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CRITICAL ANALYSIS OF CALIBRATION OF TECHNICAL VOCATIONAL EDUCATION AND TRAINING (TVET) SYSTEM WITH NATIONAL SKILL QUALIFICATION FRAME WORK (NSQF) IN INDIA.

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ABSTRACT

Economic Development, prosperity and wellbeing of people in Developed countries is due to quality of manpower/human resources developed through well planned and managed education and training system .they plan and Develop Human resources to take advantage of global requirement and local perspective. Technical manpower profile of developed, developing and undeveloped countries is of Egg shape, Cone shape and Pyramid shape respectively. Technical manpower in developed, undeveloped and developing countries comprises of Inventors and Innovators, Managers and Engineers, Specialized and General Technicians, Craftsman and Skilled Workers, and Semiskilled and other Workers. In developed countries the availability of technical manpower of all types is quite large compared to developing and undeveloped countries. The number of inventors and innovators, managers and engineers is much larger then technicians in comparison to developing countries. So, if India is to become a developed nation, it requires a large number of high level researchers and engineers in addition to Technicians for meeting the future challenges of industry and business. For India capabilities of participating in benefits of technological progress and of contributing actively to technological innovations depends on a

number of educational pre-requisites. High-level researchers, engineers, technicians and craftsman must be trained and used effectively. These must have strategic (innovative) done by Specialists; Tactical (acquisitive) done by Engineers; Technical (adaptive) done by Technician and Craftsman and operative (adoptive) capabilities done by un/semi skilled worker. In all advanced countries manpower of different levels like craftsman ,technician ,engineer and manager etc. certified by industry associations or professional bodies having desired education and competencies is employed in social, cultural ,economical, art and architecture, engineering and services etc. sectors. In order to have comparability of various occupational levels in different fields National Skill Qualification Framework (NSQF) levels are identified and described in terms of learning outcomes. This certified manpower has greater chances of employability all over the world Education system of the country is required to develop various levels and types of desired human resources in all fields like Engineering, Law, Business and Commerce, Social Sciences, Culture, Art, Agriculture, Health, Architecture, Management etc. TVET sub system (formal and non-formal) develop HR in the fields of Engineering and Technology, Art and Architecture, Hotel Management Pharmacy, Home Science, Business and Management etc TVET has a multiplier effect in improving the quality of life of people. It develops people to earn their living and also utilize technology in their day to day life for enhancing their efficiency and comforts.

The study highlights the calibration of TVET system with NSOF in India and how it will be helpful for creating self employment in India.

Key Words- *Technical Vocational Education and Training (TVET) ,National Skill Qualification Frame Work (NSQF)*

INTRODUCTION

The role of education in facilitating social and economic progress has long been recognized. Education improves functional and analytical ability and thereby opens up opportunities for individuals and also groups to achieve greater access to labour markets and livelihoods. A better educated labour force is essential if we are to meet the labour supply requirements of faster growth. Education is not only an instrument of enhancing efficiency but is also an effective tool of widening and augmenting democratic participation and upgrading the overall quality of individual and societal life. The population growth of India has declined over many years, yet the labour is projected to grow by close to 2% or some 7 million or more per year over next few years. Modernization and social processes have also led to more women entering the work force lowering the dependency ratio (ratio of dependent to working age population) from 0.8 in 1991 to 0.73 in 2001 and is expected to further decline to 0.59 by 2011. Skills and knowledge are the engines of economic growth and social development of any country. Countries with higher and better levels of knowledge and skills respond more effectively and promptly to challenges and opportunities of globalization.

HUMAN RESOURCE DEVELOPMENT THROUGH EDUCATION SYSTEM

It deals with the process of competency development in people and creation of conditions (through public policy, programmes and other interventions) to help people apply these competencies for their own benefit and for that of others by starting enterprises /services etc by aligning all technical skill development courses with NSQF .These competencies include Knowledge, skills, attitudes and values.

MAJOR CHALLENGES AND ISSUES IN TVET SYSTEM.

Major problems being faced by the polytechnic education system are: - 1. Non - availability of courses in new and emerging areas. 2. Inadequate infrastructure facilities and obsolete equipment. 3. System unable to attract quality teachers 4. Inadequate financial resources 5. Inadequate or non-existence of state policies for training and retention of faculty and staff 6. Lack of flexibility and autonomy to the institutions 7. Inadequate industry institute participation 8. Lack of Research and Development in technical education 9. Antiquated Curricula.

TVET has a multiplier effect in improving the quality of life of people. It develops people to earn their livelihood and also utilize technology in their day to day life for enhancing their efficiency and comforts.

VISION AND THRUST AREAS OF THE 2015 POLICY

The Vision of the National Policy for skill Development and Entrepreneurship 2015 is” to create an ecosystem of empowerment by skilling on a large scale at speed with high standards and to promote a culture of innovation based entrepreneurship which can generate wealth and employment so as to ensure sustainable livelihoods for all citizens in the country”.

To achieve the vision, the policy has four thrust areas. It addresses key obstacles to skilling, including low inspirational value, lack of integration with formal education, lack of focus on outcomes, low quality of training infrastructure and trainers, etc. Further, the policy seeks to align supply and demand for skills by bridging existing skill gaps, promoting industry engagement operationalizing a quality assurance framework, leverage technology, and promoting greater opportunities for apprenticeship training. Equity is also a focus of the policy, which targets skilling opportunities for socially/ geographically marginalized and disadvantaged groups. The objective of this policy is to meet the challenge of skilling at scale with speed, standard (quality) and sustainability. It aims to provide an umbrella framework to all skilling activities being carried out within the country, to align them to common standards (NSQF).

TECHNICAL EDUCATION NEED TO GO FOR CAPACITY EXPANSION

Equity, Excellence ,Efficiency, Effectiveness,, Quality And Culture for meeting the challenges of enhancing employability of population, Rise, Dream & Awaken the power within you to achieve professional excellence, happiness and empowerment of poor.

Table 1. Calibration of occupations, TVTET Qualifications and NSQF Levels

Age	General Education Qualification	Vocational Education and Training Qualification	University and other higher education provider					Levels corresponding to Proposed NVEQF	
27		Ph. D	PhD					PhD	Level X Doctorate
25		Masters OR Vocational Graduate Diploma	Post Graduate Diploma		Masters Degree			Masters Degree Professional	Level IX Master level
		Vocational Graduate Certificate							Level VIII Professional Vocational Degree (L)
22		Bachelor Degree	Post Graduate Certificate		Bachelor Honours			BE/B.Pharma/ B.Arch/ B.Ph/ B.Ag/B.A rt	Level VII National Diploma Level V
		Advanced Diploma	B.A	B.Sc	BC	B.Com	BMB A		Level IV National Certificate (Professional or Master)
19	Diploma in Engineering/Technology								
18	Higher Secondary Education	Higher Secondary Vocational	ITI Trade certificate IV					Level III National Certificate	
			ITI Trade Certificate III				Level III National Certificate		
16	Certificate Secondary Education	Trade Certificate II					Level II National Certificate		
		Trade Certificate I							
14		8 th Pass							
11	5 th Pass								

LEVEL AND DESCRIPTOR

Different countries namely UK, Australia, Scotland, South Africa, New Zealand, Sri Lanka, China have decided numbers of levels in their qualification framework based on the occupational levels like craftsman, technician etc existing in their industry and service sector. Each level of NSQF is described by a statement of learning outcomes in five domains, known as PROCESS, PROFESSIONAL KNOWLEDGE, PROFESSIONAL SKILL, CORE SKILL AND RESPONSIBILITY.

India has adopted NSQF (NATIONAL SKILL QUALIFICATION FRAMEWORK) with Ten Levels from 1 to 10 presuming 10 occupational levels/positions in Indian industry and services. These levels are defined in terms of learning outcomes relating to knowledge, skills and attitude, which the learner must possess regardless of whether they are acquired through formal, non-formal and informal learning.

Table 2**OCCUPATIONAL LEVELS IN INDUSTRY & NSQF LEVELS**

NSQ Levels	Occupational position
10-----	Specialist and top management
9-----	Designer and innovator/manager
8-----	Professional Engineer-Manage independently
7-----	Engineer (Entry)-Manage others (Degree)
6-----	Advanced Technician-Supervise independently complex jobs.
5-----	Technician –supervise others under the guidance of engineer(Diploma)
4-----	Craftsman-work independently (Certificate)
3-----	Work under some supervision
2-----	-Worker work under supervision
1 -----	-worker with basic skills/core entry

Each level of NSQF Five Descriptors for a particular position in specific industry give idea of outcome/ competence to be demonstrate by manpower. Competency focuses on what is expected of an employee in the work place or ability to do a job well

Table 3.**NSQF QUALIFICATIONS, CREDITS & EXISTING QUALIFICATION**

NSQF	ACADEMIC	CREDITS QUALIFICATION
NSQ L10	Doctorate	
NSQ L9	Master	
NSQ L8	Degree Special	240 credits after NSQL 5
NSQ L7	Degree	180
NSQ L6	Professional Diploma	120 (40of 6+50 of 5+30 of credits level 3
NSQ L5	Diploma	60(40 of 5+20 of 3 /4)
NSQ L4	Certificate	
NSQ L3	Certificate	
NSQ L2	Certificate	
NSQ L1	Certificate	

Note:

NSQF LEVEL 2 & 3-18 MONTHS INDUSTRIAL EXPOSURE FOR RPL AND 24 MONTHS AFTER OBTAINING NSQ LEVELS 2 OR 3 FOR LEVEL 4

SUGGESTIONS

A few suggestions are offered here to strengthen the skilling drive as practiced by a few Union ministries with focus on self employment, and in a limited way wage employment.

1. The common norms for all skill development programme should be adopted as declared in new skill development policy.
2. The Ministry of Skill development and entrepreneurship has taken the initiative to standardize of skill development programmes conducted by different institutions under its purview. Linkage of skill development programmes with the proposed National Vocational Education Qualification Framework (NVEQF) is planned to provide certification for these programmes. Accreditation of programmes from a national body will benefit the candidates immensely, apart from improving the standards of instruction and teaching – learning methodologies followed by various institutions.
3. The training capacity of the existing training institutions needs to be augmented, and training infrastructure also needs to be multiplied to cope up with the demands of the Skill Development Mission in various trades. Faculty development programmes or trainers' training programmes of a repetitive nature need to be organized to orient the faculty with innovative and modern method using Information and Communication Technology (ICT) tools, with internet, repositories of e-lessons, etc. ICT can also be used for project work, and case studies, creating new models in diverse subjects.
4. Ensuring high quality of the programmes conducted is of utmost importance. Training curricula need to be standardized for different courses in consultation with the industry

associations and leading industrial houses. Faculty development programmers will facilitate up gradation and reorientation of the course content. Handholding of trained entrepreneurs for setting up enterprises through the provisions of Rajiv Gandhi Udyami Mitra Yojana (RGUMY) with the support of various implementing agencies will ensure higher success rate of start-up enterprises.

5. Choice-based credit system in academic institutions will facilitate youth to identify subjects of interest will facilitate youth to them apart from the core areas covered in the course. These can be pursued in the same institution or in any other nearby institutions. Providing opportunities for learning and practicing skills in as many diversified areas as possible over years during the academic career will equip the youth to be transformed into well rounded personalities.

CONCLUSION

The Vision of the National Policy for skill Development and Entrepreneurship can be fulfilled by skilling on a large scale at speed with high standards and by promoting a culture of innovation based entrepreneurship which can generate wealth and employment so as to ensure sustainable livelihoods for all citizens in the country". To achieve the vision, the policy will have to work on thrust areas. It addresses key obstacles to skilling, including low inspirational value, lack of integration with formal education, lack of focus on outcomes, low quality of training infrastructure and trainers, etc. Further, the policy seeks to align supply and demand for skills by bridging existing skill gaps, promoting industry engagement operationalizing a quality assurance framework, leverage technology, and promoting greater opportunities for apprenticeship training. Equity is also a focus of the policy, which targets skilling opportunities for socially/ geographically marginalized and disadvantaged groups Skill Development and Entrepreneurship for enterprise promotion in various sectors by training the youth in modular and motivational skills is the desirable direction for developing employable skills among the youth and other section of society. Personality development skills should form part of the training programmes. The National Policy for Skill Development and Entrepreneurship 2015 offers an integrated Approach by calibrating skill development courses with NSQF in India.. This strengthens the role of training and motivational programmes and institutions to be developed for undertaking the challenging task.

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