

QUALITY ISSUES AT MANY COLLEGES LOWER DOWN THE ORDER

Employability of Engineers a Concern: IIT Heads

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Mumbai | New Delhi: What do the heads of the country's top tech institutes think about the debate around employability of Indian engineering graduates, an issue that rears its head every now and then?

There is indeed a real concern about employability because of the large number of engineering graduates that India produces every year; outdated curriculum, poor teaching infrastructure and shortage of good faculty, particularly in institutes lower down the order, said IIT directors that ET spoke to. But they termed numbers thrown up by some surveys—a recent one said as much as 95% of engineering graduates were unfit for programming jobs—as exaggerated.

"The country is producing as many as 10 lakh engineers a year. There needs to be a serious review," said Indranil Manna, director at IIT-Kanpur. "Do we really need so many engineers? Are there that many jobs?"

The onus of bringing out quality engineers lies not on the students, most of who come into the system with the intention to learn, but on

the institutes, he said. "We need good teachers, good labs and infrastructure. That is not available in a majority of the institutes beyond a few at the top... Blame the system which has allowed so many institutes of questionable quality to mushroom."

V Ramgopal Rao, director of IIT-Delhi, agreed that there was an overproduction of engineers, which needed to be addressed. But saying an overwhelming majority of them is unemployable is an exaggeration, he said.

"Our job is to produce graduates who are broadbased and who can be trained for a given job. Not to be so narrowly focused that they can only do one kind of job. We must strengthen our ITI and polytechnic diploma education by incorporating a significant hands-on training component," Rao suggested.

Even today, a large chunk of Indian parents keep pushing their children to gravitate towards engineering. A handful of high-performers from top IITs do get eye-popping salaries, but it isn't thunky-dory for most fresh graduates from institutes not in the top few. Many end up doing jobs that are unrelated to engineering.

A few years ago, a McKinsey report said just a quarter of engine-

A Problem of Plenty



ers in India were employable. Of late, some other studies put it less than 20%. More recently, a survey by employability assessment firm Aspiring Minds said 95% of Indian engineers can't code.

"There is no doubt that this (debate over employability) is not applicable to IITs, NITs, some notable CFTIs such as the IIITs, IIEST, IIIT, etc. Some leading state universities including Jadavpur University and Anna University colleges are

imparting very high-quality education as are private institutes such as BITS, VIT, Amity and SRM, among others," said Gautam Biswas, director at IIT-Guwahati. But there are concerns about some colleges and institutes that are unable to raise the standard, he added.

The main problems, said Biswas, were inappropriate curriculum, poor syllabi, inadequate laboratory infrastructure and a shortage of quality human resources for tea-

ching. Attention should be focused on all these areas while institutes without adequate teaching support may seek help from industry experts through special seminar or lectures, he suggested.

"Even in IITs, soft skills are to be enhanced. The programming skill, knowledge on Big Data analytics and Internet of Things are to be introduced at second-year level for all branches," Biswas added.

No student is ready to immediately join industry straight off campus, said IIT-Bombay director Devang Khakhar. People need to go through training programmes, and often soft skills including English speaking can be picked up on the job.

On the surveys on employability, he said the findings needed to be taken with a pinch of salt. "If the situation was that dire, so many IT companies wouldn't be recruiting in such large numbers."

IIT-Kanpur alumnus Vipin Agarwal, a co-founder of OnlineTyari, called academic training given at universities as largely theoretical and dated which doesn't offer relevant job-necessary skills to the students. "While the AICTE and IIT systems have ensured that the students do complete 'industrial training' as a prerequisite to complete

their university studies, a more holistic cultural and mindset change is required in society," he added.

Narayanan Ramaswamy, partner and head of education and skill development at KPMG in India, said that the engineer employability debate needed to be looked at from a macro perspective. The real problem is whether what is being taught is correlating to current industry requirements, he said.

"Don't attack the students. You're barking up the wrong tree then," he said. "Academia has been myopic. But industry isn't taking the effort either to tell academia how things have changed and what they now want."

He cited the examples of economies such as Germany, Singapore and Australia, which have two qualities of higher education: one that creates people relevant for industry and the other that is more scholarly and research-oriented.

"In India, there isn't enough engagement with industry, whereas the need of the hour is more universities aligned to the requirements of industry. Why can't industry adopt universities and work with them, and offer internships? A little investment goes a long way," he said.