
EMPOWERING WOMEN THROUGH INFORMATION AND TECHNOLOGY

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Abstract : Women can be empowered only if they are given education and made aware of their rights and hence they themselves priorities their lives. Violence has to be completely eradicated from her life, then and only then can the dream of empowerment becomes a reality. Women have to be given due respect in a society to have actual empowerment. Women have always been suppressed, underestimated and valued less in the society and also within her family. Although efforts have been taken to improve the status of women, the constitutional dream of gender equality is miles away from becoming a reality. Even today, 'the mainstream remains very much a males stream' Inclusive development must involve women since poverty is particularly acute for women living in rural households. There is a need to empower these poor women through science and technology (S&T).

Key words: Innovation, science, information, technology, women's empowerment.

Introduction; The women's entrepreneurial activities realized properly in many developing countries. However, there are isolated experiences where IT is judiciously utilized for the economic empowerment of poor women. Such experiences need detailed documentation and analysis to identify key barriers to women's participation in IT as well as some innovative areas where women can participate in it revolution. Women in general do not have a strong presence in science and technology. This is attributed to two broad issues: first, women's perception of their role and function in society, and second, society's expectation of their contribution. Women's involvement in science and technology encounters bias in regard to disciplines and academic or professional level of responsibility. Women are divided between two spheres: the management of the home and family, and the fulfillment of job responsibilities. Family commitments, either as the women's choice or as a result of cultural enforcement, have impaired women's capacity to meet their potential, and put them at a disadvantage in many science and technology-related jobs that are dynamic and competitive in nature. The reality of women's lives remains invisible to men and women alike and this invisibility persists at all levels beginning with the family to the nation. Although geographically men and women share the same space, they live in different worlds. Sprawling inequalities persist in their access to education, health care, physical and financial resources.

Studies on women in science: In India, the status of women in science did not receive adequate attention. There are only a few reports and studies on gender and science in India. Books that did mention women's perspective often got minimal importance with chapters located in the end. Studies analysing education and science policies have also revealed the reasons for women's exclusion. Empirical research specifically on women scientists is scarce and their

is an important benefit of IT, which has not been research productivity has not been particularly dealt with in detail. There are, however, only a few studies on women in science in developing countries and most of the productivity difference data are from the advanced countries. The scattered information about the participation of women in science in the developing countries refers to their access to education and career; very little is known about the contribution of female researchers to scientific production. Professional areas of engineering and technology still witness a severe imbalance and women's participation has been limited and confined to junior positions as far as science careers are concerned. Only a few women could make it to senior decision-making positions and get recognition. Scientific institutions in India carry essentially masculine ethos and exhibit vertical as well as hierarchical segregation in terms of gender. Women are often underrepresented in the scientific and technological community and are generally seen as consumers and end users of technology. The prevailing socio-cultural systems in India result in a 'triple burden' for women in academic and scientific careers. Women in all professions perform a double role of managing job and domestic responsibilities, which has been commonly referred to as a 'dual burden'. In science, the dual burden is combined with various problems that are specific to the scientific profession. Very few women have been a part of these structures in senior positions. Their participation is confined to the junior level and the few women who do make it to senior decision-making positions are unable to change the essentially masculine ethos of these institutions.

Increase productivity through science: Scientific institutions in India are extremely hierarchical and competitive. Women either drop out of the rat race or learn to compromise on their ambitions. Women scientists also seem to cluster in life sciences and

chemistry and are not necessarily found in earth sciences or physics or mathematics. They also seem to prefer taking research topics that do not require long hours in the laboratory or extended periods of fieldwork. These trends for women involved in science have largely been due to the prevailing education and science policies in the country. Most of the studies on women and S&T (Science & technology) have addressed issues and challenges related to women involved in S&T in India. However, with most of the population of women living in rural India, it is important to have a bottom-top approach and harness S&T for socio-economic empowerment of women. S&T offers solutions to many challenges faced by rural women, including labour-saving technologies related to domestic and productive work such as water pumps and community water schemes, improved cooking technologies, transport of water, wood and crops, post-harvest and food processing. As poor women continue to use labour-intensive traditional technologies or use no technology at all, there is a need for serious commitment on the part of the Government if women are to achieve parity with men in the rural sector.

S&t for women's empowerment: Women contribute to the economy through both remunerated and unremunerated work at home, in the community and in the workplace. Poverty is particularly acute for women living in rural households. Women's poverty is directly related to absence of economic opportunities and autonomy, lack of access to economic resources, and lack of access to education and support services resulting in poor participation in the decision-making process. Rural women constitute 66% of the total labour in farm production and livestock-related activities have low participation in decision-making processes such as marketing or selection of the livestock/crop. Market economy trends in the new era of globalization have further widened the gap between education and technology opportunities for women. Despite the fact that women share greater burden in agriculture, there are hardly any special programmes for enhancing women's agricultural skills.

Enterprises: While rural women are involved in micro/small enterprises or manufacturing, most of training programmes have poor female participation. There is often less involvement of women in opportunities related to construction, trade, transport, storage and services due to lack of skills. S&T can help in creating opportunities to enable them to acquire the skills necessary for entering these newly emerging occupations. S&T can be a powerful tool in bridging the gender divide and achieving inclusive development, if effectively and universally adopted. S&T offers solutions to many challenges faced by rural women: it can contribute to food

security by boosting crop yields, increasing women's performance by introducing labour-saving technologies and increase their participation in the rural labour market through better communications. Women can greatly benefit from a combination of ICT and space technology.

Government programmes: DST (Department of Science & Technology) has been making pioneering efforts in initiating and implementing programmes based on appropriate S&T inputs for the welfare for women. This endeavour was aimed to support these women through reduction in drudgery involved in their daily chores, improvement in their quality of life and empowering them with the opening of new avenues of income generation. The scheme 'S&T for Women' in 1981 was a pioneering gender initiative of DST being implemented since the Sixth Five- Year Plan to promote research, development and adaptation of technologies to enhance the overall social status of the women and augment their incomes through S&T, especially in rural areas. Due to the efforts of the last two decades, this programme of DST has made a distinct impact through its innovative approach, gender sensitivity and involvement of S&T-based voluntary organizations having strong linkages at the grassroots. They have also focused on women through All-India Coordinated Programmes (AICP),

Finance facilities: Women technology parks, scholarship schemes and by the constitution of national awards for women development through application of S&T. The focus of these interventions has largely been to demonstrate the application of S&T to women. These initiatives enabled women to get newer opportunities for income generation, reduce drudgery and improve health and environment. With feminization of agriculture, women played an important role in the genomic conservation of natural resources and scientific validation of traditional knowledge which helped them lead a better quality of life with their empowerment. Partners in this exercise have been select voluntary organizations having an S&T base and key R&D laboratories in the country. Initiatives were taken up both in the farm and non-farm sector.

Management skills: With focus on technology development and demonstration aspects, emphasis on these initiatives has been to improve upon existing skills, provide managerial capabilities and to understand the science behind the processes/products. This has made them more open to improved/emerging technologies for improving production efficiency and reducing drudgery in their day-to-day work. Since rural women have special understanding of natural resource management, they also play a crucial role in upcoming issues pertaining to climate change. S&T helps ease women's work load

inside and outside the house involving them as equal partners, recognizing their knowledge, experience and the significant role they can play in sustainable development. These programmes involve field-level agencies and S&T institutions.

Training programmes: Technology up-scaling and demonstration projects undertaken through such programmes have shown potential for improved quality of life and livelihoods gain at pilot scale. All the above efforts have largely been carried through women component programmes (with 100% allocation to women) being implemented through two major schemes: Science for Equity Empowerment and Development (SEED), and Disha Programme for Women in Science. However, the expenditure on these schemes is meagre; only 0.04% of the overall expenditure on S&T in the country as revealed through gender-based statement of the expenditure budget. Besides, there is also little gender mainstreaming in the other S&T programmes for socioeconomic development being carried out in the country by the Ministry of S&T.

Conclusion: It is universally accepted that IT offers immense opportunities for the comprehensive social and economic development of Developing Countries. Without its adoption, there is little chance for countries or regions to develop. The term women's rights refer to the putative freedoms and entitlements of women and girls of all ages. These rights may or may not be institutionalized, ignored or suppressed by law, local custom, and behavior in a particular society. These liberties are grouped together and differentiated from broader notions of human rights

because they often differ from the freedoms inherently possessed by or recognized for men and boys and because activists for this issue claim an inherent historical and traditional bias against the exercise of rights by women and girls. Issues commonly associated with notions of women's rights include, though are not limited to, the right: to bodily integrity and autonomy; to vote (suffrage); to hold public office; to work; to fair wages or equal pay; to own property; to education; to serve in the military or be conscripted; to enter into legal contracts; and to have marital, parental and religious rights. Women and their supporters have campaigned and in some places continue to campaign for the same rights as men. It illustrates how IT can effectively be used as a technology for small scale industries, which are promoted by women under self-employment scheme. This paper discusses the establishment of small scale industries which they can promote such business for their economic empowerment. The IT based micro-enterprises by the self-help groups of poor women have helped the demystification of the common man that a few elite ones in the society are the only beneficiaries of the powerful IT. They have begun to consider IT as a tool for attaining knowledge and development by everyone. The strategy to encourage the participation of the poor women in the digital revolution is expected to reduce the gap in digital and gender divide in this state. The economic empowerment of women via IT enables them to challenge discrimination and overcome gender barriers.

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