

## EXECUTIVE SUMMARY

India is making strides to empower women. Women are better integrated into the workforce now compared to 50 years ago. They are entering technical fields and contributing significantly to the overall well-being of the nation. There are several economic, social and cultural factors playing a key role in limiting the education – particularly engineering education. The number of women, on an average, working in organizations is less when compared to men in spite of reservation policies to women. Women graduates are satisfied with the campus placements and positions, as such they are losing interest in pursuing higher education. Hence, motivation on the importance of enhancing Higher Education should be stressed.

There would be random difference in the confidence levels of Men and Women graduates. The lower levels of self confidence of girls should be boosted up to improve their academic performance. Understanding Concepts is also a skill to be honed by girl students. Getting command over concepts help them to work on some research oriented projects. Girl students will have more stress when compared to boys during exams. Some sessions on stress management will help them to overcome stress. Because of the growing modernization there is a deterioration in values. Sessions on personality development, Values & Ethics is the need of the day for the overall development of girl students.

There is a biggest gap in the overall enrolment of women in undergraduate level in technical education (BE/B.Tech), where there are 26,736 females as compared to 96,724 males. Similarly at postgraduate level, the number of females is just 12,819 in a population of 50,201. The number of women enrolling in PhD programs over the years has been constantly lesser than men in Engineering stream. The enrolment of women in Ph.D in other streams like Medical, Nursing, Social Sciences and MBA has been increased when compared with men. Research

options in India are offered only after post graduation. Girl Students are stopped from pursuing higher education because of societal pressures and limitations due to family reasons. The problems faced by Engineering faculty from the study are gender diversity, work life balance, career plateau and delay in promotions.

### **Objectives of the Study:**

1. Quantify attrition levels as women move from bachelors to masters to doctoral degree programs in Telangana;
2. Identify and quantify key problems faced by women engineering students in different programs during their educational journey Bachelors/Masters/Doctoral degrees;
3. Quantify the number of women faculty in different types of institutions;
4. Identify opportunities available to women engineering faculty;
5. Identify and quantify key problems faced by women engineering faculty members at different levels of career path.

### **Methodology:**

This study mainly focuses on the analysis of career path of Women Engineers in Telangana state. A total of 31 districts were selected for the study particularly Engineering Colleges to examine their career path. Convenience sampling was employed for the study. Girl students were only selected for the study. Because the enrolment of women in engineering courses are less when compared to enrolment of women in other disciplines like medical sciences and social sciences.

A Questionnaire has been prepared to carry out the study. Primary data is collected from the girl students of Engineering colleges located in Telangana State and the secondary data has been taken from AICTE, UGC, HRD, TSCHE, AISHE, State

Government, Opinion of Alumni Students, News papers etc.

### **Results and Discussion:**

1. Attrition levels of women from bachelors to masters, masters to doctoral degrees has gradually declined in Engineering stream.
2. The following major problems identified when students move from bachelors to Masters and from Masters to Doctoral Program are:
  - Parents cannot afford for higher studies.
  - Universal marriage system.
  - Students would like to settle with the available jobs.
  - More number of children in the family.
  - Unclear goals for pursuing higher studies.
  - Lack of family support
3. There are many opportunities that are available to women faculty members like
  - Pursuing PhD program.
  - DST/UGC/SERB research projects.
  - Promotions.
4. Following are the key problems faced by women engineering faculty members at Different levels of their career path
  - Gender diversity
  - Work Life Balance

- Career Plateau
- Delay in Promotions etc.

## **Findings and Recommendations**

1. Both the enrolment rate and pass percentage of men seeking higher education is decreasing with each passing year. Whereas, the enrolment rate and pass percentage for women is increasing.
2. The enrolment rate of women in Engineering Studies is less when compared with the enrolment of women in Medical sciences and Social sciences.
3. There is a biggest gap in the overall enrolment of women in undergraduate level in technical education (BE/B.Tech), where there are 26,736 females as compared to 96,724 males. Similarly at postgraduate level, the number of females is just 12,819 in a population of 50,201.
4. The number of women enrolling in Ph.D. programs over the years has been constantly lesser than men in 2017-18 around 1 lakh men enrolled in Ph.D. as compared to only 65,000 women.
5. Research options in India are offered only after post graduation.
6. The most influential reasons from the study are Parents cannot afford for their higher studies, Not aware of Financial assistance schemes for higher education, Universal marriage System, students would like to settle with the available jobs, more number of children in the family, unclear goals for pursuing higher studies, lack of family support.
7. Girl Students are stopped from pursuing higher education because of societal pressures and limitations due to family reasons.

8. The problems faced by Engineering faculty from the study are gender diversity, work life balance, career plateau and delay in promotions.
9. 10% of women would like to do their higher education in other countries, not in India.

**Recommendations:**

1. Proper counselling need to be groomed to girl students about career path from schooling.
2. Awareness programmes should be given as there is no proper awareness about Government schemes for higher education specially for women.
3. Special campaigns should be arranged in the areas where the women education is very less.
4. Educating the parents about the importance of women education and self reliance.