

Knowledge Sharing: Collaboration between Universities and Industry Organizations

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Abstract

Human being while traveling through Rural, Agricultural and Industrial Societies has now reached to the Knowledge Society. With the advancement of Information and Communication Technology, there are now drastic changes almost in every sphere of life. Due to increased competition as a result of globalization and continuous technological improvements, it is imperative for universities to collaborate with industry in order to enhance the distribution of knowledge, growth research and development, patent inventions and shape the nation's organizational capacity. For this reason, it has become gradually clear that there is a need for close by a university - industry partnership as a means of national economic prosperity. It is obvious from the study of literature that university-industry partnership and their succeeding knowledge transfers are topics of economic, political, sociological, managerial and academic interest. Indeed, technological knowledge is look as a great source of long-term economic growth factor .This paper presents our literature analysis concerning this research topic and explores one particular means of inter-organizational knowledge transfer. The paper begins with the term knowledge. It then discusses knowledge sharing. For Collaboration between universities & Industrial organizations, collaboration policy, needs for collaboration, challenges and benefits of university – industry partnership.

Keywords: Knowledge transfer, University/industry collaboration, Academic growth

INTRODUCTION

Knowledge sharing

To share knowledge means to study, understand, feast and duplication the information, the ideas, the views and the resources with each other, connected with, on a detailed ground. If we both exchange 1 Rupee, we both have 1 rupee each.

But if we exchange 1 Good Thought, we both have 2 Good Thoughts. So if you share knowledge with me, we both will gain something and the knowledge of both of us will be increased so that means Knowledge sharing is an action through which knowledge is exchanged among people. Supposing that transfer activities between

universities and private sectors will add to corporate competitiveness and growth of the economy, researchers intensively examined university-industry associations. This research field has been highly indicated the traditional open sciences channels and other knowledge communications such as informal associations and combined research & development projects.

Collaboration for Knowledge Sharing between Universities and Industrial Organization

The association between universities and industries may play a vital role in the area of knowledge sharing. As we know, the research work is a constant process, on various levels, at many places, at the same time. In any subject or any field, daily knowledge is calculating new measurements from the angles of the globe. Every year, many students take admission in institutions of higher education. Some of them start research work in their particular subject. Generally, all the research work has done at this place. It is very important is to expose these works. The concept of collaboration for research work is not new. Many countries in the world are involved in this kind of partnerships on global levels also. However, for India, we have not made more efforts in this field. It is very much essential to apply knowledge on practical platform. Globalization strains that our society requirements to move quicker, work smarter and take more risks than at any time in our history. Every academy has its research students and experts and every industrial firm has its experts, employees

who practically work on projects having employed knowledge of many years. By association, they all can share the information and can lead the work in a specific way, can add new measurements in knowledge and can create new standards. Any new invention for example, to make fuel from water, the researcher discovers it and the manufacturing firm places it in exercise. The information created in the educational domain takes various tracks before finally attainment a reasonable receiver, from patent and licenses to Research publication or consulting.

LITRETURE REVIEW

The study of knowledge sharing has its roots within the technology transfer and improvement literature. The research in this area has focused on clarifications for different nation's successes or failures in nurturing economic growth through technological development. While some philosophers argue that high investment rates in physical and human capital drive national innovation and growth rates (Young, 1993; Kim & Lau, 1994; Krugman, 1994), 'assimilation theorists' instead argue that entrepreneurship, effective learning, and innovation are separate, but equally important variables affecting development (OECD, 1971; Freeman, 1982; Kim & Nelson, 2000). Central to both approaches, nonetheless, is an understanding of the importance of the sharing of ideas.

In this literature, successful knowledge sharing results in firm understanding and getting into

practice product designs, manufacturing processes, and organizational designs that are new to them (Nelson, 1993). As demonstrated by the title of Richard Nelson's recent volume on technology transfer, *Technology, Knowledge, & Innovation* (Kim & Nelson, 2000), knowledge sharing is seen as occurring through a dynamic learning process where organizations continually interact with customers and suppliers to innovate or creatively imitate. Consider the case of technology transfer as articulated by Lall (2000, p. 15)

Knowledge is a well-ordered combination of information, adapted within a set of rules, procedures and operations learned through experience and practice (Keskin, 2005). The literature classified knowledge into two main types: tacit and explicit. Explicit knowledge is knowledge that can be seen, shared and easily communicated to others. Most explicit knowledge is in the form of raw data, such as documents that contain the work experiences of staff, descriptions of events, interpretations of data, beliefs, guesses, hunches, ideas, opinions, judgment and proposed actions (Choo, 2000). Tacit knowledge is more difficult to share because it is embedded in a person's memory.

These conclusions have led development experts to recommend that activities focused on facilitating knowledge sharing rather than on transmitting Northern knowledge to the South are likely to prove more successful (Ellerman, Denning & Hanna, 2001; Knowledge for

Development, 1998; Social Development Group, 2002; Prusak, 1999). In other words, while the communication of knowledge is important, it is the processes through which knowledge is shared that determine whether organizational learning occurs and, therefore, whether a knowledge-sharing process was a success.

OBJECTIVES OF THE STUDY

- To understand the conception of knowledge sharing between University & Industry.
- To explore the need and scope of University & Industry collaboration.
- To discuss the collaboration policy for knowledge sharing.
- To analyze the benefits and challenges of University – Industry collaboration and provide some alternative solutions.

RESEARCH METHODOLOGY

Research and experimental development work is undertaken systematically to increase the stock of knowledge. The first objective of this paper fulfil by the analysis of introduction of the paper. This research paper is carried out with the help of secondary data. The major tools for the collection of the information has been available collected primarily from journals, articles, online database of Indian Economy, websites or newspaper etc.

DISCUSSION AND ANALYSIS

Knowledge cannot be produced in an unexpected manner – it needs to be managed well. For that Universities & companies who have combined hands for a specific subject or specific drive should first of all, decide a common frame of work. There are numerous needs for make a corporation of industrial organization and educational institute or universities to make a sustainable growth.

NEED OF UNIVERSITY-INDUSTRY COLLABORATION

The need for sharing information between university and industry has become gradually obvious in recent time. Historically, research institutions were supposed as a Cause of new ideas and industry offered a usual way to get the most out of the use of these ideas.

However, the past period has seen a substantial change in the roles of both parties. Many corporations are developing open invention approaches to research & development, combining internal and external resources, and pointing to get the most out of economic value from their

knowledgeable property, even when it is not directly linked to their central business. It has become clear that universities need to play a livelier role in their association with industry in order to maximize the use of the research results. It is very much essential to understand needs for partnership and decide collaboration policy to better understand and increase the partnerships.

- Knowledge which is generated in research works at university level lies in theses unused in libraries. To pull out the Knowledge from thesis.
- To get fresh & pure knowledge directly from universities for industries.
- To reduce the time for research at the industrial level.
- In universities research work goes on and on haphazardly without any specific direction. To give a specific direction
- By getting a perfect direction, research work will be done more speedily. Knowledge will grow faster which is very much essential for knowledge society.

TABLE 1 . DIFFERENT WAY OF KNOWLEDGE SHARING BETWEEN UNIVERSITY AND INDUSTRY

Publications	Scientific publications Co-publications Consulting of publications
Participation in conference Participation in fairs professional networks & boards	Participation in conferences Exchange in professional organizations Participation in boards of knowledge institutions Participation in governmental organizations

Mobility of people	Graduates Mobility from public knowledge institutes to industry Mobility from industry to public knowledge institutes Trainees Double appointments Temporarily exchange of personnel
Cooperation in R&D	Joint R&D projects Presentation of research Supervision of a trainee or Ph.D. student Financing of Ph.D. research Sponsoring of research
Sharing of facilities	Shared laboratories Common use of machines Common location or building (Science parks) Purchase of prototypes
Cooperation in education	Contract education or training Retraining of employees Working students Influencing curriculum of university programs Providing scholarships Sponsoring of education
Contract research and advisement	Contract-based research Contract-based consultancy

Collaboration policy for University and Industry Partnership

Universities have research students and subject experts while enterprises have their experts,

Experienced workers, and mechanism. By collaboration, the knowledge can be shared among both of the parties. Each organization and university should develop a policy specific to its own needs and objectives. This policy should define the:

Objectives

First of all, it is very much important to clear the objectives for which both the industries & universities have merged hands.

Context

Research should be developed in a framework of formation and presentation of knowledge. Research should be designed to reflect that knowledge is developed collectively and that the 'distribution' of knowledge leads to its continuous application in different frameworks, by different participants with differing backgrounds and experiences.

Participants

Research scholars and business experts at university level and the experts and employees

who have practical working knowledge and experience at the other end should be contributing in the project.

Processes

The research effort should be established to support and improve knowledge intensive processes. The whole work should be a knowledge life cycle by involving the research students and subject experts as a knowledge generator, the experts of firms who execute the knowledge and the works who actually apply the knowledge on real-world. Here, knowledge will flow in both the directions. And at the time of actual execution on practical ground, if any difficulty derives, the feedback will be given to the researcher and by removing the deficiencies, it will be improved and will be made more perfect and more useful for enterprises.

Privacy and other rights

To keep the matters and materials and the progress of work top confidential between collaborating parties only is a must. All rights should be reserved for enterprises if it is supported financially by firms.

BENEFITS OF UNIVERSITY AND INDUSTRIAL COLLABORATION

- ❖ Sharing of valuable knowledge.
- ❖ U-I partnership able to avoid re-inventing the wheel, reducing redundant work.
- ❖ May reduce the cost for inventions.
- ❖ Formation of knowledge with the support of experts and experienced persons.
- ❖ By giving a right direction to the enthusiastic intelligent students, making them experts of future.
- ❖ Which kind of change manufacturing firms needed? Which kind of difficulties they are facing and to resolve it, which kind of research works they are supposing from the university will be cleared well in advance. Maximum production with the lowest cost is the main aim of all enterprises. If, they were raw materials, or machinery and technology or management deals.
- ❖ By collaborations, the firms will inform university and university will frame the research work as per the needs to fulfill the aim.
- ❖ Any kind of the problem ascends, will be solved at the primary level, which will save the time, money and manpower.



Source –<http://blogs.lse.ac.uk/impactofsocialsciences/files/2014/08/healy1.jpg>

CHALLENGES IN UNIVERSITY–INDUSTRY INTERACTIONS

There are some major challenges in university–industry interactions or collaboration which are–

- Generally lack of information about what is on proposal from universities
- Quality of material re. innovation provided by universities once contact made
- Generally low level of engagement with universities.
- Key problems remain in terms of basic mismatches in terms of relevance, time horizons and expectations

CONCLUSION

There is much more to be done. Universities will have to get better at identifying their areas of competitive strength in research. The government

will have to do more to support an industry–university collaboration. Industries will have to learn how to exploit the innovative ideas that are being developed in the university sector. With such collaborations, government, industry and universities, all three parties can sharpen their entrepreneurial skills to effectuate transformation of the nation’s science and technology landscape. One key strategy is that of responsiveness in the higher education sector. Greater responsiveness imply that universities should take the problems and challenges presented by the societal context in which they operate seriously (HSRC 2003-1). Knowledge sharing appears to work best when it is seen not so much as a relay race, but as a team sport. It is ‘a game during which the ball moves continuously between the players and in which all players have to collaborate and share resources to win’ (Entrepreneurial Higher Education Institution 2002-10–11).

There are several areas in which research efforts can be focused on the future. For example, similar understanding of blockades, trials and success factors is required. Further research is needed to understand the mechanisms by which universities transfer research & development knowledge in order to increase industry competitiveness and efficiency as well as complete economic and social growth. Research on how association with universities influences the decision making procedures in industrial firms may be a relevant topic, as would be research that explores how intellectual property rights are negotiated between universities and industry partners. To frame a network for academic libraries of a country for knowledge sharing is also the area of future work. It is hoped that this work has contributed to our understanding of knowledge sharing for saving the time, money and man power and contribution of university libraries as providers of scientific R&D knowledge to move the knowledge life cycle faster. In future, to make India a knowledge super power, this kind of collaborations should be increased.

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