

# Review on Vocational Education

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**Abstract:** The vocational component of NEP 2020 viewed through the lens of the future of work, holds immense potential to prepare students for the challenges and opportunities that lie ahead. By embracing innovation, collaboration, and adaptability, the implementation of vocational education can usher in a new era of education that seamlessly integrates with the demands of the job market.

**Keywords:** Innovation, Collaboration, Employability Skills, CSR Funds, Handicrafts, Social Change

## INTRODUCTION

Since 2011, the ministry of education (MOE), GOL, has been implementing a revised centrally sponsored scheme for vocationalisation of secondary and higher secondary education (CSS for VSHSE), to integrate vocational education into school education.

This scheme was revised in 2018 and brought under the integrated initiative (samagra Shiksha) by MOE and was renamed vocationalisation of school education (VSE). Under the revised norms, students are allowed to complete vocational training for one job role 9th and 10th standards. Followed by another job role, in 11th and 12th standard within the school curriculum and school hours.

Applying a future of work lens: India according to priority to the task of a cube in children and youth with the competencies required enter the world of work. NEP 2020 aims to empower our students with 21st century skills.

## OBJECTIVES

Understand and review the Vocational Education  
Review on principles of Vocational Education  
Highlight some features of Vocational Education and its relevance with present world

## METHODOLOGY

Some journals and e-content relating to Vocational Education are studied, several books on Education are reviewed on Vocational Education

Vocational Education

A major thrust in the context of the future of work is to prepare students for meeting the demands of the fourth industrial revolution. This necessitates reorienting students to respond to the fast pace of technology development and innovations that demand education systems to undertake renewal of their curricula and pedagogy to respond to the changes that drive a major shift in employers' demand for skills, particularly with respect to transition towards more technology-assistant work. This would require periodic renewal of curricula supported by good skills assessment and anticipation systems, that help focus on those skills most needed in current and future work environment.

With the quickly changing employment landscape and global ecosystem, it is becoming increasingly critical that children not only learn but more importantly learn how to learn. Education thus, must move towards less content, and more towards learning about how to think critically and solve problems, how to be creative and multidisciplinary, and how to innovate, adapt, and absorb new material in novel and changing fields. Education must develop the foundational capacity of literacy and numeracy and 'higher order' cognitive capacities, such as critical thinking and problem-solving but also social, ethical, and emotional capacity and dispositions. Providing such foundational learning in the early years ensures that all children, regardless of their socio-economic background, are given equal opportunity to perform well in schools and are better prepared to improve their academic achievements and quality of life. This warrants a system that will deliver the foundational skills that will allow and stress to embrace changes and orient them towards the future world of work.

In a parallel context, rethinking lifelong learning is equally essential in the context of ongoing changes. The frontloading of skills through initial training for a single lifetime qualification may no longer be sufficient in the context of rapidly changing skill needs. The value of introducing lifelong learning is implicit in achieving the targets of sustainable development goals (SDG), particularly those relating to education, economic growth, and inequality. Also,

the future of work warrants the need for formal recognition of universal entitlement to lifelong learning and the establishment of an effective lifelong learning system. For Lifelong learning to be an entitlement, governments must broaden and reconfigure institutions such as skills development policies, employment services, and training systems to provide workers with the time and financial support they need to learn.

There is now a growing realisation of the need to educate and train people with the necessary skills for the future of work, the importance of opportunities to re and upskilling throughout their working lives, and assist them to successfully adapt to change.

\*Explore innovative financing models such as impact investing, social bonds, and corporate philanthropy to secure funding for vocational education.

\*Encourage private companies to allocate a portion of their CSR funds to support vocational education initiatives, creating a positive societal impact while aligning with business goals.

\*Celebrate with corporate partners to establish vocational training centres, fund scholarships, and sponsor skill competitions.

\*Establish skill development funds in partnership with industries, where a portion of industry revenue is directed towards vocational education and skill and enhancement programs.

To make this vision a reality requires collective action. Policy makers, educators, industry leaders and community must collaborate to implement and strengthen vocational education initiatives. We need to build a future where industry has the tools to contribute meaningfully to the work force insuring a prosperous and inclusive society for generations to come.

- Launch targeted outreach campaigns to raise awareness about the benefits of vocational education among students, parents, educators, and the community.
- Advocate for vocational education as a pathway to lucrative and fulfilling careers, emphasizing its alignment with industry demands and the potential for entrepreneurship.
- Rebrand vocational education by highlighting success stories of individuals who have excelled in their careers through vocational training.
- Gamify skill training by incorporating interactive elements and challenges into the curriculum,

making learning engaging and enjoyable for students.

- Encourage participation in skill competitions, starting from local school-level contests and progressing to regional, national, and international competitions such as India Skills and World Skills.
- Promote recognition of excellence among vocational students through such competitions.
- Collaborate with influencers, including successful vocational education graduates, industry professionals, and public figures, to endorse the value of vocational education.
- Leverage social media platforms, webinars, and workshops featuring influencers to inspire students and debunk misconceptions surrounding vocational education,
- Utilize influencers to showcase the practical and aspirational aspects of vocational careers.
- Gender inclusion in vocational education is pivotal for creating a workforce that reflects equality and diversity. Traditionally, certain vocational fields have been dominated by one gender, perpetuating stereotypes and limiting opportunities. Embracing gender inclusion means breaking these barriers, and encouraging both men and women to explore diverse career paths.

In the future of work, gender-inclusive vocational education is not just a goal; it's a pathway to building a fair and thriving professional landscape for everyone, regardless of gender identity.

#### Public Private Partnerships and Innovative Financing

- Foster collaborations between government bodies, educational institutions, and private industry players to share resources, expertise, and responsibilities.
- Engage private sector partners to provide financial support, infrastructure development, curriculum design, and industry exposure, enhancing the quality and relevance of vocational education.
- Leverage private sector expertise to align curriculum with industry needs, ensuring the graduates are well-equipped for the market.

Skill Hub initiative Introduction for OOSC in Schools through NSDC

Introduction:

The 'Skill Hubs Initiative' under PMKVY 3.0 aims at creating shared infrastructure, aligned with the needs of the local economy which addresses the vocational training needs of all target segments. It is also expected that existing resources in education and skilling system can be put to optimum usage by utilization for skilling beyond normal working hours and during weekends.

AIM:

The scheme is aimed at the following:

- a. Provision of permanent vocational infrastructure and resources for skilling
- b. To ensure contiguous availability of skill centres for ease of candidates
- c. Introduce vocational learning at an early stage with multiple well-defined pathways for candidates to continue with their chosen vocations
- d. Provide vocational offerings for target segments including in-school, drop-outs and out-of-education candidates

Strategy for implementation of Skill Hub Initiative:

To create and promote Skill Hubs in the country, the following significant core and peripheral reforms have been envisaged for the design and implementation approach:

- a. Integration of Skills in Education both School and Higher Education Institutions as envisaged in NEP 2020.
- b. Cross-utilization of available infrastructure with Universities / Colleges / Schools/ Polytechnics/Government ITIs for skill development.
- c. Introduction of vocational subjects in schools, until institutionalized by the National Curriculum Framework (NCF).
- d. Academic Bank of Credit (ABC) framework for the recognition of Skills in Education and credit accumulation, transfer, and equivalence with Education, ITI and skilling ecosystem.
- e. Focus on up-skilling/re-skilling courses through training to increase productivity of existing workforce for the Out of Education segment

NEP FOCUS RELATED (NEP 2020)

"The main objectives are to enhance the employability of youth through demand driven competency based, modular vocational courses, to bridge the divide between the academic and applied learning and reduce the dropout rate in schools.

Exposure to VE in 6th to 8th under NEP-2020 (para 4.26)

Level: NSQF Level Elementary (Vocational Level 1-10)

Modalities of Implementation:

Pre-vocational education has been conceptualized in Samagra Shiksha as the integration of work based activities with teaching-learning processes, rather than a separate add on to the existing scheme of studies of education from Classes VI-VIII.

*NEP 2020 emphasizes the integration of Vocational Education with General Academic Education with an objective of expanding the exposure of vocational Education to 50% of learners by 2025 and to 100% by 2030.*

Objective:

- Provide exposure to a world outside their classroom and to transactions that affect, contribute day to day life
- Build observation-based learning capacity and provide scope for practice.
- Develop understanding of connectedness of community and interdependence.
- Exposure to the interconnectedness of learnings that students do in the classroom with conceptual as well as practical application.
- Promote dignity of labour by giving exposure to Hands on Activity and accordingly importance to local vocations.
- Identify the productive activities, plan and organize productive work;
- Identify the tools, equipment and material, used in the production of goods and services;
- Develop basic skills to observe and participate in work practice; Inculcate socially desirable values, such as cooperativeness, teamwork, perseverance, tolerance, etc.
- Students creating things with their own hand along with their facilitator
- On Field/Outdoor Learning

- Chance to see actual work in Industry, meet people &c practice what they see at Industry site at home
- Guest lecturers with display of activities (At least 5 from diverse background)
- Each lecture should be of at least 1 hour duration
- The activities displayed should be decided taking in consideration the safety point of view and must avoid use of fire, acids, high voltage, electricity and should be planned and discussed in advance with the head of school concerned.
- Develop respect for manual work (dignity of labour) and regard for workers.
- Prepare students for Vocational Courses in 9-12

#### Strategy:

No additional VIPs will be engaged in implementation of Pre Vocational Education, instead the existing School Teachers will be implementing the Pre VE from Classes 6th to 8th.

- General education teachers of languages, mathematics, science, social science would
- organize skill based activities related to the themes that they are teaching.
- Age appropriate activities developed by the SCERT under SCFSE and NCFSE are to be aligned with the General Curriculum in the subjects like, maths, science etc.,
- Implementation of 10 Bag less days emphasized in NEP 2020.
- Introduction/ Awareness to students on Local art and crafts.
- Science Visits, Industrial visits to Local industries to understand local arts.

#### State Level activities:

- Pre-Vocational Education is implemented with the help of SCERT to introduce work based learning inline with the General Academic Education.
- Curated practical to be delivered by regular teacher along with part time vocational teacher/vocational trainers
- Training of these teachers

#### School Level activities:

- Setting Up Skill Corners in Schools operated by current science/math teacher
- 10 Days Bagless Exposure to Local Artisan/Employer

- Guest Lecture for Various Vocational Subject Orientation
- Soft skills covered by existing teacher/coordinator

#### Typical Implementation module

- Exposure to broad based multiple sectors (Agriculture, Electrical work; Healthcare, Retail; IT; Handwork- Carpentry, Fitting; Food Processing; Tourism etc.)
- Exposure to basic class 6-8 concepts of Science, Maths, Environment in hands on mode

Status of Vocational Education in Andhra Pradesh Government of Andhra Pradesh was implementing the policy of vocational education in secondary schools under Zilla Parishad and municipal management's since 1984. 8th, 9th, 10th classes are selected for instruction in Telugu medium for 1030 schools during the academic year 1985-86. After bifurcation of Andhra Pradesh 532 school's are implementing vocational education in 13 districts after retirement's of vocational instructor till today 289 schools are implementing vocational education in the state.

#### List of vocational trades

1. House wiring and domestic electrical appliances.
2. First aid and nutrition
3. Radio & TV repairing
4. Secretarial practice
5. Composing printing and book binding
6. Sericulture
7. Horticulture
8. Pisciculture
9. knitting & garment making darning
10. Farm machinery repair
11. AC, refrigerator repair
12. poultry
13. Computer techniques
14. Carpentry & cabinet making

Training. Internship provides students with an opportunity to have a real time experience of "World of Work" and learn hands-on skills of their respective

trade/ vocational subject. Till 2018 the state has conducted internship but due to corona from the academic year 2019-20 the internship program is not implemented in the State.

Students will undergo an Internship Program for a minimum of 80 hours at a nearby selected

Students	Employers	School Head Master; Vocational Trainers	VTP Vocational Coordinators	State Samagra Shiksha Resource Organisation
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industry/company. Schools/VTPs will coordinate and look after student's attendance and benefits from internships. Report on Learning and feedback on internship programs will be submitted by students.

Key Stakeholders

### HUB AND SPOKE MODEL

The Hub and Spoke Model is a unique model wherein schools with robust infrastructure will be identified as hubs and new schools (without the requisite infrastructure) will be attached to the hub schools as spoken and utilize their Skill labs for imparting Vocational Education to their students. This will ensure increasing the coverage of Vocational Education as well as efficient utilization of the existing infrastructure in Hub schools.

Towards this objective, MoE has issued Programmatic and Financial norms for the Hub and Spoke Model, based on which the following execution plan has been developed.

Justification: NEP 2020 (para 16.5) and the new Skills Hub initiative also promotes and suggests utilizing the existing infrastructure in an optimal way. Hub and Spoke model align with the objective and widens the scope of offering VE to a wider number of students with available resources.

### Status of Vocational Education in Samagra Shiksha Andhra Pradesh

In Andhra Pradesh State the Project Approval Board (PAB), MOE, Gol has sanctioned 505 Schools from the academic year 2016-17 to 2021-22 upto level IV. PAB has newly approved 101 Schools for implementation of the Current academic year 2022-23 (Phase VII). A total of 606 Schools with 7 Sectors are implementing for the current academic year.

As part of the scheme, 2 sectors are approved in all Management schools (except KGBVs) and 1 sector in KGBVs and MJPAPBCWs are implementing Vocational Education. So, with two Settors 1051 Vocational Trainers will work under these schools.

Vocational Education is to be taught as an additional subject in Class 9th and 10th as a compulsory and elective in Class 11<sup>th</sup> and 12<sup>th</sup>. The policy of implementation of courses finalized by NSQF and approved by MoE are implementing in Andhra Pradesh.

### Sectors implementing for current Academic Year 2022-23

S.No	Sector	S.No	Sector
1	Agriculture	5	Beauty and Wellness
2	Apparel & Made-ups	6	Automotive
3	Electronics	7	Food Processing
4	IT/ITeS		

### Phase wise no of Schools Approved (2016-23)

Phase	Year of Sanction	No of Schools	No of Trainers
Phase-I	2016-17	126	252
Phase-II	2017-18	80	160
Phase-III	2018-19	50	100
Phase-IV	2019-20	181	331
Phase-V	2020-21	40	79
Phase-VI	2021-22	28	28
Phase-VII	2022-23	101	101
		606	1051

## IMPLEMENTATION MECHANISM

Under the scheme, Vocational Courses based on the Job roles which have been approved by National Skill Qualification Committee (NSQC) are offered in the schools.

1. Vocational Training Partners (NSDC partners): Vocational education is being implemented in the State by engaging 10 VIPs for supporting the implementation of Vocational Education in 606 Schools of Andhra Pradesh 2022-23. A total of 1051 Vocational Trainers (VTs) should be deployed by the VIPs to teach Vocational Subjects in Schools. Work Order is issued to 544 Trades (393 Schools) and for remaining 507 schools requesting NSDC to float EO for Implementing of VE in the State.

2. Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE): A constituent Unit of NCERT is the Nodal Agency for Curriculum/Courseware Development. Curriculum and Courseware are developed for NSQC Compliant Job roles in consultation with the Sector Skills Councils (SSCs), the representative bodies of industry.

3. Guest Lectures & Field Visits: Under the program, there is a provision for arranging hands on training, field visits, on the job training for students in industrial set up and guest lectures from industry. Arrangements are also being made for providing apprenticeship training to the students passing out with vocational subjects.

4. Assessment: For Level 2 (10th Class) and Level 4 (12th Class) Students: The State Board conducts external competency-based assessment of skills of the students in collaboration with the concerned Sector Skill Council wherein the practical assessment of vocational subject is being carried out by Sector Skill Council. The Sector Skill Councils depute certified assessors to the state to carry out the assessment.

Written Exam (SSC/Intermediate Board): 30 Marks

Internal Marks (Vocational Trainer): 20 Marks

External (Practical Marks (Sector Skill Councils- NSDC): 50 Marks

5. Certificate:

A joint NSQC Aligned Certificate by the school board and the concerned Sector Skill Council is issued to the successful candidates.

6. Internship/Apprenticeship/Placement for Higher Secondary Students:

To increase the effectiveness of vocational education, as part of the NSQC compliant vocational education curriculum, senior secondary students are required to undergo 80 hours of hands-on training at the workplace which is referred to as Internship/On Job

## CONCLUSION

The National Education Policy 2020 outlines that by 2025, at least 50% of learners through the school and higher education system shall have exposure to vocational education, for which a clear action plan with targets and timelines need to be developed. While the number of schools providing Vocational Education is growing annually in all the States, in order to achieve the set target of NEP 2020, MoE aims to implement the Hub and Spoke Model across the country. This is in alignment with Sustainable Development Goal 4.4 and will help to realize the full potential of India's demographic dividend. The number of students in vocational education will be considered while arriving at the GER targets.