SKILL DEVELOPMENT AND EDUCATION - THE PROBLEM OF PARALLEL EDUCATION IN INDIA

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Abstract: *Human Development is an inclusive term with possession or availability of certain amenities to make life comfortable. The earning and purchasing capacity of the individual is enhanced by the embodied skill. In India, the British introduced western education and was supported by social reformers The government of India with visionary development of skill courses has presented its intention with a pragmatic approach. The confusion prevails on whether the skill-oriented degree in education or not. The other problem is whether skill and education are convergent or divergent or parallel is a problem that needs to be addressed.*

With the exploratory analysis, the literature on skill and education is skimmed to address the real problem in the approach to the skill-based education system. The skill and education are convergent or divergent or parallel in the India system of education formed the basis for analysis in this paper. The above review presents skill and knowledge is part of the education process. The present education system has a divergent policy on skill and education. The present system of simultaneous skill acquisition and general education in parallel institutes is not better for the future.

Key Words: Skill Development; General Education; Parallel Education; Divergent education.

Introduction:

Human Development is an inclusive term with possession or availability of certain amenities to make life comfortable. The earning and purchasing capacity of the individual is enhanced by the embodied skill. The possession of skill has earned indomitable power to earn more and make life comfortable. The happiness index has human development as one of the factors for measurement. The significance of skill development is the transformation power for human development. The skill, dexterity and knowledge of the workforce are the critical factors which determine the rate of growth of an economy (Mangham and Silver, 1986).

The formalization of education in the modern age of the post-industrialization phase has seen a tremendous transformation in the education system. The erstwhile skill-based learning since ancient times has been replaced with the modern education system. In India, the British introduced western education with 1813 Charter Order and fortified by Lord Macaulay's Education Policy, 1835**(**Webster, 1990). The system was supported by social reformers as it is modern and rational. The industrial revolution has placed the demand for manpower with skills to match the job requirements of running the machines. The British education system concentrated on supply-side for administration and consciousness building. The parallel development of skill-based education and knowledge-based general education has confused the education system in India.

The traditional artisan and crafts based skill has lost its relevance on account of machine-based industrial processing. In 1950 and 60's the problem is addressed by establishing ITI, Polytechnics and Vocational courses. But the glamour for higher education in Engineering, Arts and Humanities has sidelined the skill-oriented degrees or diploma. The government of India with visionary development of skill courses has presented its intention with a pragmatic approach. The confusion prevails on whether the skill-oriented degree in education or not. The other problem is whether skill and education are convergent or divergent or parallel is a problem that needs to be addressed.

Method:

With the exploratory analysis, the literature on skill and education is skimmed to address the real problem in the approach to the skill-based education system. The skill and education are convergent or divergent or parallel in the India system of education formed the basis for analysis in this paper.

Skill and Education: Convergent or Parallel:

The concept of skill is often used with knowledge, education, learning and employment. The differentiation in the contemporary phase is more strongly made and terms dramatized with different meanings. The association or disassociation of these terms has lead to prolonged debates. The skill is termed as a separate word from education or education and skill are inseparable is a question of merit for furthering the cause of conceptualization.

Education has three divergent theories (Bertrand Russel, 1969)

1) To provide growth opportunities and to remove hampering influences.
2) To give culture to the individuals and to develop his capacities to the utmost.
3) To be considered rather concerning the community than concerning the individual and that its business is to train useful citizen

The Organization for Economic Cooperation and Development i.e. OECD (2011) comments

"In much of the literature, definitions of skill appear to be driven by data limitations. Many existing studies equate skill with education qualification; even though academic credential is a very distinct concept that is, in general, only moderately linked with concrete skills needed in the workplace. To some extent, this reflects the fact that objective and quantified data on skills in terms of competencies needed by employers are much more limited than data on education qualifications, such as on numbers of youth or workers with specific academic credentials."

The education is building the character and culture of the individual in the society and nurture concise of the individuals. The skill with qualification is a credential and separation of academic qualification from skill is elaborated in the OECD (2011) clarification.

The research on skills and skill development needs a definition, so in the following paragraphs, the concepts are examined theoretically. The word skill as defined in the Cambridge Advanced Learner's dictionary is "an ability to do an activity or job well, especially because you have practised it". The definition from literary sources describes skill as an ability or something attained through practice or experience and important for accomplishing a job. The skill is defined as the practical ability to exhibit what is learned. The word is applied in the context of an explanation of the embodied ability of an individual. The synonymous word is artistry or prowess or competence or ability or proficiency or expertise or aptitude or dexterity. The word is contextually applied in business or work to explain the proficiency level or ability to complete a task.

In psychology, skill is an ability associated with perceptual-motor skills. The term describes the cognitive abilities and meta-cognition further may be applied to describe the management of association, self-organization and movement. The skill is the ability to deploy the acquired skills.

According to Scott (1976), skills may be termed as conscious representation, acquisition of sub-skills, integration of sub-skills and practice leading to proceduralisation. Harri-Augstein and Thomas (1991) terms "Skills are described as cognitive (involving the use of logical, intuitive and creative thinking or practical (involving manual dexterity and the use of methods, materials, tools and instruments)". The Minimum Wages Act, 1948 describes the skill under four categories

a) Highly Skilled: The employee shall have a high degree of skill, Judgment and Capacity to supervise.

b) Skilled: The employee shall have the skill and capacity to work independently.

c) Semi-Skilled: The employee shall have a minimum of one year experience in the trade and able to do repetitive work and simple jobs with the help of simple tools or machines.

d) Un-skilled: The employee who attends work that involves the performance of the simple tasks which

require little or no experience. No worker shall be classified as unskilled if he is called upon to operate any machine. These definitions view skill is acquired with practice over a certain period, the definitions are framed for the inclusion of recognized learnt skill and unrecognized learnt skill or prior learning without certification.

The attempts to abstract the word by researchers to explain the phenomena of learning a skill is different from learning the skill from education has added to the confusion. The broad separation of concepts is logical or illogical is a question to be answered by future researchers. The evolution of education in connection with technology has translated education as the acquisition of literacy and knowledge **(**David O'Donnell & Thomas N. Garavan, 1997).

The evolution of skill, education, work and leisure as centrality to life of society is to be understood in the context of culture and technological environment. The artistic form of skill and knowledge-oriented education are the explanations to the division of occupations and work in society. The psychology of learning intends to understand the knowledge and skill acquisition in human beings as a behavioural process. Engestrom (1994) theory is based on cognitive learning and the psychological theory of activity. The learning of skills is faster with demonstrating the learning or doing while learning. The theory demonstrates that learning the principles of the concept and applying while doing enables learning skills. Handy (1994) discussing the qualities required for learning skill mentions focused intelligence, the ability to acquire and apply knowledge and know-how as the characteristics. The above definition focuses on the qualities of the learner.

Lovell's (1980) analysis strengthens the idea of skill as a process. The skills-based on employability is defined by Wye & Lim (2009) "are the skills, knowledge, understanding and personal attributes that enable a person to obtain employment, and be successful and satisfied in their chosen careers".

Further, the expert attainment in skill acquisition system is categorized into four stages.

1. Ability flexibility: Apply the knowledge acquired about the concept.

2. Heuristic rule of thumb: Ability to solve simple problems.

3. Metacognitive skills: Reflective learning based on the experience of self-cognition.

4. Strategies: Ability to frame strategies for expertise in any of the stages.

The presentation skill or ability to apply as an independent variable in the functional equation of talent by Ulrich and Smallwood (2012) has given scope for measurement. The talent in equation form is the multiples of skill, willingness and contribution.

Talent = competence [skills, able to do the job] x time's commitment [willing to do the job] x contribution [finding meaning and purpose in their work]

The skill is defined as a total of all the experience, knowledge, skills, and behaviours that a person has and brings to work (Cheese, Thomas, and Craig, 2008). Tansley (2011), tracing the history of the usage of the word talent has shortlisted two perspectives

a) Talent as Subject referred to as person embodied with skills and ability.
b) Talent as Object referred to as possession in particular art or trade.

The OECD Report (1996) has recognized the importance of education, skill, training, R&D and innovations as the components of a knowledge economy. The report suggests knowledge development shall be the focus of such economies with emphasis on skill and development. The International Labor Organization's (ILO's) Recommendation No. 195 on Human Resource Development (ILO, 2007) defines competence as ''knowledge, skills and know-how applied and mastered in a specific context''.The differentiation between training and education was succinctly presented by the OECD Report (1996) "Education typically has no association with a specific job, though it can be and often is designed to be specifically associated with a set of jobs. The focus of training, on the other hand, is on know-how or skills development."

Task Force on Skills Development of the Planning Commission (2007) in its report has highlighted the

need to shift from the general education system to a skill-based education system. Industrial Research and Development Advisory Committee of the European Communities(1991) observes "conviction that the output of education and training systems (including in particular higher education) in terms of both quantity and quality of skills at all levels is the prime determinant of a country's level of industrial productivity and hence competitiveness". These observations view skill is the outcome of the education process and the quality of education is measured with the skill learned. The confusion of skill development whether associated with general and vocational education or technical education is a gap to be effectively explained.

The work by Mehrotra et al. (2013) addresses the narrow understanding of the term skill development. The skill development is viewed as a synonym for vocational education and focused as a requirement for general education. Skill development improves the employability of human in gainful employment. The gainful employment raises the standard of living of the learner on skill acquisition. The role of education is broader and holistic to equip an individual with knowledge and skill. The research reviews are mainly on formal skill training programmes and the gap is wide in case of non-formal training (Amelia Manuti et al,.2015). The problem with non-formal training is it is not certified.

The narrow approach of separating general education which is knowledge-oriented from skill acquisition is divergence. The education comes with skill and knowledge; skill-oriented education is a convergent approach. The present trend of running separate skill and knowledge-oriented education is a parallel approach.

Perception of Skill and Education in Society:

The skill in society is associated with stratification. The strata are the layers as skilled, semi-skilled and unskilled, but in the contemporary period, a new layer is added as highly skilled. The perception of the society towards skill-oriented vocational or technical vocational education training in India

- The prospects for career progression are low and the highest designation without higher education is supervisor or foreman.
- Society views vocational or technical vocational education training as a stop-gap arrangement before a full-time job or projects it lowly.
- Neglect of ITI, vocational and polytechnic courses due to lower career prospects.
- No direct admission opportunity for those pursuing ITI, polytechnic into IIT. The polytechnic diploma holders can pursue graduation in engineering from engineering colleges.

The above perception of society has resulted in the decline of vocational education and an increase in general higher education without skill orientation.

The review of the societal view of vocational training highlights two important issues

- Knowledge oriented formal education is preferred for its higher status in the society for its placement in higher-level jobs with a higher salary.
- Skill Oriented Vocational education is least preferred or lost its appeal for its inability in place in higher-level jobs with a higher salary.

Some Views on Skill Oriented Education and General Education:

M.K.Gandhi's Views

Mahatma Gandhi's views on education may be traced based on his writings in newspapers, books and practices. Gandhi believes in learning by doing and is against the Macaulay's education system (**Webster, 1990)** introduced by the British in India. The ideal principles are more humanistic rather than a machinist. The belief in the traditional learning system for its ability to provide a livelihood to large masses is rooted in his thinking. A firm experimenter and started a Tolstoy type farm in South Africa during his mass strike against the established rules. The farm is an example of his belief in practice where more emphasis is on craft centric learning. The manual labour and skill associated with manual techniques are given priority in his thoughts on economic progress. India is a country with high population growth and the traditional economic system. The hand-based artefacts, craftsmen and agriculture are the mainstay or characteristics of the economy. In such conditions, replacing body embodied skills with

machine-oriented skills is not advisable according to his methodology of thinking. Basing on his practises implemented at the Tolstoy Farm in South Africa there is evidence of belief in self-reliant technology and indigenous technology with more emphasis on manual or artistic skill. The manual chakra woven cloth he believed is advantageous since it involves physical exertion, development of skills, innovation, and identification with work, health improvement and life consciousness.

The following observations of Gandhi (1925) explain his views on technical education

"I would revolutionize college education and relate it to national necessities. There would be degrees for mechanical and other engineers. They would be attached to the different industries which should pay for the training of the graduate they need". The philosophy is not against technology or higher education, the technology is required but shall be suitable to the country social and economic conditions.

The craft is built into the Gemeinschaft of the structure of the society (Tonnies, 1912). Therefore, revolutionary adoption of machinery requires machine skills which will disturb the social fabric, create mass unemployment and poverty. The vocationalisation of education with scope for technical and craft-based skills is the viewpoint of Gandhi philosophy. India is an agriculture society and the majority of the employment is in agriculture. The farm and factory link require skills for operations. The farm skills are manual and factory skills are machine-oriented but machine-oriented technical skills may be applied for agriculture but not simply for mass production. Gandhi felt the education system of the British in India is not supporting this cause.

Karl Marx views

The modern education technology delinks the embodied skill. Machine-centric education replaces the labour and benefits of the capitalist. The labour surplus is utilised to modernise and automate the machinery. The alienation of skill with work is the feature of modern education. The vocationalisation from school level will develop the individual to learn the essential skills for livelihood (Wayne Au, 2018). The skill learning and general education are convergent, not divergent or parallel.

Present System in India:

The economic society in India is based on the caste system in the post Manusmriti phase. The caste decided the occupation of the person. Skill acquisition is based on Varna and Jatti. This system stabilized over the years and firmly laid its roots in the division of labour. The division based on knowledge and skill-based on caste originated from this age. The education for higher castes is knowledge acquisition whereas for others education means skills acquisition. The Industrial Revolution has resulted in the structured shift of the economy from agriculture to manufacturing. The evolution of the factory system with the aid of machinery in production has a severe effect on the social aspects of society. The artisan or craft-based skill lost their prominence on account of the ability of the machinery to generate mass production. The skill required for machine intensive product is less intensive. The training period is for a shorter duration than required by the handmade product.

The history of skill development in India in chronological order is traced as below

- The First Industrial Policy in 1956 mentioned about the need to skill the workforce.
- Apprentice Act was framed in the year 1961 to train apprentices in different trades
- India Education Committee was formed in 1964, popularly known as Kothari Committee suggested for vocational courses at higher secondary school level in different trades and crafts.
- National Labor Policy framed in 1966 recommended for skill training
- National Policy on Education framed in 1968 made a provision for industry-academic collaboration for vocational training
- National Policy on Education framed in 1986 called for vocational courses in electronics and automation
- Modified National Policy on Education was made in 1993 with an emphasis on skill-based courses for formal and informal sector employment
- Formation of National Skill Development Corporation in 2008

- First National Policy on Skill Development announced in 2009
- The quality of skill acquisition is regulated by National Skills Qualification Framework in 2013. Formation of the National Skill Development Agency
- Amendment to Apprentice Act in 2014 including some more trades and optional trades
- Formation of Ministry of Skill Development and Entrepreneurship in 2014,
- Merging of all training and apprentice division in the Ministry of Labour with the Ministry of Skill Development and Entrepreneurship.
- New Education Policy, 2020 based on the recommendations of the Kasturirangan Committee was accepted for implementation by the Central Government.

The skill is viewed as parallel learning to the education system in India. The then HRD Minister Rajnath Singh during the year 2019 made some important observations on the quality of human resources in India "need to focus on skill development and only 34 per cent of our graduates are employable, 60% of the total population available for working and contributing towards GDP, but out of the total pool only 25 % is capable of being used by the market and demand-supply gap of 82-86% in the core professions; IT industry would face the shortage of up to 3.5 million skilled workers". The present flow of education system in India is presented in the following figure.

Figure 1: Education and Technical Education System in India

Age	Grade					
		Doctorate				Scientist
		Master Program				Engineering & Technologies
19-21		University UG Degree	Engineering College	Advance Training Institute Central Training Institute Foreign Training Institute		Technician
17-18	11-12	Senior Secondary Board Exam Certificate	Polytechnics 3-year Diploma	ITI(1-2Year) Craftsman DGET Certificate	Apprenticeship (2-4 Year Certificate)	Craftsman
15-16	9-10	General Secondary Board Exam	Vocational Secondary			
6-14	1-8	Elementary Education Certificate				Workers without specific skills

Source: National Skill Development Mission Report (2017)

The parallel system with the option to enter into general or higher education exists at all levels in Indian Education System. The social perception of higher status and income is more with higher or general education in India. The vocational and technical education at senior secondary level stagnates the career prospectus after employment. The diploma holders cannot enter IIT or premium institutes without general education qualification in science at senior secondary board exam. The option is to opt for advance training which assures career progress up to foreman or supervisor level.

Conclusion:

The above review presents skill and knowledge is part of the education process. The operational definition of vocational education (Clement Cabral and Rajib Lochan Dhar, 2020) and the general higher education in India are blurred. The general education is knowledge-based is a myth. The education shall converge in skill acquisition. The

present education system has a divergent policy on skill and education. The psychomotor skill is separated from early, secondary and higher education. The cognitive and psychomotor at secondary and above levels are treated as separate domains. The knowledge is the preference for higher-level jobs and is associated with higher education. The lower level jobs are more in number and require a technical or vocational skill. The technical or vocational certified candidate loses identity and stagnates with less scope for advancement. The social status has hindered the candidates' choice for skill-based technical or vocational courses at the senior secondary level. The channel for higher education for technical vocational skilled candidates is limited and the economic earning capacity is lower in comparison with graduate technical or above qualified candidates. The reason for the failure of technical vocational education courses in the social and economic dimension. Germany's dual model of vocational education which is convergent model has experimented without much support in India. The Government policy post liberalization has separated the skill from the general education curriculum and stage for complete alienation of skill with education has awakened the Government to frame its skill policy. The perception of skill without education is divergent view whereas skill with education in convergent view. The present system of simultaneous skill acquisition and general education in parallel institutes is not better for the future. The integration of skill development into the course curriculum with the single or looped system is required to clear the confusion in the minds of the learners.

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