

Learning, Technology and Gender: Need, Opportunity and Obligation



*Presented at the
Regional Consultation on Rural Women in Knowledge Society*

*Jointly organised by
FAO Regional Office for Asia and the Pacific and ICRISAT
Patancheru (Hyderabad), India
16-19 December 2002*

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Salutations!

Let me first express my regrets for missing the first day of this important regional consultation on "Rural Women in Knowledge Society" - you have identified and embarked on developing responses to a major challenge confronting global development in today's knowledge-based societies. This challenge has to do with getting timely and quality information and knowledge into the hands of those most needing it at a time and place they need it? Had this question been asked a decade ago, many of us would have found it a little difficult to provide a satisfactory response. Not today; the technology tools available at our disposal make it possible not only to respond in time to the information needs of our communities but also to customise the information in a variety of ways - text, data, audio, video and animations in multiple languages at the blink of an eye, for local needs. While delivery vehicles for information have come a long way, those who need that information desperately, still have some way to go to easily access it.

Your consultation has taken upon itself to find ways and means of reducing the gap between those who need the information but lack the skills to get it for themselves. Noting the community that you are addressing is probably the most deprived in a whole range of necessary skills from literacy to using modern technological tools, empowering the community will require overcoming a number of challenges and impediments, not the least of which has to do with designing strategic directions and finding practical

solutions. I am grateful for the opportunity you have given me to share some thoughts on the subject. I come to this assembly neither as an information technologist nor as an agricultural writer. My vocation is education and my Commonwealth responsibility is about finding ways to increase access to learning among the most isolated, marginalized, deprived and denied of a fundamental right. In this respect, the agency I work for and I have gained some modest insight as to what works and what does not; what is necessary and what is not in speaking about the massification of education using technological tools. I hope that our experiences and what I have to say find some resonance in your further deliberations, for I think one of the first practical solution in ensuring that rural women participate in, contribute to, and share the benefits of, knowledge societies is to "literate" this segment of our nation's population.

In the next 20 minutes or so that I have, if you permit and indulge me, I wish to reflect with you, from an educational perspective, on:

- i. where our rural and marginalized populations find themselves in a world that is increasingly globalised and knowledge-based;
- ii. the challenges development professionals like us find ourselves as we confront the digital gaps;
- iii. attempts to discover those digital opportunities to serve the needs of rural women;
- iv. experiences from the world of educational delivery;
- v. issues that require our collective attention on the promise of technology to bring learning to marginalized groups which are mostly rural; and finally
- vi. how gender fits into this equation.

In a globalised world - where technology or more precisely the information, communication technologies have become the most pervasive drivers - knowledge is a powerful factor in production. This is essential for nations in pursuit of economic growth and for individuals to acquire the skills they need to find employment or succeed as self-employed. Acquiring information, turning that information into knowledge and applying that knowledge (a triad of inter-relations) require a minimum of basic education. Expounded by philosophers and educational theorists at one time but increasingly supported by pragmatic economists now - education is a central pillar to all social development and virtually to every aspect of quality of life, including unfettered access to information. To participate effectively in making our democratic systems work, to assert our political and legal rights, to develop our skills, to shape our attitudes to analyse problems and to find solutions require an education. Acquiring this education is not a one-off experience contained to a small segment of one's lifespan, say between four and 20 years, but a lifelong pursuit. Access to learning must be available to all of us at any time we need it and at a place we desire. This is the knowledge society which gurus like Peter Drucker, Daniel Bell and others have written so much about.

At the World Education Forum in Dakar (April 2000), it was brought to all of our attention that the full

potential of education is far from being realised in some 150 countries of the world. Basic education continues to be out of the reach of some 855 million adults, and some 125 million children will not see the inside of a classroom. This, after some 12 years following the declaration at the first World Conference on Education For All in Jomtien in 1990. Two years after Dakar, UNESCO recently published a monitoring report that seemed to indicate that the targets set for ensuring that at least all children get to a classroom by 2015 might not be met. This is important in the context of your discussions, as most of those denied this access will be in the developing countries, especially those countries which are in the high-risk category such as India, Nigeria, Pakistan, Bangladesh, China, etc.; women and girl children will continue to remain the most vulnerable. This begs the question. What does it mean to be illiterate? One graphic description comes from the Independent Commission on Population and Quality of Life which states:

"Literate people find it hard to grasp the full . . . impact of illiteracy. In a world operating on written laws, rules, and instructions, being illiterate is a severe handicap when . . . participating in decisions affecting life: it is tantamount to disability affecting every aspect of living. It confines job opportunities to the most menial and low-paid tasks. It means being unable to read instructions on a packet of seed, a tin of powdered milk, an oral contraceptive or a packet of insecticide. It means being unable to read newspapers, street signs, and warning signs. It means . . . the inability to check . . . legal rights, an inability to check if a title or deed is faulty. And it means being exposed to fraud and expropriation."
--Caring for the Future: Report of the Independent Commission on Population and Quality of Life. OUP, New York, 1996.

Deprivation to educational access is a denial of an individual's fundamental rights; this is a matter of equity. Not fulfilling such a right results in a variety of consequences, most of which you are aware. These consequences affect ethnic minorities and marginalized people, the poor more than the rich, the rural more than the urban and, most importantly, females more than males. The last of these, i.e., the inequality between men and women is certainly the most perverse in the list. As a number of you noted, globally, and according to recent statistics, enrolment ratios in primary schools were 74% for girls against 83% for boys. The imbalance is even more atrocious as we move into the post-primary sector where the difference between girls and boys or men and women was between 15 and 55% depending on the location.

Most of us assembled here know very well what this legacy of discrimination to educational equality between the genders has resulted in. At the end of the last century:

- i. 44% of adult women in developing countries could not read or write;
- ii. 60% of the world's illiterates were women;
- iii. in a review of 47 countries, women aged 25 years and older and who went to school received less than two years of schooling while men had twice as much; and
- iv. generally, women received about half the schooling than men.

Following the EFA forum in Jomtien in 1990, those studying the sociology of educational deprivation have brought to our attention a multitude of reasons why fewer girls than boys go to school in developing societies. These findings were further reinforced in more recent analyses after the World Education Forum in Dakar, including work by those closely associated with many UN agencies. It is helpful for us to revisit these in the context of introducing technological tools, as many of the factors that once inhibited women from participating in learning can very easily apply to them participating in the digital world. Non or lesser participation of girl children and women can be traced to age-old traditions, fears and the role of women in their families and communities. These include:

i. Family maintenance: the bulk, if not the entire maintenance of the family, rests on the shoulders of women in almost all rural and therefore agricultural communities. The situation sees further exacerbation when, in most instances, women must also engage in earning activities besides doing housework. This role sets in motion a vicious cycle which would require the girl children of rural households to take the responsibilities of mothers (as soon as they are able) so as to release the mother to go out and earn. This family obligation, unless broken, will result in the next and the next generation of illiterate women.

ii Contribution to family income: girls start contributing to family income at a very young age - perhaps as young as 5 in countries of South Asia. By the age of 10, girls may be working up to 10 hours daily in productive activity inside and outside the home. However, in South Asia, the average hours of work girls put in is around 5.5 against 1.8 for boys. Under such circumstances, educational attainment by girls gets clearly impaired.

iii. Unfriendly access to schooling: school fees, distance between school and home, fear of insecurity (both in rural and urban areas where street violence and sexual abuse against girls occur), all contribute to non-participation of girl children from schooling. Poor families on the poverty line would rather invest their disposable income on a son rather than on a daughter. Boys are more likely to find paid jobs than their sisters after schooling.

iv. Cultural and religious sensitivities: in many societies, customary practices and attitudes result in female education assigned a lower status than male education. This may be the result of traditions of inheritance (patrilineal) and residence after marriage (patrilocal) when girls are expected to move in with her in-laws. The cultural practice of early marriage, values and norms of male-dominated societies where women are assigned certain specific roles, all conspire collectively to limit the time girls are permitted to spend at school.

v. Curriculum and content: it is argued in many quarters that the content of schooling also prevents girls from participating and getting ahead in education. Curriculum planners require all participants in learning to conform to national norms. Girls are urged to study subjects that educational planners believe are within a woman's traditional domain. Yet among farming and rural communities, the generations-old knowledge of animal husbandry, horticulture, forestry, use of herbs in traditional medicine, food preparation and enhancing diets, have been the realm of women. Organised training has gradually made this into men's vocation thereby contemptuously destroying ancient knowledge passed on by women.

There are no easy answers to removing many of these barriers to education that girls and women face. Changing household attitudes, high profile political campaigns, women teachers in local areas being role models, cost reduction for schooling especially for girls, even subsidising families with cash compensation for sending girls to school, are strategies worth pursuing. In order for this unacceptable situation to be remedied, it will require not just a band aid as we are often prone to do but a profound transformation of entire educational systems and approaches. By so doing, education's response can rapidly adapt to the critical needs of deprived communities and at the same time, and more importantly, exploit the opportunities offered by advances in the technologies. In the context of this conference, let me consider what and how technology can contribute to the delivery of learning especially to the communities that this consultation has an interest in:

- i. Content customisation: sophisticated pedagogy can facilitate individuals to customise curriculum content. Local knowledge can be turned into local learning. Learning can become either a multi-channel or a mono-channel experience. The final authority on customisation will be the expected learning outcomes of the subject and the learning preferences of the student.
- ii. People as the ultimate resource: technology presents an opportunity to use those who possess knowledge at the community level to be the coaching resource for their communities. The real challenge will be to identify such people and train them with the necessary skills to perform the tasks required.
- iii. Communities of culture can be developed. The opportunity to make available content in other languages, apart from English, to a larger audience will become feasible. Declining cost and ease of use of the communication tools will mean the availability of a vehicle to disseminate other cultures and traditions.
- iv. The size of the teaching organisation providing the training service is not relevant; what matters is the quality of the service. Small and specialised groups can generate and transmit knowledge just as effectively as bigger ones.
- v. Location does not matter: providers of educational services can be located anywhere on earth and can reach the users of the educational services wherever they may be as long as there is a basic communication infrastructure.
- vi. The death of distance: the cost of communication will not be determined by distance even in the most regulated environments. Reaching out to students through the electronic highway will be determined more by willingness of the educational providers to utilise the newer technologies than by fear of inaccessibility because of communication costs.

So how do all these relate to your consultations? Clearly from the perspective of this speaker, an essential precursor to the use of the intelligent technologies to empower women in rural areas, to be active participants in knowledge societies, to bridge the digital divide, to ensure the preservation of local knowledge, to reduce poverty, to reduce child mortality and to improve maternal health will all require a

tremendous effort at increasing the levels of literacy among the 600 odd million women who currently suffer from this deprivation. You clearly recognise the enormous contribution that women make to agriculture, applying traditional wisdom and lore, using recently acquired knowledge from hearsay, word of mouth, extension services and market representatives. Knowledge of the power of the new technologies as well as the skill to use them can help rural women, engaged in agriculture, from relying on secondary (and often biased) sources of information to accessing primary sources by themselves for the same information. However, as numerous studies have shown, including a series of regional discussions that the Commonwealth of Learning has had over the last two years, there are some impediments and challenges. Many of you have touched on these and clearly will have some views on ways to confront and overcome these impediments.

As you consider these options, allow me to present to you a list of "thoughts" that those in the educational sector were invited to ponder in the mid-sixties as computers made their way to classrooms, by an educational thinker, Neil Postman, in his book: *The End of Education*, Vintage Books, New York, 1996):

- i. The advantages and disadvantages of new technologies are never distributed evenly among the population. This means every new technology benefits some and harms others.
- ii. Embedded in every technology there is a powerful idea, sometimes two or three powerful ideas. Like language itself, a technology predisposes us to favour and value certain perspectives and accomplishments and to subordinate others.
- iii. Every technology has a philosophy, which is given expression in how the technology makes people use their minds, in what it makes us do with our bodies, in how it codifies the world, in which of our senses it amplifies, in which of our emotional and intellectual tendencies it disregards.
- iv. A new technology usually makes war against an old technology. It competes with it for time, attention, money, prestige and a "worldview".
- v. Technological change is not additive; it is ecological.
- vi. A new technology does not merely add something; it changes everything.
- vii. Because of the accessibility and speed of their information, different technologies have different political biases.
- viii. Because of the symbolic forms in which information is encoded, different technologies have different intellectual and emotional biases.
- ix. Because of the conditions in which we attend them different technologies have different social biases.
- x. Because of their physical form, different technologies have different sensory biases.

In the new knowledge societies, learning, training and access to information will not be the monopoly of a few because of gender, age, class, race, economic status and location. It is one where everybody, regardless of whom they are, will have access to information and the power to turn that information into knowledge. Individuals, and certainly those suffering from extreme deprivation, must be empowered and enabled to do so despite some of the biases and impediments in the way. Learning has to be a first step in this process. Many who are non-participants in education today need to be brought into the fold if we are serious about giving all of our people equal opportunities. Such a diversity of potential beneficiaries of our efforts will require us to organise our interventions in non-traditional and flexible ways. Under these circumstances, open and distance learning is no longer an option. This method of delivering learning along with the new tools should enable everyone in a knowledge society to participate in education or training (formal or informal) throughout life.

Finally, let me compliment those responsible for organising this consultation. It is timely and it is also pleasing to note that agencies such as ICRISAT and the FAO are continuing their focus on broader issues of community development well beyond their core functions. Those of us at the Commonwealth of Learning are pleased to be part of your company.

Thank you.