

Importance of Industrial Training for Engineering Girl students



Engineering

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ABSTRACT

Industrial training plays a very important role for engineering graduates of all disciplines. As an engineering student, training can help to implement the concepts that students have learnt in their classes. This paper addresses issues related to training, especially for girl students. This is because still in Indian community there are many families those who do not want to send their daughters for a training of a month or two especially if training venue is far from the residence or hostels. This paper also discusses at length the true feelings of girls regarding importance of industrial training programme and also what can be achieved after completing these trainings.

I. Introduction

Training helps in increasing the knowledge and skill of a person for doing a particular job. Training enables acquisition of latest skills, and thus increases the versatility of the person for boosting his/her career. Appropriate training teaches proper operation and usage of equipments. Training develops confidence in whatever students have learnt. After completion of training, the students will feel much more confident about the field in which they have specialized. If concepts are not clear because of any confusions then at the time of interview, exams or in professional life students will face many problems. All experienced people always like to hear accurate to the point solution to every problem; career depends on sharpness, intelligence and of course confidence. Therefore, as far as possible, students must clear such confusions and also get new ideas of particular fields with the help of summer training, project training and become confident and sincere about the future [1].

II. Importance of industrial training for girls

Access to education has been one of the most pressing demands of the women's rights movements. Women constitute almost half of the world's population. Development of this half of human resources can help in improving the quality of life at home and outside. Education of women in science and technology can empower them with requisite knowledge and skill to make effective contribution to the society.

Traditionally, however, Engineering has been a 'man's world'. Even in the so-called modern times, women have been socially conditioned since their childhood to feel that it is not woman-like to be mechanically inclined or to be interested in technical things. Even in the developed countries of the world, very few girls opt for engineering courses. It is often felt that in the existing system of co-education in the engineering colleges, girls find it difficult to fulfill the requirement of skilled engineers. Also, the male students generally consider themselves superior to female students. The girls face problem in laboratory classes and also project work where they have to work in a group with majority of boys [2].

Girls need to have capability to leverage the knowledge and promote cross-functional learning [3]. However, it is observed that majority of girl engineering graduates are lagging in practical skills. Some of the reasons could be their primary education, medium of instruction, background, financial status and lack of confidence etc. To overcome this inadequacy, industrial training can be vital for them and is therefore the motivation of the material presented in this paper.

The girl engineering graduates are also supposed to work with significant independence and should be strong in leadership qualities. They should have adequate competence to perform the designated duties in effective manner [4]. They should be pro-active and committed and also must be team-players and to have passion for learning at the work site [5].

In order to achieve desired level of performance and prove that they are fit for the job market, it is essential that girls should look forward positively and actively participate in industrial training because it offers the following:

1. Experience of industrial environment/conditions to girls students.
2. Enable the students to learn engineering techniques by observation and practice.
3. Show how theory presented in class is applied in practice.
4. Provide contact with practicing engineers.
5. Familiarize the student with practices and problems faced by companies employing engineers.
6. Give the student the responsibility of completing a piece of work.
7. Enable and accord industry opportunity to shape and participate in the development of future human resources.

III. Observations and discussions

This paper is based on the following work which is based on a survey that was carried out among the engineering girl students of pre-final and final year of various branches at a central university. Survey forms have been critically analyzed in this work and results have been compiled in this paper. It has been found that for each question, the percentage of students who support and understand the importance of industrial training and those who do not, are summarized in Table 1.

Table 1: Observations of Questionnaire

Question number	% of Yes	% of No
Q1	100	0
Q2	94	06
Q3	96	04
Q4	98	02
Q5	93	07
Q6	80	20

The survey results are presented in the following sub-sections.

1. All girls (100% of them) have a strong opinion that the industrial training is beneficial for them, as indicated in Fig. 1. In authors' opinion, industrial training can help in reforming and grooming girls in their profession and can produce better engineers. This is because generally girls are more sincere and dedicated in their work and can excel if properly trained. It is suggested that colleges should take keen interest in arranging such trainings in industries & companies because with this girls will get a better chance to work in a market oriented professional environment compared to their college laboratory.

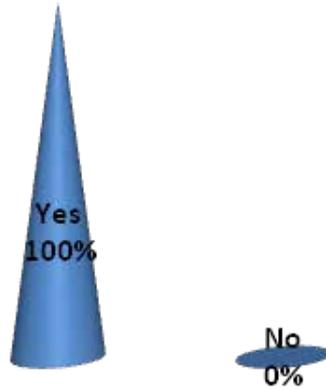


Figure 1: Training is beneficial for girls

2. 94% of the respondents believe that there should be sufficient practical knowledge before students are deputed to the companies and only 6% girls do not agree with this fact as shown in fig. 2. Industries also expect that students must have sound theoretical and practical knowledge beforehand and be productive from day one. For quality improvement in technical education more emphasis should be given on practicals. This will fulfill the requirements and expectations of the industry in the new globally competitive industrial and economic environments driven by the new technologies.

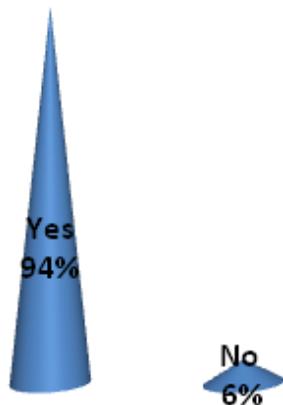


Figure 2: Sufficient practical/workshop necessary before deputed on training

3. This question reviewed the communication and managerial skills. From the survey results, it has been found that 96% girls do agree with the fact that training plays an important role in enhancing communication and managerial skills while only 4% students do not agree with this fact as shown in fig. 3. The authors also personally feel that with the help of such training students can improve and enhance their communication and managerial skill after completing the training and will gain confidence at work place.

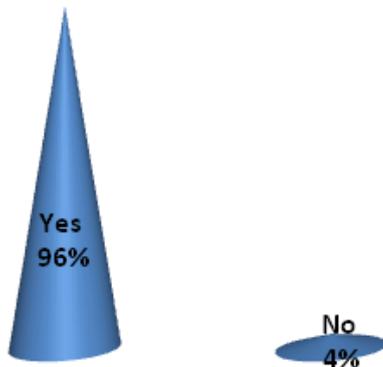


Figure 3: Enhancing communication and managerial skills

4. 98% girls are accepting that training provides proper knowledge and job skills as shown in fig. 4. This work has found that such training programs give great combination of practical as well as theory knowledge of technologies. These days it is very tough to get a good job and to survive in the corporate world without strong technical knowledge of their respective technical domain. Moreover, there is nothing special in the syllabus of engineering which can enhance technical knowledge of students. The first requirement of most companies nowadays is that the candidate should be technically strong so that she can easily understand the technology quickly and start working as soon as possible. It is also suggested that special doubt sessions should be arranged for shooting out the doubt of students, so that they can feel confident in their work.

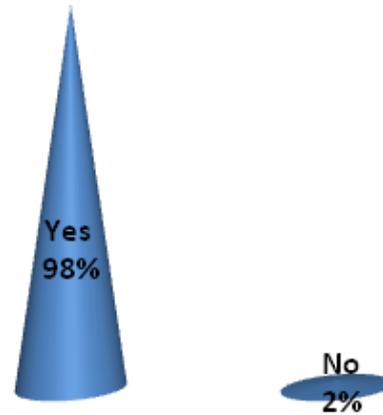


Figure 4: Proper knowledge and job skills

5. Industry always looks forward for talented staff. Training is a mode through which trainee interacts with the industrial staff. It provides an edge to superiors in the industry to understand the trainee's talent, potential, interpersonal and attitude skills which help them to recruit the manpower which suited best to them. Through training, industry is also able to generate data of the potential viable candidates to be absorbed at a later date as per the need of the industry. It has been observed that 93% girls, as shown in fig. 5, strongly believe that students who have a positive experience with a company will be more likely to apply for a job and chances for getting job are much better.

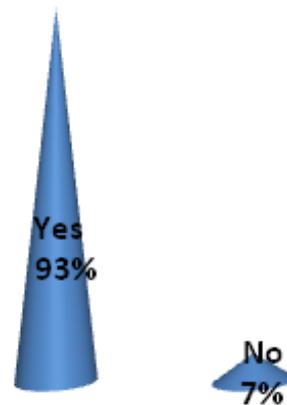


Figure 5: Chances of employment are better after completing the industrial training

6. 80% girls have supported the fact that the place for industrial training should be nearer to the residential area as shown in fig. 6. It is important to note that most of the parents are not ready to send their daughter(s) far away from their homes. Thus by making the arrangement of training centers nearer to the universities or within the universities, chances of well trained engineering girls will be more.

In order to practically implement the issues raised above, these following steps should be taken into account:

1. Engineering colleges should develop a Repair and Maintenance Cell of the serviceable machinery and equipments.
2. Training schedule in all the Engineering colleges should be maintained.
3. Training and Re-training of Faculty in Modern Technologies and sophisticated high tech machinery in the modern industry is required.
4. Faculty exchange programme with industry on short term basis should be organized.

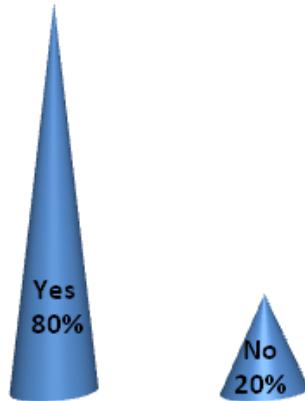


Figure 6: Industrial training should be near to the residential area

Iv. Conclusion

All respondents understand that training is beneficial for students of all discipline. This is because it plays an instrumental role in improving communication and managerial skills, building confidence and getting jobs. It is also concluded that our course curriculum should be reoriented towards practical knowledge and art of doing things. There is a critical need to establish some training centres close to universities or within the universities. This is because 80% students have supported that venue for training should be near to residential areas. This paper also suggests the methodology for increasing significant percentage of practical/workshop which is necessary before deputed on training for girl's students because observations reveal that 94% respondents understand the need.

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