Recognize the Role of Academia and Industry to match between Demand and Supply of Quality Manpower

Prof. (Dr.) Ajay Arora,
Director and HOD of Hotel and Tourism, Kumaon University, Nainital

Bipin Chandra Pant,
Sr. Asstt. Professor – Hotel & Tourism Management, NIMS University, Jaipur. E-mail: bipinp114@gmail.com

Abstract
Academia 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. A productive interface between academia and industry in the present times of knowledge economy is a critical requirement. Failure to recognize each other’s role will reduce the interface between institute and industry; and it can potentially give rise to mismatch between demand and supply of manpower, which in turn, can cause disruption in the job market. Separate department or Board at Universities, Institutes and other academic organizations for monitor the Academia Industry Interaction at all academic level is a solution. The Academia Industry Interface department at University and Institute level or the Academia Industry Interface board at departmental level can performs the following activities: Memberships, Academic Alliances, Research and Development, Industrial Consultancy and Continuing education program for Industry. The academia can develop courses for industrial employees as continuing education program. The curriculum of programs can be structured as per the industry’s need in the following format: Short term training programs, Skill up gradation courses, Pre-placement Training, Conferences and Seminars. Adopting the globally relevant best practices to create a continuous stream of future student leaders, continuously improving upon the past. By learning and understanding the industry needs and requirements, Academia have to develop a deep insight which helps and guides students. Above programs can be deliver through a highly accomplished and experienced faculty. These initiatives should implemented through Industry Academia Partnership Cell (IAPC), Corporate Resource Centre (CRC) and Management Development Projects (MDP).

Key Words: Academia, Industry, Curriculum, initiatives

1.1 Introduction
Interaction between Institute and the Industry is widely recognized as an essential requirement to train and develop the right kind of technical manpower necessary to sustain and promote industrial and economic growth. Industry Institute Partnership forms an important activity for academic body, as its stakeholders interact with the real world. Close interaction between the institute and the industry/enterprise is seen as the platform for showcasing best practices, latest technological advancements and their implementation and impact on the Industry. Education is regarded as one that contributes to social, political and cultural and economic transformation of a country. The social sector of a country, namely, health, rural development, education and employment generation has assumed great significance in the new economic regime. The prosperity of any nation is intrinsically linked to its human resources. Human capital is one of the most important assets of a country and a key determinant of a nation’s economic performance.

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, experience and 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. Universities have played a great role in the emergence of clusters in industrial region. Campus recruitment is a challenge for both, industry and institute. 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.

1.2 Objectives

- To examine the different initiatives of the Industry-Academia interface adopted by the Institutes, Colleges and universities.
- To know the greater degree of industry-academy collaboration to integrate employer’s needs into the programmes on offer;
- To highlight the challenges in academy – industry interactions
- Give suggestions to improve the programmes by encouraging the participation of a number of guest speakers who can offer their own practical experiences.
- Real involvement with industry to allow students to gain valuable practical experience and also to facilitate development of business.

1.3 Research Problem

Over the last five and a half decades, the technical and management education system in the country has grown enormously. The system has built large capacities both in conventional disciplines as also in many emerging fields. It is technology that lies at the core of economic growth. Even as we talk about increasing number of job opportunities emerging across sectors.

Employability is far bigger a challenge than unemployment. Industry leaders feel that the “skills” and “quality” of the workforce need a lot of improvement. Plagued with problems like curriculum, lack of qualified faculty, poor quality of content, and not-so-effective examination system, technical institutions do not provide signaling value in the job market. A disparity exists in the types of skills taught at colleges and those that are demanded in industry. Products of technical education: engineers, managers, architects and other professionals should have the ability to operate effectively while maintaining high professional standards and taking the country along the path of development.

One dimension of “delivering on promise” is the success of graduates in securing decent employment after the completion of the programme. The preference for technical education to general education emanates from this very expectation. This promise is broken if after graduation many students fail to find employment or are forced to accept low paying jobs not commensurate with their qualifications. Institutions of management education in particular are deeply concerned to such an extent that their
educational perspectives get distorted. High incidence of unemployment, underemployment or low incomes becomes a matter of serious concern to central and state governments.

1.4 Challenges

- Different Incentives
- Different ideas of deliverables
- Building relationship takes time
- Risk associated with a single corporate contact
- Perceptions of pace
- Written agreements
- Campus recruitment is a challenge for both, industry and institute

1.5 Initiative for becoming success

i) **Alumni-Student Conclave (ASC)**
The alumni plays a very important role to bring the academia to close to each other. The pass out students of that particular academic body know about the education system and their applicability in industry, where they are working. They can share their experiences in various fields or area of their expert.

ii) **Student Welfare Committee (SWC)**
The academic body should develop a committee of well experienced and educated faculty member, to nourish the student time to time by allowing them to engage or motivate in various activities i.e. debates, quiz, sports, skill development etc.

iii) **Research and Development Committee (RDC)**
The main purpose of this committee should be to do field research or desk research not only by the students but faculties also. They should visit the companies time to time and find out the gaps, problems, issues and challenges. After collecting data from various companies the selected students and selected faculties who has visited, should sit together to find out the solutions and then implementations. Projects / dissertation work in industries under joint guidance of the faculty and experts from industry. Joint research programmes and field studies by faculty and people from industries.

iv) **Industry Expert and Student Meet (IESM)**
Continuous interactions between industry experts and students should be conducted as a guest lectures. The industry experts will share their experiences, case studies and role models. Which will help to the students to knowing the reality of ground and prepare their self accordingly.

v) **Corporate Resource Center (CRC)**
The corporate resource center plays a vital role in bringing the industry and academia close to each other by providing Career Counseling, need based education and organization support. It has the task to organize campus interviews for student placement and training and also organizes corporate guest lectures and industry interaction. It acts as an interface between the students, faculty and the corporate world to initiate continuous interaction with the industry, sharing industry experiences, and understanding the needs of the corporate world. It has been regularly inviting heads of leading Companies to the campus, who share their insights into the latest issues concerning the economy to stimulate and enhance the intellectual climate. Academic staff should be encouraged to keep their skills updated by undertaking practical consultancy on regular basis.

vi) **Pre-Placement Meet (PPM)**
The PPM offers the corporate world an opportunity to interact with the students and to know their prospective recruits better, both for the summer and final placements. Organizations make presentation which are vital in providing the students with the information about the organization and career prospects in which typical students concerns like job description, selection criteria, industry culture, remuneration package, scope for growth, cross functional exposure are answered.
vii) **Summer Internship Scheme (SIS)**

Summer Internship constitutes an integral part of the course curriculum and is valued for its relevance in management education. Summer Internship is positioned between the first and second year of the master degree program and second and third year of the Bachelor degree and other three year duration courses. The students are placed in different organizations for a period of about 8-10 weeks on a specific assignment with their preferred areas of specialization. It provides the students an opportunity to test the theoretical concepts learnt in the classroom, also helps students to explore linkages amongst different functions and develop a realistic managerial perspective about organizations in their reality. As a part of the assignment, students are required to submit a report. The presentation made by the students to the organization and the faculty forms the basis for the evaluation of the project work.

viii) **Industry - Academia Partnership Cell (IAPC)**

Industry Academia Partnership Cell should foster excellent working environment and relationship between Institutes or departments of Universities, colleges and other academic bodies with partner industries. The interaction and joint ventures include planning and conduct of a academic event like National Conferences, Seminars, Workshops, Guest lectures by industry experts. Participation of experts from industry in curriculum development. Memoranda of Understanding between the Institute and industries to bring the two sides emotionally and strategically closer. Collaborative degree programmes and human resource development programmes

ix) **Entrepreneur Development Council (EDC)**

Entrepreneur Development Council should establish with a view to provide fillip to the young and budding entrepreneurs. Regular programmes should be conducted for the volunteer students to create awareness as well as to sharpen their skills. Expert from the Industry and Academia should address the students to coach, guide and enthuse them to turn their dreams into reality.

x) **Management Development Projects (MDP)**

Management Development Projects may include – training programmes conducted for the various companies. These projects should be tailor made to meet the specific requirement of the companies and delivered with the professional to ensure effectiveness.

xi) **Bilateral Programme of Mobility from Academia to Industries**

Refresher course and orientation programme of one month each can be arranged in the industry where academic faculty can participate. The lectures in the programme will be delivered by the professionals from industry to provide up-to-date technical and non-technical knowledge. The refresher course would be designed to provide knowledge in depth while the orientation course would be created to acquaint the participant with the interdisciplinary approach to the real problem. The participation of the faculty can be made mandatory maintaining a time period interval. The faculty could also be offered an internship programme of six months to one year at advanced level in industry of national and international level. This would enable them to enlighten the students with more practical knowledge, relevant to industry . Short-term assignment to faculty members in industries. Visits of faculty to industry for study and discussions or delivering lectures on subjects of mutual interest.

xii) **Bilateral Programme of Mobility from Industry to Academia**

Intensive programmes under Visiting Professorship scheme should be created for regular visits of resourceful persons from industry to address students, academic, and scientific staff and to involve them in teaching or research during their short stay in the premises of the institute. An expert from industry, with several years of job experience should be given the status of a Professor. He could be called as a Corporate Professor, so that the individual may also earn due recognition from all concerned. This type of programme should also be designed to share knowledge during an open interactive discussion. Industry practitioners should display the challenges of the industry in the form of workshop or seminar and give real time exposure to the students. This endeavor not only ensures feasibility to the companies but also can mould the workforce according to its need. Practical training of students in industries. Visits of industry executives, practicing engineers and other experts of their area or field to the Institute for seeing research work and laboratories, discussions and delivering lectures on industrial practices, trends and experiences.
1.6 Suggestions

- Industry people are willing to join hands with university to arrange practical exposure at their manufacturing units. Industry and institute must jointly work to expose practical based learning. Industry is ready to support academic world to develop & train students to give right exposure in their manufacturing units.

- A fully fledged university must have centralized well designed program fit for imparting soft skills & communications along with extracurricular activities to develop the students.

- Academic institutions must provide good ambiance and free space and all facilities and technologies to learn. Teachers/Faculties must also be trained and updated with latest technology to mentor good students. Students must be engaged in learning activities regularly to build a positive attitude. From each batch academicians must identify serious students willing to work in tough conditions and generate placeable students. Each selected students must prove his worth in industry.

- There is a major problem of effective interpersonal and professional communication among the new students joining the industry. Negotiation skill, presentation skills, discussion and expressive skills are very much lacking. Average students have basic domain knowledge but other skills are not matching. Special emphasis must be given to personality development program. Education system must be more practical based.

- There is great problem of right attitude, students don’t know what to do, how to do and how to reach the solution of problem instead they keep of passing the thing from one to another. Students have theoretical knowledge but are lacking in practical exposure. Industry requires good learners with thorough knowledge of fundamentals of any streams. Student development with right mentorship and right education with right curriculum is required. Students must not always look jobs directly into bigger MNC companies instead be mentally prepared to work for smaller companies to learn and develop skills required by the industry.

- Industry has no time to invest upon training and development of candidates hired and expects entrance to be job ready. For achieving it academic people must understand the requirements of industries and design programs relevant to industry meets.

- Education systems must rectify the curriculum to be more practical. Newer ideas are required to build better students. Education system must be like – Quality Input, Quality Processing, Quality Output. Students must learn the global business trends and must understand how industry moves.

- Instead of quantity of students rolling out the university quality students must be rolled out. As observed, the quality level of the students is very low, when industry evaluates on their parameters and hence the selection rates are very low. Industry has observed that out of 20-30 candidates only 1-2 students are presentable and expressive. As per the data, out of more than 4 lakh candidates from more than 1500 colleges, only 30-35 thousand students are employed. Academicians should give updated knowledge of leading technologies in the world with innovation in thought. Industry wants instant results from professionals so the students rolled out must be industry ready.

- The selection criteria at the time of admission to any particular course must be tough to identify and select good quality of students rather than just admitting students to increase the quantity in each course. Students with 75 or more percentile must be indentified and given thorough knowledge based. There should be a strict selection committee for admissions.

- It has been observed that students who possess low skills demand high salary and does not understand the basic needs of work. It must be developed in students to accept lower packages matching their skills and deliver high performance. They must understand the cost factors. Each industry has limited resources to pay to its employees.

- Government should ensure a smooth transition of KPO (knowledge process outsourcing) between academia and industry through its regulatory bodies and policies laid down by the management. It can help with a clear stipulation, where it should prohibit so that the academic world may not be deceived by the industry.
Providing infrastructure to meet the training needs of the industry, like improving communication skills, job analysis, management skills and on up gradation of technical knowledge on current topics. In house training programme at the request of industries at their location. Conducting market surveys and feasibility reports through projects assigned to the students and providing them to the industry for their benefit.

1.7 Recommendations

In developing recommendations, it is clear that the skills needs of the industry are wide and in some instances, complex. Addressing skills needs, therefore, has a number of facets: Some shortages can be addressed through increasing supply, providing specific modules, accredited work placements or amending the curriculum within the mainstream education and training system. This is about ensuring both the right numbers are being produced and that graduates have relevant industry skills. However, many employers also address specific skills needs through up skilling and building upon existing skills base and experience within the firm – this requires flexible systems of Continuing Professional Development (CPD), online delivery, post graduate qualifications and conversion courses. In many cases, these shortages are small in scale but acutely felt by industry due to the critical nature of the roles within the firm. Some skills requirements are for key persons with highly specific expertise that is mainly developed through experience. These are often global shortages for key persons that drive innovation and growth within the firm. The main requirements from education and training relate to ensuring access to relevant research expertise and/or collaboration on company specific product/process development.

1.8 Further Discussion

The world has moved from industrial revolution to knowledge revolution and from industrial economy towards knowledge economy. Global economies are gradually getting interconnected in this changed situation. Keeping pace with this change, R&D is crossing national boundary. India, with its enormous pool of technical graduates, is facing new challenges. They are actually the country’s greatest resource and have brought opportunity for India to grasp the global economy. The quality of products of immeasurable economic value will here after be knowledge based, requiring very limited capital unlike the traditionally manufactured industrial goods that need investment of vast capital. What is knowledge economy? A widely accepted definition could be that knowledge economy is characterized by the highest number of the well-trained, productive individuals. In other way it can be said that, much learned, research-minded human capital of the creative class is the bedrock of the knowledge economy.

In the state-of-the-art era of knowledge driven economy, a productive interface between industry and academia is a critical requirement. In the proposed integrated model an attempt has been made about knowledge sharing, knowledge transfer, and transfer of experience and technology between academia and industry. There is a prediction that probably before the middle of this century, BRICs (Brazil, Russia, India, and China) could emerge as a much larger force in the world economy and India’s position could be the third largest economy. Indian companies in the software and automotive sectors have proved their capability in knowledge-based commercial operations and have earned recognition as potential world leaders. In the near future, new technologies in the domain of advanced materials and nano-technology, ICT, bio-technology and pharmaceuticals, etc. will presumably be the key drivers of growth. Therefore, in the cutting-edge era of S &T a glorious opportunity for India has emerged which can bring the leadership of the new technology-driven development and application of technology in varied fields.

The advent of technology-driven entrepreneurship in India at a galloping pace, demands the formation of a synergy with wider industry-academia interface. Small and medium sized enterprises (SMEs),
which are likely to be the major force in the new advancement of IT industry, could presumably be the accelerating agent in this emerging scenario. “While the thrust of this academia–industry interface initiative is from the perspective of large-scale research collaboration, the SME sector has common issues of concern which need to be addressed”. IT companies may need an updated version of technology to cope with the rapidly changing IT industry in this highly competitive era. Therefore, it is imperative that IT companies should tie up with academia to ensure a steady inflow of IT professionals who are well aware of the most recent development in IT field. If academia, jointly with industry launch short term, small-budgeted, targeted exploratory activity having commercial viability, it will provide confidence in industry for adopting long-term research oriented project. Besides teaching and research activities, academia’s entrepreneurial activities are also likely to be very important for achieving enhanced academia-industry interaction.

In this era of globalization, to stay alive in the race for competitive excellence of global market, industries will have to restructure its R&D initiatives. This approach must be directed by a complete paradigmatic shift from a simple capital oriented business format to a technology driven entrepreneurial one. For conducting industry-oriented applied R&D, academia-Industry-R&D lab consortia could be a very fruitful mechanism. Moreover, public private partnership and industry involvement are really very important in connection with applied R&D, where there has to be a focus on market access of the research outcomes and technologies developed. While fundamental research is likely to continue to be largely promoted through public funds and conducted in academia, even in this, public private partnership is imperative for setting up and maintaining the level of research infrastructure updated and upgraded to face the challenges of the changing world of global business and industry. Inclusion of industry practitioners in academia’s research activities through academic programmes could be very important for achieving the desired outcomes in this direction.

Establishment of technology incubation centers in the adjoining areas of academia could be yet another platform for interaction with industry. Finally it can be said that, in this era of knowledge-driven global economy, for promoting sustainable academia-industry interface multilevel collaboration is required. Therefore, it is the foremost task to localize the areas where optimum collaboration is likely to be available. Moreover, to achieve the desired outcomes of this interface, there should be two way academia-industry cooperation and the two entities will have to be more sensitive with respect to each other’s growth.

1.9 Conclusion

With a goal to make India the global powerhouse in research and innovation, a new range of technology is required to meet the future challenges, and India has to head forward on innovative collaborations between industry and our universities through cooperative knowledge creation and exchange. Although cooperative research is the key word to fill the gaps existing in the present structure, there is a tremendous need to create other avenues that need to be intensified, stimulated, and above all integrated for a close academia and industry interaction through all the stages of technology development, starting from conceptualization down to commercialization. Other avenues for tie ups are achievable and can be well explored. The most meaningful aspect is that such tie ups acknowledge and capitalize on the relative strengths of the academia and industry. Besides industry associations, the universities should also form linkages with government agencies which are entrusted with industrial development activities. In spite of some shortcomings and inhibiting factors with respect to the academia-industry collaboration, government should put into place an integrated policy of academia-industry collaborative interaction encompassing a number of strategies enabling such an initiative to thrive in the country’s quest for technological leadership.
References


