

## Academia industry interaction: A 'win- win' partnership

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### Abstract

Relationship between the academia and industry is not just one of technology donor- recipient, but is of interactive, collaborative, participative nature spanning respect for each other's role and contributions to bring about research production integration - the true purpose of such interactions. Here, academia-industry interactions are viewed as a system where active participation of all players is important. It is observed that the changing Complexity of the Business environment has necessitated the industry and the academia to develop close links to create the synergy. The interface between these two has led to increasing mutual dependence to ensure their better survival in their domains.

There is a tremendous need for academia industry interaction. All the Stakeholders, namely: Institutions, Industry, Students and Society stand to gain, as it can be a 'win- win' partnership. Industries could gain by using the academia's knowledge base to improve the industry's cost, quality and global competitive dimensions, reducing dependence on foreign know- how and expenditure on internal R & D. Industries .also gets benefited by updating and upgrading the knowledge base of the industry's professionals through management development programs designed by the academia.

Academics benefit by having the satisfaction of seeing its knowledge and expertise being used for socially useful and productive purposes, widening and deepening of the curricula and the perspectives of teachers and researchers and thereby improving their morale as well as that of students, secure training and final placements more easily for their students based on the respect earned from, and the relationship established with industry. The faculty's exposure to industry leading to improved curricula and widened and deepened teaching perspectives resulting in professional graduates of improved caliber emerging from the academia to man industry. Students stand to gain by way of hands- on training, reduction of learning curve in industrial practices: and, society stands to gain by way of improved quality of goods and services.

**Keywords:** Academia industry interaction, win- win, partnership.

### Introduction

A productive interface between academia and industry, in the present times of knowledge economy, is a critical requirement. The industry academia interface is all about knowledge transfer and experience/technology transfer. Universities and industry, which, for long have been operating in separate domains, are rapidly inching closer to each other to create synergies. The constantly changing management paradigms, in response to growing complexity of the business environment today have necessitated these two to come closer. Indian Industry, after the liberalization, has become marginally more aware of the vital linkage between the education system and business and corporate productivity. Even with this awareness, its engagement with academia is tentative and ritualistic than real. Indian industry is myopically disengaged, if not wholly divorced from Indian academia. As much as management institutes aim to provide well-groomed manpower to industry, the latter needs to involve in the affairs of the former for improving quality of manpower. There exists principal-agent relationship between institute and industry. In fact, input of one is critical for the other. In large firms, the formalization of the industrial Ph.D. studies, future Ph.D. programs and academia-industry relationships can be used to enhance strategic competences with win-win results. Internships, an example of

successful cooperation between industry and academics, are designed to help students develop vocational self-concept, acquire job relevant skills and provide informed career decision making ability. The various challenges currently facing Academia-Industry collaborations are awareness, identification, evaluation, protection and commercialization of ideas. There are two key factors that are driving the trend toward industry institute interface. They are the development of technology that allows the university to deliver quality coursework to the worksite and increased competitiveness at companies.

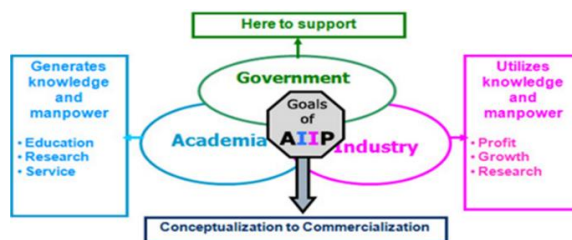


Fig 2: Industry - Academia Interaction

❖ To Promote Academia-Industry Interaction Following Schemes are being undertaken

- ✓ Establishment of Industry-Institute Partnership /interaction Cell.
- ✓ Organizing Workshops, conferences and symposia with joint participation of the faculty and the industries.
- ✓ Encouraging engineers from industry to visit Engineering Institution to deliver lectures.
- ✓ Participation of experts from industry in curriculum development.
- ✓ Arranging visits of staff members to various industry
- ✓ Professional consultancy by the faculty to industries.
- ✓ Industrial testing by faculty & technicians at site or in laboratory.
- ✓ Joint research programmes and field studies by faculty and people from industries.
- ✓ Visits of faculty to industry for study and discussions or delivering lectures on subjects of mutual interest.
- ✓ Visits of industry executives and practising engineers to the Institute for seeing research work and laboratories, discussions and delivering lectures on industrial practices, trends and experiences.
- ✓ Memoranda of Understanding between the Institute and industries to bring the two sides emotionally and strategically closer.
- ✓ Human resource development programmes by the faculty for practising engineers.
- ✓ Collaborative degree programmes.
- ✓ B.Tech. and M.Tech. projects/dissertation work in industries under joint guidance of the faculty and experts from industry.
- ✓ Practising engineers taking up part-time M.Tech./Ph.D. programme at NIT Tiruchirappalli
- ✓ Short-term assignment to faculty members in industries.
- ✓ Visiting faculty/professors from industries.
- ✓ Professorial Chairs sponsored by industries at the Institute.
- ✓ R&D Laboratories sponsored by industries at the Institute.
- ✓ Scholarships/fellowships instituted by industries at the Institute for students.
- ✓ Practical training of students in industries.

### Results & Discussion: (Benefits)

The emerging era of science-based collaborations between academia and industry offers advantages to both entities and a means by which academic institutions and industry can address global challenges to their mutual benefit and the well-being of society. When academia-industry partnerships work well, they can facilitate research discoveries reaching the people who need them and serving the purposes for which they are required, at affordable prices. Additionally, the combined credibility and influence of academia and industry can achieve beneficial results for society more readily than when the sectors work in isolation. Governments and international organizations can encourage, embrace, and actively facilitate such partnerships. It was clear that mechanisms and guidelines are often inefficient and unenforceable in the current context. The dominant operating political economy framework suggests that modernization will lead to win-win relationships.

#### For Industry

Collaboration provides industry an opportunity to grow its business by using the results of academic research  
Industry benefits by using the academic knowledge base to improve industrial cost, quality and competitive dimensions,

reducing dependence on foreign know-how and expenditure on internal R&D

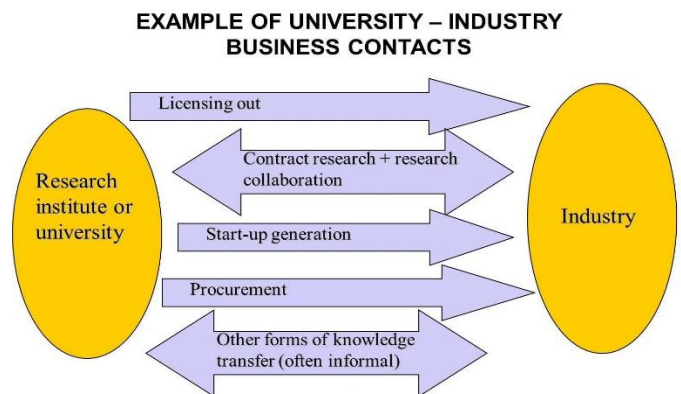
#### For Academia

The collaboration earns additional resources for an academic system severely constrained financially  
Results move fundamental research from the laboratories to the common man's place. That is discoveries move from the Academic Institution to the market place

### Objectives

#### ❖ TEACHING, research and extension are the trio of higher education

- ✓ Teaching - communicates knowledge to students, stimulating their interest in it, and preparing them to take up Industry/Academia job
- ✓ Research - extends the frontiers of knowledge, and lends depth, breadth and authenticity to teaching
- ✓ Extension - exploits existing knowledge for socio-economically beneficial purposes – i.e., the Industry-Academia Interaction
- ✓ Major source of research funding for academia.
- ✓ Industry gains valuable insight from key opinion leaders.
- ✓ Complementary capabilities and skill sets.
- ✓ Industry trends and practices.
- ✓ Designing the course curriculum and other value added programmes based on industry requirements.
- ✓ Source for external project sponsored by the companies.
- ✓ Bring-in consultancy project.
- ✓ Create employable students “Industry-ready students”.
- ✓ Curricula, faculty, infrastructure, pedagogy improvements in line with the industry's requirements of demand for skilled professionals.



**Fig 1:** Academia-Industry Business Contacts

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