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Implementation of Vocational Education in the State of Haryana: Some Insights from the Field Visit

Abstract

This paper attempts to share the experience and insights gained on vocational education during the field visits to schools of Haryana. Vocational education was piloted in the year 2011-12 in 40 schools of Haryana, covering 8 districts with 4000 total number of students enrolled and slowly multiplied in many schools. The planning, implementation, coordination, evaluation of vocational education and associated issues and concerns are highlighted in the paper. The concerns raised by the teachers, students and parents also find place in the paper. On the basis of which, measures to strengthen vocational education in the schools of Haryana have been suggested.

Introduction

The Skill Development Mission of India has envisioned the target of skilling 500 million people of the country by the year 2022. As one of the measures for achieving this target, vocational education has been integrated into the general education system by launching National Skills Qualifications Framework (NSQF). The vocational courses under this policy were introduced as pilot project in the state of Haryana. Subsequently, under the Centrally Sponsored Scheme, almost all states have introduced vocational courses under NSQF.

NSQF will pave the way to strengthen Technical Vocational Education and Training (TVET) system by linking vocational education to higher education, which in yester years was up to +2 stages. The objectives of NSQF include:

- To create a workforce empowered with the necessary and continuously upgraded skills, knowledge and internationally recognized qualification to gain access to decent employment and ensure India's competitiveness in the dynamic global market.
- To increase the productivity and employability of the workforce (wage and self-employed) both in the organized and the unorganized sector.
- To increase the participation of youth, women, disabled and other disadvantaged sections and to synergism efforts of various sectors and restructure the present system with the enhanced capability to adapt to changing technologies and labour market demands.

The NSQF has proposed 10 levels, from Class IX to Ph.D. programmes in particular vocations. TVET at higher levels (from L-5 onwards) will become a part of the university system and will have opportunities for trade specific research. A list of 20 sectors was identified by Planning Commission, Government of India (2010) for vocational education.

The pilot NSQF unveiled in Haryana in the year 2011-12 in 40 schools, covering 8 districts with 4000 total number of students enrolled. The sector covered under NSQF in Haryana included sectors like Agriculture; Apparels, Made ups & Home Furnishing; Automotive; Beauty & Wellness; Banking, Financial Services & Insurance;

Construction; Electronics; Food processing; Health care; IT/ITeS; Retail; Physical Education, Plumbing, Private Security, Telecom, Tourism & Hospitality, Media & Entertainment. Further, it is scaled down to almost all districts of the state in terms of schools and subjects provided. It is very interesting to learn the planning at state and district level involving various academic, administrative and certifying bodies like National Skill Development Corporation (NSDC), the Sector Skill Councils (SSC), School boards, Open Schools, Boards of Technical Education, AICTE and UGC. The skill gap analysis carried out by NSDC in some high growth sectors and then mandated with the constitution and notification of the Sector Skill Councils (SSC), which will lay down the National Occupational Skill Standards (NOSS) for the respective sectors. Awarding bodies ensure that the curriculum design and delivery is in conformity with the national standards prescribed by the NSQF. It is very encouraging to know that central and state governments and employers, including private, will need to amend the recruitment policies, rules and procedures for giving preference to persons with competencies in conformity to the NSQF.

Planning of Vocational Education Programme

It is rightly said "Well planned is half done". There is a need for comprehensive planning and coordination among various academic bodies, Boards and organisations involved in planning, training, implementing and assessing the programme. Before the implementation of any policy or framework it is very essential to prepare the system for its implementation in terms of resource availability, infrastructure, trained human resources, etc.

- Development and supply of curriculum, syllabi and textbooks in various languages, especially in English and regional languages to facilitate learning.
- For effective instruction, availability of minimum required facilities and instructional materials and their maintenance is essential. Exhaustible materials are not replaced from time to time in the Labs. Many vocational subjects, like IT, Retail were taught without adequate number of computers, raw materials and allied primal matter in the school.
- Resources for maintenance; basic facilities like water supply, electricity, internet facility, tools, equipment etc. are the basic facilities for any practical oriented course. Shelf life expiration of equipments & irregular supply of electricity resulted in not conducting practicum properly which affects expected skill development process among the students.
- Decision regarding the number of vocational subjects is made at higher level. Freedom should be given to all the institutions in providing number of optional subjects to the students depending upon the demand of the subject in the locality. It is suggested that provisions be made for smart classroom for each vocational subject in every school.

Teacher Preparation

Whatever be the quality of the prescribed curriculum, it is the teacher who is responsible for the training of students.

- Teachers need to be prepared and must be ready for any implementation/ exigency. Just creating awareness of the course may not suffice; if left to 'time or tide', will unquestionably tantamount to 'crying for the spilled milk'.
- Vocational education teachers are mostly Post Graduate/Graduate/Diploma holders with no experience of teaching. However, The Pandit Sundarlal Sharma Central Institute of Vocational Education (PSSCIVE), Vocational Training Provider (VTP), subject experts helped in training and they have updated their subject knowledge. As vocational subjects are

practical oriented, the teachers handling them should be skilled in pedagogy and assessment. But teaching learning process in the classrooms was far from expected standards. The focus of teacher training should not only be on the acquisition of the knowledge and skills, but also on use of an integrated approach to develop entrepreneurship and soft skills required for the vocation among the students.

- It is suggested by the state officials that UGC and NCTE should work on Pre-service teacher training to address this perspective. Vocational Subjects should be introduced during B.Ed. for Vocational Teachers/trainers.

Coordination Between Academic Bodies & Examination Boards

Planning again in terms of checking whether there is provision for vertical mobility in the regions or state is most essential. Vertical mobility is the chief aim of NSQF, but due to lack of coordination with higher education agencies (UGC), universities, colleges; students passing out L4 are unable to take up L5 as the degree program in that vocational area. Hence, the purpose of NSQF is defeated and certificates of L1 – L4 are being wasted. School Education, Technical Education and higher education need to harmonize their fields of expertise in order to provide opportunities to have vertical mobility in the area of interest of the students. Mapping of skills under RMSA and RUSA have to be done for ensuring vertical mobility.

Implementation of Vocational Education

1. Freedom to choose the vocational subject
   - Are our students not capable of selecting the vocational subjects? Existing mechanism of selection of vocational subjects to school and students for the subject in Haryana is as follows: - The schools are requested to send data regarding student enrollment, proximity of the industry, Aptitude of the students, Skill Gap, School Infrastructure etc. and also details of the skills that is proposed to be introduced. Accordingly the schools were allocated the vocational subjects as per the data collected.
   - When interacted with students, most of them selected the vocational subjects based on the guidance and counseling provided by the vocational teachers. Added to this, the selection was also gender based, the girls were provided with either Beauty & Wellness or Retail as one of the vocational subjects and boys were given IT / Security/ Health. Students need to be given opportunity to choose the vocational subject in which they are interested.
   - The system failed in foreseeing the issues related to providing vocational education as equal to that of other optional courses. Two skills are introduced in each school. The scheme provides enrollment of 25 students per skill, being practical based skill. Putting the vocational subject in the basket of other optional subjects created administrative, academic and other problems. Since it is to be taken by choice, this may be made an independent additional optional subject by choice.
2. Setting up of labs and procurement of equipments
   There needs to be flexibility under which the state needs to be empowered to change a particular skill approved by MHRD Govt. of India, keeping in view peculiar situation such as enrolment, aptitude of the students in a particular schools as well as ceiling in fact.
3. Encouraging admission of Children with Special Needs (CWSN)
   There were hardly any children with special needs enrolled in the vocational subjects. This would have been great

opportunity to CWSN to get skilled in one of the vocation.

4. Monitoring the programme with a view to improve the situation
   - Development and updation of textbooks and other course materials: Vocational subject being a very dynamic subject with ever changing role expectations, one has to identify the skill gaps continuously and hence needs curricular/syllabi/textbook up-dation. Otherwise, the skill sets demonstrated by the students at the end of the year would be out-dated and not suitable to the market. In the study conducted at Haryana, a few employers have responded positively and expressed that the syllabi is not updated and skills are not matching with the demands of the market due to out-dated equipment at schools. For instance, in retail sector, students have to work on different & latest software at work place which is not in tune with softwares at schools.
   - Smooth fund flow mechanism: For effective implementation of any scheme or policy, most vital prerequisite is smooth and timely fund flow. Many of the schemes do not function as expected due to untimely or delayed fund flow which leads to compromising quality instruction and ultimately resulting in negotiated quality of education.
   - Performance assessment of teachers: All the vocational coordinators monitor the performance of vocational teachers in their respective subjects. It is done through self-appraisal, visits, daily diary and monthly reports. They visit the schools, observe classes and lab maintenance, go through the reports, assess the activities carried out by the students, etc. They provide feedback to the principal and also appraise the district level functionaries. They visit school on quarterly basis to review the implementation of vocational education in schools.

It was learnt that from the Vocational coordinators that vocational teachers are used as substitutes in the absence of regular teachers and also are involved in co-curricular activities. These teachers are involved usually in the activities like maintenance of overall records of the class as an class In-charge ; students enrolment process; as a substitute teachers; substitute clerical staff; maintenance of school accounts related to NSQF and most of the times in feeding data in MIS Portal(especially Vocational Teachers from IT/ITes skill).

- Organizing field visits/guest lectures: Regarding the field visits, they are promptly carried out in IT/ITes, Beauty and Wellness, Patient care assistance and retail. Guest lectures are arranged in various areas many times in a year.
- Apprenticeship: Looking into the importance and ensuring skill development in the vocational subject, it is suggested that provision for internship/ apprenticeship may be made mandatory for every student to provide experience and exposure of the real world of work situation.
- Teacher related concerns: Teacher recruitment, salaries and training is most essential for success of any educational endeavour in schools. The salaries and increments to the vocational teachers were not provided on time. It is a matter of great concern that salaries of all the vocational teachers/trainees (VTs) are not at par. Different VTPs are paying different amounts; vocational teachers appointed by state department are getting higher salaries. This issue can be resolved at the state level before the implementation of the scheme at schools at planning stage.
- Treatment of vocational subject as an optional subject: Overall Vocational subject is also offered as an optional

subject along with other optional subjects including Applied Learning Skills. If the students fail in academic subjects but get through in vocational subjects, he cannot be promoted to the next class. This indicates that a vocational subject has still not been accepted at par with other subjects viz. Mathematics, Science etc.

- Streamlining MIS and e-portal for effective implementation: Various problems/issues may be shared through e-portals of all the stake holders so that solutions or guidance may be obtained quickly and without holding meetings which are difficult to organize frequently.

Management Information System (MIS) may also be updated and data/information from all the concerned offices may be uploaded. This will also enable to take stock of situation and implementation could be streamlined.

There is no systematic student tracking mechanism in the schools to know the employment or vertical mobility of alumni. Some of them expressed that they track the progress of alumni through telephone, emails, records maintained by vocational training providers and schools.

Issues Related to Coordination

The state has evinced the problems due to lack of coordination between the schools, SSC Board and other academic bodies in implementing the programme. There should be clarity in roles and coordination amongst the bodies conducting and certifying the courses. A long delay in providing certificates is witnessed especially on successful completion of level 4 by students due to lack of coordination.

- **For Tracking Mechanism:** Another lapse due to poor coordination is that there is no tracking mechanism to discern whether the students are employed after completion of level 4. Most of the students opt for higher education and a very few choose employment after level 4. Only 25 students were enrolled in level 1 for a vocational subject in a school, however till class 12 the number sharply declines to 4-8 students per vocational subject.
- **For Providing Exposure to Industry And Placement:**
  At the time of completion of Level 4 examination, most of the students do not attain 18 years of age thus are not eligible for employment. Moreover, Campus placements/recruitments are also not common. Therefore, the content needs to be designed to provide the students basic knowledge and the specialized knowledge. Added to this, a specialized training if given to students after 10+2 would help them to enter world of work in a smooth way. Due to poor coordination and linkages between service providers, employers and educational institutions, arranging On-Job-Training is a big challenge. System failed in Liasioning with industries due to absence of organizational support.
- **For Higher Education**
  It is also witnessed that there is no academic linkage or support in terms of vertical mobility/pursuing higher education in the same field, the scheme turned out a flop; reason being that there is no linkage and coordination among school vocational education, University/ UGC & MHRD.

Problems Related to Evaluation and Certification

The examination is conducted by Board of Secondary Education, Haryana and for the practical examination district wise assessors are appointed by Sector Skill Council (SSC) under NSDC. The certificate for skill development is issued by the NSDC at each level. But the certificates never reached the students on time and usually get delayed. The resultant consequence brunt impact was faced by the students, as they do not get certificates for vocational subject along with board results.

Placement of Students

Students passing out 12th class i.e. Level 4 of the vocational trade are less than 18 years of age; hence they cannot be absorbed or placed for employment. It is therefore suggested that the students after obtaining Level 4 certificate may be placed for apprenticeship, which should be mandatory for VTPs to make arrangements. It is suggested that SSCs may provide support in the placement of students after passing level 4. Students and parents demanded to make provision in the scheme which would lay the foundation for vocational pass-outs to develop into entrepreneurs.

Strengthening the Participation of Industries

There is lack of desired participation of industries through SSCs in the implementation of NSQF. The state was facing problem in organizing industrial visits to students. Also, students are not able to undertake training at industries, as most industries hesitate to/do not allow students. It is in this context, SSCs role may be strengthened and VTPs may ensure strong linkages for NSQF implementation. It is also suggested that stronger coordination is required between all the agencies at the centre and state level, responsible for the implementation of NSQF. These include NSDC, PSSCIVE, SSC, State Board of Examinations, Department of School Education (RMSA), Schools offering vocational subjects, Principals, VTPs, VTs etc.

Parents' Reactions Towards Vocational Education

Both the parents and the students were found to be happy with the vocational subjects as these courses are job oriented. They are contented with the training provided in the schools. When interacted they even said that their children tend to apply whatever is learned in the vocational subject in different contexts, and in this way propagate their skills in society. For instance:

"Students who opted for retail were found to fight with shopkeeper for extra charged bills after reading bar-code on each article. Students share their knowledge at home like importance of expiry date, MRP, first aid kits, skin care, nutrients and diets, hygiene, mobile applications, computer knowledge, security aspects, repairing automobiles, type of lubricants and oil used in automobiles etc."

When parents were asked about the problems or difficulties faced by their children while studying vocational education, their responses were as follows:

- Children studying IT were struggling due to lack of adequate computers at school and unavailability of computers at home. As a result the students had no proper practice. There are instances where IT subject is taught with no lab but only with one computer / one computer and a projector
- When the Placement Mela is conducted, jobs offered are in faraway places with a salary up to Rs. 7,000/- only and sometimes the names of the students are noted or announced but were not appointed. They felt that it was a 'namesake affair'.
- Government should provide financial support to these students for their start-up/ own business.
- Colleges /Universities should offer these vocational subjects in higher number and students should be given direct admission in them.

When met Alumni, most of them revealed that these vocational subjects have helped them in developing confidence, communication skills and positive attitude towards work, education and life. Every alumnus acknowledged change in their personality after studying vocational subject. They also pointed out that lack of computers in some schools, discontinuous power supply, no water supply in the labs were other hindrances for the conduct of practicals in vocational subjects. They suggested that more industrial visit, OJTs and practicals should be conducted during the course.

Summary of Suggestions to Improve Vocational Education

Vocational subjects must be considered as a compulsory subject along with the other core subjects. A bridge course may be started to tackle the problem of less enrolment in Level-3 & Level-4 in particular vocational subject under NSQF. The institution having less enrolment may be allowed by the state to offer only one vocational subject to enable access to vocational education.

To improve the quality of vocational education, linkages between NSDC, SSC, Boards, and Department of school education need to be strengthened. Effective implementation of NSQF leads to achieve the objective of skill development through stronger industry-institution linkages for field visits, practical, OJT and evaluation by the industry. It is therefore suggested that Vocational Training Provider need to monitor the above mentioned areas and these may be taken up as per provisions made in the scheme. It is also felt that Industry should absorb level-4 students who are less than 18 years of age for apprenticeship.

For the students to get equipped with skills, government should provide more facilities & placements. The labs have to be updated with new instruments/equipment. Study materials have to be provided to the students in time. Moreover, simulation training should be given. Further regular teachers for vocational subjects with pedagogical knowledge need to be appointed. Involving members of sub-committee of SMDC for Vocational Education in creating awareness among parents; reviewing of infrastructure like labs and classrooms; monitoring of project and funds allocated to the vocational education; classroom training and field visits; Job fair, organization of Exhibition of schools etc. would facilitate smooth functioning of the system.

Conclusion

The NSQF system is expected to achieve goal of skilled human resource under country's skill development mission to train 500 million youth. This skill development initiative will enable students to develop certain skills and competencies during the school life. It will prove to be beneficial to a large population of students dropping out from the school system. The Public Private Partnership (PPP) model under NSQF system will enhance industry participation in skill development resulting in reducing mismatch between demand and supply of skills and competencies. The state of Haryana evinced a high impact of introduction of NSQF on Enrolment rate, retention rate, development of employment skills and reduction of dropout rate in general education. The quality of vocational education may be monitored periodically by updating the course curriculum, textbooks, labs and liasioning with other associated functionaries.

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References

Agrawal, T. (2012). Vocational education and training in India: Challenges, status and labour market outcomes. *Journal of Vocational Education and Training, 64*(4),453-474.

NCERT. (1981). Vocationalisation of Post-Secondary Education A Critical study of implementation in the states, NCERT, New Delhi.

NCERT.(2003). Evaluation of implementation of the vocational Education Programme in the state of Punjab, PSCIVE, NCERT, New Delhi

Planning Commission, Government of India. (2013). Twelfth Five Year Plan (2012- 2017). New Delhi: Sage Publications.

Planning Commission, Government of India. (2008). Eleventh Five Year Plan (2007- 2012). New Delhi: Sage Publications.

Sharma, Y.P. (2010). Skill Development Programmes in India. Study Visit on Skills and TVET: India and China, November 2010.

UNESCO. (2001). Revised Recommendation Concerning Technical and Vocational Education and Training. Paris: UNESCO.

World Bank (2006). Skill Development in India: The Vocational Education and Training System. Human Development Unit, South Asia Region, World Bank.

World Bank (2009). Secondary education in India: Universalizing opportunity. Human Development Unit, South Asia Region. Washington D.C: World Bank.

World Bank (2012). World Development Report 2013: Jobs. Washington DC: The World Bank.