

# Important Factors - Affecting Fresh Civil Engineering Graduates Job Opportunities

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**Abstract** - The Indian construction industries is the second largest industry in India after agriculture sector it accounts for approximately about ten Percentage of India as gross domestic product (GDP). It makes significant contribution to the national economy and provides employment to large number of people. However, the current situation a large number of civil engineers were unemployed due to various factors. This paper main aim is to find out the reasons for fresh civil engineering graduates unemployment. The results shows that five most important factors. The students are lacking in communication skills, practical knowledge, software skills, self-development and technical knowledge.

**Key Words:** Unemployment, Civil Engineering Education System, Unemployment Factors, Communication Skills, Practical knowledge

## 1. INTRODUCTION

There are mainly three segments in the construction industry like real estate construction, which includes residential and commercial constructions; infrastructures building which includes roads, railways, power, ports, harbor, etc. In addition, industrial construction that consists of oil and gas refineries, pipe lines, textiles etc. Construction industry links with various industries like cement, steel, bricks etc. so it will generate more employment opportunities in India. The Infrastructures sector only consumes 54 percentages of construction activities in India. Then the industrial construction takes 36 percentages of construction activities. Then the other sectors of residential, commercial consume 5 percentages, 5 percentage respectively. This data collected from Royal institution of surveyors (RICS) reported on 2013.

## 2. OBJECTIVE

In overall view, the construction industry will generate more employment in India. The Indian Engineering Education System is the important participator to generate civil engineering graduates employment. In a current scenario

there is large number of civil engineers were unemployed due to various reasons. Therefore, this study main aim is to find out causes of unemployment for fresh civil engineering graduates based on field survey.

## 3. METHODOLOGY

Methodology is the systematic theoretical analysis of the methods applied to a field of study. It comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge. Typically, it encompasses concepts such as paradigm, theoretical model, phases and quantitative or qualitative techniques. A methodology does not set out to provide solutions- it is, therefore, not the same as a method. Instead, a methodology offers the theoretical underpinning for understanding which method, set of methods, or so-called "best practices" can be applied to specific case. This definition was carried out from wiki pedia.

This data's are secondary data's. The field Survey carried out from several engineering colleges selected in various regions like Coimbatore, Thiruchirapalli, Madurai, and Chennai. The engineering education is slightly different from one region to another region. Commonly English language used as a teaching language in India but the local languages like Tamil, Telungu, Kanata, etc., used for communication. Here the first problem is arrived between education and communication.

The Civil engineering students are most commonly used local language for their communication. The field survey is initially conducted on fresh civil engineering graduate and B.E., B.Tech., civil engineering final years students to collect the multiple factors which is affecting fresh civil engineering graduates job recruitment. Three Hundred students were written their own factors for "factors affecting fresh civil engineering graduates jobs recruitment". The field survey is extended to various industrial professionals, academic professors, lectures and HR managers who working in construction industries.

## 4. FACTORS AFFECTING FRESH CIVIL ENGINEERING GRADUATES EMPLOYMENT

There is lot of factors mentioned by construction industry professionals, academic professors, leading academic experts

and HR managers in construction industries. The most common point denoted from all of us is students are lacked in communication skills, students are lacked in practical knowledge, students are lacked in technical knowledge, students are lacked in software skills (like auto cad designing skills, Microsoft office, Primavera, Lean techniques and BIM), but the prime question is who is responsible for this problems? In addition, who had this mistake?

## 5. CONSTRUCTION INDUSTRY VIEW

Tremendous job opportunities are waiting to civil engineering graduates by 2018. These statements reported by industrial heads and professionals, because the Indian government will spend more money in infrastructures and residential developments like smart cities schemes, metro train projects and national highway development projects. Therefore, the need of civil engineers is very high, but the quality of fresh civil engineering graduates is questionable in current education scenario. The Collected factors are separately grouped into three categories like students individual skills, academic institutional factors and construction industry factors

### 5.1 Students Individual Skills

The most common factor is communication skills and practical knowledge. Almost all of industrial professionals told these factors. Communication is very basic and most important individual skill for students, fresh civil engineering graduates and employees who want to lead a successful carrier. Communication leads to everything we do, not only at work, also with family, friends and society. Therefore, many problems arise out of poor communication and the students and graduates are not taught how to communicate properly in his schools, colleges and work places. More than Forty percentages of engineering graduates today are struggling even for basic communication. Then the practical knowledge is also very important to fresh civil engineering carrier. Construction is a very creative field. The construction industries are updated day to day. So the practical knowledge and higher order thinking is essential for civil engineering graduates. Then the other collected factors are listed below,

- Communication skills
- Presentation skills
- Body language of fresh civil engineering graduates
- Key competence (specific task)
- Advanced technologic update
- Less application knowledge
- Minimum approach to industry
- In-plant training and working on project is less than optimum
- Less effort to scale up the required skills to face the industry requirement
- Frequent jumping plan (moving from organization to organization) very soon
- The students are less receiving / accepting power.
- Easily affected by habits

- Less health care
- Poor investment/ saving plans
- Willing to enjoy the social facilities
- No long term approach
- Less knowledge on basic civil engineering parameters
- No pre-preparation to face interview
- The students are less knowledge on latest technologies like Lean, BIM, ERP and PM skills.
- The civil engineering graduates are hesitating to touch the civil materials, structure, tools, and machinery.
- The civil engineering graduates are no readiness to work in field in building/ construction operations.
- The civil engineering graduates are less concentration on leadership skills.
- Lack of basic academic knowledge
- Lack of practical training and exposure
- 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
- Students are choose wrong carrier choice resulting in lack of interest in studies

### 5.2 Institutional Factors

The academic institutions are concentrate only the academic curriculum and academic syllabus. They want to pass out the students without arrears and they were not ready to teach knowledge based education. The tremendous growth of private engineering education institutions, it leads to a competitive business mode with other institutions. Therefore, the colleges are not concentrate practical application training to provide the students said by industrial professionals. The other collected factors are listed below

- Minimum facilities with industry exposure
- Following standard syllabus
- Less collaboration with industries
- Concentrating only on syllabus
- Skill training on co-operation, team work, etc., and management is not educated
- Career path guidance skill to be improved
- Less program on group discussion / confidence development program
- Organize less conference & trainings
- Less interaction with industry experts
- Less program on latest technologies
- Less practical application training

### 5.3 Industrial Factors

The construction company's gives less importance to academic institutional proposals like to invite conference in colleges, guest lectures, and in-plant training proposals. The general thing is industry always expecting trained professionals, because the current financial situation they are not ready to spent money for employees training and development. The small-scale construction industries are mostly affected in the economic recession in the year of 2007-2010.

- Less importance on Institutional proposal
- Expecting trained personnel
- No inbuilt training system to groom fresher
- Confidence level on fresher is very less
- Moderate pay scale
- Adopting of less pay more work concept
- Expecting more than the exposure and knowledge
- No clear career path plan
- Internal politics & procedures
- Adaption and acceptance of fresher is very less
- No personnel manage (People welfare office) to take care persons need and guidance
- More concentration on output than skill development (Need based Vs. Career role)
- Less space for self-employment

### 6. ACADEMIC PROFESSIONALS VIEW

The academic professionals are repeated the above same five factors like students are lacked in practical knowledge, communication skills, technical skills, software and designing skills and application knowledge. In the time of field survey was most of the teaching professionals are not ready to give their opinion or factors about factors affecting fresh civil engineering graduates jobs recruitment and some professionals were told that students are not ready to learn knowledge based education and they are wanted to enjoy the college life. In simply the academic professionals says the students are not eligible to study civil engineering.

### 7. FRESH CIVIL ENGINEERING GRADUATES VIEW

In the current scenario, increasing of engineering colleges is to change engineering education as a business. They are ready to provide free education seats, but not ready to provide valuable knowledge based civil engineering education. Students accepted they are lacked in individual skills but they were do not know how to develop that skill sets, because they were spent more money for engineering education approximately one and half lacks per annum. So the students are cannot able to go outside training institutions for their development of individual skills. The private engineering colleges needs to sale his engineering seats, so they are given more offers and adds like aaddi sale like 100 % placement guarantee, 50 % offer in tuition fees less, 75 % in tuition fees less. The rural students are believe

that offers and they will starts dreamed to get a high salary, so they were entering into engineering colleges but real truth is nobody colleges were given a 100 % placement. Many students were dis continued his engineering education, for the reason is, cannot able to adapt engineering education. Finally the collected factors, "factors affecting fresh civil engineering graduates jobs recruitment" from various civil engineering graduates (BE final year students) are listed below

- Fresh Civil engineering graduates are Lacked in practical knowledge
- Fresh Civil engineering graduates are Lacked in Communication skills
- Fresh Civil engineering graduates are Lacked in software knowledge
- Fresh Civil engineering graduates are Lack of technical knowledge
- The civil engineering Academic curriculum is run's based on only theory
- The fresh civil engineering graduates has poor Application knowledge (where will apply the studied concepts)
- The students are only having theoretical knowledge
- The civil engineering Students are can't able to get site experience at the time of studies
- National language is essential for civil engineers
- Corruption in government sectors
- Poor design of engineering education system and syllabus
- The engineering colleges are concentrating to teach theory; they are not ready to teach knowledge based education and practical knowledge.
- To be need of application oriented civil engineering education system
- Fresh civil engineering graduates expects high salary, so the construction company's take more diploma holders compared to under graduates
- Government jobs is also need more practical knowledge compared to theory
- The sudden increasing of engineering colleges were affect civil engineering graduates job recruitment
- Necessity for well experienced teaching professionals and guide
- The students history of arrear was affect job recruitment
- The construction industries are expects more skilled persons, but they were not ready to provide any training and development schemes for fresh civil engineering graduates in current financial situation
- Influence of recommendations in jobs recruitment
- Need world standard education system, it included our Indian culture
- Internal mark system (some teaching staffs were doing partiality between students due to their community based)

- Most of teaching faculties are Unskilled , they were not ready to update their knowledge in current trends
- Failure of our education system
- The students are needs personality and individual skill development classes
- The government failed to control and ruled the AICTE
- In many colleges concentrating only IT based company's for placement, they were not concentrated on core companies
- The students are un awarded the industry expectations
- The civil engineering students are lacked in experimental studies
- Poor teaching methodology (the students are need interactive classes like power point presentations and videos delivery )
- Less arrival of core companies for placement meet
- Ego between students and staff
- Need entrance exam to filter the unskilled students
- Interview fear
- The academic curriculum is can't take any steps to improve application and designing skills
- We are doing practical labs are also in theoretical manner
- Arrange in plant training (IPT) and in plant Training works (ITW) - monthly
- Students; Less self-motivation and self-development
- The students are choosing his engineering carrier with external factors (like family, friends, high salary, etc.)
- Political interactions in education system
- Students are lacked in aptitude skills
- The students aim is to pass the degree examinations who are not put-on effect to achieve the knowledge
- The engineering colleges were deviate from the vision of knowledge based engineering education
- The students were needed to upgrade new software's in syllabus with current technology
- To provide the "knowledge of engineering" is first duty of professors
- The institutions are not accepted new innovative project ideas
- Reservation system in education
- Un availability of labs
- Less practical classes
- Attitude and personal behavior of students
- Inferior and superior complex between students and staffs
- The engineering syllabus is not updated in modern construction trends
- The employment exchanges are not properly worked in our country
- The engineering education will be going on business mode
- In many students are not eligible to study engineering education

### 3. CONCLUSIONS

From the collected factors, fresh civil engineering graduates (final year students) are mainly lacked in practical knowledge, communication skills, technical knowledge, application knowledge, software and designing skills. From the entry level of fresh civil engineering graduates into their colleges, they were not known about first what is engineering. In addition, what is civil engineering?, Because most of the student came from rural areas and backward classes. So teaching the engineering and personal development skills (like communication, health awareness, soft skills, and stress control programmers) are duties of engineering colleges. However, the colleges concentrate only in theory education, they are wanted to increase the pass percentage of institutions and vacate the student as engineering graduates not as an engineer. The students denotes numerous factors, but all the factors target only one thing that is the academic institutions can't concentrate the rural students education and their individual skills development. The teaching staffs are pushed students, 'to clear the papers', but they are not ready to teach how to understand the subject, they are ready to conduct more exams like first internal, second internal, third internal, first model, second model, etc. The real truth is they want to memories the subjects by students and recalled on exam times. Our engineering education and school education are also suffered by "memorizing the subjects" disease. At the same time the academic professionals says students are not ready to get knowledge and they are want to enjoy the college life. However, finally the fresh civil engineering graduates are suffered to get their job opportunities

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## BIOGRAPHIES



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