

Quality of Engineering Education in India: Opinion

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Abstract

Since the inception of Vedic civilisation (1500 B.C.-500 B.C.), education has always been given great importance in Indian society. In the past, Indian universities at Taxila in Nalanda had great reputation in the world and attracted students from all over. Unfortunately with the passage of time the Indian education system has been greatly diluted and consequently its reputation has also been affected. However, post-independence engineering and medical professions have emerged as promising fields for the youngsters in terms of their bright future. Despite the fact that post-independence Indian government has made significant attempts to improve the quality of the education in the institutes of national repute (IIT, NIT, IIM & AIIMS), these institutes seem to be lacking the glamour of the ancient Indian universities. The author has dispassionately reflected on all such matters that have led to degeneration of standards and consequently affected the reputation of all such institutions in India.

Introduction

Engineering is emerging as the field of education among the young Indian kids to pursue as a promising career. After independence, a lot of investment has been made by public and private sectors in the field of technical education to increase the number of engineering graduate. As an emerging economy of the world, India needs number of quality engineers every year. To meet the increasing demand of engineers, public and private universities are emerging all over India. Despite the mushroom growth of technical universities, industries are still dependent on premier technical institutes such as IIT and NIT for getting quality engineers. In of view of that, the author has made attempts to discuss the causes of dilution of the quality of technical education in premier engineering institutes in India, and being the part of the system, has attempted to compile the possible reasons for the dilution of the brand IIT.

1. Discussion

Premier engineering institutes are once again in the focus, after failing short from featuring in the list of top 200 universities released by Q S world university rankings 2015 (1).Only, Indian institute of Science, Bangalore (147) and Indian Institute of Technology, Delhi (179) featured in the top 200 rankings.

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1.1 Role of coaching institutes

Cracking joint entrance examination (JEE) is always considered as a proof of intelligence and a matter of pride among the parents as well as students. To take advantage of this situation, coaching institutes for IIT-JEE entrance examinations have emerged in most of the metro cities in India. Aim of these coaching institutes is to get more number of students registered and get as many students as possible among the list of successful candidates for JEE. Now, these institutes have range of courses for which students starting from class 9th and onwards are attracted to compete for JEE. Parents are willingly paying hefty fees to these coaching institutes just to ensure the chances of their kids to crack JEE exam. Due to the increase in the number of students appearing each year for JEE, the nature of question paper has been changed from subjective to objective. This transition of pattern of examination, helps coaching institutes a lot in training their students. Instead of improving the depth of knowledge and grasp over the concepts of science, these coaching institutes prefer to train their students in learning the shortcuts to crack JEE.

The overall impact of the coaching institutes and their strategy is that students with low calibre are also getting admissions in IITs. The issue of coaching institutes has also been raised by the co-founder and Infosys chairman emeritus N R Narayana Murthy (2). Recently in 2015, IIT Roorkee earlier expelled and later on took back its decision on 72 students (3). The expulsion of students from IIT Roorkee was associated with the below par academic performance of the students. Hence, probably the students trained from coaching institutes lack the depth of knowledge and also don't have any grasp over the basic concepts, which make it difficult for them to cop-up with the increased level of toughness of courses in the field.

1.1 Setting up of new IITs

Setting up of new IITs have reduced the selectivity term associated with the students of IITs. Now, every year IITs have an intake of around 9000 undergraduate students which can also be considered as a reason relating the dilution of the brand IIT. Most of the new IITs are coming up in small cities, which make it difficult for the management to attract top faculty from the world.

1.2 Quality of faculty

Quality of the faculty is another parameter on which the performance of these IITs can be judged. Despite the fact that elite club of IITs (Delhi, Madras, Bombay, Kanpur, Roorkee & Kharagpur) are getting quality faculty with international exposure, but still the other IITs are dependent on Ph.D. students graduating from Indian universities with negligible amount of international research exposure.

1.2 Quality of graduate students

Research performed by graduate students at any institute in the world depends on two factors, first the idea and depth of knowledge of the supervisor and secondly on the hard work and knowledge of the graduate student to handle that problem. In India the top students from the premier engineering institutes (IIT & NIT) either moves to foreign universities for higher education or prefer MBA over research. Most of the doctoral students registering with IITs are either from private engineering colleges or from low ranked state engineering colleges.

Due to the brain drain, getting quality doctoral student in IITs is still a challenging task, which hampers the quality of the research as well. In order to attract best doctoral students in IITs, government has also increased the stipend. The increased stipend is still well below the payment received by a doctoral student in North American universities and is also insufficient to meet their necessary academic needs.

2. Concluding remarks

As a consequence of all the facts indicated here above, brand value of IITs is diluting with time. Many more reasons can be cited behind the diminishing of quality of research and students registering with IITs than what I have reflected. Unless more strict norms for the recruitment of faculty are observed, a reasonable increase of money in the stipend for graduate students is made and a reasonable raise in the infrastructure of IITs could be done, not much improvement in the overall ranking of IITs could be possible from my point of view.

References

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