

Women And STEM, why a match not made in heaven?

Reports show that babies tend to learn things at a faster rate than that of adults but, you will ask me how is that related to women and STEM. Well, we'll come to that later but coming back to the point, the above-mentioned reports reflect children tend to learn things faster at a young age which means, the younger you teach them good habits the more they retain them when growing up. Also, it will all make sense at the end of this article so stick around.

Talking in brief about STEM, it is an acronym for Science, Technology, Engineering, and Mathematics. If I ask you about imagining a mechanical engineering classroom, what's the first thing that comes to your mind? A room full of Boys probably not happy. Wait why not happy? Well, who doesn't like some opposite gender? But wait, why no girls in this engineering class? Surprised? What if I tell you the same situations exist in all other STEM branches?

Engineering, Mathematics, Sciences are hugely dominated by males and rightly so because they are gender-specific roles right? The answer is NO. The reasons are some problems, problems that lie deep within a person's mindset. Mahatma Gandhi rightly said, if you want to change the world, start from yourself.

HOW DO MEN & WOMEN COMPETE WHEN ITS ABOUT STEM?

1. Starting on a positive note, the gender gap as far as STEM branches are concerned is shrinking. Of course, it has a long way to go still, we will be looking at the rising sun.
2. If we compare the numbers from that of the year 2004 when the world was moving towards digitalization, globalization the situation of the STEM department with respect to women was far worse than that of now. If we compare, only 20% of total students were female in the computer sciences department whereas the number has grown to 30% over these years, says the [ABC AUSTRALIA REPORT](#).
3. However, females dominate some science fields such as Biological sciences with 60% of students being females, dentistry being 62 %, Veterinary Doctors being 70% and Nursing which is the most dominated field by females after Teaching being 90% females, says [BBC](#).
4. When a survey was carried out among small children where the children were asked to draw a picture of a Scientist, only 28 students out of 1600 drew female as a scientist which clearly show the stereotypical image which students had, whereas when this survey was recarried after years the number of students drawing a female as a scientist seems to be increased by a small amount at least shows the [research](#).

5. Changes can be seen as more and more students be male or female are getting access to technology, development programs, scholarships, less social pressure, freedom has resulted in more and more people getting access to education and therefore creating a huge difference to the numbers that were recorder earlier creating a good amount of shift in the ratio of MEN: WOMEN in STEM.

FEWER WOMEN IN STEM, WHY?

1. The first problem as mentioned earlier initiates with the rigid mindset of people. In many conservative countries, women in 2020 are still deprived of education. How bad is that? The sick mindset of “why spend on them, if they are eventually gonna get married and leave the house”. This right here has destroyed the futures of thousand and lacs of women just because they didn’t get the support they wanted or we should say, they deserved! Talking about INDIA in particular, poverty has been an issue that haunts the country 70+ years after its independence. Parents of a girl child born in a poor household tend to be considered as a burden and are forced to marry just to cut the expenses of the house. But this is just the tip of the iceberg.
2. Secondly, in Countries like India which are still developing and is an Agriculture driven country, Half of the population lives in remote places where access to school is not the smoothest. Conservative or “Protective” parents are “worried about the girl child” as they don’t allow girls to travel longer distances and therefore major native living women population in INDIA, unfortunately, is deprived of such education.
3. Stereotypes exist in each field and STEM is no exception. People have this stereotypical image set in their mind that a Scientist is most probably a male and generally a teacher is always female. What stereotypes does is, literally make a blockage in the path and therefore it acts as an obstacle for a person who even had a chance of sliding in but the gender stereotypes came in the way. We need to understand there is not fix schema for a particular role. Some argue about how women are biologically made for jobs that require verbal and thoughtful domination and how males are inclined towards STEM due to biological reasons. Well, survey results describe things in a completely opposite tone where girls are as inclined towards STEM as boys, so where is the problem? and why aren’t we able to see them?
4. The most bizarre thing is, the most gender-equal countries like Norway and Finland have the lowest % of women STEM graduates, and the countries with a low rate of gender equality have higher women in STEM. Researchers say countries like NORWAY and FINLAND where the life expectancy rate is higher and the happiness index is more people tend to think they can do whatever they want and not what the economy wants.

5. One more big problem that exists is, when a student is in mid-school, the awareness about the contribution of women is way more than a student when he is in high school. When in high school students especially female students are hit with a stereotype where they are mentally manipulated where they start to think they don't belong to STEM and it's not what they want to do.
6. [Studies](#) show that 65 % of total undergraduates that get a degree in STEM are women. Surprised? Well, the bad thing is only 23% of these women actually work in a STEM environment and actually make a use of their degree and make the time spend in the college worth by getting a job in the field they study in. Studies also show that remaining women either end up in completely different fields of work where they are either forcefully fitted in or end up paid less than what they have got by working in a STEM field.
7. There are a lot of cases where women that are working in a STEM environment quit after a certain amount of time because of various issues like the black sheep effect and the queen bee effect where the group leader only upgrades the members who are like him or have behavior that suits him and therefore many women leave behind as they are not able to cope up. Also, women in power do not want other women to succeed and therefore tend to keep the career of other women stagnant which eventually results in the individuals getting demotivated and leaving the job in the middle of nowhere.

HOW TO INCREASE WOMEN IN STEM - THE SOLUTION.

Each problem has a solution and if it doesn't have a solution, it is not a problem in the first place. The number of female participation can be very easily increased if some major but important measures are taken at a global stage eventually will create a positive image of the right kind of feminism as well as equality as each of us deserve equal when we are born on this planet earth.

Some measure that can be taken are :

1. **Emphasis on GENDER EQUALITY** - As I said at the very beginning, the child learns what it has been taught. They should be taught about gender equality and respect for various genders which will shape their mind for the future and will make them a better human being and eventually make the world a better place to live.
2. **Enhancing the women's work culture** - In major countries, a woman is considered to be a homemaker and is not the most favorite choice in the STEM department which basically is what we need to change. A woman's stereotypical image should be changed

and they should be given equal opportunities and should be welcomed to the organizations.

3. **Marriages** - Marriage should happen when the girl wants. This is quite a self-explanatory thing, to be honest. Forced marriages often end up being a mess and also destroy their careers.
4. **Breaking the Stereotypes** - What will happen if someone constantly tells you, that you can't do something or this is not where you belong. You'll definitely feel lost ain't it? Well, the same happens with women when they are told "technology is not for you", "how can a woman be a scientist?" It takes a toll on the mind and often ends up being a demotivating factor for an individual.
5. **Gender Pay Gap** - Imagine if your colleague is doing the same work as you and you are being paid less because your height is less. Sounds illogical right? Well, the same is pay discrimination due to gender. The pay to an employee should be decided according to their role, skills, and not their gender. This creates a rift among the minds of people which ends up being a regular thing.
6. **Finishing the Queen-bee and black sheep effect** - This kind of issue creates an irrational environment in the organization and affects the long-term growth of the field. This can be explained in a short example. Imagine a lady who is a team member in the engineering field lets say Computer science and she has been affected by the queen bee effect where her team leader has been very disrespectful and harsh towards her will eventually make the mindset of member lady in oppose of STEM and she will not let her child be a STEM enthusiast. This is an infinite cycle.

"SHE" MADE "He"STORY(History) - "Ayyalasomayajula Lalitha".

Ms. Lalitha is known as the first women engineer of INDIA. How cool is that? Well, the path was full of thorns and definitely not the easiest. Her father was an electrical engineer and a teacher himself but had to fight a lot socially to let her daughter study which she did. And today we know her as the first woman in INDIA to get an engineering degree. She studied at an all-male college at Guindy which shows how one of kind moments it was and the rest is, as they say, is history.

“WOMAN THAT IS MADE TODAY” - RUCHI SANGHVI

Ruchi was the first women engineer ever to be hired by Facebook and today Facebook has thousands of women in their workforce. She paved the way for others and became an example for other women.

- **Hardik Yewale.**