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A Study on Academic and Industry Collaboration to Identified and Managing the Skill Gap

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Abstract - Academic system certainly believes in development of skill set which are crucial for the interest of job market. For the successful implementation of plan it is the prime responsibility of academic institutes to be in regular contact of industry and the advancement taking place in the demand of skills for recruitment. The alliance of academics and industry can only become beneficial if sincere attention is paid towards the present and future perspectives of education system. Despite of an increase in number of educational institutes since independence, the quality of education is still a big question mark in present era. A close nit alliance between academics and industry can work as a reward and motivation for the education system. A weak interface between academic system and industry is the result of many problem areas. The problem needs to be identified minutely and design of solutions should be drafted to attain objectives of bringing a fruitful alliance of academics and industry.
Keywords: Academics, Industry, Alliance, Motivation, Reward, Job market.

Introduction - Academic system certainly believes in development of skill set which are crucial for the interest of job market. For the successful implementation of plan it is the prime responsibility of academic institutes to be in regular contact of industry and the advancement taking place in the demand of skills for recruitment.A target set alliance between academics and industry should work as a reward for academic institutes for accomplishing the actual objectives of the education system. The alliance of academics and industry can only become beneficial if sincere attention is paid towards the present and future perspectives of education system. The time has arrived to realize the true objective of education system for bringing academic excellence. It is a point of time to realize the fact that how academics and industry can work for mutual benefits. As one or the other way both are dependent on each other for the attainment of objectives. It seems after so many years of independence that the actual motive of education is missing somewhere. The mushrooming of institutes has deteriorated the quality of education in India. There was a time when Indian system of education was appreciated all over the world. The ancient system of education has produced so many brave and courageous examples of excellence. India does not have scarcity of talent. In other words it can be said that it is a hub of talent. But a seeding talent needs a support to shape it and take its actual final shape.

As per the demand of present scenario a proper and regular interface between the industry and education system becomes essential. Over it, its realization becomes important by talent builders. It is the need of the hour to work on appreciating the quality of knowledge, curriculum design, and skill development for the crowd of students. Every child is not made for few defined professions; instead they owe their own capabilities and interest areas where they can perform better. It is not only the responsibility of parents but of educational institutes as well to counsel the students and direct them in right direction.

The academic should make industry demand as their motivation for developing education system. An educational institute may perform better in terms of quality and industry oriented vision if skill based programmes are introduced. This would not only help student but will work for the betterment of whole society.

Objective of the study:

1. To discuss current industry demand with reference to skilled manpower and role of academics in bringing desired skill set.
2. To discuss the need of development of customized curriculum as per the need of industry.

Literature Review:

At the time of independence the total number of universities was 20 and total numbers of colleges were 500. Whereas by the year 2016 the number of universities came to 801 and colleges to 39071 (UGC annual report 2016). This increase is in respect to the population increase of the country.The demographic profile of India works as the source of opportunity to utilize young skills for the economic

affluence of the nation. Around 65% of India's population is under the age of 35 years (Virmani, 2014). The increasing number of educational institutes is not a matter of concern but the quality of education provided is to be focussed on. With the introduction of more and more private institutions, the focus on quality education is reducing. The reports of National Association of Software and Services Companies (NASSCOM) 2011 have stated that 75% of Indian engineering students are not up to the mark of getting employment. It is always a point of discussion for the technical institutes to be associated with industries for bringing larger improvement in the quality of education especially its practical component. The application of which will help the students in preparing them and making them industry-ready. It survey conducted by FCCI 2011 that there is shortage of skill in around 90% of the companies, due to scarcity of labour 89% companies are not able to meet potential demand of their potential products. The National Policy on Education (1986) in India havehighlighted and put strong emphasis on the need for university industry interaction. However, even after incurring lot of efforts undertaken by the Centre and State governments, university industry interaction has been a failure proving noticeable progress up till now. Nilson (1985) proposes that academia-industry interface may be carried on "by a framework of representation from industry, society and professional organisations at various levels of planning and management of engineering education and also by a direct support in actual course work".Bhusari (2008) was of the view that "instead of opting for particular model, different forms of partnership should be explored and settling the comfortable levels of working with the industry, comfortable interaction scenarios and a subsequent comfortable sharing of the gains that will have from the research of all types".Therefore, it is the most important task to concentrate the areas where optimum collaboration is likely to be available.Bisoux (2003) has tried to explore the extent ofacademics and industryassociation between each other. He is of the view says that companies are focussing more in the search of the "right person". It gives direction to business schools to learn more carefully on whom they hire, and therefore the importance of industry in the whole business school model becomes important.According to Friga, Bettis and Sullivan (2003) the current trends of management education indicates thecreation of knowledge which is becoming more student based. This will accompany in a variety of changes including paradoxically an inclination towards close interaction among students, industry and the faculty. Fowler (1984) has identified 15 impediments to university-industry relationships. At least two of these pose problems in establishing a practical working relationship. Firstly, academics believe in publishing the results from the research conducted as soon as possible. On the other side industry keenly guards its proprietary information. Secondly, the main focus of academics is to concentrate on basic research and establishes new concepts or hypotheses. The demand of Industry's primarily is for applied research leading for product-improvement and hence to short-term profits. The proper engagement of academicplays crucial role in the transferring of knowledge of academics to industrial domain; it has been given considerable significanceand considered valuable by many companies than licensing university patents (Cohen et al., 2002). The incomes generated in universities' from academic engagement aregenerally a higher multiple of the income derived from intellectual property (Perkmann et al., 2011). Giselle LaFrance found that the attainment of industry academia collaborative experiences helps students who are the prospective employees for industry to reach with their full potential earlier and to a higher degree. Moreover, learning's acquired through collaboration helps Human resource of industry to expand the reach and streamline the operations of the company, identify and shape strong potential hires, and continue to inspire the education, passion, and investment in academic tie-up so vital to the industry. By industry and academia working together to truly understand the student's, each other's, and even their own needs, as Hanson suggests, we have the prosperous opportunity to build a collaborative model and teach students in a style – both in and out of the classroom – that will truly prepare them for the twenty-first century workforce – already a scarier and more competitive place than ever before. "We are facing great challenges today in all industries and in all states," says Atrion's Cronin.

Ambreen Gul & Aftab Ahmad, Pakistan in their research paper "Perspectives of Academia-Industrial Linkage in Pakistan: An Insight Story" presented the analysis of role of government policy, importance of university strengthening & importance of university strengthening. They argued that government should act to initialize the linkage program between industry and universities. National policy for academia-industry linkage is obligatory to strengthen scientific developments.

During the year 1960, the education field of business education properly started gaining importance in India and establishment of two Indian Institute of Management; IIM Calcutta in association with Sloan School of Management and IIM Ahmadabad with Harvard Business School took place. After that there has been a relatively slow but steady growth in number of schools and popularity of business education in India. At the time of post liberalization in the year 1991, when India was opened for the global world, a huge upsurge was observed in the number of business schools. Many multi-nationals entered India bringing with them increased demand for professionals. The role of government in business education was then moved out of the control with the setting up of many private institutions. The role became superficial and confined to limited or few premier institutions.

According to Rizvi (2003), The collaboration of

Academia-Industry becomes essential if industry has to take the advantage of research and development activity at business schools, and such a relationship should be encouraged across cultures for the benefit of global business. More and more opportunities need to be provided to the faculty through applied research, and case writing to keep them abreast of changes in the business world and hence enhance the overall teaching-learning experience. Mishra (2000) argued there is lesser adequacy of efforts for continuous and systematic professional development of teachers. The author proposed a professional development model using distance learning methodology (DLM). The model focuses on collaboration and sharing facilities to conduct the program. The curriculum should be designed keeping in mind the profile of the teachers and after analysis of their needs.

Dr. M.M Pallam Raju,previous HRD minister was also in favour of bringing closer partnership of industry and academia to improve the employability of students. (Indian education review 2013). Ministry of Labour and employment has also identified poor industry academia collaboration as a weakness in our education system.

Dayal (2004), says that "In most cases industry use business schools as recruitment centres. The right interface can develop only when they approach business schools for help, for which the latter has to equip them to understand business situations in depth and those useful to industry". Gupta and Gupta 2012, studied the challenges in Indian higher education. It was suggested that better salaries to teachers and collaboration with foreign universities should be encouraged to meet the challenges.

Tom Wanyama and Venansius Baryamureeba in their paper on "The Role of Academia in Fostering Private Sector Competitiveness in ICT Development" found that it is necessary that the academia and the private sector build strong collaborative relationships. Such relationships should not be limited to industrial training, and research and development, but should also include other important areas, such as curricula development, business proposal writing, improvement of business processes, and continuous training of private sector workers.

India needs closer partnership, (Pallam Raju, 2013a), between academia and industry. The most of the funding at present for Research and Development in the country is coming from the Government side. There is an urgent need for more contribution from industry in research, besides greater private sector involvement. The industry should engage itself more in terms of not only funding but also in skill development, innovation and entrepreneurship. The gap between the academia and industry has to be bridged to enhance employability of our people.

The Ministry of HRD, Government of India (MHRD), has set up three task forces on, (a) Research, innovation and entrepreneurship (b) skill and employability and (c) the ways to foster institutional mechanism, (Thakur 2013). The recommendations of these task forces are of wider perspective. The Government is keen to promote top end research for skill building and the plans to foster ties with academia, industry and the Government. It will come up with a plan within two hundred days, (Thakur 2013).

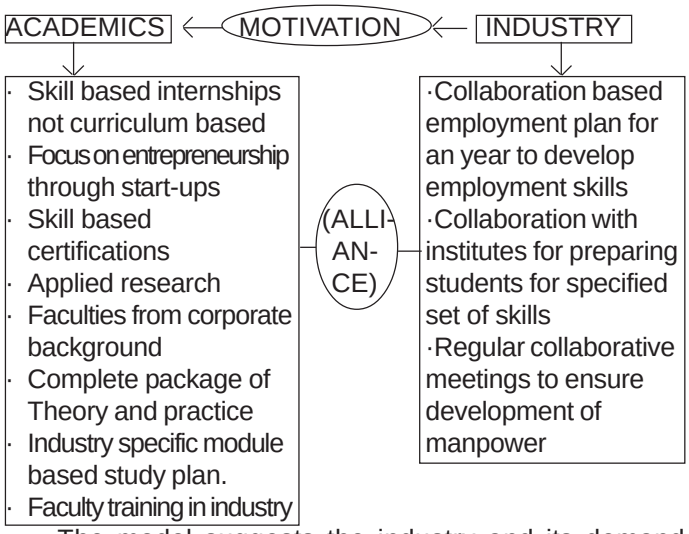
Our university curricula are redundant. It is also true that there are gaps in our education system. Various initiatives to promote industry interaction, mandatory internships, setting up of research parks, etc. have helped in improving the overall entropy within the system. The MHRD has taken several policy decisions to introduce finishing school programmes as supplementary training schools to enhance employability, (Pallam Raju, 2013b)

Industries should encourage, (Bhartiya, 2013), their employees to enhance their knowledge by doing M. Tech., Ph.D. in IITs, IIMs, Universities, etc This way productivity and enhancement and performance go hand in hand. Unfortunately the practice is limited for the same in some sectors and people do not get advantage to grow or have choice of career.

Both academic engagement and commercialization tend to be individually driven and pursued on a discretionary basis. Universities are 'professional bureaucracies' (Mintzberg, 1979) that rely on the independent initiative of autonomous, highly skilled professionals to reach their organisational goals. While academic entrepreneurship – as well as patenting as an often used proxy for entrepreneurial behavior – is also primarily individual behaviours, licensing can be carried out by the university without the active participation of the academic inventor even though such participation enhances the probability of commercial success (Agrawal, 2006).

Suggestions: The literature reviewed was understood by observing views of many researchers. In general it can be said that there is still a wide gap that exist between academic system and industry demands. Keeping aside few top-notch institutes many shortcomings can be observed in other institutes having blurred vision based education programs. Problems like weak curriculum design, few or negligible student interaction with industry, more theory based classrooms, less faculty development programs, vision less study pattern, non regulating strict government rules and regulations in education programs, and last but not the least incapable of understanding the need and demand of industry.Many innovative ideas need to be generated to bring a desired change in the current system of education. Not only idea generation will help but its proper dedicated implementation has to be done for the attainment of true societal goals.

The following model is suggested for bringing closer nit contact between academics and industry. The model is not the overall solution but would give it's contribute in reducing the above mentioned problems to some extent.



The model suggests the industry and its demand should work as a source of motivation for the academic institutes. And a sincere alliance between the industry and academics plans drawn on common objectives could lead to ascertainment of universal objectives.

Industry Plans:

1. A pre-decided collaboration based employment plans for a period of minimum one year in the final year of the study program should be developed for creating attitude of work in the student and development of practical employment skills.
2. An agreement should be done among institutes and industry to develop specific or work related skill set.
3. Conduct of meetings between industry and academics on regular basis for ensuring development of manpower for the job market.

Academic Plans:

1. The internship should be skill based and not curriculum based. It is considered that the internship programs are often curriculum based and not skill based.
2. Students should be motivated for entrepreneurship and start-ups.
3. Specific skill based certifications should be made mandatory as a part of curriculum.
4. The research conducted should be given an application based exposure.
5. Faculties should be hired from corporate background, who can better understand the delivery of study material.
6. The curriculum should be designed in such a way which can be a complete mix of theory and practical approach.
7. An industry based specific module study plan should be incorporated to meet the industry demand.
8. The faculties are the knowledge sharing source. For higher education programs the faculties should also be given training in corporate so that they can transfer the learning's to the future industry manpower prospects.

Conclusion: For achieving the objective of making India a global name in education and innovation, a different and new set of curriculum concept is required to meet future challenges. Indian education system has to move ahead for bringing innovative collaborations among academia and industry for the betterment of the society. In order to fill the gaps of present education system many avenues that needs to be intensified, encouraged, and above all incorporated, for a close academia and industry interaction has to be created to bring close interaction between them. This close interaction acknowledges and capitalizes the relative strength of academia and industry tie-ups. Along with the industrial associations the educational institutes should also try to link with government agencies engaged in industrial development activities. Many new innovative practical approach needs to be amplified for quickly recovering from the setback already tolerated by the industries and academics.

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