

# Bridging the gap between Academia and industry for increasing placements of engineering fresh graduates.

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**Abstract**— Consistently more than 15 lakh specialists move on from Indian specialized establishments yet just 20% of this part is really employable. The paper recognizes components of connecting this partition, which is through the Academia elevating multi-disciplinary way to deal with research and learning, and building up a dream structure and techniques (designs) that will draw in the Industry. The Industries teaming up with the Academia are receiving open development procedures to expand access to wellsprings of learning, prompting enthusiasm for coordinated effort with the Academia, which will in the long run get more understudies employable and it will result in the advancement of the nation.

**Keywords**— Academia, multi-disciplinary, MOU.

## I. INTRODUCTION

In the Indian industry it is observed that the course curriculum taught in many of the engineering colleges does not prepare the students to start effectively at the level that the organizations require. As a result the organizations that recruit these fresh graduates spend considerable time, money and other resources to bring their skills to the right level for them to become productive. So industry and academia collaboration is must for the overall development of the youth and the country. Industries demands new and developing skills so that they can compete in demanding global market. Anyway moves on from building establishments are coming in Lacs yet the sizable number of understudies stays jobless because of holes in abilities and desires.

## II. ANALYSIS

Analysis was done from two aspects- 1. Industry, 2 institution (faculties) because to understand the gap between academia and industry. In analysis people from both the fields were interviewed and few common conclusions were drawn.

### 2.1 Industry Analysis

In this type of analysis, TPO of the college (particularly Mechanical department) visited many companies which includes companies where students have either done an internship or they have worked there. Interaction took place between Manager, employees and HR with the help of a questioner. Following common conclusions were drawn.

- Students have lack of confidence, honesty, patience.
- They don't work hard and have bad attitude towards work.
- Basic concepts are not clear.
- Can't even take the readings with the help of Vernier Calliper and Micrometer. ( instruments used to measure length and diameter of components).
- Few softwares are out of the use and advanced softwares are being used in industry but students are trained on those old softwares so they couldn't work on latest softwares.
- Students are not aware of recent trends in manufacturing.
- When there is MNCs ,the common point where students lag is Commutation skills.

### 2.2 Academia Analysis

In this type, faculties who teach final year students and those who are actively involved in Training and Placement committee were interviewed and following points were noted down.

Students have their major academic syllabus on theory part. If in case the subject includes the practical hours then too few faculties don't conduct practical just because students don't show interest due to no practical exam is conducted for the same subject.

Major application based subjects are included in final semester so companies probably come for the interviews in second last semester or at the beginning of the final semester and they are unable to answer in interviews because they are not taught the subjects then.

Every subject included in the engineering academics is equally important but hardly few core subjects have got oral and practical exams so the other subjects are not given importance by students so their basic concepts are vanished.

There are shortage of experimental setups.

- University is reluctant to add advanced softwares in academics for training.
- Few institutes doesn't allow the installation of dedicated labs for particular companies because of huge investments.
- Project based learnings are not included in academics i.e. 70% is for written exams and remaining is for practical.
- Students projects are mostly project based or thesis based not related to industry problems.
- Many industries don't allow students for apprenticeship or training in their vacations between two semesters.
- University by norms don't allow students to join early if she/he got offered.
- Few students are sound in core subjects but are eliminated in Aptitude and group discussion rounds.

Though few students are good at some softwares taught in college but companies ask for Certification for the same from recognized training institutes.

### III. CHALLENGES

The challenges here was taking into consideration the problems which academia and industry have with making a settlement so that it won't disturb the regular work flow of any. Now after analyzing each person (from industry and from academia), meetings were conducted between TPOs (person who connects industry and academia), Industry Experts and Faculties. Both parties were made aware of each other's requirements and they been called on the program on "Industry-Institute interaction" where they were pn panel and students and other faculties were the audience and then program was open for discussion.

### IV. METHODS TO ACHIEVE CHALLENGES

During the discussion in "industry-institute interaction" program, few points were discussed which were agreed upon by both the parties. These points can be taken as methods to bridge the gap between industry and academia.

Syllabus should contain application based subject in Sixth or seventh semester.

- Importance should be given to Industry Experts lecture, Industry Visits, Case studies Presentations so that students are exposed to actual practical conditions.
- Every subjects should have oral exams at least.
- To make practical interesting virtual experiments are to be made which will be of animation type.
- Dedicated labs consisting of particular software which industry uses should be made in each institute.
- MOU should be signed between industries and institutes for internship or training of students every semester gaps.
- Faculties should be hired who have good experience in industry at least for final year students.

University should allow students to join early since initially few months are invested in training of students so when they complete their semester, students are ready to work in company with dedicated responsibility, because first two months in final semester are spend in cultural and sports events in college. In similar way companies should relieve students for their university exams.

Aptitude and soft skill trainings should be provided to all students by professionals.

Students should be influenced to take industry problems as final year projects so that students get good exposure to industry and it increases the probability of students to get placed in that industry.

Companies should accept certificates signed by Institutes if students have good ability to work on that software.

## **V. RESULTS AND DISCUSSION**

Now after the meet both the parties settled down on few points and those were added in MOU. This MOU is signed between institute and industries according to the requirements. Also these points need to be put forth to MUMBAI UNIVERSITY for making changes in curriculum.

## **VI. CONCLUSION**

Development of any nation is decided upon the potential young population of that nation which is responsible for new developments and revolutions. But nations like India we have enough youth for development but many of them are not employable. Blame should be given to both i.e. Institute and Industry. So now it's time to fill the gap between them so that maximum youth would be employable and that will contribute to the development of the nation. Hence this paper puts lights on problems and requirements from each party's (Industry and Institute) point of view. Also few methods to solve the stated problems are discussed and agreed upon by two parties which is a win-win situation for both the parties.

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