Int. Res. Adv. 2017, 4(2), 37-39 Insight

INTEGRATED
RESEARCH ADVANCES

WOMEN EMPOWERMENT IN SCIENCE AND TECHNOLOGY- AN ESSENTIAL APPROACH FOR STRONG NATION BUILDING

Dr. Monika Moitra

Professor, M.M Institute of Physiotherapy & Rehabilitation, M.M University, Mullana, Ambala, Haryana

Received on: 29-01-2017 , Accepted and Published on: 28-04-2017

ABSTRACT

Introduction: Women empowerment refers to increasing the spiritual, political, social or economic strength of women in diversified streams. It involves the empowered developing confidence in their capacities. It's a multidimensional social process that helps women to gain control over their own lives and give contribution in strong nation building by their knowledge and skills in various fields of science and technology. Women are becoming aware of their rights and trying best to improve and upgrading their intellectualism & positive value assertion to create own definition of herself and view herself as a complete human being with strong liberal values without any gender discrimination. Science and Technology have been an integral part of Indian civilization and culture. Over the years Indian women have overcome the traditional mind-sets and have excelled in professions like teaching, medicine, engineering, information technology, biotechnology, nuclear science, space science and many such specialized fields in the domain of science and technology. Their contribution to socio-economic development as employer and employee, getting recognized and honored in public, private sectors.

Conclusion: In a related way, attention to women's concerns has helped to reveal the value of cognitive diversity in the scientific process. The human intellectual repertoire consists of many styles and many ways of organizing the production of knowledge. The scientific method can be enhanced by our appreciation of the wealth of intellectual resources to be gained by valuing and promoting cognitive diversity.

Keywords: Women Empowerment, Socio-Economic Development, Science & Technology, Nation Building.

INTRODUCTION

Three decades ago, women's movements around the globe, were rigorously asking the exclusion of women, their interests, and visions of the good life from policy debates, including those of science and technology. In the last 30 years, great progress has been made in analysing, and responding to these concerns. Women have made headway, as they enter the fields of science and technology. Greater opportunity in these fields, has allowed more women to share good wages, interesting work, and high social status, associated with these occupations.The gender dimension of science and technology, has become one of the most important, and debated issues worldwide and special attention has been directed, towards the role of women in science &technology. They have immense pool of talent and resource , as they comprise more than half of the population of any society, and could contribute immensely towards , the social and economic development of societies, through participation in science and technology programmes.[1]

Countries need to open up opportunities , to bring more women to science and technology, thereby producing a critical mass of scientifically skilled women. Women have made important contributions, in all walks of life and made inroads into new fields of science and technology. There is need, to remove structural obstacles and barriers that continue to exclude girls and women from the study of science and technology. There is urgent requirement ,for the development and mobilization of all segments of populations across cultures , to contribute to the eradication of poverty, fighting diseases, stemming environmental degradation and improving global economic competitiveness through the application and development of science and technology. While these developments have been highly satisfying, constraints in the form of socio-cultural factors, such as discrimination, lack of self-confidence and gender disparity continue to affect Indian women and their choices of career.

There are great concerns now being shown in India, about careers for women in science and consideration is being given to nurturing their talent, by facilitating and providing

Dr. Monika Moitra

Professor, M.M Institute of Physiotherapy & Rehabilitation, M.M University, Mullana, Ambala, Haryana

Email id: drmonika_7900@yahoo.com

Cite as: *Int. Res. Adv., 2017, 4(2), 37-39.*

 ISSN 2456-334X http://pubs.iscience.in/ira

various options.[2]There is a need of parameters to focus on strong flavour of gendered science and implementation of remedial measures to improve women's participation in science need to become priority in policy making. The world is becoming confident about the calibre, being shown by the women in diversified field of science and technology.

The gender gap in academic science, in technology and engineering is not only a topic of on-going policy changes and scholarly debates, but also is of interest to policy makers and governments engaged in initiatives to narrow the gap between women and men in these fields. There has been an increase , in the number of technical and vocational schools for girls across the country, as well as an increase in the percentage of girls entering the university in science and technology fields. A cross sectional conducted to evaluate self-reported attitude and belief among male and female physiotherapist, and the result show equal remarkable up-gradation of professional knowledge and skill.[3]

In order to promote, addressed gender equality and involvement of women in science and technology. The government commitment has led to policies prioritizing gender equality at various levels of societal development, including the establishment of policies promoting gender equality and the implementing of these policies among institutions.

In the education sector, information and communication technologies (ICTs) hold great potential. E-learning, which can involve a wide variety of technologies offers students access to a vast amount of information and resources that are not possible in a single instructional setting. Online teaching support programmes for teachers can assist with lesson planning, curriculum design and other learning tools.

Training of women in the use of ICTs, media management and content development can enable them , to participate in decision-making processes at government, private sector and civil society levels. Moreover, teaching methods and tools must be gender sensitive, and responsive to women's and girls' unique need and learning styles. Education, training and skill development are critical to ICT interventions. These areas represent an entry point, for encouraging women to become more involved in ICT applications development, shaping ICT solutions and framing ICT policies according to female-specific needs and experiences.

Science and Technology (S&T) tools are frequently used to promote empowerment of women farm workers and agricultural producers. Government of India uses S&T to provide information about farm production, managerial capabilities and understanding of the science involved in the processes and products of farm production. Rural women have a special understanding of natural resource management and hence they can play a crucial role in re-nurturing and re-greening rural India.[4]

Thus, in those cases where science and technology institutions have made it possible for women to advance, they have provided a model for other fields. The entrance of women into such professions, enables the sciences to take at least some credit for increasing social justice and for providing an example of what is possible far beyond the borders of scientific and technological institutions themselves.[5] Advancing scientific careers for women has led to other benefits for science, the most obvious being an enlarged pool of smart, well-trained, and highly motivated individuals from which to staff its projects.

It appears that improving women's opportunities in science has benefited both the sciences and the cause of women in general, for the example of women's successes in fields thought to be most resistant to them, has provided powerful encouragement to women seeking equality in other endeavours. Just as Marie Curie's achievements excited the imaginations of women around the world, so, too, are women today inspired by the successes of women scientists, mathematicians, and engineers.

DISCUSSION

In the knowledgeable society, an accessibility is required, not only to new technologies but also to education, entrepreneurship and employment opportunities as well as the ability to participate fully in knowledge based activities. The involvement and engagement of women in the information society on an equal footing with men would directly contribute to improving the livelihood of people, making it more sustainable and thereby promoting the social and economic advancement of societies.

Programmes should be strengthened , to bring about a greater involvement of women in science and technology. These should include measures to motivate girls to take up science and technology for higher education, and also ensure that development projects with scientific and technical inputs have a total involvement of women.6 Governments must design and implement national policies and programmes that promote science and technology education for women and girls and encourage women to enter into high value added ICT career.

Apart from the efforts of, multilateral bodies, organizations and civil society, the positive role of women also depends on the supportive attitudes of their local family unit, the local community in each village and town.[7]Programmes should be worked out to empower women through innovative scientific activities integrating action oriented literacy, sound micro-finance and micro-enterprise training as well as an understanding of fundamental rights. Efforts to develop a scientific temper and awareness need should be stepped up. Special measures should be adopted for their training in areas where they have special skills like communication and information technology. Efforts to develop appropriate technologies suited to women's needs and skill enhancement have to be given a special focus too.

INTERNATIONAL INITIATIVES PROMOTING WOMEN'S CAREERS IN SCIENCE &TECHNOLOGY:

Countries have been implementing various policies and programs to encourage and support women's participation in science and technology fields, especially in those which they have been historically underrepresented, such as engineering and physics. Following are some of these initiatives:

INCREASING THE PARTICIPATION AND ADVANCEMENT OF WOMEN IN ACADEMIC SCIENCE AND CAREERS -ADVANCE PROGRAM (USA)

The goal of the National Science Foundation's (NSF) ADVANCE program is to increase the representation and advancement of women in academic science and engineering careers, thereby contributing to the development of a more diverse science and engineering workforce. ADVANCE encourages institutions of higher education and the broader science, technology, engineering, and mathematics (STEM) community, including professional societies and other STEM-related not-for-profit organizations, to address various aspects of STEM academic culture and institutional structure that may differentially affect women faculty and academic administrators. This multi-component program provides three types of awards: institutional transformation, leadership, and fellows. In particular, the program aims at facilitating the transition of girls interested in STEM disciplines from secondary school to universities, through admittance campaigns focused on girls and scholarship programs.

THE EUROPEAN PLATFORM OF WOMEN SCIENTISTS (EPWS)

EPWS is an international non-profit organization, that represents the needs, concerns, interests, and aspirations of more than 12,000 women scientists in Europe and beyond. Since, its inception in 2005, more than 100 networks of women scientists and organizations promoting women in science from 40 countries have joined the Platform, working for the promotion of equal opportunity, in the research fields of all scientific disciplines and aiming to give women scientists a voice in European research policy.

NETHERLANDS ASPASIA PROGRAM

The Aspasia program was launched in 1999 by the Ministry of Education, Culture and Science, the Association of Universities in the Netherlands and the Netherlands Organization for Scientific Research (NWO) and has been designed to alleviate the under-representation of women in the upper echelons of academia. The aim of Aspasia is to encourage the promotion of female academics to senior lecturer (or professorial) level.

G&D-ROCKEFELLER FELLOWSHIP PROGRAM

The Rockefeller Foundation in 2005, joined by the Syngenta Foundation for Sustainable Agriculture in 2006, to design and implement a pilot fellowship program to enhance the careers of women crop scientists in East Africa. As a core concept, it organized formal mentoring by a senior scientist for each fellow throughout her fellowship as well as leadership and negotiations training and access to electronic networking with women scientists around the world.

BORLAUG FELLOWSHIP PROGRAM

The Norman E Borlaug International Agricultural Science and Technology Fellows' Program launched Women in Science (WIS) component in 2005. This program also was based on a form of mentorship, but its approach emphasized short-term scientific training and research collaboration. Young women scientists working in agriculture in West African institutions were supported to spend four to six weeks at highly regarded US universities to initiate collaborative research on a topic of mutual interest with successful senior scientists who served as their short-term mentors.

CONCLUSION

Women are a great human resource and the role of women in society is absolutely vital for its progress. Concentrated efforts should be made to ensure that benefits of training, extension and various programmes reach them in proportion to their numbers. Programmes should be strengthened to bring about a greater involvement of women in science and technology. It helps in building and strengthening networks where women come together from different nations and regions for common goal economic empowerment of women.

ACKNOWLEDGMENTS

I want to show my gratitude to all those great women who shows remarkable achievements in their respective field and becomes an inspirational source for society.

REFERENCES AND NOTES

1. Betty M. Vetter. Working Women Scientists and Engineers. Science. 1980, 207(4426):28-34.
2. Young K. (1993).Planning development with women: making a world of difference. CAB Direct, 187.
3. M Moitra, M Neogi. Evidence-based Physiotherapy-Self reported attitude and belief among physiotherapists: A cross-sectional study. Integrated Research Advances, 2016, 3 (2), 45-46.
4. http://www.esocialsciences.org. "Rural Women Empowerment and Entrepreneurship Development".
5. Maria Ong, Carol Wright, Lorelle Espinosa, and Gary Orfield. Inside the Double Bind: A Synthesis of Empirical Research on Undergraduate and Graduate Women of Color in Science, Technology, Engineering, and Mathematics. Harvard Educational Review, 2011, 81(2), 172-209.
6. Cronin, C. and Roger, A. Theorizing progress: Women in science, engineering, and technology in higher education. Journal of Research in Science Teaching. 1999, 36: 637-661.
7. Sandra Harding. Women, Science, and Society. Science. 1998, 281 (5383), 1599-1600.