

# Factors Affecting Unemployment of Engineering Graduates – An Overview

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**ABSTRACT:** *Today the problem of unemployment of engineering graduates has drastically been increasing in India. According to Aspiring Minds National Employability Report, which is based on a study of more than 1, 50,000 engineering students who graduated in 2015 from over 650 colleges, 80% of the them are unemployable. Several accrediting bodies for engineering qualifications have developed outcomes-based education as criteria for evaluating programmes. The employment for the graduates is the ultimate outcome of providing any course / programme for the student's by the educational institutions which lacks at present. This article explores the various factors that contribute to unemployment of engineering graduates.*

**KEY TERMS:** Unemployment, accrediting bodies, outcomes-based education, engineering graduates.

**Introduction:** Education that is provided in the systems of schools, colleges & Universities and other formal Educational institutions that normally constitutes a continuous ladder of full time education generally beginning at the age of 5 to7 and continuing up to 20-25 years of age. In some countries the upper part of this ladder are constituted by organized programmes of joint part time employment and part time participation in regular school and university system which are known as dual systems or equivalent terms.

India is having a unique and progressive educational system of its own and is considered to be the largest educational network in the world at present. The adoption of the common pattern of 10 + 2 + 3 for school and college classes is regarded as an important reform in

the Indian system of education for a longtime and has been accepted in all parts of the country. The number of fresh university graduates has been increased substantially during the last decade due to the high competitiveness in the labor market.

Employability of graduates depends on the development level of a country. Recognition of new skills of graduates might also improve the progress of a country. We have to find out which skills are important for better employability and which stakeholders play a role in the achievement of some skills. The role of formal education to achieve some skills and competences is on the first place.

Currently there is a global tendency that the employability of graduates is used as a benchmark to measure the quality of higher

education, hence the concept gaining an important place in higher education policies and strategies (Teichler, 2009, p. 15, 16). —In general terms, employability is defined as having the skills and abilities to find employment, remain in employment or obtain new employment as, and when, required (Crossman & Clarke, 2010, p. 602).

### **Engineering Education:**

Few years back there was a great craze for engineering education/graduation among the student community. This scenario has been changed and engineering has become the de-facto graduate degree for a large chunk of students today.

Today, unemployment is up, jobs are scarce, and layoffs have become common across the organizations. Engineering education is a process of developing techno human resources, which are to be used later as input to industry which in turn produces goods and services for the societal use. Having considered the current situation of the engineering educational system and the quality of all its individual components it can be noticed that the awareness of the importance of education as a foundation for the growth and development of the country, such as India, is not strong enough. Engineering graduates passing out from educational institutions have to fulfill modern and high standard requirements that are needed by industry.

To examine the link between education and employment, an attempt should be made to study the relationship between the output of the education system with the manpower needs or job opportunities available in the labor market. Several accrediting bodies for engineering qualifications have developed outcomes-based

criteria for evaluating programmes. The ultimate outcome of providing any course/programme for the students by an educational institution is employment which lacks at present.

Graduate employability and unemployment are issues that have given rise to many policy implications for higher education in many developing countries. The employability of graduates depends on individual factors, the labor market and organizational practices. Individual factors refer to the graduate's proactive attitude and behaviors with respect to the desired career opportunities. At the moment there is a huge gap in what is delivered in the name of quality education and whether the outcome is fit and ready to use in the real world of work. To bridge this gap beyond the formal education, graduates should take necessary steps to build their career competency skills through undergoing some value added courses related to their area of specialization.

**Unemployment:** In a context of intensive and global economic competition, many countries are growingly concerned with the consequences of increasing numbers of young people temporarily or permanently prevented from entering the job market and the difficulties faced by college and university graduates to find adequate employment. Educational institutions train millions of youngsters but corporate often complain that they do not get the necessary skill and talent required for a job.

Unemployment is an important issue facing in many developing countries. Country with high unemployment indicates that the country's labor resource is not fully utilized. Theoretically, a country that is not efficiently

utilizing its resources does not achieve its maximum output. Hence, full employment need to be considered as macroeconomic goals if a country wants to maximize its output.

### **Effects of Unemployment:**

When unemployment rates are high and steady, there are negative impacts on the long run economic growth. Unemployment wastes resources, generates redistributive pressures and distortions, increases poverty, limits labor mobility and promotes social unrest and conflict. The effects unemployment can be broken down into three types:

1. Individual: People who are unemployed cannot earn money to meet their financial obligations. Unemployment can lead to homelessness, illness and mental stress. It can also cause underemployment where workers take on jobs that are below their skill level.
2. Social: An economy that has high unemployment is not using all of its resources efficiently, specifically labor. When individuals accept employment below their skill level the economy's efficiency reduces. Workers lose skills which causes a lot of human capital.
3. Socio-political: High unemployment rates can cause civil unrest in a country.

### **Unemployment of Engineering graduates:**

According to (Bhushan 2005), the quality of higher education has deteriorated, but exactly there is no assessment of quality in terms of the employability of the students. The industry today needs graduates to know how to increase the overall turnover of the business and industries which is related to the professional development of the student compared to the present system of academics

and marks orientation. It is not only the business and industries that are suffering due to the lack of professional quality in education or real time education, but also colleges and other educational institutions.

There are nearly 4000 colleges across India. All producing 10 lakh engineers per year but for every single job 300 members are competing. The ratio increases every year due to the previous year unemployed. When supply outstrips demand naturally there will be a surplus of the stock.

### **According to Aspiring Minds National Employability Report,**

which is based on a study of more than 1,50,000 engineering students who graduated in 2015 from over 650 colleges, 80% of the them are unemployable. Interestingly, the report said that unlike popular notion, tier-III cities too produce a share of employable engineers and should not be neglected from a recruitment perspective. "These candidates could also possibly fill the entry-level hiring needs of several IT services companies," it said.

The key findings of the study are as follows:

No significant improvement in employability in the last four years. The employability outcome of Indian engineers sees no massive progress as over 80% engineers continue to be unemployable reveals Aspiring Minds' latest **National Employability Report**. The first large scale study on employability was done in 2011 but there is no significant improvement in the last five years. The report is based on a study of more than 150,000 engineering students from 650+ engineering colleges who have graduated in 2015 across the country.

### **Reasons for unemployment of engineering graduates:**

- Bookish & Mechanical system of engineering education
- Uniform & Rigid syllabus
- No University/Institution – Industry Interface
- Heavy & Overloaded curriculum
- Education system dominated by Examinations
- Un-progressive curriculum and outdated syllabus
- Emphasis on memorizing as opposed to understanding and producing original work of the students
- Availability of too many engineers (Demand supply ratio)
- Lack of practical exposure to industries
- Lack of employability skills expected by corporate
- Attitude issues of Indian engineering graduates
- Lack of higher order thinking and problem solving capacity
- No willingness to learn
- Lack of confidence
- Lack of skills to use modern engineering tools and software's to analyze problems
- Lack of creativity

Now these are not unknown reasons. Every unemployed engineering graduate in the country knows these reasons, as they have affected his/her life directly. Now they're playing catch up.

### **What can be done to overcome the unemployment of engineering graduates?**

#### **Offering value added courses:**

Offering courses that have employment

potential along with the mainstream education will create productive synergy between Universities, Institutions and the corporate world. According to the researcher such a synergy only will work create employment in the near future (Mukhopadhyay & Parhar 2007).

#### **Institution- Industry interface:**

Educational institutions should have constant interactions and maintain good rapport with the corporate in order to know the need an expectation of the labor market. Colleges are now showing deep interest in employability improvement and are adopting the idea of employability assessment from the first year onward to identify gaps and fill them. Over 3500 big or small companies have adopted the use of standardized assessments for hiring irrespective of college tier, location or reputation.

#### **Competency Skill Mapping:**

Graduates and institutions can work to draw skill map, through theoretical and empirical evidence, for alternate careers for engineers such as sales engineer, technical content developer etc.,

**Change in the education system:** The entire concept rounds the whole education-employment ecosystem. The success of this system depends on the collective responsibility of the system's stakeholders -students, teachers, the education system as a whole, the government and lastly the corporate world. The higher education system should put time and efforts towards building market-ready students. In order to enable the fresh engineers to be employed, the education system should give

them the right aptitude and attitude to meet the industry needs.

**Developing soft skills:** Engineering graduates are expected to be employable and ready for the workplace when they complete their studies. It is generally expected that graduates should be equipped with a balance of technical knowledge in addition to the relevant soft skills required in the workplace. This balance is what gives one graduate competitive edge over another. Engineering students are often equipped with technical knowledge, but lack of soft skills leaves them not prepared for the contemporary requirements of workplace.

**Proactive attitude:** Graduate's proactive attitude and behaviors with respect to the desired career opportunities will help them to get right job.

### **Conclusion**

A set of achievements, skills, understandings and personal attributes that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy. The intention of bringing this study in the focus is to try and help professionals to gain edge and develop a sustainable growth pattern for employment through professional and market driven education. Education has no meaning without a job. This is the horrible reality that plagues any country. This is a national sentiment and changing it will take few years. Expecting for the change with the effort of all stakeholders which is crucial for India to continue its growth story and achieve the Prime Minister Narendra Modi's vision of India becoming the human resource provider for the whole world.

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