Academic Institutions and Growth of Industrial Sector; Exploring the Broken Links and Their Consequences
Waleed Khan Afridi
Faculty Member, Preston University, Peshawar Campus
UAN: (091) 111-707-808
E-mail: waleed@instructor.net

SUMMARY
The demand of a product or service satisfying the needs and wants of those living in a society, shall increases and the product no more needed shall become useless. Similarly the need for the products offered by academic institutions would remain high if they were designed according to the needs of the industries. Otherwise the product will be subject to rejection. Such a product can be either in the form of fresh graduates that will leave universities upon graduation or a service in the form of research and development that a university will provide. Industry needs to assess its demands and then look forward for better supply of inputs which can be in the form of trained and equipped management and developmental research activities. This will surely benefit industry in both the short and long run. Only then academic institutions and industry through participative and consultative approach can make progress in the relevant field.

INTRODUCTION
Academic institutions are providing knowledge in the form of education with regard to diverse fields. A number of private sector universities and institutions have been given recognition for the very same purpose. Educational programs and their durations have been prolonged and the syllabi of the respective programs that are offered at the universities have also been amended in order to make their acceptance internationally. These are the positive trends which are beneficial to the society, as those individuals who were unable to get education due to limited seats, can now easily enrol themselves in any program they like. Academic institutions on one side are providing opportunities for better education. On the other hand they have become the important source of employment creation as desirable remunerations are offered at various renowned universities.

But the same institutions on the other hand hardly focus on their weak perspectives. This includes the lack of interaction between the universities and industries and the wider role of research and development. Universities hardly focus on the growing needs of the industry and rarely spend resources on the research and development, thus the result appears in the form of the graduates, who start hunting for jobs just as they get their degrees and leave universities. Not only this but industry in this way suffers to an extent that their productivity decreases day by day due to lack of innovative ideas and cost effective techniques of producing goods and services and a limited number of product lines. Thus their uncompetitive nature and time bound technology makes them obsolete which finally leads to closure or then reduced market share, resulting in survival with a nominal profit. Universities with the help of well versed graduates with regard to operational activities of working in a commercial unit and the tool of research and development can provide a gateway to success for industry.

New Paradigms of Academia and Industry Interaction
Syllabi Review: Universities and other academic institutions need to assess the growing demands of the industry and then with the collaboration of industry review and design a new curriculum for the industrial education in such a way that each and every aspect of the industry is covered. It can be considered a dilemma for the developing countries that like most of the things in our daily lives we tend to copy even the curriculum and syllabi of other universities. Similarly, books that are taught in our universities though help the students to learn a lot but do not provide insight to the students due to cultural differences and many other reasons. Most of the examples stated in the foreign books do not relate to our daily life instead they are ignored in a lenient way.
Many universities are following the same curriculum taught by foreign universities, as a symbol of pride and dignity. Where as what is required here is to design syllabi according to the needs of the industry in order to fulfill the required demands of the same industry. A lot of subjects taught in universities have no relevance to the ongoing program but in order to fulfill the criteria for providing a degree universities follow teach them.
Project Assignments: Practical assignments with regard to industry, in the form of projects should be assigned to the enrolled students in different programs so that they may be able to conduct field surveys and analyze industrial situations. For alumni it should be made an obligation to analyze at least one single commercial unit and provide fruitful suggestion. This objective can be achieved by involving more and more students in the industry affairs. Students enrolled in the PhD programs can play a vital role in the industrial development. Numerous academic institutions have started working on such type of projects. According to which, scholars related to various filed are asked to provide their scientific knowledge to the industry in order to make proper use of their knowledge.

Research and Development (R&D) Activities: Academic institutions should focus on the research activities with regard to industry. Industry at every stage needs ideas, innovative techniques to reduce cost and increase productivity and prepare it self for the up-coming challenges. This can only be done through research activities. Universities need to provide individuals with the opportunities to visit field industry and conduct researches with regards, product design, product development, cost effective techniques and even creation and processing of raw materials needed by an industry, at reasonable prices.

Large industries, in most of the advanced countries tend to possess their own research and development departments but the case differs in the developing countries. Even in the large industries hardly a department of R&D exists. But now with the emergence of new world order and implications of World Trade Organization, industry has started focusing on the R&D departments. Industry, if considered necessary despite developing its own R&D department can provide finances to a university for the same purpose. In this way R&D activities will not be over burdening the industry’s resources instead such development would keep industry linked with university for an uncounted period.

Government Role: Government in almost every country play an important role that is beneficial both to the industry and academia. Under its certain provisions it can take certain initiatives, to make the academia and industry collaboration more fruitful. Government of Pakistan through the Higher Education Commission (HEC), in many ways have taken certain initiatives which include University-Industry Support Program, Pakistan Education & Research Network and Industrial Liaison Secretariat. Such actions indicate the fact that government is taking keen interest in promoting collaboration of universities and industry including their growth. The role of the HEC Industrial Liaison Secretariat is to facilitate the development of an effective cooperation between academia and industry. The aim is to focus on the increasing international demands for products and services. The secretariat serves as a medium for university-industry interaction by identifying new challenges, finding their best possible solutions and providing assistance for developing new programs in the academic institutions. The secretariat has undertaken various programs to support the discovery of new knowledge and enhancement of a skilled workforce. Private sector industries are being involved to identify their needs as per changes taking place so that intellectual capital and emerging technologies are brought together in way that promote economic growth and an improved quality of life. Further details are available at www.hec.gov.pk. The HEC aim is to develop university–industry partnerships. To encourage students and researchers conduct research and gain experience with production processes in an industrial setting. Industrial engineers and professionals are exposed to industry’s perspective and integrative skills and enabled to conduct long-term projects. All this is being facilitated through the initiative of university-based support for partnering university and industry scientists and/or engineers on a research project of mutual interest, including joint graduate student advising.

Universities and Industry Joint Ventures: Some universities have taken initiatives on the university and industry partnership and interaction which includes the Sarhad University and Small and Medium Enterprise Development Authority (SMEDA). Sarhad university representing the academic institutions and SMEDA representing Small and Medium Enterprises. As a result of joint venture among both the parties the Entrepreneurship Development Centre (EDC) has been formed which can be considered a potential link between the academia and industry linkages. The philosophy of EDC is to apply scientific knowledge to the SMEs and then evaluating the same knowledge in terms of increased productivity and cost effectiveness.

CONCLUSIONS
1. Growth of industry and academia depends upon the practice of interaction and
assessment of their demands and maintaining standards to fulfil those demands. For this industry needs to keep close liaison with the university. This is because the university is better able to provide current and accurate knowledge regarding the issues and problems. Industries face challenges one after another especially in developing countries and the secret of meeting those challenges lies in the close contact with the academic institutions.

2. Academic institutions should focus on quality in terms of research and development practices. This can be done through practical projects with regard to industry and establishing practices of research related activities with the industry. Universities need to design curriculum as per requirements of the industry and should keep updating the same syllabi as necessary. This would help fast-processing of information. As a result, the graduates leaving universities will have bright future. On the other hand the industry will be willing to accept those graduates.

3. Academic institutions should arrange research seminars and workshops. This will act as a path to make progress towards innovative ideas and cost-effective techniques of production. Such practices should be made binding on the enrolled scholars, otherwise universities will become places for getting degrees with knowledge not practically applicable.

4. Industry is already contributing their share to the government for enhancing R&D activities within the universities and research centres. That money need to be now instilled appropriately to them. This will surely bring a positive change within the universities as the audit of such funds will make it compulsory for the universities to show their due responsibility of focusing on innovative and product development related research.

5. Global changes are taking place in those countries producing cement in bulk quantities. They are now focusing on methods of producing other materials which will be used as substitute products for cement. This objective has been achieved through strong research practices. Industry in the long run might not be interested in producing a product which is already being produced at high costs involved with prospects of lower profit margins. In such a case it can seek help from university to develop product plans and make progress.

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