

Globalisation and Engineering Education: An Indian Perspective

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Advances in information technology, communication speeds and travel conveniences have shortened distances and turned the world into a global village. Globalisation refers to the new world order, which is the cornerstone of the GATT and WTO regimes. The current era is known as that of the “Knowledge Economy”, where knowledge generated is shared globally and can be used for the benefit of society in general. In this scenario, the role of engineering education is central and will only increase in importance in the future. All these have a direct impact on engineering education in India, as the pedagogy paradigm has shifted significantly.

To understand the Indian perspective, it is essential to understand the evolution of engineering education in this country. In the middle of the nineteenth century, a few engineering colleges were set up in various regions of this vast country, essentially to provide engineers for projects in those regions. After Independence, our first Prime Minister, Pandit Jawahar Lal Nehru, envisioned that to ensure that India becomes an industrial nation with its rightful place in the new world order, it was essential to set up national institutions of engineering excellence in the country, to impart a high quality education, and develop man power and the leaders and innovators of tomorrow for the new India. Thus grew the now world-famous Indian Institutes of Technology, which have not only realised Pandit Nehru’s dream, but much more. Of course, many more engineering colleges have been established after Independence. Unfortunately, these engineering colleges have belied the expectations of the nation, due to various reasons. The current situation in India is, therefore, that there are seven IITs that have maintained and indeed augmented their quality of education and research, and then a vast gap in quality. Thus, when we talk about globalisation of engineering education in an Indian context, it is essentially about the IITs and a few other institutions that have started the process of improving their quality of education and bring them up to global standards, with some help from the IITs in their region.

For any academic institution, which aspires to be globally recognised, it is essential that the curriculum must make students aware of knowledge being transmitted in other institutions around the world, must enable students to adjust to international jobs, and maintain a very high, globally benchmarked, academic quality. It also requires a synergistic relationship with global industry. Furthermore, in the realm of globalisation, it is imperative that they have an ambience where innovation and creativity flourish, which leads to generation of intellectual property and development of business incubators, innovation centres and technology parks around the institution. The IITs are addressing all these issues by recruiting more high quality faculty, attracting a greater number of high quality research students from India and abroad, and interacting in focused areas with international universities and industry. We are also establishing joint degree and distance education programs with international universities in other countries. These, in brief, are our efforts to bring India to the forefront of global engineering education.