

Issues and Strategies for Women Empowerment through Information Technology Training in Agriculture

10

Dr. Sushila Shaktawat*

Over the last 25 years, the role of women in agriculture has become more familiar and well-developed subject. Whereas once small groups of women met at local and regional Conferences to examine the roles of women on farms and in agricultural development and to bring attention to their importance, the Second International Conference on Women in Agriculture, organized by the U.S. Department of Agriculture and held in Washington, DC, offers over 100 sessions on three separate tracks, with speakers from every continent. The sustainability of agriculture development has become a prerogative to women's participation moving across the caste, creed and economic echelons. Our need is to ascertain and assure the areas where women are still far from enjoying the minimum privileges and question of empowerment has been thrown to a very complex, integrated situation the access to resources, institution.

An attempt has been made in this paper to identify the major issues and constraints for the technological empowerment of women in agriculture. The information technology has been analyzed by focusing on the impact of technology on various social parameters of village economy. This paper also proposes ways of enabling community based women organizations in the countryside to gain scientific and technological competencies that lead to enhanced economic power for themselves and their families, communities and societies.

*Associate Professor (History), Jai Narayan Vyas University, Jodhpur (Raj.)

Issues and Constraints for Technological Empowerment of Women in Agriculture:-

Economic growth and technological advancement in India in the current decade is very impressive. Technology, market and development are considered gender-neutral. But there is pronounced urban bias and rural neglect in the development process of India. The impact of information technology on society has not been uniformly beneficial, and the technological divide is being increasingly felt, especially in the developing countries. Serious obstacles still continue in achieving gender equality. Modernization of the economy or advancement of the society is a semi-myth for village women. The gender division of labour within the rural household has remained culturally stubborn. Women as a class are oppressed and subdued by the hegemony of social patriarchy.

In most of the developing countries, women have very little access to information technology. The new technological innovations fail to realize the diversity of women's work and fail to improve their productivity and economic contribution. Agricultural extension workers continue to view male farmers as their main market for new or appropriate inputs. The major constraints to women are lack of physical access to information and communication infrastructure; social and cultural norms; lack of literacy skills and educational opportunities and feminization of poverty due to financial constraints. Information technology has great potential to meet the needs of rural women farmers and to benefit rural communities. It could provide women farmers with guidance on where and when to sow, harvest and market their produce to avoid having to off-load their goods at throwaway prices. Women farmers could improve their productivity within information on improved seeds, alternate crops and weather. Therefore, the common goal is to empower women to improve their standards of living through better access to useful and relevant information because information technology is an enabler

to deliver the content in a cost-effective manner.

Gender and Information Technology: A Theoretical Perspective

Feminism is a diverse, competing and often opposing collection of social theories, political movements, and moral philosophies, largely motivated by or concerning the experiences of women, especially in terms of their social, political and economic equalities. The most well known types of feminism are: liberal feminism, social feminism, radical feminism, and post-modern feminism. Liberal feminism seeks no special privileges for women and simply demands that everyone receive equal consideration without discrimination on the basis of sex. Liberal feminists would seek to remove barriers that prevent equal access for women to information technology jobs not only to provide economic equality but to provide access to higher-paying jobs for women. In contrast to liberal feminism, socialist feminism rejects individualism and positivism. Social feminism believes that technology and the social shaping of technology have often been conceptualized in terms of men, excluding women at all levels. Socialist feminist reform suggests that the allocation of resources for technology development should be determined by greatest benefit for the common good. Radical feminism maintains that women's oppression is the first, most widespread, and deepest oppression. It suggests that because men, masculinity, and patriarchy have become completely intertwined with technology and computer systems in our society, no truly feminist alternative to technology exists.

Postmodern feminist theories imply that no universal research agenda or application of technologies will be appropriate and that various women will have different reactions to technologies depending upon their own class, race, sexuality, country, and other factors. This definition of postmodern feminism parallels the description of the complex and divers co-evolution of women and computing. Some cyber feminists see these

technologies as inherently liberal and argue that their development will lead to and end to male superiority because women are uniquely suited to life in the digital age.¹ The term cyber feminism, which explicitly fuses gender and information technology, arose in the late 1980s and early 1990s. Hawthorne and Klein in their book, "Cyber feminism", state: "Just as there are liberal, socialist, radical and postmodern feminists, so too one finds these positions reflected in the interpretations of Cyber feminism".² Cyber feminists saw the potential of the Internet and Computer science as technologies to level the playing field and open new avenues for job opportunities and creativity for women where absence of sexism, racism, and other oppression would serve as major contrasts between the virtual world and the real world. Cyber feminism uses aspects of different feminist theories to reflect many interactions among information technologies, women, and feminism. Rosser believes that Cyber feminism appears currently to pick and choose among aspects of various feminist theories in a somewhat uncritical fashion without developing a coherent or successor theory.³

Information Technology and Gender Empowerment: Some Critical Issues

Modern technology is supported and directed by powerful institutions and interests. Men gravitate to science and technology. We must question, whether, technology is male dominated because it demands some essentially masculine traits, or 'simply' because technology is where the power is? Technology is socially constructed, or co-produced, alongside gender. Technology itself gets gendered in the eyes of would be technologists. The continued male dominance in science and engineering is due in large measure to the enduring symbolic association of masculinity and technology by which cultural images and representations of technology converge with prevailing images of masculinity and power. The use of technology is always discriminatory. Technical prowess is what defines them as engineers and what gives them a sense of power.

The symbolic gendering of technology extends beyond the artifactual, but it has material consequences. Within the masculinity-technology⁴ association, one can discern a series of highly gendered dichotomies. Most obvious of these is the distinction between being people-focused and machine-focussed. It correspond to the division between feminine expressiveness and masculine instrumentalism. Most women routinely interact with people and technologies. For example computer is implicitly rather than explicitly gendered. 'Hard' technology is inert and powerful, while 'Soft' technology is smaller scale. So the world of technology is made to feel remote and overwhelmingly powerful because of the hard-soft dualism. The hard-soft dichotomy also extend to styles of thought in technology.⁵ On the masculine side of those dualism, we have an objectivist rationality associated with emotional detachment. On the feminine side we have a more subjective rationality associated with emotional connectedness. Males have dominated the 'Internet culture' since its inception. The Internet culture can be discomfoting and alien to females.⁶ India has achieved higher technological advancement during last decade. The Green Revolution, which focuses on increasing yields of rice and wheat, entails a shift in inputs from human to technical. Women's participation, knowledge and inputs are marginalized, and their role has shifted from being "primary prducers to subsidiary workers." Women work longer hours and their work is more arduous than men's, yet their work is unrecognized. Men report that "women, like children. eat and do nothing." Technological process in agriculture has had a negative impact on women.

There are tremendous effects of information technology on women's employment and the nature of women's work in all third world countries including India.⁷ But in areas of technology, till today women represent about 10 percent of researchers and about 5 percent of managers. The impact of information technology on society has not been uniformly beneficial, and the technological divide is being increasingly felt, especially in the

developing countries. Serious obstacles still continue in achieving gender equality. The gender implications of digital divide is very serious in India. Access to and use of the Internet has important economic, educational, and social benefits, and those who are excluded from Internet participation will also be excluded from several benefits.⁸ Lack of training does not allow them to escape from their sex-typed slots. The women from poorer families face challenges as they adjust to new technologies. Their jobs do not reintegrate them, leveling the hierarchies and adding responsibilities.⁹ Cultural attitudes and gender stereotyping are impediments to education leading to more men than women in scientific and technical careers and in decision-making positions, thus increasing gender inequity. Equal access to science is not only a social and ethical requirement for human development, but also essential for realizing the full potential of scientific communities and for orienting scientific programmes towards meeting the needs of humankind.

Information Technology and Gender Empowerment: Practical Needs

The new information technologies hold out a unique opportunity for women in the developing countries to speak out, and to be more visible and less isolated. Women also contribute towards expanding political, social and economic participation once they can encourage access to and the sharing of knowledge, establishing networks and strengthening decision-making power.¹⁰ The increasing integration of new information and communication technologies (ISTs) offer exciting opportunities for rural people to improve their livelihoods, reduce vulnerability to disasters and find a voice in the global village. Information and Communication Technology is a generic term encompassing a variety of computer, telecommunication and networking hardware and software (wireless local loops, digital radio, Internet, villages e-kiosks, mobiles) which essentially act as 'enabling' tools to provide the poor with access to timely information (market prices) or connect them to educational media,

'virtual' markets, or indicative of increasing interest among international agencies and investors in promoting the use of information and communication technologies in development.¹¹ According to one report, "In the rural context, the ICTs usually provide very little employment or direct income unlike labour-intensive manufacturing and the Green Revolution, both of which created substantial employment. ICTs then need to be evaluated mainly in terms of their effect on productivity of other sectors (agriculture, farming or other rural, non-farm economic activities) and especially on agency development, including that resulting from sharing experiences of mobilization and innovations".¹² Many countries in Asia and the Pacific region recognize the potential of Information and Communication Technologies to improve women's access to information and knowledge, enhance education and learning, and accelerate technology transfer. Radio and television are used extensively in countries to inform and educate rural women about topics such as health, nutrition and agriculture.

Despite the potential, however, the threat of increased "digital divide" that would widen information, education and knowledge inequality between urban and rural communities is real. "Access to ICTs is still a distant reality for the vast majority of people, particularly rural populations, have been left out of the information revolution. In many regions of India, there is a lack of infrastructure, resulting in high costs for installing and running ICTs.¹³ In addition, women's access to, and use of information technology, is largely confined to urban areas. A number of barriers to the increased use of ICTs for the empowerment of rural women include inadequate infrastructure, high costs and limited capacity, all of which are more acute in rural areas.¹⁴ More importantly the content relevancy presents the greatest challenge to the use of ICTs for the advancement of rural women. According to Green and Trevor-Deutsch (2002), "the major barrier to the use of ICTs for women is its lack of relevancy to their lives. Women encounter barriers to the use of ICTs when

the learning content is not directly relevant to their livelihood, and when it does not value their knowledge, wisdom and experience".¹⁵ Certainly, there are opportunities to use ICTs to educate and empower a large number of rural women and men provided that user-friendly and gender-responsive content and applications are developed, and the agents of development are well trained and gender-sensitive. One such application is on the education front. With appropriate and adequate investment in content and learning resources a distance education modality could reach women in the rural areas. ICT applications can be either directed to women as primary users of ICTs and/or for capacity building among service providers and social agents who serve the women's programmers. In the rural context, women as primary users of ICTs are still a social curiosity rather than a common occurrence. The opportunities for using ICT applications for improving livelihood skills for rural clients are currently mediated through development service providers (government and non-government) and hence they must be trained in ICT applications to improve women's livelihood. It would be important to distinguish the potential of ISCTs to improve the livelihood of women to ensure economic empowerment and their prospects to improve access to information and knowledge to improve their quality of life and informed participation in various spheres of society.¹⁶

To conclude, given their local knowledge and multiple roles, rural women should be fully involved throughout the development of women's work oriented technologies. In-depth assessment of the roles and constraints faced by rural women in different circumstances should be undertaken in order to guide the development and application of appropriate technologies. Training should build the capacity of rural women according to their multisegment production tasks and new information and communication technologies should be harnessed to improve rural women's access to technical information and public sector support-services. The existing models of farmer field school and

farmer-to-farmer learning approaches may have ignored gender biases that prevent women from taking advantage of such technology transfer approaches. It is important to explore the concept of increasing rural women's skills as technology trainers and knowledge providers in the rural areas. The technical experts in the extension, outreach and agricultural centres could ably support rural women's local efforts if the traditions of ignoring women's technology needs could be changed.¹⁷ Community-based women's organizations have been instrumental in the process of enabling women to cross the so-called digital divide and become confident users of ICTs. With gender empowerment as a key objective, they can use technology to successfully build personal confidence and self-esteem that has had wider implications in women's lives. ICT technologies are powerful tools for women to overcome discrimination, achieve full equality, well-being and participation in the decisions that determine their lives and the future of their communities. It will be a highly valuable reference tool for policy makers and development leaders, so that appropriate steps can be taken to mainstream the gender dimension in all areas of technology development, incubation and adoption.

Reference:

1. Millar, M.S., "Cracking the Gender Code : Who rules the wired world? Second Story press, San Francisco, 1998, P.2
2. Hawthorne, S. and Klein, R, "Cyberfeminism", Spinifex, Melbourne, Australia, 1999, P. 20.
3. Rosser, S.V., Op. cit., P. 27
4. Faulkner, Wendy "The power and the pleasure: A research agenda for "making genderstick" to Engineers", Science Technology & Human Values, 25(1), 2000, p. 88

5. Edwards, Paul N. "The closed world: Computers and the politics of discourse in cold war America", Mass MIT press, Cambridge, 1996, pp. 167-72
6. Kiesler, S., etal, "Pool halls, chips and war games: Women in the culture of computing, Psychology of Women Quarterly 9, 1985, pp. 451-462, Turkle, S., "The Second Self: Computers and the Human Spirit", Simon and Schuster, New York, 1984.
7. Swasti, Mitter "Women Encounter Technology", Routledge, UK, 1997, p. 54
8. Jannet, "Women and Girls last: Females and the Internet", IRISS '98 International Conference, 25-27 March, 1998, Bristol, UK.
9. Gattiker, "Women and Technology", Walter de Gruyter, UK, 1994, p. 65
10. Odame, H.H. et.al. "Gender and Agriculture in the information Society", Briefing Paper No. 55, The Hague: International Service for National Agricultural Research, 2002 (www.isnar.cgiar.org)
11. International Food Policy Research Institute, "Bridging the Digital Divide: 2020 vision news and views," Washington, Dc, September 2000.
12. International Fund for Agricultural Development, "Assessment of Rural Poverty: Asia and the Pacific," Rome, 2002.
13. Food and Agricultural Organization, "Rural Women and Food Security in Asia and the Pacific: Prospects and Paradoxes", RAP publication, Bangkok, Thailand, 2005, p.79.
14. Gurumurthy, A., "Challenging Gender Inequalities in Information Society: Gender and ICTs", Gender and Development, Bridge Bulletin (14), 2004.
15. Aitkin, H., "Rural women and telecommunications in developing countries: Women in agriculture and modern

communication technology”, Proceedings of workshop (available at www.husdr.kvl.dk/htm/php/tune98/13-HelenAitkin.htm).

16. Green, L. and Trevor-Deutsch, L. “Women and ICTs for open and distance learning: some experiences and strategies from commonwealth”. The Commonwealth of Learning, Vancouver, 2002
17. Food and Agricultural Organisation, Op.cit., p.84