# How to bridge the gap between Employability & Employment - A thought

**Dr. S. Sridhar**
Ex. President and Vice Chancellor, Dr. K. N. Modi University, Rajasthan
drssridhar@yahoo.com

1. Hypothesis: Every admitted student is capable

2. Present situation: Normally engineering courses cost about 8 Lakhs for 4 years in private colleges. After finishing the course there is no guarantee of getting good job ! After the course, getting a job with salary 20k pm is also waste , as compared to money spent for the course. Today even science degree or Arts degree students get 20k in many clerical govt jobs or digital online jobs.

3. My thought: First two years the fundamental subjects related to the discipline with outcome based education method, are to be taught. Next two years the students should have the option of selecting only industry oriented skilled courses with hands on experience by Industrial experts under Industry Institutions Interaction basis with placement oriented way. To achieve this, institutions should follow the method of NTU, Singapore, where every Professor is Director in 4 or 5 companies and thereby the students can be easily packed with jobs. Institutions should have more funded Labs by industries, carry out industrial projects in the form of consultancy work and thereby the students are to be associated with projects execution from third year onwards. The computing power in the institutions should be utilised for product developments with research focussed projects useful for society.

4. For higher studies aspiring students, more research focus should be given by doing creative and innovative work from 3rd year onwards under the guidance of a Professor, by publishing papers in Scopus indexed journal or web of science to meet the standard , so that they are ready for PhD programmes further as per their expectation.

5. For entrepreneurs, special focus similarly has to be given through establishing incubation centres, and gradually creating a company with short term and long term goals. This is the need of the hour today!

Conclusion : Admitted student is placed with decent job or packed for higher studies or developed as an entrepreneur through the aforesaid method !

**6. Views of different Stakeholders :**

**Annette Indralal:** **https://www.linkedin.com/in/annette-indralal-a516aa84**

In my opinion, Skill development is very important for every graduating student. If given the industrial exposure, the student will be very clear in choosing their field of interest. Instead of the traditional lab experiments there can be a way to interact with relevant industries and the opportunities that each subject has out in the market. Also faculties should take the initiative and interest to be more than a teacher (mentor, trainer, interactive discussions about the present situation in the industries, career guidance, etc).

**Vineeth A: Executive member at CSD ROBOCON NITK**

But the problem is , after 2 years of studying engineering subjects(in current methods) many BTech students including me are in no position to judge themselves that whether they want to go to higher studies or industry or become an entrepreneur . If such person chose either of them , one would be narrowing down his/her path and may be what if like he /she wanted to persue other as their career . So I guess , college environment in the first two years must be modified and then if govt installs this type of education you have suggested , that would be really great for one's future including the nation's.

**Koushik CV: https://www.linkedin.com/in/koushik-cv-b24297ba**

I swear by OBE and I have been propagating the concept through training hundreds of engineering college faculty! I agree with your approach that OBE is the most effective way to match industry skill requirements with student competencies! It is applicable not only to the engineering and related courses but also to all other instructional activities that involves learning! It is the most effective way to mould students to the precise requirements of the outside world, be it placement, higher studies or entrepreneurship! I suggest that UGC or other designated authority must develop primers/learning resources for engineering faculty and students to refer to and become more conversant with the OBE concept!!

**Suraksha R V:**  [https://www.linkedin.com/in/suraksharv](https://www.linkedin.com/in/suraksharv)

OBE is what exactly we need Sir. I think our focus should be on getting corporate ready. We need to implement everything we learn or else it'll be a waste. For getting ready for employment, we need to do live projects as and when we learn. In the first year of my engineering, we learn subjects that we aren't interested in despite choosing a specific branch. A CS or IS student studying mechanics and other branches' subjects is waste of time. They are basically studying them just to pass that semester. So it's of no use. And hence, I think this system in which we study something not related to our branch isn't productive, I believe. Also, many don't know the importance of internships in the first year itself. So, the college should spend some time, once in a while in creating awareness about this among 1st year students and also guide them in landing internships.

**Siva Kumar:**  [https://www.linkedin.com/in/siva-kumar-62a4a535](https://www.linkedin.com/in/siva-kumar-62a4a535)

To be frank I really wanted to comment on one of your post I saw recently. It was about restructuring the engineering curriculum. I'm an M.Tech student from IIT Kanpur in Aerospace engineering with a specialization in propulsion. It is very difficult to get an admission in IITs, and come out from there with a degree. Still I am unemployed, looking for jobs. And not just me, placements were very less, this year only 3/10 people got place from propulsion. Out of these three 2 are placed in coaching institute. We are coming in iits with big aspirations, and now.. In a nutshell, our educational system needs to rethink about structural change for engineering academics. we are not scientist to learn everything. We are engineers, we build things. Outside india, there is very good tie up between industry and academia where students are part of many industrial projects and by working with them they will gain the experience, where in India the professors are actually selfish, making the students to work for their personal scientific research gains, and to get more paper work published and for their growth. Thank you sir, and have a great day ahead.

**Shivam Nagpal:**  [https://www.linkedin.com/in/shivamnagpal](https://www.linkedin.com/in/shivamnagpal)

I agree with your thoughts on outcome based education. It will help students to figure out their area of interest to work much earlier and they can strengthen their skills. Students will get a gist of work they will be doing in future. It will also help Industries as they will be more confident about hiring students.

**Sanjay Adhikari, Founder at Embedkari, Bengaluru, Karnataka, India**

Great advice Sir . I got one from Aman Goel today with excellent study plan for CSE students [https://embedkari.com/2019/07/30/advice-for-those-cse-students-who-learned-nothing-in-college-but-now-wish-to-work-at-google/](https://embedkari.com/2019/07/30/advice-for-those-cse-students-who-learned-nothing-in-college-but-now-wish-to-work-at-google/)

**Namratha M, Research Scholar at NIT Trichy**

1. Outcome based education main impact would be better quality of placements 2. Projects would help students explore new things 3. Students are exposed to the industry environment and hence it is easier for them to adjust to their work culture 4. Skill set of the student is strengthened further.

**Ramchandra Palakodeti, Sr Consultant at CCiTRACC ; Sr Mentor for Career Development & Sr Life Planner, Hyderabad, Telangana, India**

Its the way to go and we need to address "how industries especially the likeminded and good ones can cope with so many thousands of graduates" how are they going to accommodate so many students ? We have to figure out this to make it practical and feasible

**Venkata Ramana Ratnakaram, Chief Information Technology Officer at Candidbrains, Hyderabad, Telangana, India**

#candidbrains has been established based on the similar strategy. We are providing employment skill training on Information Technology. We are going to hit the market in 2020 to disrupt education, learning and recruitment domains

**Prof.(Dr.) Devendra Pathak,  Vice Chancellor at Om Sterling Global University**

Very practical solution in the contemporary crisis of galloping unemployment. Your suggestions open up two- pronged possibilities of job and self-employment.

**Rajesh Khanna, Professor at Thapar Institute of Engineering and Technology, Patiala, Punjab, India**

Outcome based education plays an important role for student as well for instructor. Instructor can align his teaching and assessment methods easily by using course learning outcomes. As per your hypothesis the program level outcome will help student to choose right path. In all these cases the outcomes should be clearly observable and measureable.

**About the author**

"Best Scholar " awardee by Department of Technical Education, TN Govt on 24th Aug., 2010 by Hon'ble Minister of Higher Education, by appreciating educational and research activities, with a cash prize of Rs.25,000/-& a certificate

- Ph.D (1984) from the School of Computers and Systems, JNU, Delhi, India
- Guided so far 20 PhD scholars and all are awarded degrees
- Published so far 178 research papers in national / international journals / conferences
- Total experience 41 years in Education, Research and Industry. Worked as Vice Chancellor in 3 universities
- Carried out 42 Software and Hardware projects for Sharjah International Airport during the span of 5 years
- 30 R & D projects for ONGC,India during the span of 15 years
- Awarded with research titles like , RMR(USA), RZFM(Germany), RACI(Paris) and reviewer for IEEE journals and other international ones.
- Authored two books on "Distributed DBMS" (ISBN 81-7758-177-5) as a joint author with Ozsu,University of Alberta,Canada, Pearson publications and another book on "Datamining" (ISBN 81-7758-785-4) jointly with Canadian Professor Dunham are released as impression 2006 AND 8 books by Lambert publishers Germany
- Prepared International / National Conference proceedings as Editor in Chair.
- Chaired IT Seminars in California organised by INFORMIX,UK, PARIS, NICE, ACI CONFERENCE, NAU, Dubai, UAE Universities

Awards: Honoured with national and international awards periodically

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### *Related Readings*

**Employment & employability: India's dual challenges:** On February 1, 2018 the government will present one of the most anticipated budgets of its tenure. However, most of the young Indians worry about the employment opportunities in the country. In a top-tier engineering college in the eastern part of India, more than 600 students are worried. They have not found jobs through the campus placement process. Everyone has sent out feelers to the family to explore options through the family network. Several of them do not have the luxury. They have loans to settle. Should they become entrepreneurs? Can Budget 2018 address these concerns adequately? According to the World Bank, over 30% of Indians between the ages of 15 and 29 are NEETs, "not in education, employment or training". In 2016, National Skill Development Corporation trained more than 550,000 workers. Only 12% of these trainees found jobs. How will Budget 2018 address job creation? Full Post at https://abhijitbhaduri.com/2018/01/25/employment-employability/

**Youth in India: Challenges of Employment and Employability:** Using the NSSO Employment and Unemployment Survey Rounds as the basis, this paper examines questions of unemployment, employment and human capital formation among Indian youth belonging to various social and religious groups across different regions since the advent of the economic reforms in the early 1990s. The paper argues for strengthening measures to create decent employment on a large scale and for improving the education and skill levels of youths with a greater focus on those belonging to the marginalised groups of Indian society. Download the paper from http://bit.ly/2m883zp

**National Employability Report Engineers, 2019:** In the fifth Edition of NER, Aspiring Minds finds that the employability of Indian engineers has not changed on aggregate level since 2010 – we call it 'Stubborn Unemployability'. This calls for systemic long term changes in higher education in India. Furthermore, the report compared the skills of Indian engineers with those in other countries and also looked into whether Indian engineers are acquiring new age skills in areas like AI, mobile, cloud and web. In a first, the report looks quantitatively into the reasons for low employability and makes detailed recommendations for change. Summary: Only 3.84% of engineers are employable in software-related jobs at start-ups; Around 3% engineers possess new-age skills in areas such as AI, Machine Learning, Data engineering and Mobile technologies. On an aggregate level, employability in these areas is around 1.5-1.7%; A much higher percentage of Indian engineers (37.7%) cannot write an error-free code, as compared to China (10.35%).; and Only 40% of engineering graduates end up doing an internship and 36% do any projects beyond coursework. http://bit.ly/2kZ9i3V