

How universities and industry can collaborate

Posted at: 01/12/2023

Introduction:

It is well known that collaborations between industry and academia can be mutually beneficial. However, most Indian higher education institutions (HEIs) have not focused on such collaborations or on intellectual property rights (IPRs) and transfer of technology (ToT).

Issues with Indian HEIs:

While universities conduct and encourage basic research, many of them do not capitalise on the same research by commercialising their IPR; they miss out on likely gains from patents, licensing, or startup companies. Determining and managing impediments to collaborations between industry and academia requires a multipronged approach.

Industry- Academia collaboration:

1. First, HEIs and industry can only collaborate if they evolve shared goals. HEIs predominantly seek to educate students and conduct research. They often focus on creating theoretical knowledge. On the other hand, industries are profit driven and pursue practical applications of knowledge to enhance productivity and innovation.
2. To resolve these issues, the two parties must engage in an open dialogue, develop a flexible attitude, and find common ground where theoretical knowledge and practical applications can coexist.

Cultural differences:

1. Second, there are cultural differences between how HEIs and industrial partners approach the issue of collaboration.
2. Let us say an HEI is collaborating with an industrial partner (a renewable energy company) on a research project associated with sustainable energy. When researchers at the HEI scrutinise the data furnished by the company, they may find that it needs more academic rigour and theoretical profoundness. Consequently, they might suppose that the data is of restricted use for publishing in a prestigious academic journal.
3. Conversely, the company will focus more on practical outcomes. It may not have the time or expertise to have theoretical discussions since its immediate concern is to implement solutions in the real world by improving processes or by devising new products. So, both sides must find a middle path to bridge this cultural gap.
4. HEI researchers could refine their findings into practical recommendations that the industrial partner can understand and implement, while the industrial partner could provide more context to the data

Communication and training:

1. Third, Indian HEIs must establish good communication channels with the industry. If a research team from a university is partnering with a pharmaceutical company, it needs to be acquainted with the industry's regulatory processes.
2. Training programmes could be implemented so that researchers and industry professionals get familiar with the other's language and expectations.

Trust building:

1. Fourth, Indian HEIs must focus on building trust. Let us suppose a university and a tech company are collaborating to develop a new software application. A professor may be an expert in developing algorithms, but the industrial partner may want solutions that can be implemented in real world products. Both parties can work out a mutually agreeable IPR arrangement to address this.
2. Such an arrangement will also help alleviate certain fears. For instance, the university might agree to fasttrack the development of a prototype software application that the company can use and refine for commercial purposes.
3. But the industrial partner may fear that the university researchers will publish the research results without considering the commercial implications of their research. To overcome this, the university and the industrial partner can sign nondisclosure agreements to ensure that sensitive information shared during collaboration remains confidential.
4. Both parties can also agree on which results may be earmarked for academic publications and which may be kept confidential or jointly published.

Types of collaborations:

1. Colleges or universities with minimal research facilities can focus on short term collaborations with local manufacturing companies facing technical problems in their production line that need a quick resolution. A team of students and faculty members from a college can provide a tangible solution that benefits the industry and brings returns to the college.
2. On the other hand, universities with good research facilities and faculty expertise can partner with an industry for long term research collaborations that aim to develop cutting edge technologies. The additional benefit of such long term collaborations is that students can work as interns on research projects. They will then learn to handle deadlines, navigate failures, and collaborate with colleagues in the industry. HEIs and industries should, therefore, work on developing a symbiotic relationship.
3. Industries in specific domains should collaborate with research groups across different universities in the same domain to keep themselves abreast of new research developments.

Conclusion:

All this will become easier if government funding agencies announce suitable research grants and call for joint project proposals from HEIs and industry partners. There should also be critical annual reviews by a team of experts appointed by the funding agency to examine the deliverables promised by the stakeholders.