



IMPACT OF TRAINING ON THE EMPLOYABILITY OF THE STUDENTS IN A PROFESSIONAL COLLEGE

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ABSTRACT

In an environment of sweeping changes and the currently occurring demand for engineering education, one thing, that remains consistent all the while, is the demand for the top tier engineering colleges in the state. As a result of such heavy demand, the students, who eventually end up in these colleges, are with brilliant academic performances viz., a cut off above 195 out of 200. The performance of such students in the colleges varies depending on their emphasis on understanding the subject like Engineering Mathematics, Engineering Drawing, Engineering Graphics and Basic Science. But, more often than not the GPA, which is a parameter of technical knowledge, increases around the 5th and 6th semesters owing to its vital role that it may play in the placement season. The performance of such students depicts a different picture in the soft skills oriented tests. In one of the top tier engineering colleges, an online test has been conducted to analyse the soft skill level of the students and depending on the results of their test, a short term training programme has been offered to these students. At the end of this training programme, once again a test has been conducted and the results are studied. Thus, this paper aims to correlate the impact of the training programme with the performance of the students and analyse the outcome. Suggestions and recommendations are offered depending upon the outcome.

KEYWORDS: Performance, Placement, Testing and training, softskills.

1. INTRODUCTION

The vibrancy observed in the Indian employment sector is a sign of great relief to many policy makers. The highly dormant nature of this sector in the late 1980's was probably one of the major causes for the economic crisis in the 1990's. This enthusiasm could mainly be attributed to the fast growing employment potentiality of the private firms in the country. The major recruiters of the nation are from the service industries. These industries easily absorb a major part of the qualified work force that is ready to enter in to the working environment every year. In a developing country like India, the employability of graduate students goes a long way in determining the economy of the nation. In such a crucial scenario, the highly pivotal task of getting the skilled candidates into the appropriate career paths is a challenge task for both the recruiters and the colleges apart from the candidates themselves. Many attempts are being made to improve the employability of the graduates every year. But, most of these activities have become futile exercise to say the least. The education system churns out the whopping work force every year for any industry. But, the question of relevance and appropriate skill set are never too far away. Thus, the training of engineering graduates for appropriate skills enhancement increases their employability and it is an immensely important one for the settlement of their life. This paper is an effort in this category to improve the employability of the students by training. It aims to correlate the impact of the training programme with the performance of the students and analyse the outcome.

RELATED WORKS

During the study of engineering graduates conducted by Muchinsky and Hoyt (1973), it was observed that the students with higher academic achievement were rated high on ingenuity and creativity. It is commonly believed that those who achieved greater success in their academics possess greater knowledge and thereby perform more effectively in a professional environment (Ferris, 1982). Campus recruitment drives by companies provide an opportunity for students to demonstrate their skills and abilities, in short their employability (Fell & Kuit, 2003). Many, if not most, young engineers emerge from colleges with fabulous technical talent have little ability in the “soft” skills or even the realization of how important such skills are not there with these talented Students. The soft skills include making decisions, setting priorities, working in teams, running meetings, and negotiating. One can't blame the engineering schools for not covering this ground or equipping them in these areas, they have time just for teaching the latest technology. But when students eventually hit the workplace, they may find their soft skills woefully undeveloped. (CARL SELINGER 2003).

Engineers face a major decision area relating to their careers. They can enter their profession, or they can become a successful professional. In both cases, a strong technical foundation is required. But, to be a truly successful professional, engineers must also develop and use many non-technical skills. Professional engineers use a balance of technical and non-technical skills to achieve their highest level of success. This involves four types of communication: listening, speaking, reading, and writing. (Jim Watson and Charles Alexander, 2005)

Performance in non-academic parts of the syllabus- here 'non-technical' training has been less studied as a predictor (Smith, E. M. 2007). Although number colleges have been providing various kinds of training to enhance the employability of engineering graduates, minimum attempt on the Employability of engineering graduates has been done to identify the components of this training contributes to the success of students in campus recruitment drives.

2. THE BASIC EDUCATION

It is widely reckoned that the craze for engineering education is on the decline in India. Despite such extravagated predictions and criticisms, the top tier colleges in the country still face a huge demand for seats. The college under study is a definite member in the list of elite colleges in the country. As a result of such stiff competition, the students, who eventually end up in such colleges, are those with extraordinary academic backgrounds. They are also well backed up by high scores in their respective board exams and entrance exams. Hence, the basic understanding or the primary knowledge level or interest level of these students is usually pretty high.

3. THE TECHNICAL KNOWLEDGE

The academically better performing students enter the engineering arena with loads and loads of hopes and dreams. The technical knowledge that a student gains through the collegiate academic setup is ably measured in terms of Grade Point Average (GPA). The controversy around the soundness of such a numeric analysis of a person's knowledge can never be out of question. But for the sake of comparison, the Grade Point Average has been used as the only measure of technical knowledge in this paper. The GPA of these students varies across the different semesters depending on various direct and indirect factors like **distraction from studies, not able to correlate theory with application and peer pressure**. But as a large scale, the GPA of the students in the first semester is fairly high. With the meantime, the distraction level of the students increase and it leads to less satisfactory academic performances and GPA's.

3.1 The Placement pressure

The reason behind the huge popularity that the engineering field gained in a very short span of time is its ability to employ large number of skilled labour force. In a developing nation, the paradigm shift occurs mostly in the middle class. The engineering education alters the life of such middle class people. Across India,

Engineering education is the key to escape the “Middle class” tagline. The economic importance of the engineering sector and its employment can thus be realised. Hence, the amount of pressure that is placed on such students and colleges is high in view of placement.

3.2 The employer side of the coin

As the students get through all these stages of their pre occupational phase, the industries, where these students are deemed to work, are constantly changing and updating themselves with newer technologies and methodologies every hour. This is where the distance between the knowledge part of the student and the requirement part of the industry faces a mismatch. The core of the syllabus is sufficiently informative to provide the basic knowledge to the students, though it is not sufficient enough to keep the students updated of the ever expanding technologies. Thus, an employer typically tries to hire a candidate who can learn the newer technologies and adapt quickly to such advancements. An easier way to identify such candidates is to measure and analyse their level of soft skills.

4. PARTICIPANTS AND THE FIRST TEST

As mentioned above, the following analysis has been carried out in the Thiagarajar College of Engineering, Madurai, one of the top tier colleges of the nation in southern region. The participants of the study include 1095 students from the college consisting of under graduates and post graduates from Mechanical, Civil, Electrical, Electronic, Computer science and Information Technology branches during the year 2016. The students have been subjected to an online adaptive employability test. The test has evaluated the abilities of the candidates in the soft skills, problem solving and verbal skills disciplines and is discussed below elaborately.

Table 1

Modules Attempted	Students Eligible for Placement Before Training (Based on College Score Vs National Average Score)
English	493
Quantitative Ability	263
Logical Ability	482

4.1 Soft skills

On a broad outset, these can be viewed as the interpersonal and intrapersonal skills that any person would need to possess in order to strive in a company's social hierarchy. In a deeper sense, it also includes emotional intelligence, communication, leadership ability, etiquette, teamwork, conflict resolution, decision making, self-motivation, self-discipline and persuasion innovation, motivation, commitment and passion. Such relatively vague concepts are being tested under the banner of “Soft Skills”. These skills are at the core of employability determinants. Hence, training of the candidates in this region is of paramount importance.

4.2. Problem Solving Skills

The software industry mainly requires a huge pool of workforce with great problem solving skills. These skills are required for every engineer aspiring to enter into the software industry. The quantitative aptitude of the participant is a major criterion that could easily make a person employable irrespective of the department to which he belongs. As result, this skill is intensely tested by most of the recruiters and recruiting firms.

4.3. Verbal skill

It is always said that a work gets done in an organisation 20 per cent by technical knowledge and 80 per cent by communication. The vital role that the communication plays in any organisation is not a hidden

secret. It is also quite natural for the recruiters to look for people with very good communication skills. Moreover, the essence of any work is also conveyed by written communication viz., email throughout the organisation. For this reason, the staff members working in the software industries and other industries too are trained well in written communication.

The verbal ability of the candidates is generally tested by multiple choice questions. The occupation doesn't require the candidates to be verbose where as it expects the prescribed information to be conveyed effectively and elegantly. Hence, the basic grammatical knowledge of the candidates is put to test in this part along with certain other skills like sentence correction, reading, analogy, comprehension and vocabulary.

5. TRAINING

Training is of growing importance to companies and institutions seeking to gain an advantage among competitors. There is a significant debate among the professionals and scholars about the effect that the training has on both the trainees and organizational goals. But, most of the professionals agree that training is a complex human resource practice that can significantly impact the employability of the students.

The training industry as a whole has shown significant growth through the years. Statistics indicates that investment in training is continuously growing as more and more organisations realize its importance. In 1995, \$7.7 billion was spent on the wages and salaries of in-house company trainers and \$2.8 billion was spent on tuition reimbursement (Frazis, Gittleman, Horrigan, Joyce, 1998). The American Society for Training and Development found that in 2004, the average annual training expenditure per candidate was \$955, which has increased to \$135 per candidate from the previous year. As the investment in various training programmes continues to rise, it becomes even more imperative for students to understand the impact that the training has on their employability.

5. Training process

After the completion of the first test, the results of the tests have been obtained and the various areas in which the students have struggled to perform have been identified. Depending upon the information obtained, the training for the students has been designed and scheduled.

The training process has been conducted over an 18 hour period split up in three days period covering all the basic and essential topics under various categories like aptitude, verbal and logical. The training has been conducted in a scientifically tried and tested method with the assistance of trained professionals.

The students have been given handouts containing important tips and guidelines to improve their performances. These materials have been prepared with scientific methodologies and also by considering the various skills tested by the companies in the recruitment processes.

6. THE SECOND TEST

The training process has been followed up with another online adaptive test which lasted for the same duration of time as the first one. The participants of this test are the same as that of the first test.

Table 2.....

Modules Attempted	Students Eligible for Placement After Training (Based on College Score vs National Average Score)
English	581
Quantitative Ability	428
Logical Ability	625

7. ANALYSIS OF RESULTS

The performances of the students in the two tests are compared. The results for the overall college have been obtained and the various nuances and findings from the report are studied in detail. The finding reveals that the students from various branches have performed better in the second test compared to the first test. The aptitude percentile of the students has generally been improved by 6 to 10 per cent and in some cases, it has gone up by 20 per cent.

Modules Attempted	Students Eligible for Placement After Training	Students Eligible for Placement Before Training	Increase in Students Count with Minimum of 18 Hours Training
English	581	493	88
Quantitative Ability	428	263	165
Logical Ability	625	482	143

8. FINDINGS

The students with good academic background, who have entered the engineering colleges, have obtained sufficient technical knowledge as suggested by their GPAs, the numerical parameter of technical knowledge. Their employability with respect to soft skill knowledge is not meeting the expectations in the first test. When an appropriate training programme has been provided to these students, their inherent potentials in terms of their soft skills are unleashed. In some cases, they have been exposed to newer avenues to learn and expand their soft skill and knowledge. Hence, their performances in the test that succeeded the training programme have shown more satisfactory results and improved their positions in the employability indexing.

9. CONCLUSIONS AND SUGGESTIONS

This paper had put forward the importance of the training programme in improving the employability of the students in the under graduate engineering programmes through the analysis made. It was found a moderate improvement in the skills of the students for the employability after the training programme comparing their score before the training programme. The gain resulting from the training programmes and continues training and practice will allow over all development among the students and further enhancement in their abilities. Further, when the nation is pushing forward the theme of "Skilled India" programme, this paper essentially provides an effective and essential solution to the problem of improving skilled labour force. Hence, it has been recommended to provide ample and appropriate training programmes for the graduates to be employable in the service sector industries, software industries and also in the other industries which require a particular skill.

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