University Institute for New Technologies UN/INTECH and the United Nations Development Fund for Women (UNIFEM), 1998

21 The Women's Networking Support Program of the Association for Progressive Communications (APC) 1997 Countries that participated in the survey were Cameroon, Nigeria, Senegal, Tanzania, Zimbabwe, Australia, India, Japan, Malaysia, Philippines, Croatia, Russia Federation, Ukraine, Austria, Belgium, France, Ireland, Italy, Netherlands, Switzerland, UK, Brazil, Colombia, Ecuador, Mexico, Peru, Uruguay, Jordan, Canada and the U.S.

In order for women to benefit most from use of ICTs, and, therefore, for them to be able to use ICTs to the fullest, the following barriers to women's use of ICTs need to be addressed:

4.1 Access to the Technologies

Apart from the more obvious issue of Internet connectivity to established education institutions, alternative means for enabling women to access the existing information and communication infrastructure are being explored.

Community Access Points, telecentres or Multipurpose Information Centres are community focal points to empowering historically disadvantaged communities to collect, analyse and share information related to their development needs, typically through the practice of development support. The centres are of particular importance to rural and peri-urban communities who can be empowered to begin communicating with their own environment. Relatively expensive equipment can also be made available to women and their communities through centres visited by students and mobile equipment such as computer bus classrooms.²²

To ensure that these community centres will benefit women, the following factors need to be taken into account:

- availability of women support staff and trainers to help women use the technologies
- establishment of information centres within or as part of community locations where women have other tasks or are taking advantage of other resources, such as health centre, libraries, women's NGOs, etc.

A Canadian initiative in northern Alberta embraces the concept of "community access points" or CAPs. The definition of a CAP is a physical location within a community intended to function as an educational centre for all adult learners in the community. Communities are designated as CAPS through a self-nomination and qualification process, which includes a requirement for a minimum of local financial investment. Following this designation, CAPs are eligible to receive a threshold level of equipment (e.g., multimedia PCs with scanners, cameras, desktop video-, audio- and audio graphics conferencing capability) along with a threshold level of telecom services. CAPs will be electronically connected to the seven NAPSIS²³ institutions and to each other so that a wide range of educational programs and services can be delivered to the community.

Plans are to designate several CAP sites each year, up to approximately 150 northern communities over the next few years. During 1996-97, 23 communities have been designated CAPs.²⁴ A further aspect to "physical access" is that of bridging the connected with the unconnected. From the experience of a number of African women's groups, multi-media is a 'de-facto' means to accessing, translating and distributing information using more traditional mediums of newsletters, radios, meetings and workshops. In the distance education sector, multimedia applications are being continuously improved, these include interactive videodisks (IVD), Compact Disks - Digital Audio (CD-DA), Photo CD, CD-ROM and CD-ROM XA, Digital Video Interactive (DVI), Compact Disk Interactive (CDI), Video Information Systems (VIS), electronic books and virtual reality.

²² UNESCO Information and communication technologies in development: A UNESCO perspective. 1996

²³ Northern Alberta Post-Secondary Institutions Society

²⁴ W. Leigh Hill, Alberta North: Enhancing Adult Distance Learning Opportunities

This range of technologies serves to show that they can be adapted and developed to meet the specific needs of the intended beneficiaries and stakeholders.

4.2 *General Literacy and Language*

The higher rate of illiteracy among women means that ICT projects will need to be integrated with literacy education in many areas. This can be done by integrating literacy programmes with micro-credit and small business programmes for women. One example is INFOLIT, an information literacy initiative aiming to promote information literacy in the Western Cape Region of South Africa. At the moment it mainly serves higher education, but is extending its work to schools and communities to ensure that it develops a framework for lifelong learning for all, irrespective of gender and class.

We believe that in developing information infrastructures, we must ensure that people have the abilities to use information critically and to produce their own knowledge. Our primary activities are in the field of educating people in the use of the new ICTs and, most importantly, in the critical use of the raw materials of information. Our challenges have included how to extend information competencies to all subordinated groups so that the new skills are distributed among all people and do not remain only in the hands of an elite.²⁵

The Internet has the potential to reduce illiteracy and step up agricultural productivity. Products like "Virtual farmer schools" could be developed, and be made accessible to women farmers with no formal training in agricultural skills. This service would also link community telecentres in Africa and provide for South-South dissemination of indigenous knowledge, sharing of resources, ideas, experiences and success stories. Web pages of agricultural stakeholders could be published and this would avoid duplication of effort and enhance co-operation. Where rural women farmers are not able to directly harness the benefits of the Internet, NGOs, extension departments, rural women's associations and unions that serve them can take advantage of the technology and repackage critical information for the rural stakeholders.²⁶

4.3 *Cost*

Cost issues of ICT access especially affect women. They are generally lower paid than men and often do not have control over their income. Their family responsibilities, such as the health and education of children, are the primary priorities for the income they do earn, so that often there is little left for other less-immediate needs. Strategies to assist women include:

- training users in these areas and supporting them with equipment and installation subsidies
- addressing the needs of those without computers through the establishment of shared community telecentres and promotion, or support for wireless link alternatives where necessary, promotion of improved interfaces for the non-literate and less educated such as text to voice output, touch screens, webTV, and voice recognition.
- improvements in existing technologies rather than entirely "new" technologies can best be used to meet the needs of learners. For example, the new compressions and digital transmission technologies are giving new life to "traditional" education television by permitting many more

25 E-mail correspondence with Cathy-Mae Karelse, Director, INFOLIT, cmk@grove.uct.ac.za, April 1998

26 Hilda Munyua: Application of Information Communication Technologies in the Agricultural Sector in Africa: a Gender Perspective with Special Reference to Women. Paper presented to the UN Economic Commission for Africa, May 1998

channels to be broadcast over a given bandwidth at a much lower cost per channel, and, in the case of direct-broadcast satellite, over a wider geographic area.

4.4 *Technical Training*

Compared to men, women generally have less access to training, and less opportunity to learn the skills necessary for participation, including basic technical skills, technical repair, and language training (for those whose first language is not English). Women are unacquainted with ICTs and uncomfortable with using them. They need to be supported in learning to work with, and to feel confident in their ability to use these technologies productively. Capacity building and training are important components in the promotion of information technologies amongst women. The lack of basic computer skills is the first step in discouraging women from using e-mail.

Training in ICTs for women will need to be gender-sensitive, and offered by women trainers as much as possible. In addition, relevant training guides, documentation and on-line tutorial software to support trainers have been insufficiently developed.

To facilitate the adoption of computer communication technologies, the APC survey respondents anticipated different kinds of training needs. In addition to basic training, many respondents called for customised training in information facilitation skills, building and maintaining Web sites or bulletin boards, HTML design and programming, setting up and running mailing lists, and exploring other (and new) Internet tools and resources. Technical training for trouble-shooting was also raised, particularly from women in the South. As one woman from Malaysia wrote:

"technical knowledge in computer technology so that we are capable of identifying computer problems and solving the basic ones minimally, rather than waiting for technicians."²⁷

In January 1998, a Kenyan based women's organisation, ABANTU for Development, organised and ran a pilot internet training workshop for women and their organisations in the East African region. The workshop proposed to draw upon the experience and knowledge of participants from organisations which were working with the new ICTs. Apart from enabling some twenty-five people to develop concrete strategies and action plans for using ICTs to strengthen their organisational capacities, the workshop provided a valuable forum for information workers to consult with each other and to share their particular experiences and expertise, to understand the policy implications of the liberalisation of that sector and to build their own skills in internet use.²⁸

The training programme was designed to provide internet training within a specific policy context. It was not just about technical training in a vacuum, but attempted to strike a balance between gender analysis, policy training and technical training.

4.5 *Institutional Barriers*

The low level of computerisation in many organisations exacerbated by the high price of equipment relative to the available resources and the ensuing competition for access, affects women adversely. Scarcity of computers and the small base of skills also contributes to the low level of institutionalisation of much of the networking activity. E-mail and Internet access is usually limited to those with the most resources, very often to people with international projects and contacts.

²⁷ Association for Progressive Communications. Global Networking for Change: Experiences from the APC Women's Programme, 1997

²⁸ ABANTU for Development, training workshop report, 1998

4.6 *Infrastructural Barriers*

The high price of Internet services in most developing countries coupled with the absence of local dial access outside almost all of the capital cities, severely limits access for the bulk of those with computers.

In some cases, because of saturated public telephone exchanges, the difficulty in obtaining large numbers of local telephone lines to maintain the desired ratio of 10-15 users per modem has limited the accessibility of ISPs during periods of peak demand as all the available dialling lines quickly become occupied. In the same fashion, users requiring telephone lines to access the Internet have faced problems in obtaining new telephone lines. That is why there is some argument to be made for alternatives to telephone lines. Some have suggested the equivalent of the existing community radio stations in Latin America, which are collective, independent and service oriented. The model for the future community Internet could be based on radio more than on telephone.

5 How and Why Women are Using ICTs, with Particular Reference to Electronic Communications

5.1 *What Existing Research Shows*

According to the APC surveys' initial findings, women are increasingly active in using electronic communications, and many tools such as electronic mail have become a routine part of their day-to-day communications activity. Increasingly, women are experimenting with on-line conferences, mailing lists and web sites. At the same time, the survey showed that women continue to face barriers in using the information superhighway, such as the lack of training and the high cost of equipment and, in some places, of getting connected.

Networking has been recognised by female scholars as a tool for women's empowerment, and women have taken to the Net to create a "cyberspace of their own." In many places, women writers, editors, news directors and lobbyists, are not only surfing the Net, but have become active in establishing numerous WWW sites of special interest to women. Women's sites cover subjects such as gender and sexuality, feminism, women's health, women in computer science, engineering, women's studies, women in academia and women in industry.

Research carried out for the UN Division for the Advancement of Women found that women face two particular challenges in their use of computer networks. The first is to master access tools so they can make the best use of ICTs. The second is to use the new Internet publishing tools to develop their own publishing and media activities on the networks as paradigms of gender-sensitive media products.

5.2 *Particular Advantages of ICT Use for Women Distance Learners*

Until the advent of telecommunications technologies, distance educators were hard pressed to provide for two-way real time interaction. With the development of synchronous (two-way, real time interactive technologies) such as audio conferencing, audio graphics conferencing and video conferencing it became possible to link learners and instructors who were geographically apart. Now, the asynchronous (time-delayed) feature of computer-mediated communications (CMC) offers more advantages in that the CMC class is open 24 hours a day to accommodate the time schedules of distance learners. Any technology that offers flexibility in location and in time allocation tends to be woman-friendly.

CMC systems provide an important medium for facilitating co-operative group work among distance learners. This seems to fit in well with the ways in which women learn and counter-act. As well, CMC systems arguably provide simple on-line training along with accessible and easy sources of trouble shooting. Through differentiation, specificity, and better learner and teacher control ICTs should be able to accommodate the individual needs of most users.

5.3 Existing Data on ICTs being Used for Distance Education

Given that distance education is expected to take off with the advent of the new ICTs, it is surprising how little data there is on the trends and future of ICT use as a medium of education delivery. Most of the available detailed information on distance education development trends is from the U.S.²⁹ Even less available are statistics on how many women are accessing education programmes through ICTs.

The Satellite Telecommunications Educational Programming (STEP) network³⁰ - a division of Educational Service District 101 in Spokane, Washington - was developed to provide equal learning opportunities for all students regardless of geographic location or educational resources. In 1990, STEP joined with state education agencies from Alaska, Idaho, Montana, Oregon, and Washington to form the Pacific Northwest Star Schools partnership to provide distance education services to the five-state region. Using federal funds, STEP enhances and expands distance learning in a region connected by culture and economy. The program offers telecast courses on a wide range of topics including foreign languages, mathematics, and science in support of federal policy initiatives. Distance education is provided to approximately 500 schools serving some 6,000 students in middle and high school grades in the five states. Participating schools receive start-up equipment (e.g., satellite dishes, computers, modems, and scanners) through federal funding. A predominant majority (90%) of the participating schools are located in rural areas. The average program site is approximately 80 miles from the nearest university or college. A survey conducted in 1994 indicated that a predominant majority (72%) of the STEP/Star students were in the high school grades, there were slightly more female students (57%) than male students (43%).

Certainly in developing countries there needs to be more gendered needs assessment and more statistics tracking the numbers of women learners coming through distance education programmes.

6. Questions that Country Reports Need to Cover: National Issues³¹

6.1 Impact of ICTs on Distance Learning - a Gendered Status Report

- Is there any education or training provided through open/distance learning (ODL) in the country? If yes, generally at what levels, and provided by which institutions? Is the ODL education/training provided by publicly or privately owned institutions?

²⁹ As in US Department of Education 1998 survey, op. cit

³⁰ Kim O. Yap. Distance Education in the Pacific Northwest: Program Benefits and Implementation Barriers, Northwest Regional Educational Laboratory (NWREL), 1997

³¹ The questions that follow are compiled from Cavanagh, C: Adult Learning, Media, Culture and New Information and Communication Technologies, CONFINTEA, Fifth International Conference on Adult Education, July 1997 and from a series of questions posed to the Global Knowledge in June 1997 by the Independent Committee on Women and Global Knowledge. They are not comprehensive but are meant to guide country report authors on the kinds of issues which might be relevant.

- What are the present national priorities in ODL, and the resulting implications for women in this regard? (levels of training, subject-areas, skill training, delivery modes, etc.)
- What might be the priorities with respect to the needs of women?
- Are the new ICTs being used for the delivery of, or for supplementary purposes for ODL? If for supplementary purposes, in approximately what proportion in terms of the overall delivery? If ICTs are being used, identify which ones.
- What local institutions have access to ICTs which might be applicable to ODL? (schools, clinics, chambers of commerce, churches, etc.) To what extent are these institutions supportive of ODL?
- Is there data available that indicates how many women distance learners register and complete programmes by ODL? Is there data available showing how many learners use ICTs in ODL and what proportion of these are women?

6.2 *Widening Women's Access to ICTs for Education Purposes*

- Are there barriers encountered by women and girls to the access of ICTs for ODL? If yes, what are these barriers? Have there been any initiatives or strategies put in place in an attempt to overcome these barriers? If yes, what are these?
- Does the increased availability and use of the new ICTs impact on women teachers, instructors, tutors, etc.? If yes, in what ways?

Recognising that access to computers remains beyond the means of certain areas and certain marginalised people:

- What are the best practices or examples where ICTs have been found to be useful, particularly in reaching out to women and to those who have difficulty accessing education?
- With particular regard to rural women and girls, what are the implications with respect to the increased used of ICTs to deliver education and training?

As the user-profile of the new technologies continues to be dominated by men and persons with higher education and income:

- Are there particular programmes that could be developed to support training of women in the use of the new ICTs?
- Are there ways to ensure that women are not further disadvantaged or marginalised?
- In identifying the socio-cultural constraints that prevent women from accessing education programmes, such as:
 - special features of women students
 - affordability and time issues
 - physical location (in relation to educational institutions, etc.)
 - attitudes
 - skills and literacy
- Are there ways in which the increasing power, accessibility and decreasing costs of the technologies can assist women to overcome these constraints?
- If so, how can ODL programmes ensure that the women's needs are being met, using the capacities of the new technologies?
- Can problems of illiteracy be overcome using these new information delivery systems? If yes, in what ways?

6.3 Training and Capacity Building

- Are there ways in which women's and girls' awareness of the potential benefits of ICTs and their confidence in their ability to use them can be increased?
- Do working women have the opportunity to enhance or upgrade their skills, knowledge and access to ICTs? If yes, in what positions, careers, professions, etc.
- Are there existing examples of initiatives to build capacity through ODL programmes, such as:
 - development of courses and programmes which use gender sensitive training methodologies, materials and language?
 - learner support that particularly encourages interaction between learners, and between learner and tutors?
- How can ICTs contribute to three chief concerns for women as defined by the Platform for Action of the Fourth UN World Conference on Women:
 - education and appropriate technical training;
 - school curricula that encourage girls to enter technology and science related areas;
 - support of women organising and mobilising for empowerment.

6.4 Is Public Policy Working for Women?

- Is there an understanding of what national telecom policies might comprise? What are the implications of the liberalisation of the telecommunications sector?
- What are the national (telecommunication) policies in the education section? on distance education? How do these policies address the issued of technologies for ODL?
- Does public policy address gender differentials in the education sector? What are the opportunities offered by ICT policy to address gender differentials in the education sector?
- Do education and telecommunication policy makers collaborate to support women's use of ICTs? Do current policies enhance and build on each other's objectives? If not, how can this be changed?
- Are the national policy makers aware of the latest International Telecommunication Union resolutions on gender and development in the telecommunications sector?

7 Questions that Regional Meetings Need to Address: the Wider Issues

In addition to the questions covered in the national reports, regional issues should include:

7.1 Infrastructural Framework

- What is the current technological infrastructure that delivers education in the region?
- Does the current system integrate different levels of education, formal and non-formal, and different academic institutions? If not, why not?
- Which is the most Internet-connected country in the region? which is the least? What bearing, if any, does this have on access issues for women?

7.2 Regional Integration

- How are distance education projects co-ordinated at the regional level?
- What mechanisms are in place to ensure circulation of existing country studies and research to provide more detailed information for determining distance learning needs and strategies in the region?

7.3 *Potential of ICTs in the Region*

- What proportion of current distance education programme content is developed within the region? what proportion is developed outside the region?
- What kind of partnerships can be established between and among educational institutions to support the evolution of these new technologies?
- Has there been any evaluation of the successes, failures and effectiveness of general distance learning initiatives in the region? How might ICTs build on current successes through extending their reach?
- What are the key differences between countries in the region in terms of need for distance education programmes, particular needs of women, rural and urban differences, etc.? How might regional distance education programmes help bridge these differences ?

8 **Some Key Web Site References, Forthcoming Meetings and Ongoing Projects of Interest.**

Distance Education Clearinghouse	http://www.uwex.edu/disted/home.html
Distance Learning Resource Network	http://www.wested.org/tie/dlrn

What did the Fourth World Conference on Women say about electronic networking? FWCW Secretariat/ Division for the Advancement of Women: <http://www.un.org/womenwatch/daw>

DESIGNING EFFECTIVE TECHNOLOGY-BASED LEARNING MATERIALS will be presented by B.A.S.E. conferences on June 25th and 26th, 1998. The workshop is aimed at those who are considering turning to technology to provide solutions for their current training needs. It focuses on the instructional design process of analysis, design, development, implementation and evaluation. Various recognised experts in the instructional design field will participate and the workshop will be chaired by Prof. Johannes Cronje who is well known for innovative thinking in this field. More information from jcronje@cbt.up.ac.za

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