

## Feminist Approach to Technology – A concept note

Feminist Approach to Technology (FAT) is a pioneering organization committed towards empowering women through technology. It is a not-for-profit body, registered under the Societies Registration Act, 1860.

### **MISSION**

The mission of this organization is to enhance women's awareness, interest and participation in technology in order to decrease the gender divide in this field and strengthen the involvement of women in the technical workforce and in policy making.

FAT acts as a catalyst in steering forward feminist movements in India towards a new technological era by extending technical support and education to Women's Rights Organizations and other organizations led by women.

### **VISION**

FAT's vision is an environment where all women have equal opportunities to learn, use and create technology, irrespective of their academic background or economic status; an environment where women are not intimidated by new technologies but rather have an open mind to experiment with and benefit from them. FAT envisions spaces, both physical and digital; to be as friendly for women as it is for men.

### **SOME FIGURES**

- Population of India: 1,129 million  
Population of Women: 48%, i.e., 564 million  
Total Internet Users: about 40 million  
Women Internet Users: 0.85 million (ratio 77:23)
- 85% of internet users in India are male which not a very good sign is. Among working women, only 11% use internet. The ratio is almost half (6%) in case of non-working women and even worst in case of house-wives (2%). (<http://www.sybrant.com/blog/?tag=internet-users-in-india>)
- Rural Population: 72%
- In 1970-71, only 1% of the total engineers and technicians were women and only 0.7% of total people working in the field of science were women  
22% of students enrolled in science (graduation) were women.
- In 2001, 21.8% of engineering/technology students enrolled were women, and 39% of science students were women. But only 15% when it comes to

practicing. No clear data on how many teaching without any research opportunities. Attrition rate is very high.

- Total IT workers in India: 1.28 million  
24% of the total IT workforce of India is women: 0.3 million  
21% of the total technical workforce (including all engineering streams, IT) is women  
Women constitute 21% of the total IT workforce in India and if we consider ICT, the percentage is 24%. But what is IT or ICT?
- No data on how women who have not studied science or technology are using technology or practicing science
- Major economic activity for women is in agriculture, then in various industries, trades and finally in services which are increasingly becoming more and more complicated technology wise
- Most working women are clustered in unskilled low paying jobs (even those who have studied science and technology)
- Those who study science often end up or choose less challenging jobs

## **WHERE WE COME FROM**

FAT works on the belief that there is a need for every woman to be aware of technical developments around her and also of its impact on her and/or on the community around her. It is irrelevant if she chooses technology as an academic pursuit or as a career or even as a field of specialization. Being aware of the technological advancements and developments is as much a necessity to her as knowing her rights and privileges. Through technology, women can achieve emancipation and the true essence of empowerment.

Electronic gadgets have become an integral part of an individual's personal as well as work life. Technology largely dominates the communication media and as an extension a large part of the Business realm. Technology is now reaching out even to the grass root levels leaving no stone unturned at transforming old practices into optimized alternatives. Despite the overwhelming presence of technology in every aspect of life, women are sadly lacking the inclination to know more and comprehend even the simple aspects of this science.

Women tend to disregard technology, often attributing phrases like "it's too complicated" or "it's a man's domain" or "I am not equipped to understand it" or even "I have nothing to lose by not understanding technology. So why bother?" to the field. Along these lines they fail to perceive that they are losing out on opportunities which would not only help them in evolving personally, but also help them stand up to their rights better. Male dominated capitalism in family setups, work and other areas can be broken only when women participate in technology at an equal footing.

Paradoxically, women who aspire to learn and work on technology are faced with a large number of hurdles at every step. They aren't provided enough sources to learn and develop their spirit of technological enquiry; look at technology as an academic pursuit. They seem to fight a constant battle in workspaces in terms of remuneration, avenues to move up and even be acknowledged for their efforts in the technological domain.

Perhaps this explains the low representation of women in technical workforce. In India, it stands at 21%; with the representation in IT sector standing slightly higher at 24%. (SOURCE: NASSCOM) The reasons in specific can be narrowed down to:

- a) Most girls are not encouraged to choose technology as their field of study.
- b) Among those who do study technology, it is difficult to seek employment in the technical domain.
- c) Those who may initially chose a technical job most either shift to a non-technical domain or stop working altogether.

To counter these issues FAT feels that women have to be encouraged and supported to participate in technology as much as men do, if not more. The participation will come about only when women's interest in technology is increased; or rather, when technology is shown to be interesting to women. Making women aware of technology and its advantages will be the only way to enable them to make conscious choices in their lives. FAT aims to touch every woman's life with technology and help her improve her standard of life. Technology helps in moving a couple of notches even in the day-to-day life.

Even though it is quite evident that women are not involved in using or learning to making technology as much as they should be, largely in India, there seems to be a complete absence of any dialogue around it, except for a few superficial mentions. Many developed countries seem to witness various efforts at encouraging women entering the technical field; countries like India are yet to address the growing need for it.

**FAT envisages starting the dialogue on the issue of women and technology in India and also taking it forward by providing relevant forums to discuss the issue and spreading general awareness around the same.**

### **WHAT INSPIRES FEMINIST APPROACH TO TECHNOLOGY?**

1. It is a fact that women's participation in using and making technology is far behind men's all over the world. In India the difference is perceived to be more. Though India is one of the blooming IT producers, and there seems to be a common consensus that many women are working in the IT

industry in India, the fact is that the ratio is largely skewed. Only 24% of the technical workforce in India, including the IT workforce, is women (NASSCOM). If we don't include the IT sector, the ratio is further worse.

(We could not find details about female participation in technology making and usage from Internet and visits to libraries)

2. Women are as able as men to use and make any kind of technology efficiently. Many researches have proved that there is no biological reason for women to perform poorly in technical fields. Clearly the reason seems to be social constraints.
3. Women are crucial agents of social change. Technology and social change are closely interlinked. Every society goes through a social change with the introduction of a new technology. Women cannot participate fully in this change if they are intimidated by technology.
4. Technology is a great determinant of a society's materialistic development and in turn influences the standard of life hugely. The wheels of evolving technology are never going to stay still; so it is up to women to catch up with it.

**We aim to create a general awareness amongst both men and women on the particular need for women to participate equally in technology; encourage women to take initiative in learning, using and making technology; and also support women who do take such initiative.**

### **WHO ARE THE BENEFICIARIES?**

To make sure that women from all backgrounds benefit equally from our programs, we have divided women into 6 categories as per their relation with technology and have activities planned for various groups of women. These groups are:

- **Girl Students: Young girls between the age group 10 to 18.**  
The new age education system is making extensive use of technology. Computer classes, science projects, holiday homework to be done using the Internet, educational CDs with games, videos, etc., and lots more. Yet enthusiasm amongst girl children towards technology seems to be low. The reasons might be many, to count a few - mindset that technology is not for girls, lack of female role models, less support from family, lack of guidance, the fear that being geeky will not be considered cool, etc. On the other hand many girls do not have access to any sort of technical education. It is also very important that the girl child is comfortable with technology, so that she uses it well for her education and grows to be a confident woman who is abreast with latest technologies.  
Science and technology needs to be made more interesting and fun for girl students and to open their minds towards technical careers. It is not

necessary that all girls aim for a technical education, but whatever stream of education they choose, they should be able to make the best use of technology in it.

- **Rural Women: Women living in rural areas where different kind of technologies work.**

Rural women most often don't have access to technology or to information. When the world is moving towards the new age of computing, mobile communication and videography, many of our villages still don't have basic technical requirements like electricity. Many villages do have kiosks with Internet connectivity set up by the government or other NGOs, but how accessible these are to the women is still a question. It is important that rural women have information and access to computers and ICTs. Apart from computer skills and ICTs, information on rural technologies like, biogas, organic fertilizers, solar energy, community radio system, etc. would also be very helpful for rural women. Such technical skills will not only help them in their day-to-day life, but also in the long term help them gain confidence and develop leadership.

Information and basic technical skills need to be made available to rural women; there is a need to create awareness amongst rural women about how technology can affect their lives and how to use it correctly.

- **Urban Rural Women: Women living in urban regions below poverty line.**

Women living in urban regions have all the access to education and facilities available in urban regions for any other women, provided they have money, information and the inspiration. Majority of women living in slums around all metropolitan cities are illiterate and living in very poor social and economic conditions. Access to certain technical skills can open up some good livelihood options for women which are otherwise thought to be fit for men only, for e.g., as carpenters, electricians, drivers, auto mechanics, jobs in factories, any many more. The common perception that these kinds of jobs are fit for men only has limited women's options for livelihood, and hence to dignified life.

- **Urban/Semi-Urban Non-Professional Women: Women who use technology in their households or other activities.**

A major percentage of Indian women do not pursue a career. Most women above the poverty line have access to technology but do not use it much. It is seen that this category of women are usually scared of trying out new technologies or experimenting and understanding many on the technical equipments very easily available to them. As the traditional Indian families have always been patriarchal and women have been denied access to education, usually the men of the families get to try their hands on any

technical equipment in the house. It is very common for a woman to rely on the men for the smallest help with technical equipments. It is not always true that women are not allowed to use these equipments or learn how to use them, but most women have developed a mental block that this kind of work is not for them and should be done by men only. Hence they don't even try. However it is also true that many would not even try because they would be too shy or afraid to ask their husbands/brothers/sons. Or they would fear that others would laugh at them. To remove any mental block (fear, shyness, or under confidence) that non-professional women might have to use and learn technology, and to make them feel comfortable with technology, it is important that they are encouraged and provided some guidance.

- **Non-Techy Professional Women: Professional women who use various technologies for their work in offices or in their career.**

Women who use common technical equipments like computers, mobile phones, etc. for their work but don't work in technical fields and don't understand how these things work. It is quite often seen that many professional women are unaware of technical tools that can make their work easier and of the working of the tools/equipments that they use in their day-to-day work. And this ignorance directly affects their work and professional growth. Many a time women have to depend on their male colleagues for the smallest technical help.

- **Techy Women: Women who choose to have a career in technical fields.**

Women who have chosen a technical career; have either studied/are studying in technical fields or working/want to work in technical fields. Although in India, the percentage of women in IT and computing careers is much higher compared to many other countries, there is still a huge gender imbalance in the IT sector. And if we consider the technology industry minus the IT sector, presence of women is very very low. FAT does not feel it's necessary that every woman should study technology, but those who want to study technology should get the opportunity. Many women who are interested in studying technology or working in technical fields don't get the right opportunity. Women in technical fields have to fight a new battle every day. They are paid lesser than their male colleagues, and often are not acknowledged for the work they do.

Women in all levels of the technology industry need a wide range of professional development and networking opportunities. We need to create a forum where women in technology can support each other and women can be recognized and promoted as role models.

In many cases these groups may also overlap, but when we plan our activities, we keep these categories in mind so that we are able to effectively influence our beneficiaries, keeping in mind their specific needs, literacy level, accessibility, and exposure.

## **HOW WE WOULD DO IT?**

To achieve its goals, FAT has designed its programs around 6 thematic areas.

1. **Skill Building** : Organizing workshops for women on various technical skills
2. **Training and educating mechanisms**: Planning with trainers and educators on effective training mechanisms, keeping the gender perspective in the forefront. Also develop training manuals and the course curriculum.
3. **Supporting future techies**: Promoting various activities that support women, who aspire to have a career in the technical field. For instance - providing counsel, scholarships, mentorship, assistance to buy books, support to attend conferences or trainings, assistance in projects etc.
4. **Advocacy of Technology**: Working with the authorities at the policy level ensuring that opportunities and technical services are made available more easily, for women.
5. **Creating Awareness**: Hosting various activities to showcase the issue of women and technology; raise general awareness about it and create common concern around it.
6. **Technical Assistance for other women's organizations**: FAT also endeavors to support feminist movements by advising them on the best technical practices and providing services when necessary.

## **THE RATIONALE: WHAT WE WANT TO DO AND WHY?**

### **SKILL BUILDING THEME: Disseminating technical skills amongst women**

Organizing workshops for women on various technical skills

- Though there are many opportunities available for developing ones technical skills, they are not easily accessible to most women. Also many women don't participate in such trainings/workshops because they feel underconfident amongst men, they may also get scared away seeing many men and less women in such workshops/trainings. Many a times women are also unaware of any such workshops being conducted. Different workshops for different groups of women depending upon the kind of technology that they use or can use in their case.

- Will mostly partner with local NGOs to conduct such workshops. If we do workshops alone, it is not possible for FAT to reach a large number of women. The idea is to initially partner with local NGOs to do a couple of workshops in their region, then empower the local NGO to carry on similar workshops on their own, share our model, guidelines, resources, etc. Replicate these workshops all around the country.
- As far as possible, these workshops should be facilitated by women only. Only in situations when we can't find a woman facilitator by any chance, we may compromise to have a man facilitate the workshop. A woman facilitator is preferred because: (a) women participants feel more comfortable to participate and ask questions, (b) the facilitator also usually becomes the role model for the participants, they feel that if this woman can, then why can't I.
- The facilitator should follow some guidelines in conducting the workshop. We may bring out a manual on effective training skills to train women on technical skills.
- As a rule, workshops should be conducted only for women. However, if it seems like conducting an only women workshop may create adverse reactions, we may also include men.

**TRAINING AND EDUCATING MECHANISMS:** Planning with trainers and educators on effective training mechanisms, keeping the gender perspective in the forefront. Also develop training manuals and the course curriculum.

- There is a need to work with trainers who provide technical training to women and girls. Like trainers who work in computer centers (government run or privately run), school teachers (specially computer teachers), college teachers and lab assistants, NGO trainers, etc. Mostly there is a need to sensitize them on gender issues, providing equal opportunity to both the sexes, caution them on the effects of conscious or subconscious gender discrimination, and in some cases also the importance of ensuring that the facilities put to best usage, not ignoring their duty as trainers/educators.
- Some trainers/educators who have experience in training women/girls may be able to share some of their experiences, what worked well and what did not work well. Training manuals need to be brought out of such experiences and best training methodologies keeping gender perspective in the foreground and shared with other trainers and educators.
- We specially need to work with computer teachers in elementary government schools. Most schools have computers and compulsory



computer classes, but the facilities are either not being used properly or the curriculum and teaching methods are very hard for the girls to understand. We need to work with school authorities and teachers to develop an easily understandable and fun curriculum and introduce effective and interesting ways of teaching.

- Need to work in policy level on introducing other technologies in school level for girls. Like the SUPW (SOCIALY USEFUL PRODUCTIVE WORK) classes still have different options for girls and boys. Boys get to learn making switchboards, repairing electronic equipments, a bit of carpentry etc., while girls get to learn stitching, embroidery, cooking, knitting, etc. While the curriculum does not suggest any gender division of the activities, teachers tend to give separate tasks to boys and girls as per the gender roles of the society which effects the upbringing of the children and discourages the girls from learning skills that are considered manly.

**SUPPORTING FUTURE TECHIES:** Promoting various activities that support women, who aspire to have a career in the technical field. For instance - providing counsel, scholarships, mentorship, assistance to buy books, support to attend conferences or trainings, assistance in projects etc.

- Hurdles in front of a woman wanted to study or work in a technical field are many more than those faced by a man. Reasons? Parent prefer to invest on sons rather than on daughters; girls also have to perform their social duties, do a lot of house hold chores which leaves them usually tired and no time for studies; limitations on mobility within their hometown or outside which makes many facilities inaccessible, like the library or the community information centre for instance, moving out of their hometown for education or working may not be allowed, find a safe place to stay in a new city; ....While we cannot help solve all such problems, we would provide assistance in some through financial support and counselling.
- Providing the forum to interact with other women in the field, to share, learn and get advice.
- Recognising women who have achieved a markable position in their field despite hurdles, promoting them as role models.

**ADVOCACY OF TECHNOLOGY:** Working with the authorities at the policy level ensuring that opportunities and technical services are made available more easily, for women.

- For example, the government of India has set up a CIC (Community Information Centre) in each block in North East of India ([www.cic.nic.in](http://www.cic.nic.in)).

Still majority of women are unaware of such a facility and hence hardly any woman uses them.

- Even the public transport system in India is a very good example of technology that's accessible to women but still most women don't use it. Why? Women don't feel safe using them. How can they be made safe for women?
- In engineering colleges, women cannot study mining under *Section 46 (1) of the Mines Act, 1952*. Why? Isn't it time to change this?
- There are many such cases where we may have to work with authorities who take the respective decisions to make technology women friendly, equally accessible for women. We will have to lobby with other women's organizations and like minded people. However, we probably will be able to do this only after we establish FAT as a credible organization.

**CREATING AWARENESS:** Hosting various activities to showcase the issue of women and technology; raise general awareness about it and create common concern around it.

- The issue is huge and still no one seems to be talking about it. In the west, many organizations are working towards encouraging women in technical fields. In India, every one knows that there are very few women in technical fields, but very few people seem to understand what that implies. Even women themselves subconsciously ignore learning and using technology and don't realize it. On the other hand, due to the sudden emergence of BPOs and increase in the number of women working in BPOs, there seems to be a common perception that in India, many there are more women working in the sector than men and hence Indian women are technically empowered, which is very false. Only a section of urban literate women are working in the IT sector, and in fact, they are mostly working in non technical jobs. Majority of women, rural, semi-urban, urban-poor, or even urban, are not even using the most common technical equipments.
- To break this silence, to create concern around this issue, to create awareness amongst women also.
- Start a volunteering program for people from various age groups. Young girls can volunteer to go to various areas, gather the girls and their parents, show some science tricks, some gadgets, let the girls try, explain the concept behind it, stimulate their spirit of enquiry. Ask them if they would like to know more, if they think they can do this kind of stuff, encourage them...

- College girls can visit campuses, carry cameras, gather girls and boys, ask them what they think of women and technology. Facilitate a debate around such a topic. Shoot the video.
- Such video's can be compiled to create short films that can be used for activism, shared with schools, may be even aired on television channels.
- Materials like bookmarks with some information a a prominent woman in technology, similar best of luck cards with encouraging text, ecards, diaries with pages dedicated to women achievers, or some fact figures, posters to put up in schools and colleges.

**TECHNICAL ASSISTANCE FOR OTHER WOMEN'S ORGANIZATIONS:** FAT also endeavors to support feminist movements by advising them on the best technical practices and providing services when necessary.

- Though the feminist movement in India is quite strong, it is completely sepeated from the IT and ICT movement. Most feminist organizations still dont have websites, and many who have are unaware of how to make best use of it, how to maintain it. Also many organizations are very dependant on external help for every small technical need which reduces their efficiency.
- We would like to empower women's organizations by supprting their technical needs and advising them on effective use of technology.
- Training for staff members of technical skills.
- Taking up their technical work: they can outsource all their technical needs.
- Providing support even when they dont have the funds to spend.
- Helping in campaigns, conferences etc.

### **THEME WISE ACTIVITIES:**

1. **Skill Building:** At least one workshop under each program in this year.
  1. **Girl Students Program:** Science/tech fair, Competitions, etc.
  2. **Rural women:** Workshops on rural technology and awareness on latest technology.
  3. **Non-Professional Women Program:**
  4. **Non-Techy Professional Women Program:** Simple technical workshops that help in office work

5. **Techy Women Program:** Workshops resume building, leadership,
2. **Training and educating mechanisms:**
  1. **Training for trainers** in the form of trainers meet. Technical trainers from different parts of the country should be brought together for a 4-5 day camp style training where they share their concerns and experiences on training women/girls. (Seperate training for school teachers, )
  2. **Training manual** should be brought out with training tips, things to keep in mind, etiquettes.
  3. **Training curriculum** development.
3. **Supporting future techies:**
  1. **Small grants** to help in education, buying books/equipments, travel grant to attend conferences.
  2. **TechyWomen Online Community** to provide career counselling, mentoring facility, networking with other women.
  3. **TechyWomen Conferences:** For women to meet, network, discuss, plan.
4. **Advocacy of Technology:** not decided yet.
5. **Creating Awareness:**
  - **Volunteering program** to create awareness through volunteers.
  - **Creating media** that can be shared, like videos, promotional material like book marks, carda, diaries.
6. **Technical Assistance for other women's organizations:**
  - **Workshops for staff**
  - **Technical support** on ICT related stuff (we may or may not charge fee depening upon the organizations budget)
  - **General advice**
  - **Joining Campaigns** like Take Back the Tech.
  - Various initiatives to introduce new technology amongst women's organizations.

## CAMPAIGNS:

1. **Take back the tech campaign** (<http://takebackthetech.org/>): FAT should join this campaign and start it's Indian chapter. Violence against women is a major concern in India and many using ICTs to fight it will give the women's organizations a technical boost. (we should join it this year. I am trying to organize something through some volunteers)
2. Campaign to get unemployed, educated till high school level women trained in basic computer skills and front desk skills and place them in offices as office assistants, a position for which men are preferred even in feminist organizations (we have already placed 3 women, we can definitely place more) We should rent a room in any locality, arrange computers, printers, scanners, LAN, and internet, start training program for the young women in

the locality and in the mean while contact placement agencies, NGOs etc for their employment. Once all the educated young women seeking jobs in that locality are placed in jobs, we can move the centre to another locality. This may be the educate 500 girls in 500 days campaign as Lisa suggested.

## **ORGANIZATIONAL STRUCTURE**

FAT will be supported by two teams:

- A Technical support Team.  
Responsible for extending technical support to other feminist organizations.
- A Development Team.  
Responsible for implementing programs to achieve the objectives of the organization.

With the combined efforts of these core teams, FAT has set milestones to be achieved quickly and effectively.