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Entrepreneurship Development In Technical Education In India

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ABSTRACT

Technical education, as entrenched in the Indian National Policy on Education, is concerned with qualitative technological human resources development directed towards a national pool of skilled and self-reliant entrepreneurs, technicians and technologists in technical fields. The two key phrases, which readily come to mind in this type of education, are competency-based skill-acquisition and sound scientific knowledge. In order to cope with the requirements of fast developing economy, to gear up employment generation and meet the challenges of globalization, it was absolutely imperative to realign Technical Education system in the country to cater for these requirements. This paper attempts to appraise the contributions of this often neglected but yet inevitable educational sector in order to make significant progress in terms of national development and job creation.

KEYWORDS: Entrepreneurs', acquisition, globalization, appraise

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INTRODUCTION

The technical education system should be dynamic and capable of responding to the changes in the socio- economic conditions of the country, national aspirations, objectives and goals. For this, the system should be efficient and the concerned people should have freedom for operation and innovation.

The next century will bring with it new challenges in the field of production technology, quality control, management and above all employment. The share of Indian goods in world market is practically negligible as compared to many South-East Asian countries despite the fact that India has today the perhaps the second largest technical work force in the world.

The technical education in India is not comprehensive. The technical education must have direct relevance to industry and society as a whole. The lack of meaningful rapport between technical institutions and industries is a matter of grave concern. Entrepreneurship, energy management and environmental protection have yet to find a suitable place in the curricula of technical education. Engineers as a vehicle of industrial growth, which can compete in world market, is a distant dream. The infrastructural facilities are far from satisfactory in many cases and facilities available are highly under-utilized.

ENTREPRENEURSHIP AND ENTREPRENEURS

Entrepreneurship in a broader sense, can be described as a creative and innovative response to the environment. Entrepreneur is an innovator who introduces something new into the economy, a new method of production which has not yet been tested in manufacturing, a product with which the consumers are not familiar or of new market hither-to unexploited and other similar innovations.

`The Entrepreneur' said the French Economist J B Say, shifts economic resources out of an area of lower into an area of higher productivity and greater yield. ButSay's definition does not tell us who this 'Entrepreneur' is.To Schumpeter (1961) an entrepreneur was dynamic agent of change; or the catalyst who transformed increasingly, natural and human resources into corresponding production possibilities. Whatever the definition, the basic underlying concepts seem to have remained the same.

The entrepreneur always searches for a change, responds to it and exploits it as an opportunity. These entrepreneurs are people who have the necessary resources to establish the venture and to initiate appropriate action to make the venture successful. Entrepreneurs are persons who start their own new and small enterprises.

Entrepreneurs are highly creative people. They always try to develop new products, processes or markets. They are innovative, flexible and are willing to adopt a change. They are not satisfied with conventional and routine way of doing things. They involve themselves in thinking and finding

new ways of doing the things in a better way. They do original thinking end come out with solutions of many problems. Their thinking is divergent and are in search for new scientific theories and knowledge for improving products and processes. Entrepreneur has a great vision. He is able to perceive the opportunities in the environment which other people are unable to see. He is future oriented. He is an intelligent and resourceful person. Knowing the present and the past he is able to predict the future events about the business more accurately than other people. He is able to anticipate problems which his business is likely to face and keeps himself prepared for these events. Entrepreneurs take calculated and moderate risk. Entrepreneurs avoid low-risk situation because there is a lack of challenge and avoid high-risk situations because they want to succeed. They always set higher goals and enjoy excitement of a challenge, but they do not gamble. Entrepreneurship activity is perhaps the most cr.al factor in the industrial and economic growth of any country. Entrepreneurs play a catalytically role in utilizing the resources in an optimal manner. Therefore, one of the important perquisites for a healthy industrial and economic growth is the availability of effective and efficient Entrepreneurs.

TECHNICAL ENTREPRENEURSHIP

If technology promotes a vibrant industry it is primarily through what Shumpeter terms the `technological in-novation'. He stated that innovation and especially technical innovation imparts to the capitalistic economies their secular dynamics through the process of “creative destruction'. Old products and industry structures are repeatedly displaced or altered by new form and disequilibrium is more prevalent than equilibrium.

Innovation requires innovators and it is here that technical entrepreneurs form the vital link. Technicians and technocrats form the backbone of the technology system within an economy and It is seen that innovators have generally been persons possessing some kind of technical skills.

Since technical knowledge is a major strength of the technical entrepreneurs, engineers developing entrepreneurial competencies among the technologists have received considerable attention. Sapru for example claims that, "by virtue of their academic qualifications, they possess varying degrees of traits associated with creativity and are suited for supporting new ventures on planned basis rather than based on conventional methods'. It may be argued that in an economy beset with problems of high unemployment among the educated and technically qualified, promotion of technical entrepreneurship has the dual advantage of turning job seekers into job creators,In India studies also reveal that entrepreneurs and other technically qualified persons are looking for certain niches in the economy where the large firms do not exist. Promotion of technical entrepreneurs in a country like ours can, therefore(i) help control flow of scientific and technological personnel into

services and less productive occupations and (ii) increase industrial productivity and check brain drain.

Many technocrats have a technological fix which increases the rate of failure. Their interest in technical products and processes often hamper them from viewing the business from a wholistic perspective. In order to overcome these shortcomings, the Entrepreneurship Development be made as an integral part of technical education. As a matter of fact it has been established that the engineers with the knowledge of entrepreneurship development have better chances of success in running their own industries.

ENTREPRENEURSHIP DEVELOPMENT IN TECHNICAL EDUCATION

The time has come when engineers should leave fancy for white-collared Government jobs. Considering present reservation policy and other socio-economic factors, Government jobs are reduced. With employment opportunities in other Asian and African countries reducing every year, one will have to make his place in one's own country. With liberal economic policy of the Central Government, our export horizon has widened. Thus there is an unprecedented scope for export provided that quality and cost are maintained. The industrialist with engineering background and knowledge in Entrepreneurship Development has better chances of exporting his goods as compared to the one without technical background. The theory of “survival of fittest” stands valid even today and would continue in future also.

It is interesting to note the findings of Dr. E. Paul Torrance, an authority on creativity. He studied 15000 students from nursery to sixth class and found that most children start life with a 'valuable creative potential but have it knocked out of them by the time they reach the fourth class". The conditions are still worse in India. Education in India is so academically oriented that it leaves room for creativity. Creativity and entrepreneurship are inter-linked. Thus the school education reduces the entrepreneurial traits in students. It is, therefore, important to change school education to have more stress on creat1vity and aesthetics. Till such time Entrepreneurship Development should find an important place in engineering education. Such education should have cognitive outcomes, equipping the students with the skill of logical thinking, critical analysis, decision making and above an integrated view of knowledge and needs that have not been fulfilled by the traditional education system. One of the main aims of technical education after independence was to produce a selected group of young owners who would establish their own industries. They are to be job creators rather than job seekers". It was expected that these engineers or technocrats would transform India into an industrialized country, which can compete in international market. Unfortunately, the Share of India

in international market is abysmally low. The tiny islands like Taiwan, Hong Kong and Singapore are individually having more export than India.

This trend can be reversed if more and more technocrats are inspired to go for entrepreneurship. The Government of India has realized the significance of attracting more and more science and engineering students in this field, in order to achieve this aim National Science & Technology Entrepreneurship Development Board (NSTEDB) was constituted in 1982. This Board is primarily responsible for Entrepreneurship Development among Science and Technology personnel.

The Entrepreneurship Development should be given due importance in the curriculum of technical education for all branches of engineering. Entrepreneurship has a very vast scope and technical knowledge imparted during engineering education may constitute only 20 percent. It includes the management of men, material and money. The Financial and Personnel Management, is perhaps, the most difficult for engineers. This is one of the main reasons why many engineers are not successful entrepreneurs. This handicap can be removed by exposing the engineering student to the course of Entrepreneurship Development (ED). It is recommended that this exposure should be done at the initial level. The whole idea is to "catch them young". The seed sown at the initial stage would grow to the full tree by the time the student completes his studies. The old myth that entrepreneurs are born, does not hold good now. The entrepreneurs can be developed by proper training and guidance. Hence the role of technical institutions in this field cannot be overemphasized.

TECHNICAL TEACHERS TRAINING

Falling standard in higher education has become a worldwide phenomenon causing acute concern to policy makers. One of the reasons for the low quality of college education is the amateurism that has come to mark the functioning of college teachers in India.

For technical teachers there is no training programme. It was assumed in the past that the teachers in technical education did not need any training in teaching methods as they were expected to evolve into competent teachers through "on the job" or voluntary efforts to improve their competence. Due to this wrong assumption, amateurism in respect of teaching is evident to-day in technical education. This has adversely affected the quality of teaching. The Quality Improvement Programme (GIP) has faded to achieve this aim. ft is imperative that the teachers be trained at the very initial stage of their career. Efforts should be made to establish a Technical Education Staff College in different regions of the country with broad objectives of pre-service training of technical teachers and conducting sponsored research and studies in technical education.

INSTITUTION-INDUSTRY LINKAGES

The National Policy on Education 1986 (revised in 1992) has stipulated that allocation of funds for education "will uniformly exceed six percent of the national income" from the 8th plan and onwards. As it stands today the allocation is expected to remain at the level of 4 percent only. The condition is no better regarding technical education. The financial crunch in technical education will adversely affect the quality of teaching.

The programme of action (1992) on National Polity on Education envisages that formal linkages between technical institutions and the industry will be strengthened in terms of curriculum development, resource sharing, joint research projects, apprenticeship training for the students, exchange of faculty and experts on mutual basis, consultancy and sponsored research, continuing education programmes, sandwich/ cooperative programmes and the concept of adjunct Professorship.

CONCLUSIONS

Time has become to review critically the various facts of engineering education. Entrepreneurship Development should be an integral part of engineering education for all branches of engineering. This would go a long way in solving, to some extent, the problem of unemployment and would provide a much needed boost in hi-tech industries. This necessitates mutually beneficial linkages with industry. Innovation and transfer of technology for the benefit of masses be given top priority. The creation of a cadre of talented and dedicated teachers at national level for engineering education cannot be postponed any further.

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