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Indian biotech sector lacks industry-ready students

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Indian biotech sector lacks industry ready students



The human resources constitute one of the most important assets of any nation since they represent potentiality and creativity and determine how efficiently the other resources are utilized. At the same time, aspirations are surely driven by job opportunities and this is kept in mind by every student while joining any course. In case of biotechnology, the experts believe that in today's scenario, the more higher the research you pursue in the field, the more refined and experienced you become. For a good career in biotechnology, it seems that one has to go for higher research (PhD and post-doctoral research). Few bright students from top universities have found out the stagnant nature of the job in the companies and the very limited opportunities for them to do something innovative in the research.

Giving the example of his state, Mr ISN Prasad, secretary, ITBT, government of Karnataka, mentions that it had the kind of ecosystem that was required for students and research to thrive from the very beginning. "The BT finishing schools are just an experiment and we look forward to scaling it up. We constituted a group from academia and industry. 12 colleges were selected randomly and the funding amount was Rs1 crore from government and Rs3 crore from institute. Online application test was conducted for all the students across the country."

As per Mr PS Sundaram, chairman, TCIL Chennai, the private institutes were allowed only after 1977, when the education system was opening up. These institutes are very crucial for the curriculum development and experimentation because of the adundant funding and resources. "Apart from that, I think regular courses have to be upgraded at regular intervals even in private institutes," he added.

Quoting the global talent index that provided insights about the trends in 60 countries across globe, the following six indicators such as quality of education system, proximity to attract talent, talent status every four years, university, and quality labour, Mr Srinivas Maddali, partner, Heidrick & Struggles said, "India is taking slow and steady efforts in rectifying its policies and thats a good thing. Infact, it is against our perception of being better off globally, we were surprisingly ranked at 35 as compared to 38th in the ranking in 2007."

However, there are many in the industry like Mr Vijayaraghavan Pisharody, GM, HR and Shared Services, Stempeutics,Â who believe that while projections are made for 1 million jobs, the ground situation remains different. "It is high time we sbmit a renewed blueprint for education refroms to human resources ministry," says Mr Pisharody.

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Dr PM Murali, president, Association of Biotechnology Led Enterprises and managing director, Evolva Biotech has a different opinion. He says that there is no need to worry about the numbers and more particularly about jobs and growth. "These are part of our vision to grow with time. Key struggle is to find out the avenues of employability," he added.

Will specialized courses really help?

Generally the universities are considered only as education centers and the research institutes as centers for strategic or applied research. Therefore, the universities have not been given that much attention in terms of fundings and support. They lack the adequate resources, effective leadership, good governance and adequate management. In comparison to this, the research institutes have been able to attract good faculty due to greater resourcefulness and adequate funding.

According to Dr Virendra S Chauhan, director, International Center for Genetic Engineering and Biotechnology, sufficient jobs are not available. Even if we say that on an average 40-60 skilled students are produced every year, still they do not find the right kind of jobs. "The skills of most of the other biotech graduates produced by a large number of institutions in the country do not match the needs of industry. Although there is a huge number of students who come out with degrees every year, it is but unfortunate that they lack the technical know-how required by the industry," remarked Dr Chauhan.

Dr GN Qazi, vice chancellor, Jamia Hamdard University seems to be agreeing with Dr Chauhan in his assesment. "It is astonishing to see sometimes that the students don't even know how to make lab solutions to do practicals. In this situation how can we expect them to be absorbed by the industry that expects them to be highly skilled workers. Therefore the education system here definitely requires certain changes and the creation of specialized courses that imparts training to students is one of the solution," says Dr Qazi.

Mr Pisharody of Stempeutics,Â feels that investing in the school level talent is more important. He adds further, "The students and faculty education along with tailor-made courses is the need of the hour."

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More entrepreneurs means expanded industry

Most of the students who joined biotech stream acknowledge that as biology students they had to face a lot of peer pressure for moving into this field owing to the comparison on employment with IT industry. A good number of department heads at both public and private universities believe that the industry has not grown to the extent to which it was expected. The opinion of these experts is that it is highly impossible to absorb everybody among the large number of students produced every year. Therefore, promoting entrepreneurship will lead to both creation of more opportunities as well as expansion of the industry. And it is a fact that only a suitable academic environment can prepare the students with an entrepreneurial frame of mind.

According to a Delhi based education consultant, "There has been a huge increase in the number of students opting for this subject every year. But now with lot of graduates not finding the expected jobs, I get lot many calls on the future of these students. I hope this doesn't lead to disappointment."

Says Mr Pisharody, GM, HR and shared services, Stempeutics, "For the industry, students with right skills are very important. It is also a fact that the demand for skilled manpower is still there and the doctorates and post-doctorates in biotechnology are more preferred for the skilled work. Therefore the development of right skills is more important at the post-graduate level. That will fill the gap between the requirement for quality manpower and existing supply of quality students to the industry. The industry generally expects the manpower to be trained and often that is not adequately done at the teaching level."

Place of study shapes the aptitude

As one of the experts pointed out that the mushrooming of institutes without basic facilities has created chaos. "These small time private institutes lack experienced teachers to teach even the basic biology. Therefore, it is wrong to have expectations from the graduates who are not taught properly and even wrong to consider them biotechnologists as they lack the required skills," she added.

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Few experts believe that there is a huge difference in the way the private and the public institutes work. According to the Dr Sukh Mahindra Singh, head, School of Biotechnology, Banaras Hindu University, there is a difference of thinking among students who get into private and public schools because of the examination they go through and the kind of exposure they get. Says Dr Singh, "The parameters for public university should be different from the private universities. Since the students here prefer higher research as more interesting than the industry jobs, it should not be interpreted that the students here don't get placed. The placements in biotech industry may be a point of case for private players, but not the public institutes."

With the industry is exploring more options in global drug discovery programs and large scale manufacturing, the dearth of skills and excellence becomes even more apparent. Hence the immediate need is the joint effort by the private and public education stakeholders to work with the biotech industry in developing a roadmap to produce skilled workforce.