

## BREAKING THE GLASS CEILING: INDIA'S EFFORTS TO PROMOTE WOMEN IN STEM



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### INTRODUCTION

Recently, we celebrated International Women's Day 2024. This year's theme was "Invest in Women: Accelerating Progress," which highlights the need to fund and support women's leadership development, health, education, and economic empowerment in STEM and other fields to achieve gender equality and sustainable development. Women have made significant contributions to science, technology, engineering, and mathematics (STEM) throughout history. However, they still face many barriers and challenges in pursuing and advancing their careers in STEM fields. Gender equality in STEM is important for human rights and social justice. It also drives innovation and sustainable development. The United Nations' Sustainable Development Goals (SDGs) see empowering women and girls in STEM as crucial. This helps achieve gender equality and tackle global challenges. These include poverty, health, climate change, and peace. However, both globally and in India, these fields are also characterized by gender disparities and inequalities. According to UNESCO, the global average of female researchers in STEM was 29.2% in 2021.



In India, 43% of STEM graduates were women in 2018. However, there are fewer women in STEM jobs and leadership roles. More women graduate in STEM in this country than in many developed countries. Yet, there are fewer women in STEM careers, especially at the leadership level. Women deal with challenges such as gender stereotypes and social and family pressures. They often lack mentors. They also face discrimination and harassment. Additionally, women have limited access to resources. These issues lower their motivation, confidence, and performance in STEM, causing many to leave the field. To help, the Indian government has started various programs and initiatives.

## SCHEMES AND INITIATIVES BY GOVERNMENT OF INDIA AND OTHERS

### A. Educational Initiatives

#### Vigyan Jyoti Scheme

The Vigyan Jyoti Scheme is run by the Department of Science and Technology (DST). It targets schools. The scheme organizes special lectures, classes, and science camps regularly. Its aim is to motivate female students to choose STEM education.

#### Pragati Scholarship

The Pragati Scholarship is offered by the All India Council for Technical Education (AICTE). It gives scholarships to deserving girl students. These students can use the scholarship to continue their higher education in technical fields.

#### L'Oréal India Science Scholarship

The L'Oréal India For Young Women in Science Scholarship offers financial help. It targets young women from poor backgrounds. They can use this support to study science at a higher level.

#### Indo-U.S. Fellowship

The Indo-U.S. Fellowship for Women in STEM is a program by the DST and the Indo-U.S. Science and Technology Forum (IUSSTF). It provides opportunities for Indian women scientists, engineers, and technologists. They can do collaborative research at top institutions in the U.S.A.



### B. Research Initiatives

#### KIRAN

The KIRAN scheme is run by the DST. It offers fellowships, travel grants, and awards. These are for women scientists and technologists.

#### WOS

The Women Scientist Scheme (WOS) is organized by the Department of Biotechnology (DBT). It supports women scientists. These women paused their careers for family or social reasons. The program allows them to return to biotechnology research.

#### SERB Women Excellence Award

The SERB Women Excellence Award is given by the Science and Engineering Research Board (SERB). It honors exceptional women scientists. These scientists are aged 27 to 45 years. They have achieved excellence in science and engineering.

#### SERB – POWER

The SERB offers the SERB – POWER Fellowship and Research Grant. It is for women researchers. It focuses on the science and engineering fields. The goal is to give these researchers more support.

#### SheRNI

The SheRNI initiative is made by the UGC for women scientists and faculty in India. It helps these women connect and supports them. The goal is equal representation and recognition for women in science and research. The initiative wants women to work together, mentor each other, and share knowledge. The SheRNI website has profiles for over 81,000 women. These profiles show their publications and patents. The aim is to boost gender equality and diversity in science and innovation.



## C. Entrepreneurial Initiatives

### TechSaksham

The TechSaksham Program (TSP) is created by the AICTE. It's a top-up program. It focuses on experiential learning. The aim is to develop employability skills. It targets underserved female students. These students are in higher education, specifically in STEM fields.

### Women Entrepreneurship and Empowerment

The Women Entrepreneurship and Empowerment (WEE) program is a joint effort by DST and IIT Delhi. It's the nation's first program of its kind. The goal is to better and reinforce support for women across the country.

### Women Technology Park

The Women Technology Park (WTP) is created by the DST. It connects women with technologies, institutions, and markets. The aim is to boost their social and economic empowerment. This is done through science and technology efforts.

### Women Bio-tech Incubator

The Women Bio-tech Incubator (WBI) is backed by the DBT. It assists female entrepreneurs in the biotech field. The incubator provides infrastructure, guidance, and opportunities to network.



## CONCLUSION

The plans and projects focus on making it easier for women in STEM. They aim to improve their skills and chances, and to recognize what they achieve and contribute. Supporting women in STEM lets India use all of its human talent. It also promotes a diverse and welcoming culture in science and technology. The article points out ways to improve STEM education and involvement for women and girls.

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