

# A CONCEPTUAL VIEW ON LINKING INDUSTRY AND ACADEMIA TO STRENGTHEN HIGHER EDUCATION INSTITUTIONS

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**Abstract :** This study is undertaken to investigate that every academic institution should always have a direct link with several industries who can timely and on regular basis come and educate the students about how the conceptual knowledge is implemented in practicality in industries once employed, so that it becomes easy for the students understand the concepts easily and they will be able to remember it for longer time period and will be portraying in exams with different aspects of understanding. The linkage will also help the student take up their own choices for research in different fields where they can make use of their own talent to get onto conclusion. Thus the paper includes the need for III cell in higher institutions, the challenges faced by higher educational system in India, and the different levels at which changes are required to link Institutions and Industry, as well as actionable steps to improve the link between industry and institutions and lastly the benefits of having interaction with institutions.

**IndexTerms -Industry-Academia Link, Interaction, Higher Education Institution.**

## 1. INTRODUCTION

The Indian higher education system is going through a drastic change or transformation in coming years due to the expectations of the industry as well as students due to changing economic and demographic conditions by 2020. As India will be the world's third largest economy, the size for the middle class will rapidly grow. As currently, over 50% of the population of India is under the age of 25 years and by 2020 India will leave china behind with largest tertiary-age population.

The need & demand for higher education in India in next ten years will definitely provide India the largest opportunity in the world for international education institutions and education business too. With the help of various discussions with the higher education leaders, academics and policy makers we are able to present an insight into the views on the future of higher education in India and its various collaborations with the foreign countries.

## 2. OBJECTIVE OF THE STUDY

The objective of the study is to increase the linkage of the industry with the academic institution which will yield positive results in research by adopting innovative practices in higher education institution and the supply of human resources and technologies in industries. So the objective of the paper is as follows:

- To propagate the active links with industry
- To promote various industrial activities by the faculty members and students.
- To have a closer linkage to promote research as per the aspirations of industry.
- To provide continuing education to industrial employees so as to upgrade their practical, conceptual and technical and knowledge.

## 3. LITERATURE REVIEWS ON INDUSTRY ACADEMIA LINKAGE

The literature survey on Industry Academia link covers the success stories of many academic institutions having association with the industry partners helping each other's growth in a very meaningful and productive way.

As per 2011 report of National Association of Software and Services Companies (NASSCOM), around 75% of Indian engineering students do not have the basic eligibility for employment. Technical education institutes have to partner with industries to improve the relevance and quality of education especially its practical component. This will help to educate and prepare students to be future-ready. Based on the growing needs to fight tough competition, engineering colleges and industry are closely interacting to create synergies. The academic strength of institutions supported by the practical experience of the industry can help young engineers grow faster. This is in turn a critical requirement of productive interface for the development of any nation in this era of knowledge economy.

According to Elliot et al(1994) there is much more emphasis of Management programmes on the qualitative aspects and analytical aspects and very less emphasis on the human skills which actually helps every managers to face the challenges of the every business globally.

Smith and Tamer (1984) notified that the changes to be made by the college & Universities are really slow in order to adapt the social changes. Sutliff (2000), in an explanation introduced that the best way of teaching and learning, it to have a balance between theories and practice that theory by applying it through different projects which helps the students to become ready to apply those strategies and practical skills in their jobs.

Montgomery and Porter (1991) found that academia traditionally has trailed business in its grasp of trends. It must be and remain aware of trends-not fads-in business so that it continues to be relevant in its "production" of graduates who will be seeking employment after finishing their degrees & leaving the institution.

Ghosh et al (2007) identified that in India there are various ways to improve the industry–academia interaction which starts from drafting the syllabus so that students can be trained as per the skill requirements of the industry.

Modi (2009) found out that the fresher who are joining industries, they take almost 2 years to be well adjusted to show their performance and by that time usually they change the job. Further, Patel and Popker (1998) stressed on have a common stage for academics and industry so that the curriculum provided to the students are as per the needs of industry.

Premchand (2009) expressed that the Industry interface has a strong bearing on a school's intellectual capital. In India, the level of interface is very low and there are some misconceptions, too. Public relations work done for placing students such as guest lectures and seminars are often the activity conducted by various B-schools. The better the interaction of industry & faculty members will ensure to keep pace of the intellect, knowledge and skills for the ever changing environment

Employability of graduates in India is very low. (E.g. 10-15% of graduates for business services, 26% engineers for technology services).Traditionally, b-schools were looking for placements and internships for their students and the industry sought for fresh recruits who are well-trained and equipped with the right.

Industry-institute interaction and cooperation has evolved from the past in the form of industry visits up to sharing of resources in recent times. There can be a wide variety of interactions practiced among industries and institutes through activities on problem solving, curriculum development, study visits, provision of scholarships and apprenticeship training and setup of incubation center. Industries started the initiative of helping educational institutes in the design, financing, building and operation of projects involving risks only from the time, the concept of public private partnership has evolved and recognized. Many researchers have emphasized the need for Industry Academic Partnership in sustainable development of technical and vocational education training in the current scenario.

Bisoux has explored the relationship between academics and the industry. He says that corporations are placing growing emphasis on finding the "right person". It forces the b-schools to think more carefully on who should be hired and therefore the role of industry in the entire b-school model becomes important.

Today, the b-schools have realized the importance of "working closely with employers" for the following reasons:

- Increasing complexity in the academic and business world and constantly changing needs of the industry.
- Increasing criticality of human competence in creating and sustaining competitiveness of the organizations.
- Shift in management paradigm of b-schools from earlier academic models to revenue based models.
- Growing competition for student placements.
- Growing pressure from industry to make fresh graduates perform from day one to reduce their training costs.
- Increasing interdependence between academia and industry to satisfy needs for sustenance and innovation in their respective areas.

#### 4. HIGHER EDUCATION SYSTEM IN INDIA-CHALLENGES

The Indian higher education system is facing an unprecedented transformation in the coming decade. This transformation is being driven by economic and demographic change: by 2020, India will be the world's third largest economy, with a correspondingly rapid growth in the size of its middle classes. Currently, over 50% of India's population is under 25 years old; by 2020 India will outpace China as the country with the largest tertiary-age population.

Despite significant progress over the last ten years, Indian higher education is faced with five broad challenges:

1. **The low quality of teaching and learning**-Arguably, the greatest challenge facing higher education in India is the chronic shortage of faculty. Various reports estimate that 30-40% of faculty positions are unfilled. Most faculties have had no training in teaching. Other issues in teaching and learning which compound the problems include:
  - Outdated, rigid curricula and the absence of employer engagement in course content and skills development. Very few opportunities for interdisciplinary learning.
  - Pedagogies and assessment are focused on input and rote learning; students have little opportunity to develop a wider range of transversal skills, including critical thinking, analytical reasoning, problem-solving and collaborative working.
  - High student: teacher ratio, due to the lack of teaching staff and pressure to enroll more students.

- Separation of research and teaching; lack of early stage research experience.
- 2. **The Supply-Demand Gap:** India has a low rate of enrolment in higher education, at only 18%, compared with 26% in China and 36% in Brazil. There is enormous unmet demand for higher education. By 2020, the Indian government aims to achieve 30% gross enrolment, which will mean providing 40 million university places, an increase of 14 million in six years.
- 3. **The Low Quality of Teaching and Learning:** The system is beset by issues of quality in many of its institutions: a chronic shortage of faculty, poor quality teaching, outdated and rigid curricula and pedagogy, lack of accountability and quality assurance and separation of research and teaching.
- 4. **Constraints On Research Capacity And Innovation:** With a very low level of PhD enrolment, India does not have enough high quality researchers; there are few opportunities for interdisciplinary and multidisciplinary working, lack of early stage research experience; a weak ecosystem for innovation, and low levels of industry engagement.
- 5. **Uneven Growth and Access to Opportunity:** Socially, India remains highly divided; access to higher education is uneven with multidimensional inequalities in enrolment across population groups and geographies. The three central pillars of the government's plans for education reflect these realities: expansion, equity and excellence. Over the next five years, every aspect of higher education is being reorganized and remodeled: funding, leadership and management, quality assurance, accountability, relationships with industry, international collaboration and the way teaching and research are conducted. Emphasis will be placed on strengthening existing institutions. In arguably the biggest reform in the governance and funding of state universities, an ambitious programme is underway to devolve authority and budgets for higher education from federal government to the state governments.

## 5. INDUSTRY INSTITUTE INTERACTION CELL

The Better the interaction between Institutions and Industry the better the exposure of the students to industry and subsequent placement in various disciplines. Thus industries will be getting good students who are well aware of industry standards and capable of achieving so. Thus it is an urgent requirement for the interaction of industry and academics where academic institutes can prepare students for jobs in multinational companies and industry will also be benefited by possibility of receiving well-trained workforce. And for this we need to bridge a gap between industry and the academic institute as was done by Industry Institute Interaction Cell (IIIC) which was established in 2011 at Fergusson College, Pune Maharashtra with the objectives of creating strong links between higher education institutions with industry.

For such regular interaction, activities like arranging industry visits, taking up industry sponsored projects, establishing an exclusive Industry-Institute Partnership / Interaction Cell, participation of experts from industry in curriculum development, student project evaluation, conduction of demo, lectures ,workshops, joint research work carried out along with faculty members from academic institution can be planned.

## 6. LEVELS OF LINK BETWEEN HIGHER EDUCATION INSTITUTION AND INDUSTRY

Education system in India should always ensure a direct link & continuous interaction between the higher education institution and the industry at all operational levels which will synchronize the countries higher education system with the requirements of industry.

### Different Levels:

**Administration & Governance:** There should always be the participation of skilled industry professionals in the administration and governing body of the higher education institutions which will help to evolve more leadership qualities.

**Delivery of education:** In higher education institution there should be always an involvement of an industry expert of middle and senior level management in designing curricula which helps in conducting regular seminars and conferences by industry professionals which helps the students to undertake live industry projects. Thus the students will also get an opportunity to learn directly by industry professionals as taking faculty positions in different institutions who will share the real case study situations as well as they will be directly counseled and monitored by the industry practitioners.

**Employment & Research:** Every institution should have a partnership with different industries human resource department and research and development department so as to provide quality internship to the students which in turn will help them to get placed in different positions and also help the students as well as industry to further evolve more research facilities.

## 7. ACTIONABLE STEPS

**Step (i): Developing a partnership:** The first step to improvise the link, every educational institution should develop a partnership or a system of engagement with industry or skill based training providers/trainers in which the students will be trained as per the modules and courses designed by the education institutions to enhance the students employability.

**Step (ii): Developing the structure:** The second step is to develop a proper structure to formalize the partnership between higher education institutions and the skill based training providers/trainers.

**Step (iii): Regulations:** The third step is to undertake the regulatory reforms enable the collaboration/partnership.

**Step (iv): Certification:** The last step is to provide the certification to the higher education students for the skills training programs they attended.

## 8. BENEFITS OF ACADEMIC & INDUSTRY LINK

### 8.1 Benefits of Academia link

The benefits of Academia link with the industry will be at three levels:

- Students,
- Faculty and
- Institute

#### 8.1(a) Benefits to the students:

- Students will be benefited with Placements as Industry participation will definitely ensure need-based education to the students to improve their employability.
- Students will get more learning opportunities through internships which will help them to relate theory with practice and get an exposure to real-life situations and understand the practices of the industry.
- Students will have to learn only curriculum relevant to industry needs which will help bridge the gap between theory and practice. This in turn will save time and money in training the interns and they can be immediately put on the job.

#### 8.1(b) Benefits to the faculty:

- Faculties can have much better & practical exposure to industrial practices which they can carry to the class room and relate their concepts with.
- A Consultancy of faculty to industry professionals will help them interact much more with the industry people and understand their way of doing the work which latter can be made as a case study for the students.
- There should be Board memberships for the faculties to interact with industry professionals on a regular basis which will update them with the latest trends in their field.
- Faculties will get enough opportunities to put new theories to tests. Funding to the institute will be provided for a viable idea of the faculty as well as other resources required by them for research.
- Faculties can share the research knowledge with their students who will then be aware of the recent developments in the outside world.

#### 8.1(c) Benefits to Institute:

- Institute can tune the curriculum as to industry needs which will help the students to bridge the gap between theory and practice which will help the institute to produce need based products instead of the chum outs of today world.
- Institute will be for sure able to achieve tangible benefits which can be converted to intangible reputations in the form of joint research projects, latest trends in the field, knowledge about latest industry practices etc.
- Institute will be benefitted with the contributions given by the Alumni by way of monetary contributions, sharing of their experience with students which will motivate the students and can easily relate them through the eyes of their seniors sharing their experiences, conveying them the real industry scenario.
- Institute will easily able to get funds for research which is in relevance for the Industry. Whereas Industry can also share and make their infrastructure and other resources available to faculty and students for the research where joint research projects could be done together.

### 8.2 Benefits of creating Link to the Industry

The benefit of interaction to the industry as a result of interaction with the academia will be at three levels

- The organization
- Top management and
- Employees.

#### 8.2(a) Benefits to the organization:

- The organization will be benefitted with a continuo's availability of pool of manpower with right skills and domain knowledge by getting associated with the institutes. Thus, they will get right candidate for the right job.
- The organization will be benefited by reducing the cost on training and induction as the institute will be providing the students the need based education to directly put the candidate on-job immediately which will save time and money of the organization.
- The organization will add-ons from academia in terms of attitudinal change, communication skills etc. The faculty is well-equipped to groom the students with modules to enhance their presentation and communication and impart them with skills required to work in a team environment.

#### 8.2(b) Benefits to the top management:

- The top management will get an expert advice on strategic management, vision, mission, benchmarking and best practices, risk management, etc. And can extend their expertise to the industry in designing strategies, vision, mission, various business models to improve the productivity of the organization
- The top management with continuous interaction with the industry professionals, new topics/projects of research can be shared and jointly developed.

**8.2(c) Benefits to the employees:**

• Employees will be benefitted with domain knowledge by providing training to them by faculties in different MDPs for the fresher's as well as other employees on soft skills, IT etc. which will be conducted in association of institute with industry. And through these MDPs faculties will get a platform to meet and interact with the industry professionals to share their knowledge and skills and get updated knowledge about current industry practices by networking opportunities provided by Industry.

**9. CONCLUSION**

India in the next decade will experience enormous growth in its middle classes: from 50 million now, to 500 million by 2025. India slowly moving towards one of the largest economy will have huge number of the learners for higher education and in few more years India will be the country having around 25 million households with an income of \$15,000 who will be much more sufficient to pay fees for higher education by 2020. Industries and institutes have been collaborating for over a century, but the rise of a global knowledge economy has intensified the need for strategic partnerships. As for now various institutes are providing the basic conceptual knowledge and skills but by the institutes interactions much more possibilities of research will develop with well trained students ready for the industry as they will be well equipped with the concepts which can be practically applied in industry. The Industry-Institute Interaction should be designed to run longer period for preparing the manpower of world class in the field of science and technology by inculcating the various skills required by the industry, thereby contributing to the economic and social development at large. India is ranked 109 among 145 countries with a score of 3.06 in Knowledge Economic Index. Thus Industry-Academia Link Is A major factor to enable the Indian Education Sector Scale up in the Global Knowledge Index. The better we industry and academia know each other's expectations and limitations the better they will strengthen the areas of common interest between both.

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