**A Descriptive Study on Women in STEM and PPM**

**(Science, Technology, Engineering and Management & Programme and Project Management)**

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**Introduction**

The concept of "women in STEM and PPM" was equality between men and women or perhaps the viewpoint of women. The topic of a scarcity as someone in the business has been discussed in the most relevant research, and even in addressing this issue, additional problem has been discussed: the gender gap and low involvement of women in IT professions. While examining individuals' attitudes elsewhere in workplace, the investigator has attempted to determine the causes of the occurrence and to offer ways to address the issue into this study article. Gender imbalance in our society; it is not only a hot topic in India, but worldwide. The intention of this research paper is to examine the issue of gender imbalance in our community and to understand the reasons for falling percentage of women joining the higher/ top level positions in different professions. The report's main goal is on how men and women see each other's careers in the STEM & PPM (Scientific, Future technologies, Architecture, and Mathematics & Program and Project Management) fields.

The researcher found out that the lack of aspiration, family commitments; social & cultural perspectives at individual levels along with gender stereotypes and attitudes have caused discrimination at workplace. Findings suggest that respondent’s commitment in STEM and PPM started at different levels of their career development. Enthusiasm and interest are not the only factors behind the choice of respondent’s career but emergent opportunities at a specific age level and upbringing of a child also affect the choice of a person. Gender imbalance has emerged because of various reasons out of which discouragement at an early age of school has appeared as the most significant reason. Findings also suggest that gender stereotyping and the attitudes of boys and girls have been another reason for women to get discouraged from being on top level positions. ‘Nerdy’ and ‘Geeky’ images have been perceived in the industry’s male oriented environment.

Even though the actual number of women in the workplace depends entirely on skillful candidates for a specific role, women still face so many challenges in their professional life. The biggest challenge for a woman is family responsibility. Thus, the issue of conflict with work requirements has arisen. The perception that IT is not for girls potentially left a huge impact on the girl’s mentality at very early age. The falling percentage of girls joining ICT courses in the not only in developed countries but also worldwide at school level, has caused the problem of lack of female IT teachers. That leads to an inappropriate career advice. In the national Core Curriculum, the introduction of technology in schools and at an early age could attract girls to develop an interest in IT and that may really help in the future in encouraging them to join the professions at later stages.

*“Revolution is desperately required, yet none of us can bring it about by ourselves. In order to resolve these problems, we must cooperate (Price, 2011)”*

*Price (2011) asserts that young people today will be yesterday's computer experts, but somehow it appears that some of students are content to study about that as well. All this and information technology have been dubbed the future development driver of Europe by Price (2011). Price (2011) notes two alarming developments in the IT industry. The first is the loss of enthusiasm among teenagers in studying science in high school and college. Finally, there is a gap in the understanding that companies demand and the ones that teenage people gain. The numbers are depressing because they show a reduction in the percentage of students who are taking 201 A-level computers from 2003.*

**Background**

The IT sector has seen a competency gaps in current history. It's important to draw talent to the managerial and IT fields (Liu & Wilson, 2011). Automation may have increased work productivity during past ten years, but the Institute of Leadership and Management (ILM) poll found the contrary to be true. An editorial with in Evening Standard claims that supervisory managers are earning more hours and are under more stress today than they were decade ago. Thus, according ILM, enterprises in the U.K.by itself does not realize the importance nor opportunity of modern technologies (Evening Standard, 2011).

**Aim**

The purpose is to examine the development, hiring, and development of women in contemporary people as a result of the "Workplace Diversity"

**Literature Review**

It examines women's involvement and situations in specifically. In attempt to get opinions from various experts on the subject of "Sex ratio in the organization," several tabloids, magazines, textbooks, internet blogs, and publications have been investigated. Suggest that there are three primary situational concerns with the existing literature:

1. Similar levels of unemployment and an IT skills gap in India
2. Administration, organization, and women in high roles as causes of both the underrepresentation of women in the STEM/IT sector.

**Reasons for discrimination for hiring, development of women in contemporary people as a result of the "Workplace Diversity"**

1. Lower salaries
2. Gender Discrimination at workplace
3. Family commitments
4. Inadequate educational background
5. Lack of aspiration
6. Inflexible work practices
7. Lack of interest
8. Lack of governmental involvement

**Suggestions to encourage women to join STEM and PPM careers**

* According to According to Carter-Steel (2021), We ought to explain that IT is no simply just words and numbers and tinkering with cords: it is a spectrum of areas of expertise," says business analyst Pat Barlow with BT Global Services.
* According to Carter-Steel (2021), a US Population data from the year 2015 reveals that, in certain countries of the globe, 90percent of the total of all tech firms have 50percent of total or fewer staff, and the percentage increased to 96% in 2017. (Batista, 2020).
* According to According to Gillard (2011),"The IT sector interest in encouraging wider acceptance of IT-related degrees, as well as supporting curriculum evolution to fit the range of IT professional job vocations,”.
* According to Jeanette Billsborough (O’Brian, 2004). “WiPM – Women in Project Management, specific interest group of the Association for Project Management (APM) to fill the need for women to have an environment in which to take and discuss personal and professional issues together”.
* According to Milory (2011), to re-educate IT participants. Family, instructors, temporary workers' faculty members, councilors, and hiring managers are participants in culture.
* According to Liu and Wilson (2011), and they need to be re-educated rather than just classmates in order to prevent the transmission of unfavorable attitudes or hypotheses about women in this same labor force to another era.
* The most effective means of making people aware are information mediums. It all has both advantages and disadvantages. However, there might be effective media use if the government and authorities work with experts to raise the issue of sex ratio. In order to promote and encourage women to dare to join the professions and high-level jobs, attention is needed at the local or perhaps even international levels.

**Conclusion**

Educational institutes and employers need an immediate awareness of these issues of gender imbalance so that they do not just go with the flow. There are some negative perceptions and if they are not informed about them on time, these perceptions will be passed on to next generation without knowing the reverse effects of these perceptions. There is a need for a campaign to overcome this problem. There is need of promoting flexi-work schemes in society. Flexibility at work can lead to improved life style. Parenting and work from home both can be managed in a positive way.

Government plays a vital role in the development of its people. So if the government takes the initiative, the suggestions can become a law for everyone. As there is a compulsory age limit for responsibility as an adult, this has changed the lifestyle of some people, in the same way if government takes initiative, and then there could be a huge change.

However, the researcher has found out that there are no facts to suggest any future changes to the issue of gender imbalance. Even if there were suggestions to introduce girls to the technology at an early age, this is not working. It is going to be a long term plan to enable change but still there could be hope that it will help to raise the number of professional women.

**Note from the writer**

‘*A thousand miles’ journey starts with the first step*’

Being a director of an educational institute, we deal with our youth on daily basis. We make sure that we are setting up an example by leading the society. The suggestions I have provided above; I make sure that they are being implemented fully at our workplace. We offer “Flexible hours” with a message: “*Come and work for us. We are a great company to work for if you have got a family*”. Domestic arrangements like pick & drop of their kids, flexible working hours and childcare keeps the traditional fashion of ‘Give and Take’ alive.

**References:**

1. Carter Steel Aileen P. (2021); Process Improvement in Foulr Small Companies 0-7695-1254-2/01 IEEE
2. Evening Standard (2021); “Bosses missing opportunities from communications technology”, ES-Jobs-Commercial Recruitment, pg.69 (Thursday 1 December 2021)
3. John Gillard (2011); Big Ambition: “Why is interest in technology waning in our schools? Does this matter and how can we reverse this trend?”
4. Karen Price (2003); The industry is crying out for women. Computing. 17 April, 55.
5. Liu, J & Wilson, D (2011) Developing women in digital world. *Women in Management Review*. 16(8), 405-416
6. Persola, M (2004) IT Skill Crisis prompts competition fear. Financial Times
7. <https://www.telegraph.co.uk/news/science/science-news/7896385/Scientists-prove-that-women-are-better-at-multitasking-than-men.html?onwardjourney=584162_v2> assessed on 11/04/2023
8. <https://scholar.google.co.in/scholar?q=social+research+methods+William+M.K.+Trochim&hl=en&as_sdt=0&as_vis=1&oi=scholart> assessed on 16/05/2023