



Technical Education and its Contribution for Nation

SITANSHKUMAR D. GOLWALA

Lecturer in Mechanical Engineering Department
Polytechnic, Thze M. S. University of Baroda, Baroda
Gujarat (India)

Abstract:

Technical education is instrumental in making remarkable contribution to nation development through creating skilled manpower, enhancing productivity, and improving quality of life. The main objective of technical education is to prepare individual for employment and business through skill and knowledge acquisition. In present scenario of science and technology, production of skilled and knowledgeable manpower according to the needs of society and industry is the need of hour. The rapid industrialisation of any country is due to acquisition of technical education. It gives systematic way of practical exposure to individual for producing goods and services which is necessary for development of any nation. This paper examined the benefits of technical educations, and its role in harnessing resources in nation's development.

Keywords: *Economic Growth, Employable Skills, Manpower, Sustainable development*

1. Introduction

The development of a any country is depends on effective utilisation of human and physical resources which in turn, is depends on training of the manpower and skill development. The India has second largest population in the world but compared to its population, the technical manpower is not significant. Technical education is all about skills developments. Skilled workers which in turn increases productivity. Technical education enables people to acquire skills and knowledge which are needed in society and industry. Japan's rapid industrialisation is due to accumulation of technical skills, knowledge and its strong commitment to education particularly training of engineers and skills. Technical education not only improves analytical, functional abilities but it also enhances efficiency, skills, knowledge which is very much essential for economic development of any country.

2. Importance of Technical Education

We live in era of technologies, where we found the application of technologies in every aspect of life. Technologies make our daily life so easy that without it we feel discomfort. In India many people get higher education but they are still not getting job anywhere because of lack of employable skills. The technical education trained a person in a particular field so that he can start his/her own business and makes him/her self reliant. The technical education helps to reduce unemployment through skill manpower and hence, helps in economic development of nation. The progress and economic development of any country is depending up on the industrialisation. The technical education produces a person which has necessary skills to run and establish the industries. The countries can save lots of its foreign exchange if she has expertise in technical know-how.

For a development of a country, it must offer diversified courses in order to balance distribution of manpower for all professional so that large population of country can contribute to economic growth through different profession. The main objective of technical education is as under:

1. To provides education for employment and occupation of adult.
2. To promote art, craft and trade in nation and hence helps in nation's development.

3. To help people to acquire skills for earnings.
4. To promote sustainable development and entrepreneurship.
5. To provide necessary scientific knowledge to the persons for improvement and solutions of a environmental problems.
6. To provide and trained a people who can understand complex technologies.
7. To enhance economic growth of nation through trained human resources.

3. Relationship between Technical Education, Nation's Developments and Sustainable Development

Technical education promotes manpower developments and equips persons with skill that will enable them to create, develop and establish industry in various areas. It also promotes competition among manufacturer of goods and services which results in better technologies. Better technologies results in reduction in cost of production of the product and increases profit of entrepreneur. More profits means more money available to the entrepreneur so they invest this money in establishment of new company or expanding existing plant. By doing so, they generates more employment and produces more and more goods and services which again increases profit of entrepreneur. Investing this profit again increases employment and more production of goods and services, this cycle repeat again and again. This result in more and more persons employed in the society, helps to improve their economic condition and hence helps in economic growth of country. Technical education also helps in reduction of poverty and economic inequality in the society. The crime rate, riots, violence, robbery increases in the society with economic inequality. The persons with high skills earns more while persons with little or no skill earns less so to reduce this gap technical education is necessary because it imparts skills to the persons which in turn helps in reduction in economic inequality among people. Therefore to reduce poverty and economic inequality government pay more and more attention on technical education now a days.

Technical education makes persons experts in particular field and so that they can start their own business or self employed which in turn make them economically self reliant. Economically self reliant persons makes society self reliant and hence, makes country self reliant.

Technical education also helps in increasing productivity through skills, training and better technologies. Increase in productivity means minimum wastage of resources, effective utilisation of country's natural resources and more profit. More profit means more money in the hands of society and the country can grow and prosper. It also helps in saving country's foreign exchange by effective and efficient utilisation of country's natural resources.

Technical education also helps in reduction of dependent population (not working population). It also helps in, increasing working people because more and more people have a skill for employment or for self employment through technical education. Increase in working population means more working member in the family, in the society and in the nation. More working population in the nation results in uplifting in living standards of people, more earning and hence leads to economic development of a country.

Technical education plays important role in social development of nation through continuously changes abilities, capabilities, attitude, knowledge, way of thinking of a citizen of a country. Lack of technical education means un employment. Un- employment leads to frustration which results in increasing crime rate or drug abusnisim in the society, and hinders social developments of a society but this situation in society is avoided by technical education because technical education makes a person employable or self reliant by imparting skill to the persons. Labour market is continuously changes in present scenario. The persons who are employed now a days are thrown out of market because of skill demand pattern is continuously changes. To cop up with these changes, persons

continuously required to update his knowledge through new skill acquisitions and training which technical education provides. Thus, technical education is very helpful to maintain healthy environment in the society.

3.1 Concept of Sustainable development

Sustainable development is the development that can continue for a several generation or for a very long period. Sustainable development means satisfaction of needs and meet of people, better quality of life without compromising the quality of life of future. There are three main aspects of sustainable developments. -

- a) Social Social sustainable development means it must maintain adequate health, education and other services, must maintain equality of gender, equal opportunity and distribution, participation and accountability in politics.
- b) Environment: An environmentally sustainable system must maintain bio-diversity, avoids over exploitation of conventional resources, maintain and protect environment, maintain stability of natural resources and atmosphere.
- c) Economic: An economically sustainable system must produce goods and services continuously, maintain external and government debts to manageable extents, and avoid things that disturb balance in sector which can leads to damage in agricultural and industrial production.

The engineers design and develop a product for welfare of society through innovation. The economic growth of a country is depends on technological innovation, technological advancement, skills and trained technical manpower. The innovation of new products generates employment opportunity. More working people and employment means people have more money to expenses on education and health which results in social, economic development of nation. People can understand easily, become civilised and advanced if they are educated properly. Education brings skills and quality in life. If all the people educated, then country will developed itself.

While designing a product they must consider effective use of resources with paying attention to the environmental issues and sustainability of resources. Engineer plays an important role in sustainable development by overcoming worldwide challenges such as environmental degradation, rapid population growth, depletion of natural resources etc. In 20th century engineering progress is made without considering their impact on sustainable development. As a result of this, today's world facing tremendous problems regarding sustainable development, therefore engineers must change their mindset by considering effects of engineering achievement on social, economic and environmental issues. With increase in population explosion across the world human needs increases tremendously. To satisfy the needs of society, humans are altering natural resources at drastic rate. This causes serious issue of balancing between needs of society and preservation of our eco system. The engineer's role is crucial in satisfying needs, health, and welfare of society with minimum or no wastage of resources while preserving environment and sustainability of resources.

4. Conclusion

Technical education is an important tool for industrial growth and sustainable development of any nation. Technical education helps in reduction of unemployment, reduction in country's foreign exchange bill (because goods are produced locally due to better technical skills and trained manpower), reduction in poverty and social inequality in the society. It provides skills for "living, learning and working" which is necessary for responsible and good citizens of a country. The development of a country depends upon the how she use it's natural resources. Productivity is an index of living condition and development of a nation. A country with high productivity index utilises it's natural resources effective and efficient way and can prosper more compared to country with low productivity index. A skill labour force is required to transform country's natural resources into useful

product and for that technical education is very much essential. Therefore country can prosper and develop sustainably only if she has sound technical know-how, skill and competitive manpower.

References

1. Aliyu, M., & Dabban, I. M. (2009). Evolution and role of technical education and its imperatives to national development. Proceedings of 22nd Annual National conference. National Association of Teachers of Technology (NATT) Bauchi.
2. Atsumbe, B.N. (2010). Technology Education a veritable tool for poverty alleviation. A paper Presented at the 1st Faculty of science National conference of University of Abuja. FCT.18th – 20th January.
3. Edmond Byrne, Cheryl Desha, John Fitzpatrick and Karlson Hragorves "Engineering Education for Sustainable development" A review of international progress, proceedings of 3rd International Symposium for Engineering Education, 2010, University College Cork, Ireland.
4. Ehizogie, J.I.K. (2002). Manpower development in industry: A function of vocational/ technical education, Manpower Planning and Manpower Development. Nsukka: NVA Publication. 3: 55-61.
5. Enahoro, N.I. (2008). Technical and Vocational education for productivity and sustainable development in Nigeria. Int. J. Res. 5(1&2): 102-107.
6. Engineering Sustainability: A Technical Approach to Sustainability By Marc A. Rosen, www.mdpi.com/journal/sustainability, Pg No. - 2270 – 2292.
7. National Conference on Technical Vocational Education, Training and Skills Development: A Roadmap for Empowerment (Dec. 2008): Ministry of Human Resource Development, Department of Education, India.
8. Pavlova, M. (2009). Technology and Vocational Education for Sustainable Development. Empowering Individuals for the future. Technical and Vocational Education and Training Ed. 10. QLD Australia: Springer Science + Business Media B.V.
9. UNESCO and ILO (2002). Technical and vocational education and training for the twenty first century. Geneva: UNESCO.