

CASE STUDY

Conducted under the Project

“Mutually reinforcing the role of women in habitat based livelihood services”

– Researching the Case of India

The Barefoot College



Keywords – Women Engineers, Breaking Norms, Community Engagement

FACTS

Context

The Barefoot College has endeavoured to break stereotypical notions regarding women, by training them in technically challenging jobs that have traditionally been considered for men. Unlike the chauvinistic and patriarchal society, the college recognizes and harnesses the tensile strength, determination and graceful dexterity that rural women possess. The college attains this through a process of community engagement and participation. It built an inroad within the community by accepting traditional norms, and slowly built the awareness of the people regarding other work, by engaging with them.

The organisation started by choosing village development committees of 15 representatives in each village. They chose people who were honest and literate to a certain extent and these were given training in accounting. As part of these committees, all the money acquired on their name was transferred to the village development committee accounts, so that the people feel a sense of ownership and responsibility. These funds were also controlled and checked by them. When the project is completed by the committee, the college intervenes and they gather the villagers to announce all the records of the expenditure. This is also done through puppetry to simplify the information for better understanding. The committee members are present to answer the questions. Through this process transparency was ensured in front of the villagers (who were the ultimate beneficiaries) and learning's were made (and accordingly changes made in the future implementation processes). Also through these committees, the villagers could directly hold dialogues with the government regarding their needs and provisions. This also enabled the college to earn trust of the community. Their ultimate aim is of a society having equality with both men and women participating, and simultaneously women empowerment initiatives were being carried out.

The initiative for women empowerment started in the year 1980. In 1981, the minimum daily wages were Rs 7, but the people, especially the women, were being paid only Rs 4 under the National Rural Employment Guarantee Act (NREGA). A road was being built near Tilonia where women were working as labour. Total 300 women involved in the road construction refused to take these lesser wages. With this in, 20 women from these 300 came to the college for support in this issue. When these women refused to take the money, their husbands were lured by the panchayat to force their women to accept the wages. However, through the support of Barefoot College, the women continued the struggle and on 20 January 1983, the Tilonia Right to Information petition was passed, which was a landmark judgement. After this, the women involved in this fight realised that they can fight for their rights, and their self-confidence increased manifold.

The organisation in all its initiatives, even today works towards gender equality, internally as well as externally. In fact, women are also taking care of administration within the organisation: the head of accounts section is a woman, who has streamlined the processes to suit the needs of the college with four men working as her subordinates. These men are from nearby villages, and due to the years of engagement of the college in Tilonia, they have come to recognise women as equal partners, and thus respect them. The video resource centre of the organisation is also managed by a local woman, who gives training in computers and editing software.

The scale of work

The college is engaged in 14 activities and in all these activities, the aim is to have the men and women work



Women cutting iron rods for cement fencing poles

as equal counterparts. They started in 1972 by addressing water issues, and also took up health, education related issues. Slowly the organisation built up to 14 activities, and each has been established through the need of the people. The whole organisation is made up of mostly the local people, as it is believed by the college that the locals can understand the problems of the people the best.

Objectives

The objective of the organisation is to bring maximum benefits to the local people by the local people themselves as it aims for sustainable local development. To achieve this, men and women both are included in the development process.

FEATURES

A. Innovative approaches

The college is for the illiterate or semi-literate. It shuns the elitist education programmes in the country as its approach is to educate the people rather than achieve 'literacy'. Moreover, the organisation from experience feels that it is much more difficult to train men, as they are restless, impatient, ambitious, and compulsively mobile. Once trained these men tend to migrate to cities. Women on the other hand, may be slower at learning but they are patient and determined. Further, with their solid base of a home and family, they usually are not interested in migrating, thus benefitting the community and the village area in greater ways.

Tilonia aggressively pursues women empowerment, but in all their efforts, the men of the village were included as well. In fact, the issues initially taken up were of public interest, which took into account the men as well. This was to make sure that the men do not feel that their women are being lured, and in this manner, it was easier to work with the local traditions, which tends to subjugate the women.

The college believes in 'learning by doing' for building self-confidence. They believe that when a person is given a chance and a platform, they can enhance their skills and especially the latent traditional knowledge and techniques. This is why any community activity is done through people participation. As a starting point across the organization, Barefoot College has interacted and spoken to the people and understood their knowledge and beliefs using that as a base to further their work.

B. Skill development

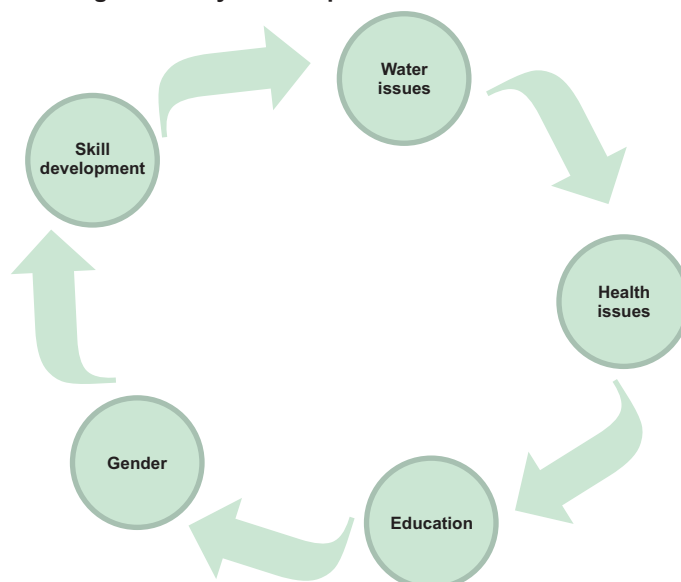
Training has been provided in habitat services to 15,000 women in solar engineering, mechanical repair and fabrication (such as hand pump mechanics), solar cooker engineering and masonry. The college has started a new initiative whereby a group of 5 women were trained in solar heater engineering. These were the women who had shown interest in the work. Many of the women solar engineers were Rajput women, who had found this as an acceptable area to work in. Rajputs are the higher castes, and the women in this community are not allowed to move outside their home to work. Being trained as solar engineers gave them an opportunity to come out of their houses and earn an independent income.

Initially, the organisation mostly trained those women who were in dire need. Most of the women were married, however, few single women were trained, but this was based upon their need as some of them were handicapped. Other than this, the organisation believes in the approach that the people should work according to their interests, and thus they give the people opportunities to work in their interest areas. The belief is that everyone has an innate skill, and this skill should be allowed to flourish. In fact, the women being trained in solar energy are increasing, as more and more women were showing interest in this area.

The solar heater group

The solar heater group is a new development in the Barefoot College. A group of five women (the first batch in the area) were trained. The training was carried out by men. The trainers provided the women with adequate support whenever they faced any difficulty. Out of the five, some were only homemakers, whereas some were agricultural workers. One of the women used to do stitching, but left that to get training in this

Diagram 1 – Cyclical Representation of Intervention



Women as solar engineers

field, as stitching was straining her eyes. Here she could easily cut wires and iron rods according to measurements, without straining her eyes.

The solar cooker group

These women were trained by a foreigner in 2003. He made one cooker in front of them, and trained them for six months. After he left, for another six months the women assembled and reassembled the cooker repeatedly, till they got it right and started making new ones. These women could now train other women in the art, and a separate society was formed for them in 2007. They speak about their work with confidence and knew their work thoroughly, and in fact, some of them felt that their work was even better than the men doing the same work.

Solar engineers

The women solar engineers were trained in developing solar panels, which is attached to solar lamps, and other such solar appliances. These women had initially been trained by men, and later a lot of them became trainers themselves, who trained women not just from Rajasthan but from all over the country as well as from other developing nations of Asia and Africa.

There was no difference in the level of knowledge of the male and female trainers, however the male trainers were more forthcoming when talking about the field, the women had to be encouraged a little to speak.

Masons

Initially, the trained women masons worked as labour in construction and later under the college's support were given training by men in making 'tankas' or tanks. To begin with, men masons trained them as no woman knew this work.

Although women were being trained as mason, but very few continued work in this field. They took it up due to dire need, although even when taking this up they were hesitant as this work was mostly done by men. They were afraid of social ridicule however, with the support of the institution, they constructed four tanks, which gave them the self-confidence and then moved on to work in 8 to 10 villages.

C. Work environment and social support

A crèche and sanitation facilities were provided to the women inside the barefoot college campus. Moreover, the women generally work in a group, which helps them support each other. Support from their husbands and family was mostly in the form of allowing them to do the work, but it was expected that they would not neglect their household chores. However, if the women had children, especially a daughter they would support her in the daily chores. The sons attended night school to support the family during the day. Girls were still lesser in number in the night school. In each village of the Tilonia area, women were mobilised to form a group based on issues that were relevant to them. These women groups met regularly to find solutions and it also worked as a forum where women could raise their individual problems.



Presenting of the record keeping system maintained by a woman worker

Solar heater

In terms of finding a balance between the work and family responsibilities, the women woke up a little earlier and finished the morning chores, and after finishing work at 5.30 pm went home and cooked for the family. They shared that the extra work was not a burden as they had the interest in doing the work, and could easily strike a balance between both. Their families at first objected, but when they saw the work environment and the extra income, the objections stopped.

Solar cooker

This group was well established with a society formed for them by the organisation. Their families were also

exposed to the work and the work environment, in order to gain their support. The women through the society collected their earnings and used that to further their work. It is through these earnings that they got their wages.

Solar engineers

The solar engineers were all working within the campus of the Barefoot College, where they worked along with men. They did not face any problems while working with the men, and the work was carried out harmoniously. In fact, there were more women and less men working here. Two basic facilities (drinking water and sanitation) were provided for them at their work place.

Masons

After the women started working, the society's perception changed. People started seeing that the women can do better work than men. In terms of their clothing, the women found it a little difficult to work, as they have to climb up onto the roof tops. However, the women were not willing to change their attire, and this mostly seemed to be because of cultural restrictions in the area. Also, the women masons, who sometimes went outside their village to work, said they still had to find a secluded area to relieve themselves.

LIVELIHOOD BENEFITS

The issue of water was close to the institution's heart and is of utmost relevance to women. The organisation started with rainwater harvesting in Tilonia, which was a drought stricken area. Special roofs that collected the rainwater were designed along with a channel and pipe. Tanks were built and pipes were connected which could channel the rainwater into underground water tanks. From 1987 to 1995, the women were trained to construct the roofs.

In most of these cases, the women started learning the work because of the need to earn a better livelihood, and as they started working, their confidence level soared high. Moreover, their incomes were helping them sustain themselves better than they did before. In fact, most of the women reported that the work has helped them in earning a better livelihood for their families. A point worth noting is that some of the women switched to solar energy from masonry and agricultural labour. Women from agriculture, switched to this work, as there was hardly any work in agriculture due to the lack of rain.

The women feel that working in the solar sector means they could do valuable work without much hard physical labour. The solar lamps made by them were widely used in the area. On the other hand, the women who have switched from sewing feel that the work allows them some movement, as against sitting all day which causes joint pain. Thus, they realize that the benefits of their work were not only in monetary terms, but also in terms of their health.

Moreover, the women could easily access health facilities within the college campus. There is a campus hospital, which includes a small operating theatre with testing and dentistry facilities. The dentist centre is handled by two women.

Solar heater

As mentioned before, the women in this group came either from agricultural work or from construction labour. This work offered them an opportunity to not only work with ease, as it could be done while sitting indoors, but also offered them better livelihood.

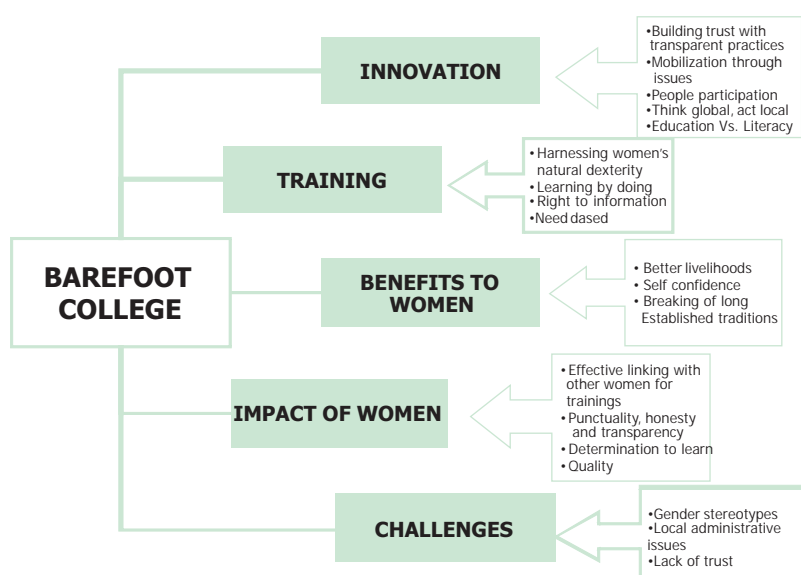
Solar cooker

Here women were well established and had formed a society. Some women had started this work in lieu of sewing, as they felt that sewing could be done at any time. Also sewing, they felt, caused health problems, as they had to sit all day on the machine. Through this work, the women learnt something different, which changed the perception of their families and those around



Women as solar engineers with their solar panels

Diagram 2 – Thematic Analysis of Barefoot College Approach



them, by showing that they could do work that men could. They became engineers without a formal education.

These women understood the value of their product, calling their work noble, as the cookers do not cause harm to the environment and use the everlasting energy of the sun. And in fact, it was said by them that no where else would rural illiterate women be given a chance like this to become solar cooker engineers.

Solar engineers

The solar engineering work had given the women an opportunity to do something beyond the threshold of their homes. Some of these engineers and trainers were from conservative Rajput families.

While initially they did face problems from their families, slowly and steadily they were able to break the shackles. The extra incomes earned by the women have also aided in breaking the barriers of tradition.

Masons

Skill building in masonry has enabled the women to come out of their houses. Moreover, when the women were not working, they would only get one meal in 24 hours. With their earnings, they not only get three meals but they can educate the children as well, rather than forcing them into work to sustain the family. The women when they were not working, or working as unskilled labour did not have any say in finances, but now with increased confidence and incomes (women are earning about ₹ 3,000 a month), they started having an equal say in the finances and expenditure.

WOMEN'S CAPABILITIES AND ACHIEVEMENTS

Women had shown immense capability in terms of their punctuality and determination to learn. Most of the women came from extremely rigid traditional families and have broken those barriers in order to learn and work. While it is true that the institution provides the women to do the work that interests them, many have chosen to do this work as against handicrafts and sewing. This indicates that women have developed the confidence that they can effectively do the technical work. Their inherent interest in learning the new type of work to help their family has had a positive impact on their work. They not only learn the work determinedly, but carry them out with dedication as well. These women once they have learnt the work they train and connect with other women effectively as well.

The male supervisors or trainers indicated that the women are better workers than men are. They also learn the work faster as they have a dire need for the work. They say, “unki ruchi hai is kaam mein”. They also realise the importance of quality, and their work is of superior quality when compared with the men. However, the products made by these trainees were sold by the institution itself, as the group was not fully trained and established. Market connections are made only after the women have work in the sector for a while, and can independently take care of the production details.

Through the society that the women had formed, they were able to connect with the market to sell their products. These women would go to the market once a month to buy all the material they needed for the production. They handled all expenses themselves. The amount they earned through this work, some of it would go to the college, and the rest would be used to pay the wages and buy the material for production. However, the college was still supporting them to a certain extent.

The women working as solar engineers had become extremely effective trainers as they were training women not only from other parts of the nation, but also from different countries. These women did not even understand each other's language, but had developed hands-on approach in training the women, using demonstrations and colour codes. The lamps and other solar products that the women made were being taken up by other not-for-profit organisations around the country. Moreover, the women who were being trained by the women trainers, were to go back to their home villages in their countries to train more women

and subsequently solar electrify their villages. The effective ways in which the women have connected with these women to train them has had major impact on the habitat sector.

Regarding the masonry work for tanks construction the women used to take one to one and a half months duration initially to train, but later they could work with ease, and at a faster pace. They could themselves do the calculations needed for the work. The supervisors were with them until the time they made the second tank, after that they made the tanks on their own. The working hours of these women were the same as the men. These women initially did need the support of the men to carry heavy loads, but now they can carry these loads using each other's support. These women are self-sustaining in terms of their work.



Women as engineers in their work lab with a visitor

CHALLENGES AND RESPONSE

Barefoot College would go from village-to-village to talk to the women regarding their statuses, but that was not thought to be the right way to seek information. To overcome this some fearless women in the village were selected and given training in basic literacy. In fact, they said, “when we went to villages and would write or record, the women would change their demeanour when talking, thinking that what they were saying would be used against them”, so, they decided to hide the recorders, when talking to the women. They surveyed 25 to 30 women in the village, and maintained monthly contact with them. It was noticed that after they initiated meetings (which were in the evening) the men would forcefully not let their wives sit in these meetings. However, through these meetings the issues close to their heart such as water and livelihoods started being communicated and addressed. This helped the men understand that the meeting were for a good cause and then they influenced the other men in the village. For three years, the institution kept engaging with the villages and by 1985, 45 groups were formed in various villages.

It goes without saying that gender stereotypes are ingrained in the society. The men will not carry water on their heads, and they will dig but will not carry the mud on their heads to the requisite site, as that is a woman's work. Yet the women were trained in brick making, hand pump repair, and solar engineering. Men and women both were trained in hand pump repair, but the struggle was to do away with the pre-conceived notions—“how will a woman perform a man's task”. After the training, the women were taken to different villages where the hand pumps required repair. At first, the villagers were sceptical, but since these pumps were already in a bad state they did not protest much to the women's work. The women repaired the pumps in front of the eyes of the villagers in two hours, much to their surprise. Slowly such demonstrations aided in changing the mindsets of the people.

After the hand pump masons were trained, the fight with the government started, as they did not believe that women could do this work. However, after giving such demonstrations and with the support of the villagers, protests were made in front of the Block Development Office (BDO). Consequently, eight women joined the permanent job officially under the government (one hand pump mason who was trained in 1996 has now retired and gets ₹ 3,500 as pension, and when she was working she could earn around ₹ 8,500 per month). These women at times got work outside their own village. They use to work on their terms as to work only in the day time if outside the village.

Masons also faced major problems even from within the women community, as their work was traditionally the domain of the men. They were ridiculed and fingers were raised on their character. However, their work quality and organisational support helped them gain their space and recognition. The society is still quite patriarchal and caste based, and thus women still ridiculed, especially while climbing up and down roofs. They counteract this by being extra careful with what they wear at work. The extra income, and the option of having a say in finances at home, has given them the confidence to do this work despite all odds.

Corruption is another major problem at the institutional level. Corruption at the local governance structures still exist, although through the support of the college and the building of a manifesto, two women had become sarpanch (one was the sarpanch during the field visit duration). However, local people of high castes and power holders did created many problems for this woman to function smoothly. Ingrained corruption in the governance structures led the organisation to inform and educate the people on the right to information (RTI) to fight corruption in payments and allocation of facilities.

Lastly, family planning is still a novice concept with the women having more than four children on an average.

Development Alternatives

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