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Rewriting Gender Paradigms in Tech

Women in DATA CONFERENCE 2024



March 5, 2024



REWRITING GENDER PARADIGMS IN DATA AND TECH

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Improving Lives, Expanding Opportunities



Data for
Development
in Nepal



INTERVENTIONS FOR GENDER EQUALITY IN TECH IN NEPAL

Women in STEM



Only 17 women have won a Nobel Prize in physics, chemistry, or medicine since Marie Curie in 1903, compared to 572 men.

Only 28% of the world's researchers are women.

Women in Tech



Only 30% of technology workers worldwide are women. Only 17% of technology workers in the EU are women. (World Bank)

Women make up between 28% and 42% of the GAFAM (Google, Apple, Facebook, Amazon, and Microsoft) workforce, with an average of 31%.

Loss of Female Talent in Tech

School level
STEM
Education

Tech related
Higher
Education

Women entering
Tech workforce

Women in
Senior levels

Executive
C-Suites



'The Leaky Pipeline'

Lesser number of girls and women, as the studies and career progresses.

“The Leaky Pipeline”



Girls in STEM (PWC Survey)

64% in early school days

30% by higher education level

3% considered tech career as their first choice

14% female leaders in tech companies worldwide, 2022

“The Leaky Pipeline”



56% of women leave the tech industry 10-20 years into their careers, which is double the rate of men.

Why they leave?

Why women leave?



Unconscious bias and sexism

Company culture

Imposter syndrome

Lack of employee benefits

Lack of career progression opportunities

Lack of female role models or mentors

Balancing family demands and career

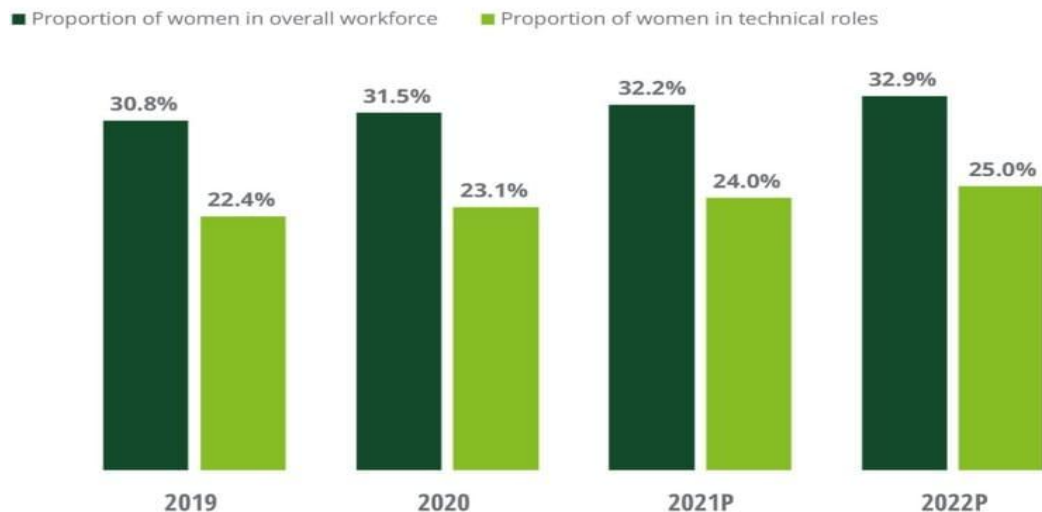
On the Positive Note



FIGURE 1

Large technology companies are making slow but steady progress in increasing female workforce representation

Female workforce representation in large technology companies



Source: Analysis and 2021 and 2022 predictions based on published diversity reports from 20 large technology companies (with an average workforce of more than 100,000 employees).

Female representation in tech organizations worldwide is on an upward trajectory, although minimal (about 1% increase per year).

Women in Nepal in wider lens



Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)

Guarantee women's equality in the sphere of education.

“Equal opportunities to girls; the conditions should be same for career and vocational guidance in educational establishments of all categories in rural as well as urban areas.”

Women in Tech in Nepal



Education for Girls

Women in Economy and Workforce

ICT access and knowledge development

National Planning Commission's SDG Roadmap 2016-2030



Target 4.3:

‘Equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university’

Enrollment of girls in vocational and technical education and Scholarship coverage of 42% of total students.

National Information and Communication Technology policy, 2015



Under the policy heading ‘ICTs for Youth, women and Girls’

Creativity and innovation around ICTs among youths and women will be encouraged through the introduction of specific programs leading to entrepreneurship development;

Measures will be taken to enable full and equal participation of women and youths in creating the Information society

National Information and Communication Technology policy, 2015



Strategies:

Developing women as human resource where ICT awareness programmes will be developed among all citizens and ICT as an alternative career path will be promoted for women.

Launching of innovative and startup project for women as ICT entrepreneurs

Women in Tech in Nepal



Education for Girls

Women in Economy and Workforce

ICT access and knowledge development

Education



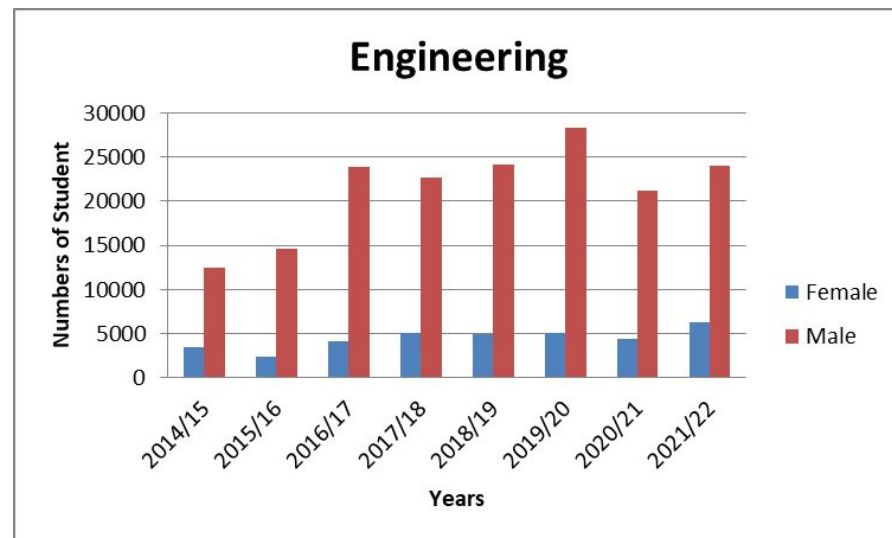
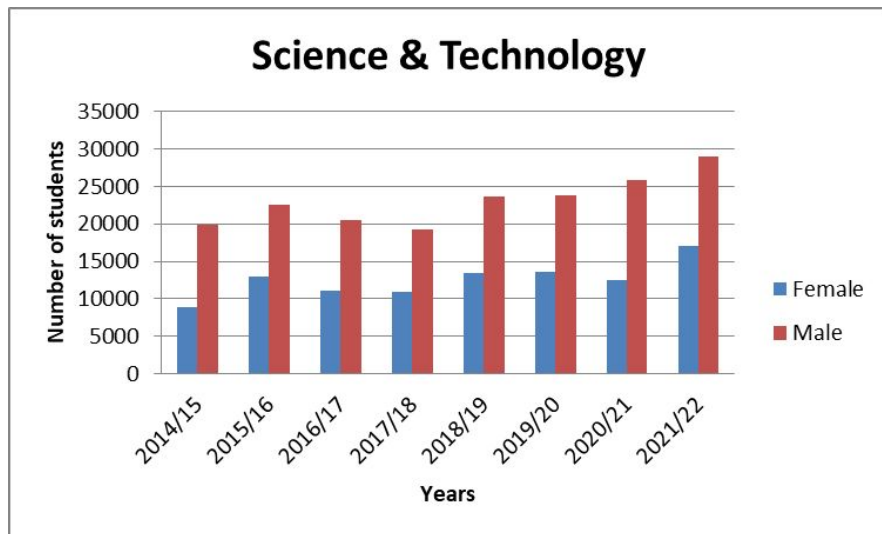
In 2018/19,

Girls' participation in higher education - 52%

Girls' participation in technical higher education - 38%

Engineering 2.1% respectively.

Women in Tech in universities

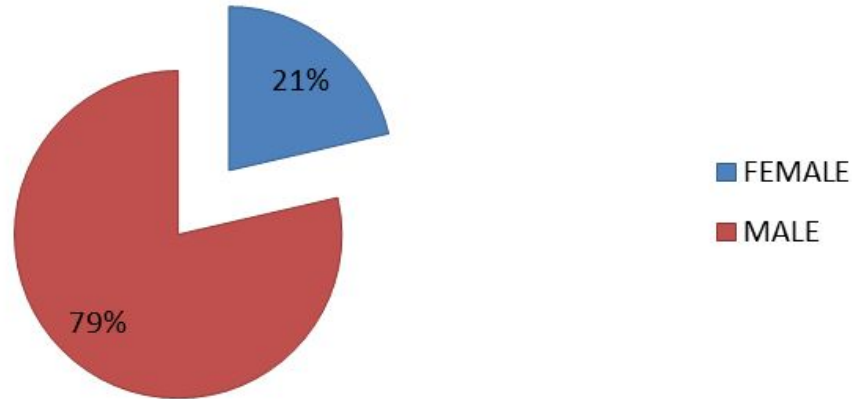


Female students in Computer programs



Women in Data

**Students enrolled in computer programs
in 2021–2022**



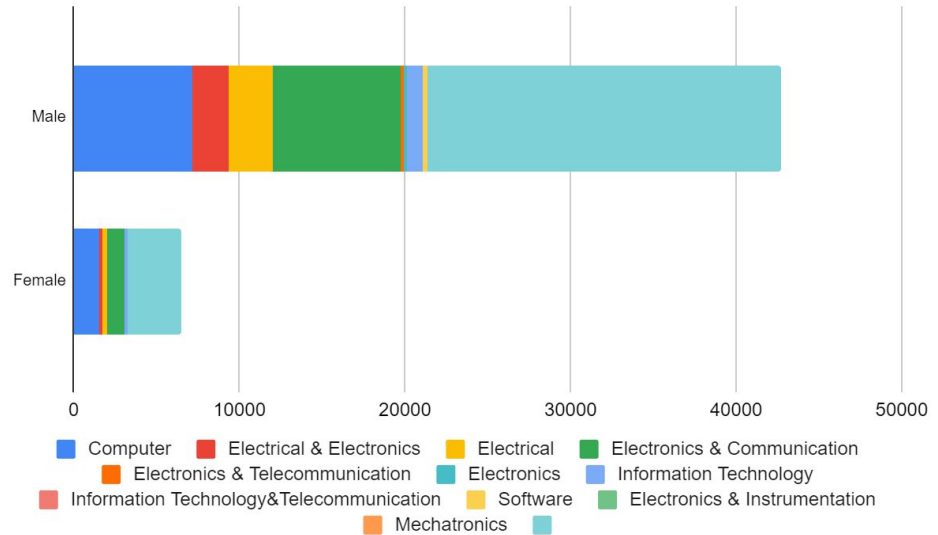
There were 19305 students enrolled in computer programs overall in the 2021–2022 academic year, of which 15175 were male and 4130 were female.

Women Engineers



Total (24610) engineers registered in NEC by 2021.

13.28% (3268) are female engineers in technology related degrees.



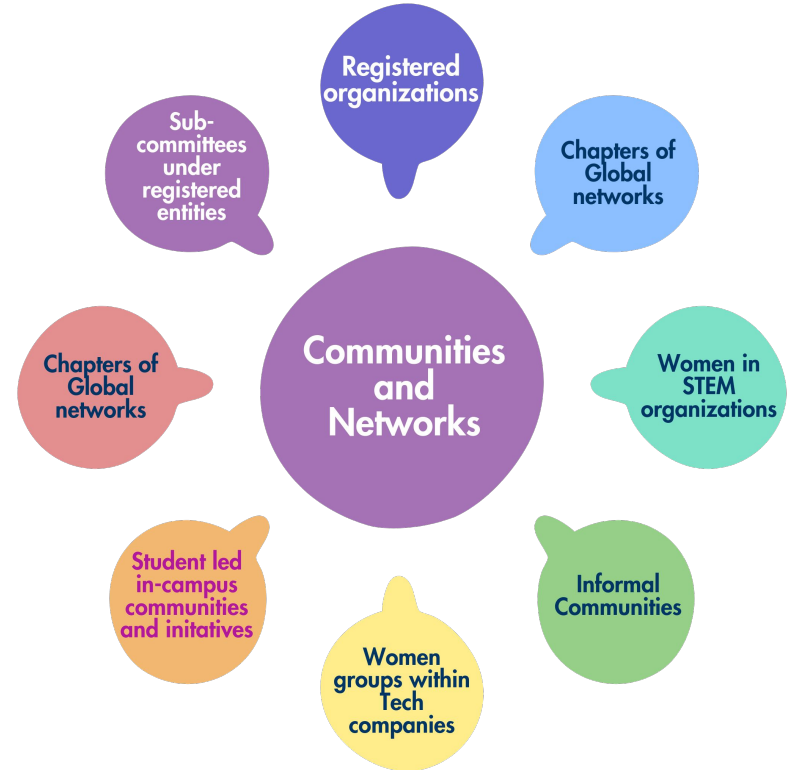
Community and Networks



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Communities with Women in Tech or STEM as the main mission

- Registered organization
- Sub-committees of registered entities
- Chapters of Global networks
- Informal Communities



Community and Networks



Trend of interventions were somewhat equal blend of tech skills and non-tech skills

- **STEM Education led by or focused towards girls**
- **Capacity building for students**
- **Job readiness and entering into industry**
- **Professional skills building**
- **Mentorship**
- **Events for networking or seminars or conferences**
- **Hackathons**

Community and Networks



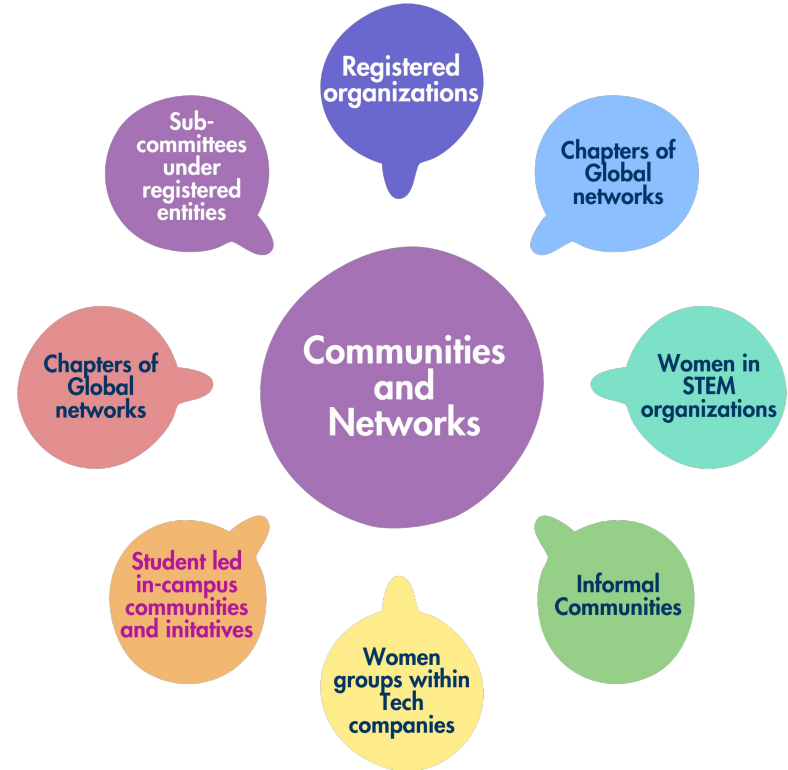
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Student led in-campus women in tech communities and Initiatives

College faculty involved in some level

Interventions seem to be

- More focused on technical skills development
- Programs within the college
- Senior-to-junior or peer-learning
-



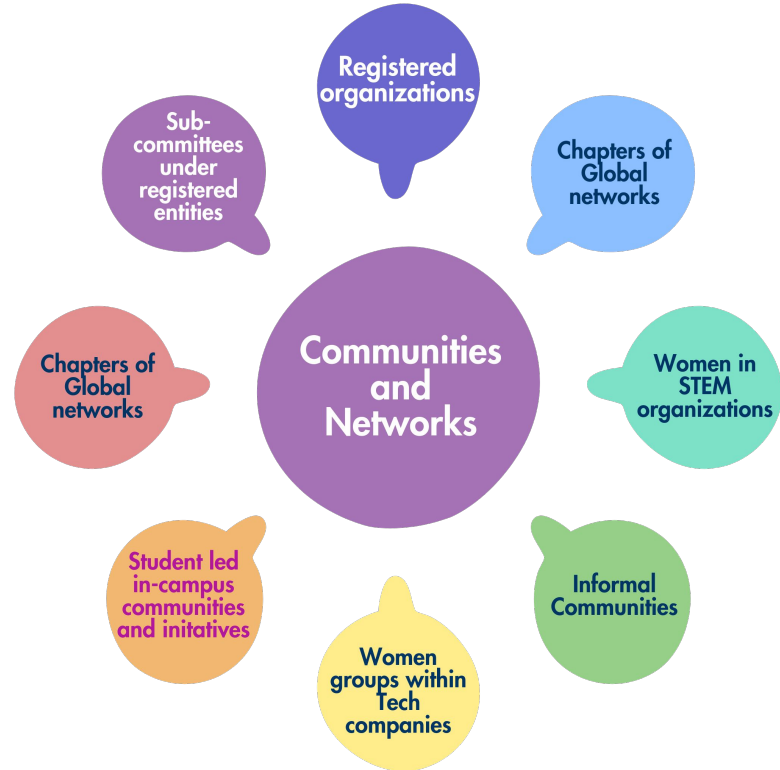
Community and Networks



Tech Organizations with occasional Gender focused programs

Tech companies with internal women groups

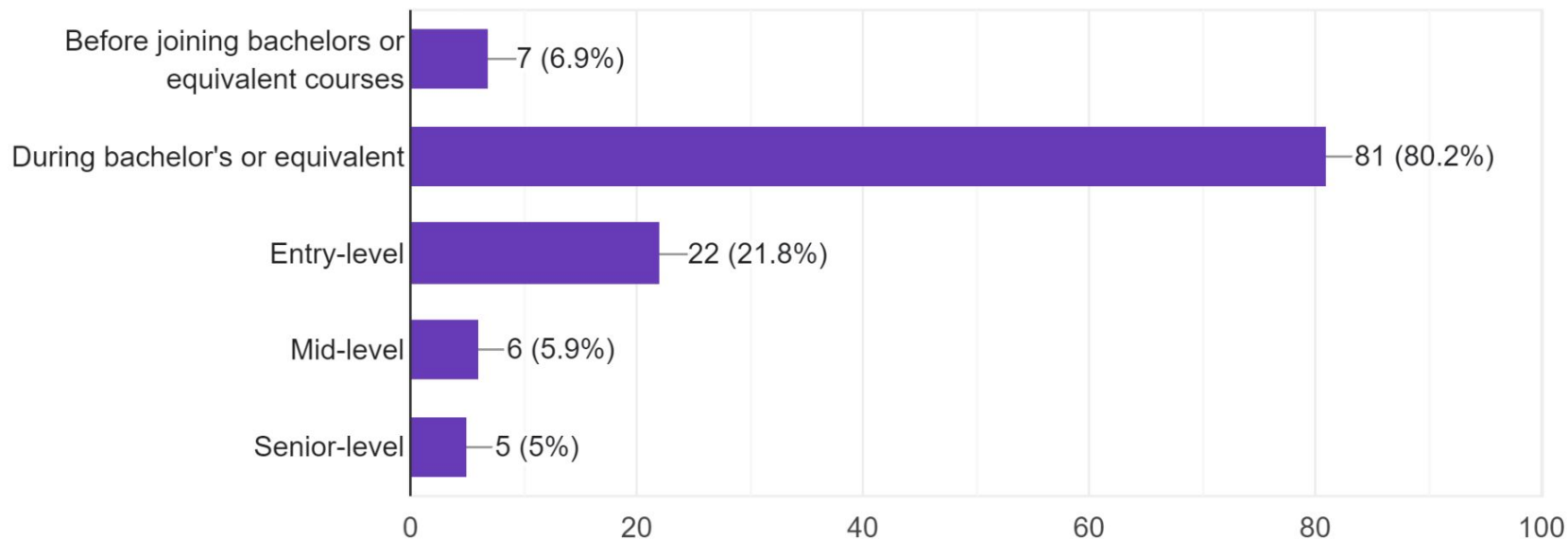
Informal networks and groups



Community and Networks



When do they join?



Community and Networks



What they expect?

Top 5

- 1. Mentorship/Coach/Guidance**
- 2. Soft-skills or professional development workshops**
- 3. Technical Courses/workshops**
- 4. Work or Job opportunities**
- 5. Attend programs/seminars/conferences**

Community and Networks

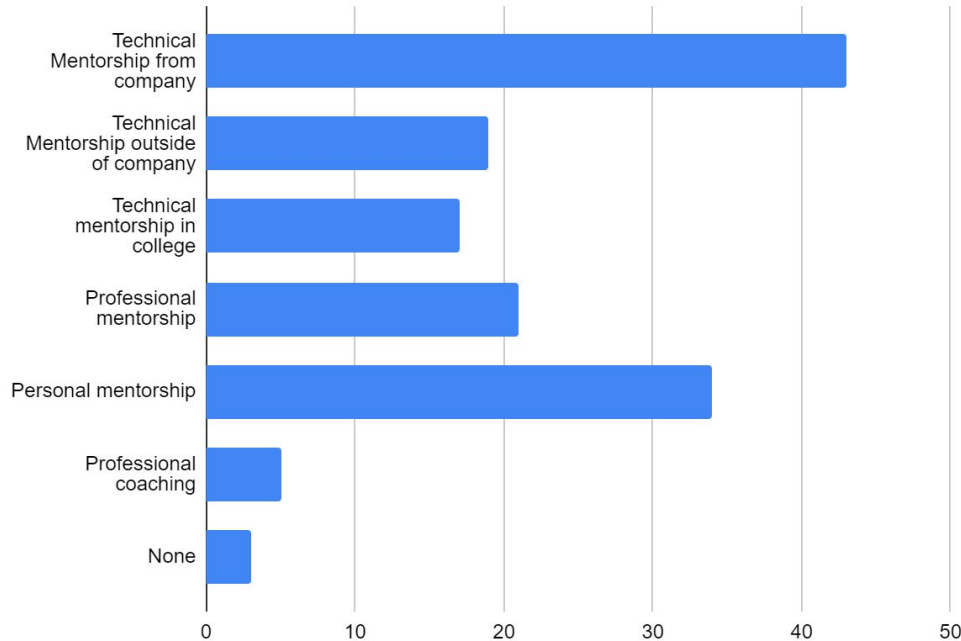


What they received?

Top 5

- 1. Getting new skills**
- 2. Being inspired by other community members or role models**
- 3. Building soft-skills**
- 4. Finding a mentor**
- 5. Finding friends, work partners, employers**

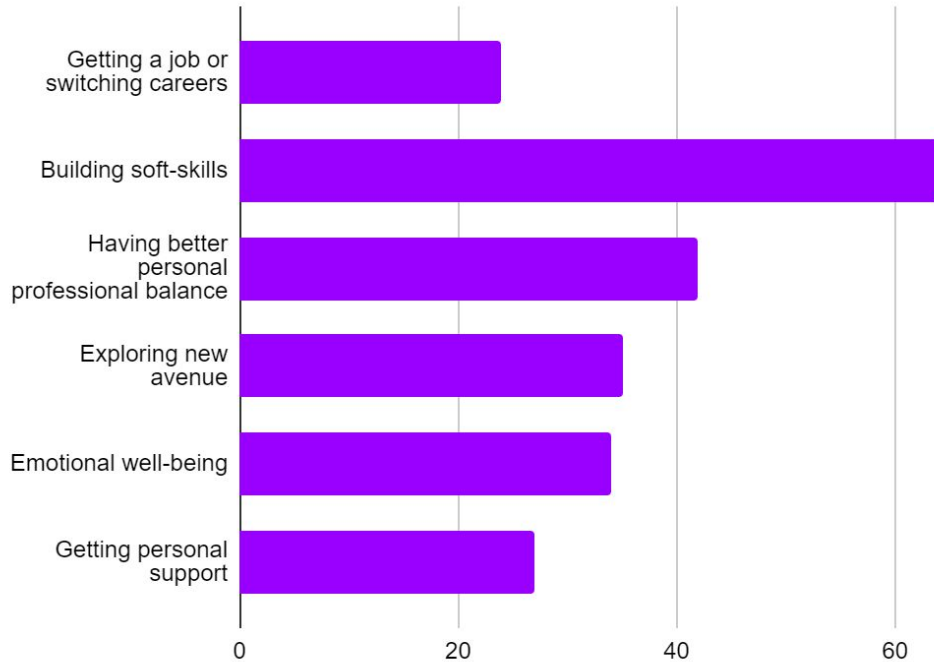
Mentorship



Most responses mentioned they received Technical mentorship through their workplace.

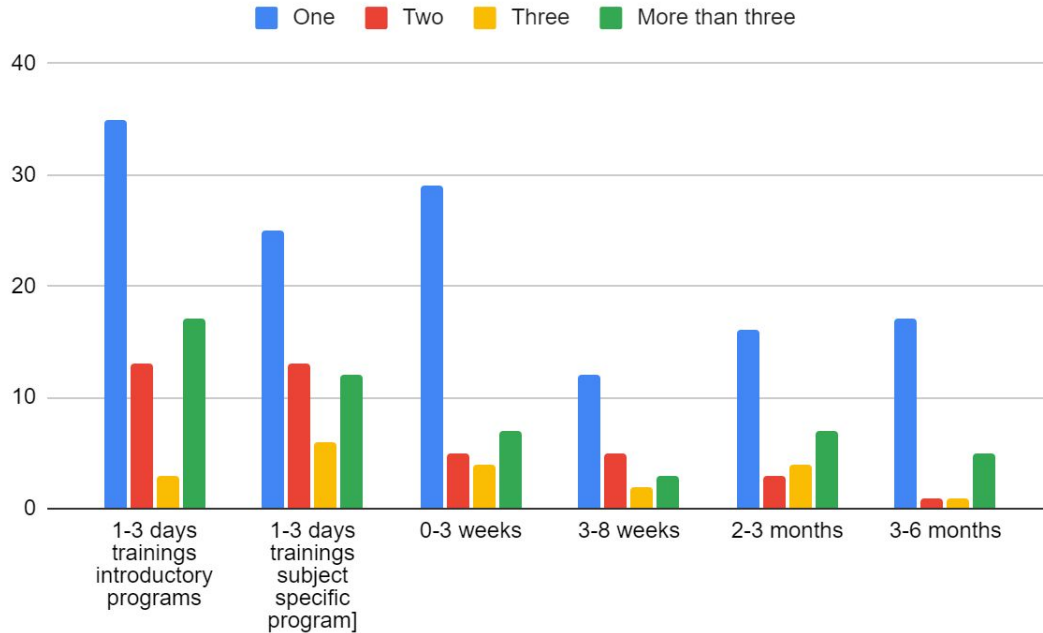
Company play a large part on tech skills advancement for women.

Mentorship



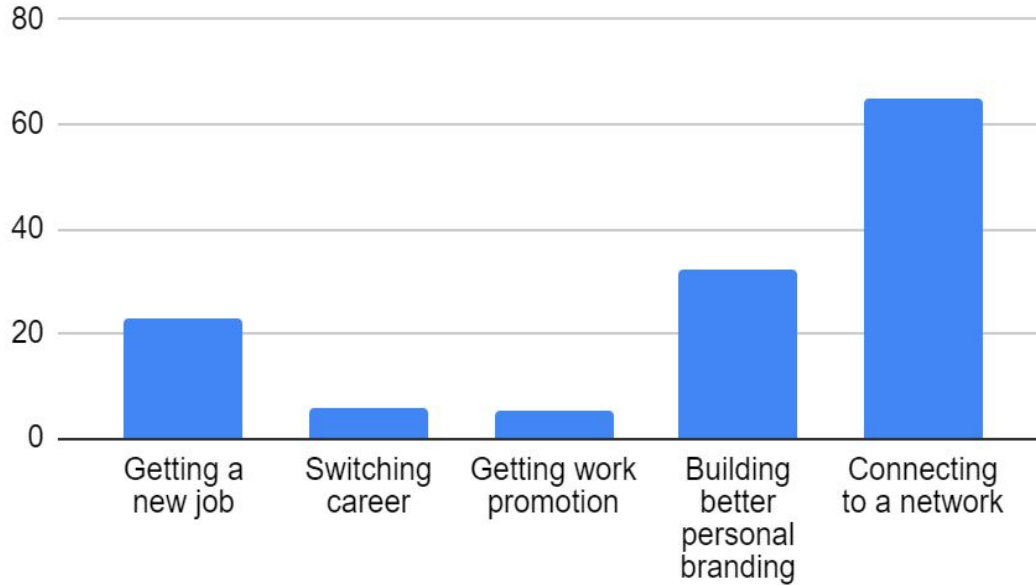
Most responses mentioned mentorship helped them in professional growth, more so by building soft-skills.

Capacity Building



Most technical capacity building trainings are 1-3 days long introductory sessions.

Capacity Building



Most responses found non-technical trainings help them build networks.

Call for Action



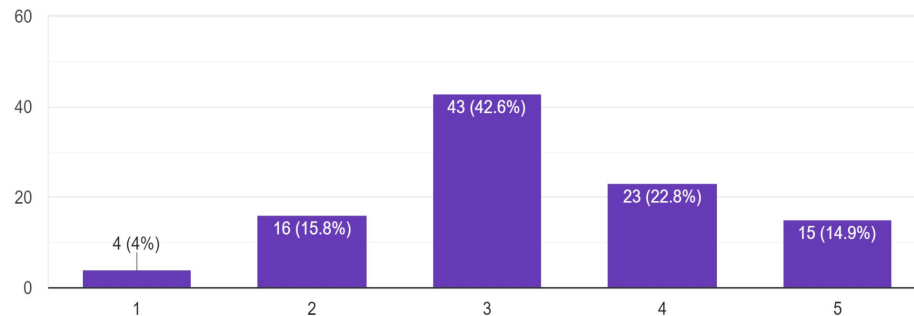
Rewriting the Gender Paradigms

Needs we see: Communities/Networks



Common Themes:
Data/ML/AI specific
Professional Skills
Job and opportunities
Global connections
Leadership

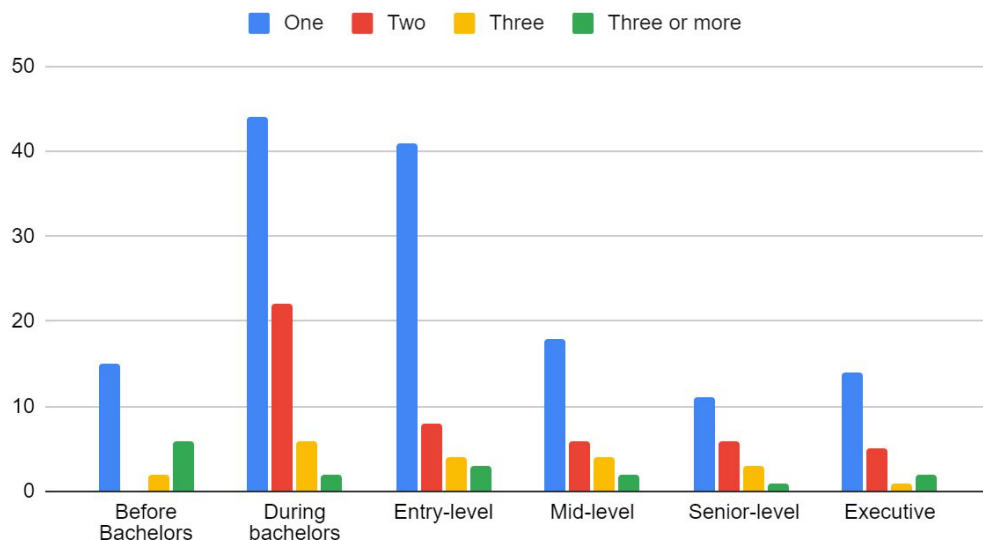
How easy is to find relevant community?



Needs we see: Mentorship across all stages in career



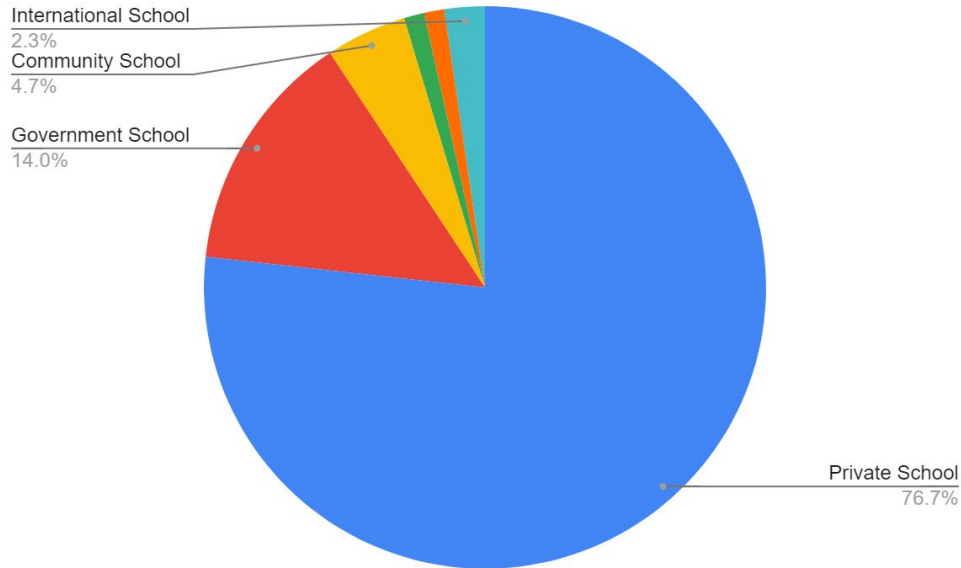
Mentorship in different stages for women in tech



Most women receive mentorship during college or entry-level in career

Fewer mentorship opportunities as they step into higher positions

Needs we see: Making STEM learning inclusive



Evidence suggests that English is the primary language used in the tech sector.

It poses a significant obstacle students to understand the concepts of computer science studies.

Needs we see: **Capacitating the teacher**



Stakeholders observe the teachers are not in capacity to deliver the new STEAM education curriculum and utilize the Smart labs.

Needs we see: **Diverse Faculty**



Students mention lack of female faculty as one of reasons of low engagement among female students in communities, project activities.

Find lack of female mentorship and role models discouraging

Needs we see:

Data for program planning



Stakeholders do not find necessary data to plan their intervention programs

Stakeholder do not use available secondary data

- **Rely on members' experiences and opinions**
- **Conduct need assessment surveys or polls**

Needs we see: **Investment in Women**



Organizations/communities conducting programs for women in tech mention lack of funding to try different strategies and to scale up the programs.

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