

## Group of altruistic people needed to fill the education gap

The need for highly qualified people in science and technology (S&T) is increasing by the day, but academic institutions are unable to produce them in the numbers needed. Professionally, it is no longer feasible to remain gainfully, let alone gracefully, employed unless one continuously anticipates and acquires skills that would be relevant in the future. Anticipation is the difficult part in this game. The need for the public to understand science has never been greater.

We live in a world where scientific theories are no longer dictated by religious leaders or political ideologies. This is a great blessing. Pursuit and sharing of knowledge has become so much easier. The increasing sophistication of a globalized economy, highly dependent on S&T, implies that the most important means of staying employable is an education rooted in science. We have discovered that an enquiring mind is an amazing mind. This is what separates humans from the rest of the animal kingdom. Our ability to reason, compute and take risk in the face of uncertainty is what advances civilization. While the arts satisfy our emotional needs, it is science which satisfies our rational intellectual needs, and technology which augments the means needed for our survival.

Thus there is a need to establish opportunities that would help people anticipate and acquire scientific and technical knowledge, preferably at their own pace

and outside of formal classroom sessions. Modern communications and computing technologies have now made that possible. We can now educate and mentor people irrespective of their geographical location. The cheap cost of moving information electronically has further reduced the cost of learning. In addition, there are real experts who are willing to share their knowledge and time gratis to educate others. It is this group of altruistic people (GAP) whose expertise needs to be tapped in an organized way. Their generosity can form a core strength of the country's education programme.

Since the late 19th century, the value of scientific knowledge and technological innovation and the fact that they feed on each other have gained widespread recognition. In recent decades, the pivotal role university-industry collaborative R&D has begun to play in advanced economies has been widely recognized. Indeed, governments of advanced economies have already included in their economic and foreign policies, measures that would attract specialists in S&T from around the world to their respective countries. In addition, they are re-examining their intellectual property (IP) laws, with special emphasis on copyright and patent laws, so that the IP openness cherished by academics and the IP protection required by industries are blended to suit the requirements of a global economy. In fact, for university-industry

collaborative R&D to deliver, academics can no longer afford to be ignorant of IP laws. The country's IP infrastructure needs to be bolstered several fold and the IP culture spread far and wide throughout the country.

GAP's focus should be the student group seeking a university-level education. It is their knowledge needs that GAP must partially fulfil through its various programmes of publications, mentoring and public events. It can make a beginning by covering physics, chemistry, mathematics, molecular biology, nonlinear dynamics, mathematical modelling, computer programming, and intellectual property rights. As their model, experts willing to share their knowledge can draw inspiration from the 20th century group of mathematicians known by the pseudonym Nicolas Bourbaki. This will be a challenging task to which many retired professors and researchers can devote their time to and help knowledge seekers regain their childhood sense of wonder and child-like curiosity, and along with it, the deep satisfaction that comes from gaining insights about nature.

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## Is resorting to 'lowest quote' a saner practice?

We need to debate whether the practice of choosing the lowest quote for purchase of different items in India often compromising on the quality, is a dogmatic approach or pragmatism; a cleverer or a foolish approach; a mantra or a tantra; a bane or a boon? In the name of the lowest quote can we compromise on the quality, time of delivery, after service/consumer support, durability, ease of handling or other comforts, agility (which we require) or fragility (which we do not require), genuineness of the supplier (per-

sons who attract buyers with bribes for the particular purchase are no good), and manipulations of some employees of the buying organization (leaking information about who quoted less or suggesting to quote lower in the case of sealed tenders or sometimes even open tenders)? In these gimmicks of lowest quote do we ever look at the past record/past performance of the supplier/contractor? Is it not the time for us to change the practice of going in for lowest quote for different purchases and instead look for quality of

the product/work. We need a serious rethinking on the above aspect and weigh the pros and cons to see whether we can abandon such a practice. We need a paradigm shift in our strategy of purchases.

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