

## MANPOWER DEVELOPMENT: ROLE OF INDUSTRY – UNIVERSITY PARTNERSHIP

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**Abstract** - *The most important factors of national competitiveness veer around the skilled human resources. The ascendancy of information technology and the intellectual capital in the current millenium would bring in a sea change in the global scene through cross-cultural synthesis irrespective of creed, color and religion. The explosion of scientific and technological marvels coupled with the fast confluence of a panorama of growing expectations of the millenium brings in the urgency and efficacy of forging long lasting partnership between industries and universities. With the Indian scene as the backdrop, its 132<sup>nd</sup> rank among 174 countries is deplorable; more so when it possesses the world's largest population of trained personnel in science and technology. Its population, recently, has crossed one billion. For exploiting such vital human resource, India needs to have development plans with vision and dedication. As a broad framework of tasks for manpower development, the focus of the study is in the context of skill generation and productive applications, dynamic partnership of universities and industry and knowledge management. Finally, a framework for nationwide knowledge management is quoted for forging a viable and vibrant partnership of the industrial organizations and the academic institutes.*

*Index Terms* - competitiveness, globalization, partnership, manpower, development, knowledge, management.

### Introduction

Michael Porter, in 'The Competitive Advantages of Nations', has argued that national property is created, not inherited; and the most important factors of national competitiveness include skilled human resources besides capital, technology, natural resources etc. [1]. The human resources policies of Japanese companies have been viewed to underpin the competitiveness of Japan on a global scale; a planned man power development is the basic need of every nation to benefit from the competitive advantage implicit in the plan profile. In Japan, the companies with their dominating role to account for the economic well being of

the people, treat the employers and the employees as social entities to share their pains and pleasures together. There exists the least exploitation of the employees by the employers. The companies do share a large percentage of the profits with the employees to inculcate a sense of belonging and dedication; ultimately contributing to the progress of the concerns.

### THE CHANGING GLOBAL SCENARIO

The institution of the new version of GATT and the setting up of WTO have enhanced greatly the aspects of globalization in trade and tariff. Presently, the active mechanisms of integration of production, consumption, investment etc. at the global scale have focussed on the man power development both for nations at the macro level and for organizations at the micro level. The challenges, no doubt, have created waves of turbulence in the process of globalization.

At present, more than the past experience, talent retention in the new global context is much more critical which needs favorable environment for the sustenance of thriving knowledge. The mobility of knowledge transcends geographical boundaries, disciplines and professions. Many, specialized in engineering and technology, have changed over to more lucrative fields in management, software, and administration. The challenge is to create adequate opportunities for retaining the skilled engineering man power to aim at sustained development.

The advances in sciences and technology have greatly broadened the horizons to embrace inter disciplinary approaches with teams of specialists from various fields to include, besides engineering, other socioeconomic and behavioral sciences. Since the pace of changes has been very fast in fields like Information Technology, the rate of obsolescence and redundancy have become unmanageable and to have unimpeded growth, the man power development planning has to be dynamic and focussed.

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Because of the ascendancy of information technology and intellectual capital, these would reign the roost in the current millennium and would bring in a sea change in the global scene through cross cultural synthesis irrespective of creed, color, and religion. This would, hopefully, reduce the erstwhile tensions and discensions nurtured by dogmatic and often fanatic, perverted and myopic views of religion. Sooner we realize and reinforce the idea of one global community, easier would be the task of real man power development.

### **TECHNICAL UNIVERSITIES AND INDUSTRIES – A VIABLE PARTNERSHIP**

Interactions between universities, especially those dealing with engineering and technology, have been taken up since decades but these have assumed greater significance presently to meet the challenges of global competitiveness. Major industries have had their in-house training, research and development programs at different levels with limited interactions with the academia. But the explosion of scientific and technological marvels coupled with the fast confluence of a panorama of growing expectations of the millenium has almost completely changed the global scenario. There exists, at present, an urgent need to forge long lasting partnership between industries and universities; the erstwhile interactions being unable to cope up with the demands. This is felt in the cases of both, the developed and the developing countries alike.

In developing countries like India, such partnership is slowly taking shape as both, the industries and the academia, have deeply felt the dire necessity of achieving excellence and aiming at sustainable growth to keep pace with the global spectrum. The newly instituted programs carved out with active participation of private entrepreneurs at the under graduate and graduate levels in the premier institutes of technology and sciences of international fame are just a beginning in the right direction. Apart from the benefits of consultancy through the available expertise and facilities in the academic institutes, the industries can support activities of innovative processes and technology transfer. The students and even faculties need to be in the process of building and nurturing the evolution of a fruitful and lasting partnership.

But the demand for quality technical manpower in India is enormous and to reach the global bench -mark of standards, such partnerships should encompass other technical institutes. This would involve more strenuous efforts to raise their existing standards. The universities and the industries should convincingly come out to support such endeavors as otherwise the prospects of existence to compete at national and international levels for both are at stake.

### **THE INDIAN SCENE**

Rapid Urbanization, growing competition, technological advancement and globalization of markets are the compulsions to use new technologies and management methods to achieve higher productivity and quality. Hence, the need of the industry- university partnership, quality conscious and quality oriented. India has entered in the middle bracket of Human Development Index 1999 with the latest ranking of 132nd among the 174 nations [2]. Miles to go before India reaches the top bracket. But with the largest population of trained personnel in science and technology along with its good command over English, India is placed in an enviable position in the global context. Even though its population has crossed the one billion mark, the man power could very well be made competent to make India a world leader in the near future. When the population in the developed countries is fast aging with the general apathy for family and offspring, in the coming decades, India would be proud to have the largest sect of young people who would surely dictate the world through innovations in science and technology.

For exploiting such vital human resources, India should have development plans with vision and dedication. Even now, the Indians have an edge over others especially in the field of information technology and the Silicon Valley is a testimony to that effect. Indian scientists and technologists, as acknowledged by all, do possess the caliber and design capabilities but for want of the support of a well coordinated network of supply of components and sound industrial base, the last mile is a hurdle race to complete the process in India. This, what many Indians feel, is the reason why Indians flourish in the Silicon Valley but not here in the Indus Valley!

The public and the private institutions/ organizations should thrive to build the basic infrastructure to attract and allure the younger generation to contribute their mite for building a New India, free from the shackles of bureaucratic hassles. They have the onerous task of restoring the glory that was ancient India with one of the richest heritage of culture and prosperity in all spheres of life and living.

### **BROAD FRAMEWORK OF TASKS FOR MANPOWER DEVELOPMENT**

#### **Paradigm of Development**

Under the changed global context of skill generation and productive applications, the partnership of universities and industries needs to be dynamic and long lasting. This is to inculcate the spirit to communicate, interact, co-ordinate so as to demonstrate responsibility, direction, and creativity. Equipped with the required high level of conceptual and behavioral skills, the worker needs to be competent in the prevailing and future work setting [3].

### Hands on Experience

As distinctly visible in the IT field, participatory activities do play a significant role. For this to happen, the industries and the academic institutes must make special efforts to come together and create opportunities for the students to work on projects of direct use and interest to the industry and society [4].

### Knowledge Management

Education and advances in knowledge are as important as capital and natural resources contributing to the economic growth of a nation [5]. Nonaka and Takeuchi[6] argue to pay attention to the potential and creativity of human beings and treat them as information creators not simply as information processors. Peter Drucker[7] suggests for learning to create new things through continuous learning and innovations so as to increase the knowledge worker's productivity.

### Knowledge Creation and Conversion

Knowledge creation is explained as a process mobilized in conversion of tacit knowledge at different entity levels i.e. at individual, group, organization and inter organizational levels [6]. The organizational knowledge creation is a process of identifying, creating and supporting creative individuals and amplification and crystallization of their knowledge as a part of knowledge network of the organization.

The four modes of knowledge conversion are suggested as socialization of the sympathized knowledge (tacit to tacit), externalization of the conceptual knowledge (tacit to explicit), combination of the systematic knowledge (explicit to explicit) and internalization of the operational knowledge (explicit to tacit).

### Organizational Knowledge

This, either in case of academic or industrial concerns, requires to fix clear objectives, prioritizes in terms of relevance, establishes knowledge creation process and practices, knowledge capture, exploitation and protection mechanism with the necessary infrastructure. Cohen[8] however, brings out the contrasts between the perception of Eastern and Western systems. While the Western systems focus mainly on the explicit knowledge, its reuse and management and measurements for short term gains, in the East, the focus is more on the tacit knowledge, its creation, culture and nurturing for long term advantages.

### NATIONWIDE KNOWLEDGE MANAGEMENT

Taking the nation as a whole to provide the synergy of economic development and improve the quality of life of the

people, the framework as suggested by Prahalada and Sen[9] can well be considered for interactions between the academic institutes and the industrial organizations. The main strategies suggested by them are:

- Intellectual Property Rights
- Research and Development through knowledge network
- Development of human resources
- Encouraging venture capital for knowledge exploitation
- Market development
- Technology acquisition
- Need based infrastructure including IT.

### CONCLUSIONS

Globalization has thrust upon nations and organizations several challenges in the area of manpower development; only those who have sensed and accepted the challenges would only survive the onslaught. As Andy Grove puts it, 'only the paranoid survive' [1]. Industry, as obvious, has a vital role to play in sustaining and enhancing the excellence of academic programs and so is the reciprocation from the academia. One has to be professionally proficient so that the society can expect his services to the humanity. The goals are clear, the need is critically felt and there is no dearth of potential in terms of human resources and technological capabilities within India. Only the thrust to boost it to the level of a movement towards reaching the pinnacles of excellence is necessary so as to give shape to the crying need of sustainable development in India, and also elsewhere. Integrated and holistic manpower development is the need of the hour. To achieve this, the cooperative efforts of the public (government) institutions, industry and the academia should thrive on and perform over a platform cast on the solid foundation of *trust, mutual confidence and respect!*

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