

## Harnessing the potential of technological youth

Twelve years ago, I shared my wish list of information technology applications in a conference on computers, information science and electronics. From 2002-2009, I could do nothing about a particular wish. The idea was to pool the engineering projects pursued by students all over the country so that no student would do what has been done before. This will help in promoting originality and lateral learning among technology students. In some cases, ideas brought to a particular level of development in one institution may be taken to the next level in another institution akin to the *kho-kho* game or relay race. I also wished that students take up their final year projects based on the real life problems of a small entrepreneur or the informal sector or grassroots innovator. I always believed that every time a person solves a real life problem, she not only becomes a better professional but also a better human being. However, all these wishes remained like a pipe dream until 2009.

A young student came to invite me for a lecture at SVNIT, Surat. In half jest, I said that I was a Shylock. I wanted my pound of flesh, i.e., my fees. He asked me what would he have to do to get me to his campus. I asked him to put 5000 student projects together. Within 15 days, he did that and of course, then I had to go for a lecture. He asked what next. And I said, may be pool 10000, or 20000 more projects. Before I could realise the enormity of complexity involved in pooling projects from all over the country, he had already pooled about 100,000 projects in eight months. The rest is history. That young student now leads this initiative [www.techpedia.in](http://www.techpedia.in) at SRISTI. It has more than 190,000 titles and abstracts of engineering projects pursued by about 600,000 students from more than 600 institutions. Over the last four years, several experiments are being pursued in collaboration with Technological Universities in Gujarat, Punjab, Karnataka, Odisha, and now Telangana. An ecosystem has evolved in Gujarat, thanks to Gujarat Technical University (GTU), where during the summer, young students try to identify the problems of small enterprises for which they get credit. And if they decided to pursue final year project on the same problem, they further get academic credit for it. A link between students from academia and the industry has been forged. Later, SRISTI announced Gandhian Young Technological Innovation Award [GYTI] given every year by Dr. R A Mashelkar, Padma Vibhushan and one of the most decorated scientists in the country. He is also the Chairperson of National Innovation Foundation (NIF).

The awards represent three categories of recognition viz., MLM, i.e., More from Less for Many (frugal engineering solutions), Social Applications, and the Technology on the Cutting-edge. Hundreds of faculty members and senior technology executives from top institutions in the country and abroad help in reviewing the entries and selection of the awardees. For more than six decades, India never cared for the academic output of young technology students. Many of these projects can be very helpful for small enterprises. In some cases, by looking at the projects, the companies can decide which faculty guide to consult for a particular kind of problem. A market for merit thus emerges. Slowly the linkages with the informal sector are also being forged. Maybe, once the young minds engage with the unmet social needs in a resolute manner, the persistent social and institutional inertia may be overcome.

There is a tremendous desire among the academic community to cooperate and support any effort, which may create common or public goods. Today, India is the only country where such a massive mapping of the mind of technology youth has been done. In an otherwise youthful country, how can problems be solved without engaging with the youth?

Many other countries such as Perú, Germany, France are also showing interest in this model. It is possible to create a collaborative platform where the students from around the world take up unsolved social, ecological or industrial problems and try to solve them openly. But this will require a huge cooperation across borders, not just geographical but also mental ones!

I earnestly hope that more and more technological universities will take lead to encourage their students to benefit from collaborative learning and sharing of their projects to promote more originality, relevance and accountability. Punjab Technical University has made it compulsory for every student to upload her project on the portal before he/she gets the degree. It may not be impossible but it will be certainly difficult for students to do a trivial project henceforth. A precious life will find a unique purpose, hopefully, thus.



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