

Bapurao Deshmukh College of Engineering, Sevagram, Maharashtra.

### **1. Title of the Practice:- FREE PROJECT LABORATORY: THE FIRST LAB**

**2. Objectives of the Practice:-** Considering the fact that all the disciplines of engineering are coming closer, it has been decided to establish the facility where the students from all the programs will work together to develop innovative ideas and to get hands on training. Being situated in rural area it was essential to have a facility where the students can do brainstorming, develop concepts, conduct training sessions, organize workshops, etc. In short the very need of industry to get enterprising engineers would be fulfilled.

The best practice came into existence with following objectives

- to facilitate the students to become enterprising
- to inculcate the spirit of creativity
- to develop homogeneous group of enterprising engineers
- to build competitive spirit
- to enhance employability

**3. The Context:-** There is a big gap between the industry and the institute. The curriculum is designed by the University and the system is too rigid to make the timely changes in the curriculum. Industry needs the engineers having acquaintance with the latest developments in technology along with the basics of the engineering. Another aspect is the growing gap between the institutes in the rural area and the institutes in the urban area. Industry prefers urban students over rural affecting the admission scenario in the rural institutes. In spite of having experienced faculty and state of the art infrastructure, the rural institutes are facing the dearth of students. Most of the students are from rural background and have less exposure to the modern world and new technological developments. Absence of quality training institutes in the locality (rural) prevented the students from acquiring additional skills needed for being employable.

Facilities like free project laboratories or technical clubs are very much essential in this context. These facilities provided necessary platforms which are far better than the commercial training institutes in urban area. The college is operating these facilities with all odds and limitations (financial) but with very good and positive responses from the students since ten years. The users are largely benefitted. The present status of all the past beneficiaries and motivation level of today's users speaks volumes of success of the facility and the practice.

**4. The Practice:-** The best practice titled free project laboratory (The Club First) was formally established in year 2006. Now it is titled as The First Lab (TFL). The seeds were sown long back in 1996 when IIT-Bombay started its technical activity TECHFEST.

A group of students and faculty started working together to build the models on robotic applications for participating in Techfest 1996. Those students are now enjoying their successful career as practicing engineers. The activity at that time was part time and the group was working for preparing various models for participating in Techfest like competitions and local technical exhibitions. This continued since 2006 when the club was inaugurated. The facility is unique in its sense. It is entirely run by the students. The lab is accommodated in one of the laboratories of Mechanical Engineering Department.

The institute invested small amount to procure small machines and tool kits to facilitate the students for fabricating the working models and projects.

The lab provided necessary platform to the students of all disciplines to interact with each other and nurture their innovative ideas. It is really a unique platform where the students of computer engineering are building a mechanical system with the help of electronic engineers. The platform provided the opportunities to the engineers of both the genders.

The lab has its own managerial body decided by the students. It includes students from final to first year. A faculty advisor guides them. The lab has a calendar for the entire year. The programs are planned for the students of all years i.e. from first to final. The programs include organizing talks, expert sessions, basic introductory workshop, high end workshops, industry visit, project competition, special sessions for product developments model building for participation in technical competitions and exhibitions at state and national level. All the arrangements from finance to technical resources are managed by the students.

Another unique feature of the lab is to train the trainers. This is excellently handled by the senior students. Since its inception no external agencies have been involved in training activity. This model of best practice gives education to manage the human, material and financial resources.

Many institutes in the region have been benefited through the lab. Even the students group of the lab conducts sessions/ workshops/talks in many local schools. School children have been allowed to interact and participate in various technical activities. The club in the real sense is contributing to the promotion of science and technology among school children, one of the objectives of Rashtriya Avishkar Abhiyan (RAA) undertaken by the Government of India.

As it is statistically proven that @ 70% of the engineering graduates from unaided private institutions are unemployable. It is very much essential to adopt various best practices to improve the skills and inculcate in them the qualities to make employable.

The results of the practice are very encouraging The feedback of the past members and their employees is also encouraging. Most of our members are enjoying upper edge in their professional career. Many have started their own enterprise and generated employment for the fellow members

**5. Evidence of Success:-** Success of the best practices is relative. It is the level of confidence shown by the members while appearing for personal interviews speaks everything. Most of the members of the lab have been well placed in the industries. Few have started their own business. The success of the students cannot be judged by only the record of placement or employment, but how they adopt the industrial culture and how effectively they are performing their duties and contributing in the growth of the industry.

The lab/club which is set and run by self motivated students always gives overwhelming response in all its activities. The club always achieves its targets and sets new targets every year. It may be in the quantity of members, quality of members, participation of the students in the workshops, competitions, etc. The details of all such activities conducted by the members of the club are provided for the kind information.

the list of few alumni of the institutes who were active users of the practices is provided for your reference.

1. Mr. Bhuvanesh Mishra
2. Mr. Anshul Awasthi
3. Mr. Rupesh Borkar
4. Mr. Shreyas Dhone
5. Mr. Dev Narote
6. Mr. Rohit Naikwad
7. Mr. Umesh Patil
8. Mr. Mohit Bajaj
9. Mr. Nitin Kavar
10. Mr. Gaurav Tidke
11. Mr. Mayur Panse

The lab activities always motivated the students to think out of box. It helps them to develop enterprising spirit among themselves. The most significant benefit of the practice we observed is the development of never say die attitude which is most precious for getting success in the life.

**6. Problems Encountered and Resources Required:-** Best practices are always helpful in the overall development of the students. To identify the useful practice is of prime importance. Any additional practice to be implemented needed in the institutes like ours it is always dependant on the various factors like budget, willingness of authorities, etc. Fortunately we have overcome these and started with the activity initially on low scale and with minimum investment. Initially all the facilities available in the different laboratories have been identified and decided to use whenever necessary. It was very tedious to manage. Anyhow within a span of two years the lab got funds from the authorities as well as the lab generated few funds by conducting various workshops and hands on training. Many small machines and kits have been procured through these funds. Human resource was another task. Many likeminded faculty members contributed to train the students in the initial days which ultimately helped in building the technical resource. The most important resource is the motivation of the students and its level is very high.

**7. Notes (Optional):** In spite of many odds the members of the lab brought many laurels to the institute in the form of awards and prizes by participating in various National level events. Many institutes from the University adopted the process and started such types of practices.

## **Best Practice–II**

**1. Title of the Practice:-** Students 'Associations in all the Departments of College.

### **2. Objectives:**

- To improve communication skill, awareness about different types of entrance exams and interview, and to improve skill to qualify in various competitive exams.
- To conduct guest lectures, useful courses, seminars & workshops as per requirement of the industry.
- To organize various activities like programming contest, technical quiz, debate competition, etc. that not only enhance the technical abilities and knowledge among the students, but also build the overall personality skills of the students.
- To organize events like project competition, paper presentations at college and national level etc.
- To motivate about participation in different events held at state, national and international level in other colleges.
- To develop awareness about sports and physical fitness.

### **3. The Context:**

- It is independent platform made available for students of all the departments to participate actively in the activities conducted by students 'associations.
- Every department has its own students 'association
- These associations are managed by the students themselves and supervised by the faculty advisory board.
- In the association students work on the posts such as President, Vice President, Secretary, Joint Secretary, Treasurer, Girls representatives and Executive members. They are selected from among the students by inviting applications from interested students.

### **4. The Practice:**

- Every Year at the beginning of the academic session office bearers of the students association are selected and newly appointed body starts functioning. Also various cells are constituted to manage different activities such as sports, cultural, technical, higher studies etc. The activities are planned for a semester. While making plan different suggestions from student and faculty members are considered in a meeting. For every activity a team is formed including a faculty advisor and students. The team is responsible for conducting the activity. Awards and prizes are given for the winners in various activities. This is a platform where all the students get opportunities to showcase their talents in divorced areas and get chance to improve and acquire various skills such as presentation, anchoring of the program, stage daring, communication, technical and management

#### **5. Evidence of success:**

■ **Students involvement:** Students are actively participating in different activities, it makes a positive improvement in students like personality development, communication skills, management skills, programming skills etc.

■ **Teamwork:** As students and faculty work together, it builds team spirit among students.

#### **6. Problems Encountered and Resources required:**

■ Students are hesitating to take part in activities because of lack of confidence and daring.

■ Feeling burden of academics to participate in activities.

■ To motivate students for participation is challenge.