

Research is necessary for creating sustainable knowledge

INVESTMENT Universities of the future must acknowledge the role of quality research in building knowledge centres of the 21st century

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When Neil Armstrong said 'Research is creating new knowledge', he probably did not envisage the significance that research had, for a better education system.

WHY RESEARCH?

Today, research and hence creating new knowledge, is not only a huge part of the education process in universities, but also plays a big role in determining their credentials. Scholars who then 'create' this new knowledge are an asset to every educational institution. As we move beyond everyday pedagogy and the process of rote learning and teaching, research starts playing a greater role in expansion of existing knowledge, and even adding new dimensions to it. Without a doubt, research has to be in the DNA of a university. This is applicable to all streams of knowledge, sciences, social sciences, medicine, technology and even arts and law.

Understandably, a university is the home of research scholars in most disciplines, and this is the group of intellectuals that have the power to take the credentials and standing of an educational institution on global scale. In addition to the added knowledge they can create for the education that is being imparted, it also becomes a social responsibility to share this knowledge for the greater good, in every field.

Unfortunately, today most educational institutions are becoming focused on just imparting existing knowledge without looking at the larger picture.



• Globally, top ranking universities derive their stature from the quality of their research

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Even though they may have excellent faculty and outstanding students, in the academic circles, the status of a university is still adjudged by the research it undertakes, the papers its scholars publish. It goes without saying that in order to maintain a commendable ranking in global indices, every university needs to have a credible body of research work.

How do universities, with already structured pedagogy, make time, effort and funds to nurture this part of their existence? The base requirement will of course be an environment that encourages research, creating knowledge and the questioning mind. When the established scholars in a university are ensured of this freedom, the flow of healthy research will follow. Since the most often measured output that decides the ranking of a university is its publications -

their quantity as well as quality; creating this environment is very essential.

Across the world, some of the top ranking universities derive their stature from the quality of their research and publications. Globally, Oxford University takes the pole position at 99.5% ranking in research, while in Asia, the top ranked university in terms of research (according to a recent ranking survey 2018),

Tsinghua University in China stands at 30th ranking worldwide in this list (and 7th ranking in terms of research at 93.2 percentile). National University Singapore which has the 22nd rank worldwide, is lower down in terms of research. These rankings are on the basis of 30% weightage to education standards and 30% weightage to research (volume, income as well as reputation), clearly highlighting the significance of research

capabilities

WHERE DOES INDIA STAND?

Indian universities today are in no position to compete at the global levels, and that is largely because, research is not 'made' our forte! Why do we have this difference? There is no lack of intellect or opportunity but lack of understanding that merely imparting education and granting degrees is no longer enough. What has worked till now, will clearly not work anymore, as world facts show us: The underlying reason is, in India, research is seen as a cost while the western system sees research as an investment. In western universities, there are grants for scholars and faculty for research - they can devote undivided attention to building more knowledge, create researches and get published in journals that matter! In Indian

system, scholars and faculty are overburdened with daily lectures and timelines that stunt any ideas for forward research. They deliver 10 months of lectures, working more than 20 hours of teaching every week, and so they cannot be expected to devote time to research, create papers and publish them. If the University leadership waste to reduce their daily workload, the cost of hiring new faculty is not built into the grants for research, either. This lack of financial support is disincentive for better research, is a malady our universities suffer from, and needs to be changed both at university as well as government support level. There need to be research scholarship and grants that take care of funds or equipment, consumable costs as well as additional manpower if needed.

Today, most top ranking international universities can boast of five or six publications per faculty every year. If India followed these systems, we would be publishing five thousand plus papers every year. Instead, our faculty can produce about one paper, and even the IITs can come up with only 3-4 papers every year. Funding agencies should not make distinctions between public and private universities while deciding research grants. The credibility of the Principal Investigator and the strength of the research proposal should be the only criteria influencing decisions.

SO WHAT NEEDS TO CHANGE?

The most important changes that we sorely need in Indian universities are:

1. Show them the big picture! Indian faculty in foreign univer-

sities for their doctorates or post-doctorates, contribute tremendously to the institution, because they find a productive and supportive environment. They can focus on their research without being bogged down by administrative paperwork etc. If we give that kind of supportive environment at home, there is no reason why these talented academics cannot deliver the same kind of work in India as well.

2. There is an environment of innovation, curiosity and open minded research that is prevalent in foreign universities. When that meets the talent Indian students have, the result is world class research and publishing. Clearly, we need to provide that intelligent and open atmosphere in India as well.

3. Compared to the west, industry support in terms of grant and other things, is negligible in India. We need to make that a part of the system, especially for technology and scientific subjects where constant research translates into innovation for industry. Clearly, to be in the ranks of world class institutions, Indian universities need to focus much more on researches, knowledge creation and scholarly publications. We need to create an environment that encourages the faculty and scholars to research, and be published in international journals of repute, as well as be cited in other educational and research products. It will, certainly take money, mindset and a lot of effort to change the focus of the Indian education system mindset from rote learning to research based knowledge.

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