Vocationalisation of School Education Under Samgra Shiksha

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Foreword

The National Education Policy (NEP) 2020 strongly emphasized vocational education as a means to prepare students for the workforce and also to promote lifelong learning. The NEP 2020 envisioned integrating vocational education into mainstream education, focusing on promoting experiential and hands on practices, encouraging collaboration between industries and educational institutions to develop relevant vocational courses and training programmes.

The main objective of the vocationalization of school education is to enhance the employability among the students by providing them with skill-based training, to bridge the gap between the industry requirements and education system, which will help students to be self-reliant and also to develop self-employability skills. The programme also aimed at reducing the dropout rate and providing an alternative stream of education for those who might not be able to continue in formal mainstream education.

The government has taken several initiatives to promote vocational education but faced some challenges like lack of awareness, inadequate infrastructure, outdated curriculum to name a few.

The key objective of the study was to have a detailed outlook at vocationalization of education in sampled schools of DOE. For this purpose, schools of District West-A were selected as sample of the study.

In this study, main stakeholders were HOS, vocational trainers and students of the schools. The findings of the study reflected that 41% of the students considered vocational education as inculcating them with procedural skills. Results also showed that vocational laboratories in schools must be upgraded with equipments and field visits along with internship opportunities should be increased for students.

We are very thankful to all dignitaries, researchers and contributors under whose guidance this research work could be completed. Special thanks to Prof. (Dr.) Novrattan Sharma and Prof. (Dr.) Saroj Bala Yadav because of whom this study could take the correct dimensions.

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Chapter 1

INTRODUCTION

"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 graduates they need"-

M.K. Gandhi

1.1 Concept of Vocational Education

Mahatma Gandhi was very foresighted when it came to his thoughts on education. His ideas and thoughts are relevant even in the modern and contemporary world.

He thought that education is closely associated with the socio-economic development of the society. He took up scheme for basic education in which vocational training or work experience is the utmost important as it stimulated the human mind for creative thinking and dignity of manual labour which should be taken up from primary to higher level education. Vocational education is any type of training, usually in the form of courses and hands-on instructional lessons, that teaches students the specialized skills required to perform a specific job. These types of programmes usually forgo traditional academic-based lessons in favour of hands-on learning. Students learn the fundamentals and capabilities of a specific occupation under the supervision of an active and highly experienced professionals.

1.2 Need of Vocational Education

Vocational, or skills-based, education is becoming more and more important today, with many employers expecting new employees to have all the practical skills they need to start work and also for those who have to support their families immediately after senior secondary education. Vocational courses are typically more practical and skills-based than academic degrees, but they are often being taught at universities as well as colleges and technical institutes, so the vocationalization of education should be done at school level. Vocational Education and Training (VET) is an important element of the nation's educational initiative. Vocational education has to be viewed from different multi-layered perspectives. One is of course the hands on training component. The other is employment generation and sustainability. If you know exactly what you want to do in your career and it requires practical skills, then vocational learning is important. It could be hospitality and tourism, retail management, software development or interior design. There are literally thousands of skills-based training options out there. In today's technical world, even an engineering graduate is supposed to have some technical skills apart from the degree possessed by him or her i.e. in the form of certification etc.

1.3 Wardha Scheme of Basic Education (1937)

It emphasized that the entire education is to be imparted through some industry or vocation with a basic craft as the center of instruction; Samavaaya (Samayay) integration method. It also advocated that learning should closely be coordinated with home, community and the child's life activities, as well as, village crafts and occupations which might have a strong impact on formulation of the educational policies, particularly at the elementary stage and for free primary education to find place in the constitution of free India.

1.4 University Education Commission (1948-49)

It emphasized on occupational education, that is, preparation of the student for his life, work or for other specialized interests. Such courses are called vocational or technical or professional and they should either be introduced into regular school education, or separately. It also suggested mandatory opening of State Board of Vocational Education and to prepare plans for vocational education, including teacher training.

1.5 Secondary Education Commission (Mudaliar Commission) (1952-53)

It stated that the education is relevant if it is also being vocationalized with an aim to gradually move towards formation of productive skills amongst school children as they advance in age. Students who go for vocational and technical education after completing higher secondary education are deprived of any possibility of pursuing higher education after completing their vocational or technical training. It can be brought under the purview of universities and by providing necessary accreditation to the courses available in polytechnics, industrial training institutions. It also suggested that polytechnics or technological institutions should be available where technical courses covering two or more years would be provided.

1.6 Indian Education Commission (Kothari commission) (1964-66)

While talking about vocationalization of secondary education it focused on strengthening of centers of advanced studies, emphasized on the training and quality of teachers for schools. Research in agriculture and allied sciences should be highly prioritized.

It advocated that facilities for technical and vocational education should cover a large number of fields, such as agriculture, industry, trade and commerce, medicine and public health, home management, arts and crafts, secretarial training, etc. with special emphasis on agricultural and technological education at the university stage.

From 1882 till 1917, majority of university students pursued purely literary courses and very few pursued professional courses. This commission visualized the future trend of school education to be a fruitful combination of general and vocational education.

It visualized a flexible educational structure covering - a pre-school stage of one to three years; - a primary stage of seven or eight years , a lower secondary or high school stage of three or two years

in general education or of one to three years in vocational education, a higher secondary stage of two years of general education or one to three years of vocational education, a higher education stage having a course of three years or more for the first degree, followed by courses of varying durations.

Adequate facilities should be made available for suitable forms of vocational education for the students who would leave the educational system and join working life at the end of the primary stage.

It also emphasized upon the need to vocationalize higher secondary education and to expand the vocational courses to cover about half of the total enrollment at this stage. It would include courses for the training of primary and pre- primary teachers; courses conducted by the industrial training institutions for a large number of trades for which the completion of studies in class X is the minimum qualification; courses in agriculture and industry which will train the middle level of personnel needed; courses for training paramedical/health personnel; courses for secretariat work; and courses in home science.

It had provisions for the introduction of different types of vocational courses at the higher secondary stage, varying in duration from one to three years, which would help in preparing young persons for employment. The entrance examinations to IITs should be held in English and also in regional languages and the best students from each linguistic group should be selected. If some of these students don't quit standard in English, this deficiency should be overcome by giving an intensive training in English to the selected students in their first year at the institute. Moreover, at the school stage, about 30 per cent of the students should be given scholarships; and this proportion should be increased to 50 per cent at the collegiate stage.

Kothari Commission had visualized that after 8th class about 20% of the students will step off the general stream and enter schools of vocational education. Similarly, a large percentage of 10th class students are to be diverted to such vocational institutions and there is also a need for expansion of the regular vocational education programmes in terms of opening more institutions and introduction of new vocational areas.

And also, one of the factors responsible for the slow progress of vocationalization of secondary education is lack of opportunities for the vocational pass outs for their professional growth and career advancement. Such programmes could include Diploma, special degree courses, general degree courses, professional degree courses. So suitable strategies should be there for providing opportunities for the vocational products to enter appropriate tertiary level programmes.

It has been strongly recommended by several committees connected with vocational education that vocational students of the +2 stage should be brought under the umbrella of apprentice scheme as an important catalyst for the promotion of vocational education. Appropriate actions are to be taken for Introducing apprentice scheme to as many vocational courses as required.

1.7 National Education Policy (1968)

Based on the report and recommendations of the Kothari Commission (1964–1966) this was the first attempt of its kind in the nation towards establishing national growth, a sense of common citizenship

and culture, and to strengthen national integration. Compulsory education for all children up to the age of 14 was made compulsory, more emphasis on learning of regional languages, outlining the "three language formula" to be in secondary education that was Hindi, English and Regional Language were some of its recommendations.

1.8 Ishwarbhai Patel Committee (1977)

Based on the recommendations of this committee, Socially Useful Productive Work (SUPW) was given a central place in the curriculum at all stages of school education. Socially Useful Productive Work can be described as purposive, meaningful, manual work resulting in either goods or services which are useful to the community. Purposive, productive work and services related to the needs of the child and the community will prove meaningful to the learner. Such work must not be performed mechanically, but must include planning, analysis and detailed preparation.

1.9 National Policy on Education (1986)

Vocational and technical courses of a wide variety would be provided for children and youth who come out of the non- formal stream. It focused on initiating a two-year vocational course in ECCE at +2 level with the objective to create basic skills which can later be adopted through job training for specific situations.

Socially Useful Productive Work (SUPW)/Work Experience (WE) forms an integral part of the curriculum in many stages. Inspite of its good intentions of developing proper attitudes, the actual implementation both in coverage and quality leaves much to be desired. At the middle school stage SUPW/WE programmes aim at developing confidence and sufficient psychomotor skills to students to enter the world of work directly or through certain occupational training courses. The SUPW/WE programmes for the secondary stage are viewed as a linear extension of it for the middle stage. These activities at secondary stage are also expected to enable students to opt for vocational programmes at the +2 level with better appreciation and undertaking. It may also be mentioned that a significant number of students drop out after this stage. Hence the programmes of SUPW/WE are expected to ensure modest preparation for students before they leave the school, to enable them to choose an occupation. Such pre- vocational courses are to be handled by teachers with specific skills and competence. These programmes also need proper resources within the school.

The vocational courses at higher secondary stage are to be regarded not as a preparation for the college, but as a period for preparing an increasingly large number of school-leavers for different vocations in life. The need for vocationalization of higher secondary education has been conceded by all, but the problems in its implementation may be appreciated by the fact that only a small percentage of student population had been covered by vocationalization.

There have been many factors responsible for the slow progress, such as, absence of a well-coordinated management system, unemployability of vocational pass outs, mismatch between demand and supply, reluctance in accepting the concept by the society, absence of proper provisions for professional growth and career advancement for the vocational pass outs etc.

The management systems for various sectors of vocational education work in isolation and hardly coordinate either at the national, regional or state level. In addition, not adequate provisions were being made for activities like curriculum design; resource material preparation, training of vocational teachers etc.

Other issue was that the tribal and rural population do not have adequate access to school education, vocational courses in schools or vocational/ technical training schools/institutions. There is also a paucity of vocational courses/institutions to cater to the women population whose earning power could be considerably augmented through vocational training. It stated that skill development for girls and women should be continuous process of learning starting from the NFE centers and AE centers. Continuing Education Centers should be set up in a phased manner which should organize vocational training, provide opportunities for retention of literacy skills and application of this learning for improving their living conditions.

Handicapped and disabled persons form another significant section of the society who have at present practically no avenues to acquire-suitable productive skills to make their living more meaningful and self-reliant.

The NPE stipulated that wherever possible education of children with locomotor handicap and other mild handicaps will be common with that of others. The children with severe handicaps are proposed to be enrolled in special schools with hostels at district headquarters.

Special schools will be established at the district and sub- district levels. It was felt that composite special schools may be established. In each of the districts where a special school is set up, a vocational training center either as a part of the school or as an adjunct to it will also be developed. This institution will provide vocational training to the students from the special schools and other severely handicapped persons for job. The emphasis will be on training craftsmen for locally available jobs. The Rehabilitation Council should be requested to give recognition to this training programme so that the incumbents can get job throughout the country. Wherever necessary approval from the NCTVE and NCTE may be obtained.

A great deal of responsibility had been assigned to SCERTs. They would have the major role of planning, sponsoring, monitoring, and evaluating the in-service education programme for all levels of teachers, instructors and other educational personnel. The needs for in-service education of teachers arise from several sources, such as, changing national goals, revision of school curricula, additional inputs in teaching- learning system, inadequate background of teachers, etc. The state level agency would take cognizance of all the needs before preparing a programme of in-service education for a given period of time. SCERTs would also prepare suitable material for in-service education of teachers, undertake orientation of key persons, monitoring and evaluation of programmes.

1.10 Acharya Ramamurti Committee Report (1990)

This report recommended that vocational education should be enriched by a meaningful combination of teaching of theory and practice and establishment of effective linkages are established with the 'world of

work', work benches and practice schools'. The training would revolve around real problem solving and on-the-job development of skills, 'practice school' is a more institutionalised arrangement with larger units in the organised sector, 'work benches' can be carved out of smaller units in the unorganised sector as well within the neighbourhood of the school.

The kind of stigmatization associated with vocational education as a last resort for the poorer sections of society, needs to be overcome for speedy development of the skills necessary in the present phase of India's economic development.

1.11 Yashpal Committee (1993)

It emphasised that education in computer applications, electronics and management is also vocational education. The fact that demand for such education has increased and many private colleges had come up does not change the fact that these institutions are providing vocational education. The quality of this education is generally rather poor. There is an impression that many of the private institutions are not doing a very good job in this regard, in spite of the fact that they charge rather heavy fees.

It emphasised on application-based syllabus of vocational education i.e. it had to be designed with a view to induct students into a community of participant citizens, to create a new kind of institutional culture and ethos in general and professional colleges. For this to happen, all syllabi should require the teachers and students to apply what they have learnt in their courses, on studying a local situation, issue or problem. There should be sufficient room for the use of local data and resources to make the knowledge covered in the syllabus come alive as experience. Curricular reform in this regard would include compulsory exposure and engagement with different kinds of work, in the form of summer jobs or internships, according to the circumstances and surroundings of the particular university, and should include both manual and other kinds of work/occupations. For this strategy of syllabus redesigning to succeed, evaluation and examination practices will also have to change, and certainly, there will have to be a change in pedagogic practices used by teachers.

1.12 National Education Policy (2020)

This policy emphasized on a concerted national effort that has to be made to ensure universal access and afford opportunity to all children of the country to obtain quality holistic education including vocational education from pre-school to Grade 12.

In particular students would continue to have the option of exiting after Grade 10 and re-entering in the next phase to pursue vocational or any other courses available in Grades 11- 12.

Students will have increased flexibility and choice of subjects to study, particularly in secondary school - including subjects in physical education, the arts and crafts, and vocational skills – so that they can design their own paths of study and life plans. There will be no hard separation among 'curricular', 'extracurricular', or 'co-curricular', among 'arts', 'humanities', and 'sciences', or between 'vocational' or 'academic' streams.

Every student will have an experience of important vocational crafts, such as carpentry, electric work, metal work, gardening, pottery making, etc.

Vocational education is perceived to be inferior to mainstream education and meant largely for students who are unable to cope with the latter. This is a perception that affects the choices students make. It is a serious concern that can only be dealt with by a complete re-imagination of how vocational education is offered to students in the future. This policy aims to overcome the social status hierarchy associated with vocational education and requires integration of vocational education programmes into mainstream education in all education institutions in a phased manner.

Vocational courses will also be available to students enrolled in all other Bachelor's degree programmes, including the 4-year multidisciplinary Bachelor's programmes. HEIs will also be allowed to conduct short-term certificate courses in various skills including soft skills. 'Lok Vidya', i.e., important vocational knowledge developed in India, will be made accessible to students through integration into vocational education courses. The possibility of offering vocational courses through ODL mode will also be explored. Vocational education will be integrated into all school and higher education institutions in a phased manner over the next decade. Focus areas for vocational education will be chosen based on skills gap analysis and mapping of local opportunities. MHRD will constitute a National Committee for the Integration of Vocational Education (NCIVE), consisting of experts in vocational education and representatives from across Ministries, in collaboration with industry, to oversee this effort. The National Skills Qualifications Framework will be detailed further for each discipline vocation and profession.

1.13 National Curriculum Framework (1975)

The NCF of 1975 recommended 10+2 system of school education with general education of 10 years. The NCF of 1975 also recommends that general science should be a core compulsory subject up to Class X. The framework suggests activity-based integrated science up to Class X.

1.14 National Curriculum Framework for School Education (2000)

It emphasised that up to the secondary stage, provisions exist for giving the students an opportunity under work education to do work and provisions also existed for an alternative scheme of pre-vocational education programmes at the secondary stage. Vocational courses are designed as self-contained modules specifying details of the theoretical aspects or basic scientific principles and the practical operational details. Schools would assess the need, relevance and potential of the courses before offering them to students. These courses in the formal school system would help in enhancing the employability of the students joining the world of work. The vocational education programme should be designed to meet the varying needs of the socially disadvantaged groups, such as women, scheduled castes, scheduled tribes and physically challenged persons, which would help them acquire suitable productive skills. It will make their lives more meaningful as they will be economically independent and self-reliant.

1.15 National Curriculum Framework (2005)

It emphasized that many vocational options may arise from the world of productive work in the local community. For example, auto maintenance in garages, tailoring and paramedical services offer possibilities for collaboration to create meaningful vocational courses. In our country, many vocational

stream courses have deteriorated in their quality, and hence are unable to provide students with meaningful work-related knowledge and skills. In many cases, no distinction were being made between learning to do a job versus learning to get a job.

The vocational stream meant to address the needs of those who would enter the work force earlier than those who would enter the professions via the traditional academic streams. The provision of these services in schools would help create the support system required to cope with increasing academic and social pressures.

In contrast to the NPE 1986 goal of covering 25 per cent of the +2 enrolment in the vocational stream by the year 2000, less than 5 per cent of students choose this option at present. According to the Report of the Working Group for the Revision of the Centrally Sponsored Scheme of Vocationalization of Secondary Education, NCERT (1998), apart from being viewed as an inferior stream, vocational education suffers from poor infrastructure, obsolete equipment, untrained or underqualified teachers (often on a part-time basis), outdated and inflexible courses, lack of vertical or lateral mobility, absence of linkage with the 'world of work', lack of a credible evaluation, accreditation and apprenticeship system, and, finally, low employability. So, it was therefore proposed moving in a phased manner towards a new programme of Vocational Education and Training (VET), which is conceived and implemented in a mission mode, involving the establishment of separate VET centers and institutions from the level of village clusters and blocks to sub-divisional/ district towns and metropolitan areas. Wherever possible, it would be in the national interest to utilize the school infrastructure (often utilized for only a part of the day) for setting up this new institutional structure for VET. Such VET centers/institutions also need to be evolved in collaboration with the nationwide spectrum of facilities already existing in this sector. This will imply the expansion of the scope of institutions like ITIs, polytechnics, technical schools, Krishi Vigyan Kendras, rural development agencies, primary health centers (and their auxilliary services), engineering, agricultural and medical colleges, S & T laboratories, cooperatives and specialized industrial training in both the private and public sectors.

Vocational Education and Training (VET) needed to be conceived and implemented in a mission mode, involving the establishment of separate VET centers and institutions from the level of village clusters and blocks to sub-divisional/district towns and metropolitan areas in collaboration with the nation-wide spectrum of facilities already existing in this sector.

1.16 National Curriculum Framework (2023)

The Policy aims to overcome the social status hierarchy associated with Vocational Education and requires integration of Vocational Education programs into mainstream education. It recommended vocational education to be inculcated in during each and every stage.

Vocational education should prepare students not just to understand the world around them, but also to do productive work. These capacities for work would enable students to be productive members of their households as well as participate in the economy. Thus, this NCF sees vocational education as an integral part of the curriculum. Through the curricular area of vocational education, students would be

exposed to and develop basic skills in three forms of work — work with life forms, work with machines and materials, and work in human services. The school curriculum at the preparatory and middle stages would endeavour to build relevant capacities in the abovementioned three forms of work.

Vocational education help students learn and respect the value of shrama or physical work, respect for all and their capabilities regardless of background, and respect for the environment. Vocational education prepare students for meaningful and productive participation in the world of work by learning hands-on abilities and skills (i.e., 'physically doing'), developing equal respect for head-hands-heart, valuing the dignity of labour, and understanding vocational choices for the future.

Vocational education prepares students for different kinds of 'work'. It enables the learning of specific knowledge, capacities, and values, such that the students upon finishing school, are ready to work in a vocation of their choice, and to deal with the day-to-day practicalities of life. School education must provide both possibilities to all students – to join the workforce or to pursue higher education. It provide the possibility of learning range of vocations – ones that are aspirational, as also those that are most relevant locally and contextually (if different), also new and emerging vocations.

The NCF has developed appropriate Learning Standards which can be transacted by existing Teachers (who currently teach Mathematics, Science or Social Science) with appropriate training and handbooks. They will also be trained to use the support of people from local communities who have expertise in certain vocations.

1.17 Policies and Initiatives

The government is well aware of the important role of vocational education and has already taken a number of important initiatives in this area. The policies and initiatives taken by the government of India in this regard:

1. Centrally Sponsored Scheme of Vocationalization of Secondary Education: The Centrally Sponsored Scheme of Vocationalization of Secondary Education was launched in year 1988. The Scheme envisaged selection of vocational courses on the basis of assessment of manpower needs. The main objectives of the scheme were to provide diversification of educational opportunities so as to enhance individual employability, reduce the mismatch between demand and supply of skilled manpower and to provide an alternative for those pursuing higher education.

2. Establishment of PSSCIVE: A Central Institution of Vocational Education named "Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE) was set up in Bhopal in 1993 under the overall umbrella of NCERT. The institute acts an apex level research and development organization in the field of vocational education and provides academic support to the programmes.

3. Central Board of Secondary Education (CBSE): CBSE is currently offering 34 Vocational courses consisting of 107 subjects in its about 500 governments and government aided schools across the country. During the academic session 2007- 08, Financial Market Management was introduced as vocational package in class 11. CBSE launched three new vocational courses, namely, "Hospitality

and Tourism," "Mass Media Studies & Media Production" and "Geospatial Technology" from the academic session 2010-11. CBSE is making efforts to introduce more such courses in collaboration with relevant industry/organization, and has facilities for joint certification.

4. National Institute of Open Schooling (NIOS): NIOS is offering 82 vocational education courses through its accredited vocational Institutes which include Government Institutes, NGOs and Registered Societies. 1063 Accredited Vocational Institute (AVI) provides training to neo literates up to pre-degree level.

5. Jan Shikshan Sansthan (JSS): JSS have evolved from the erstwhile Shramik Vidyapeeths to meet the educational and vocational training needs of illiterate and neo literate adults and young people in urban and rural India. Jan Shikshan Sansthans were set up by voluntary agencies, which are providing financial assistance for taking up vocational training programmes for illiterate and neo-literate persons, people belonging to socio-economically weaker sections, disadvantaged groups, unskilled and unemployed youth in the age group of 15-35 years. Within all these groups the Jan Shikshan Sansthans were expected to give priority to women. A total number of 271 JSSs had been sanctioned in different parts of the country.

6. National Vocational Qualification Framework (NVEQF): The National Vocational Education Qualification Framework (NVEQF), which had been launched by AICTE and Ministry of HRD mainly focused on general education element into vocational education and vice versa. It brought the vocational education program in schools that offered new career choices to students and make them better prepared for the world of work. Through NVEQF, Ministry aimed at developing the skills and competencies of students opting for vocational courses.

7. Skill India: Skill India was launched by Prime Minister Narendra Modi on 15 July 2015 which aimed at training over 40 crore people in India in different skills by 2022. It includes various initiatives of the government like "National Skill Development Mission", "National Policy for Skill Development and Entrepreneurship, 2015", "Pradhan Mantri Kaushal Vikas Yojana (PMKVY)" and the "Skill Loan scheme".

1.18 Issues of Vocational Education in the Present Education System

Following issues are being with respect to vocational education in India

1) Shortage of VET Institutions: The number of well-equipped technical and vocational institutions established post-Independence aren't adequate. As quoted by AICTE (2018-19) the number of such VET institutions is just 10,426 in the country. The youth of the country willing to receive technical education can hope for a bright future; but such institutions are very few in considerations to such a huge population.

2) Limited/Restricted Curriculum: In the techno-vocational education & training institutions, only technical subjects are provided. There is no provision of liberal education. So, with the technical

knowledge, the learners are not being able to acquire knowledge of social objectives and human relations of production.

3) The Indifferent Attitude of The People: In the present-day scenario, more respect is given to the activities related to the intellect or activities of mental engagement than physical activities or physical labour. The people engaged in handicrafts and other manual works for earning their bread were not looked with respect. So, this problem is not that easy to solve.

4) The Medium of Instruction: Medium of instruction in the Vocational courses is also an issue. English is the most common medium of instruction in almost all major technical institutions of modern India. The student who had studied throughout in Hindi medium or some other regional language, find it extremely difficult to receive technical and vocational Education in English. Such students are not being capable enough to deal with difficulties in understanding, felt disappointed & exhausted in order to keep up with the studies and so they leave vocational and technical institutions after a term of stagnation. This sort of frustration also brings about a loss of money, time and energy.

5) Lack of Good Teachers: Teaching personnel with good academic record who had also received Technical and Vocational Education are always after good salaries and other material gains. They hesitate to go in the teaching & training profession. As a result, such institutions are deprived of able and talented persons. And the institutions are looking for teachers who can work for menial salary.

6) Insufficient Practical Exposure: Mere theoretical knowledge will not suffice for successful candidates to go for establishing small workshops and small industries.

7) Shortage of Continuous Education: Young people complete the Technical and Vocational Education and get employed. In the beginning, they are full of knowledge, but with time, they forget many things. Also with advancing times, change in the technology, techniques, work ethics lead to outdated workforce.

8) Lack of co-ordination among Govt. Agencies & regulatory bodies: Different ministries manage their initiatives of employment independently in India and there is a wide range of VET providers such as social businesses, non-profits and corporate.

9) Inadequate vocational education to industry linkage: This will result in low rates of employment due to the reason that what job providers are seeking for, are not communicated with training sector.

10) The demand-supply mismatch of job market: The current VET programs are largely supply-driven and still relevant training is being required for available jobs. A divergence between the skills that the population possesses and skills required by industry is a major cause of low employability among Indian youth. With low skills and experience limited to the unorganized sector, these workers remain unemployable in industry.

Chapter 2

REVIEW OF LITERATURE

As the current research is entirely focused on vocationalisation of education, so the researcher tried to put forward some studies which are conducted on the concerned topic.

Campbell et al. (1987) in his research deducted that earning gains of 8 percent were found for vocational school graduates who worked in their training related jobs over workers who followed normal US high school curriculum.

Neuman and Ziderman (1991) conducted research on students who do not take up higher education in Israel and deducted that vocational schooling was found to be more cost effective and graduates with vocational training earned more than general secondary school graduates when they worked in closely related occupations to their field of vocational study.

Arriagada and Zideran (1992) found that vocational stream graduates employed in occupations related to their field of study had significantly higher earnings than regular academic stream graduates in Brazil.

Arum and Shavit (1995) concluded that vocational education increased the chances of employment for secondary graduates in the US and helped them in becoming skilled workers rather than unskilled workers.

Moenjak and Worswick (2003) found that when allowed for selectivity, a much higher return for vocational education was found over and above general education at the same level in Thailand.

Tunali (2002) found that women who received vocational education were found to have a higher probability of employment.

Sakellariou (2003) found that returns to technical education were found to be higher among women at the secondary level whereas the returns to formal education were found to be higher among men at the same level.

El-Hamidi (2006) found that men in Egypt with vocational education had a 29% higher rate of return over men having education till the general secondary level and this rate was found to be only 2% higher in women.

According to **Oketch (2007)** Technical and Vocational Education and Training (TVET) was seen to occupy a small and marginal position in the schooling system of Africa, mostly taken up with the hope of joining the labour market and early income.

Lee and Coelli (2010) found that positive labour market outcomes were observed for individuals in Australia who had not completed high school at all levels of vocational education & training (VET) qualifications. However, similar outcomes were observed for individuals who had completed high school at only diploma or higher levels of vocational education training qualifications.

Dietzen and Wünsche (2011) examined perceptions of employers on graduates from VET and universities and concluded that employers would rather choose for university graduates because their way of thinking makes them more flexible than VET students who however have many practical skills.

Baqadir, Patrick and Burns (2011) reported that in Saudi Arabia there is a gap between knowledge and skills of graduates on the one hand and qualification needs of employers on the other hand. The authors stated that it is necessary to change the educational system to establish higher quality.

Spierings and Meerman (2011) researched on human resources graduates and found that a student sometimes stayed with the company at which they did their apprenticeship, but most of the time they have to seek for a job.

Schweri and Trede (2011) conducted study on the career intentions of Swiss healthcare assistants and found that graduates who think about the future mostly choose to continue their education. They also found that apart from economic factors intrinsic and extrinsic motivation also played an important role in determining their choices.

Cattaneo et. al (2011) researched about getting a degree of Professional Education and Training (PET) on the job focusing on direct and indirect costs and benefits and concluded that almost every candidate gets more salary after getting the PET-degree.

According to **Geiben & Grollmann (2011)** acquisition of practical skills by the graduate reduces the induction time of training by the employer which in turn leaves a positive impact on employer about employee regarding their attitude and dedication towards job.

According to Rocher (2011), students will like to acquire task specific skills that will determine their occupational choice.

Rohrback, Schmidt & Tiemann (2011) found that the percentage of over-qualified individuals had grown due to polarization in the field of work.

Tripney and Hombrados (2013) systematically reviewed 26 studies and found the impact of Technical and Vocational Education and Training (TVET) interventions on monthly earnings, overall paid employment and formal employment to be positive and significant albeit the effects being small, in youth from middle to low-income countries.

Virtanen et al. (2014) showed that close collaboration between students, workplaces and vocational institutions benefitted learning.

Fieger (2015) found that most students in Australia were found not to discontinue their studies as soon as they have gained employment after the obtainment of the specific skills they were seeking.

Eichhorst et al. (2015) found that governments of industrialized countries provide vocational education training through the educational system to improve the job opportunities of youth who did not possessed the skills demanded of them in the labor market and the ability, funding or motivation to pursue higher education.

Scholten and Tieben (2017) concluded that higher education dropouts in Germany without pre-tertiary vocational qualifications were found to have greater difficulties in finding a job compared to such dropouts with pre-tertiary vocational qualifications which indicated that vocational education & training (VET) did served as a safety net in case of dropouts.

Overall, a large number of empirical studies, both in developing and developed countries setting, showed that vocational education was found to increase participation, employability, probability of employment and wages of the workers who received it in all kinds of countries

In Indian context, there have been few studies, which have been used as the dataset in the present paper.

According to McKinsey (2004) Indian manufacturing sector will be requiring labour force of 20 million which would further necessitate the training of 1.5 million technicians every year.

According to **NSSO survey (2004–2005)** conducted on the age group of people between 15-29 years found that only 4% of the respondents received formal vocational education & training (VET) and 8% of that age group had received non-formal VET.

Kahyarara and Teal (2008) found that returns to vocational training were found to be higher than academic education at the lower levels of education and lower than academic education at the higher levels of education.

From 61st round of **NSSO survey (2004–2005)** to 66th round of NSSO survey (2009–2010) it was found that the population in the age group of 15–29 years who had received formal vocational education reduced from 2.37 to 1.96% and those who had received non-formal vocational education declined from 7.74 to 4.80%.

According to a study by Maharashtra Higher and Secondary School Examination Board (2011) approximately 1444 senior schools are running 150 vocational courses with total intake limit of 88020. The Government of Maharashtra also introduced BIFOCAL plan at +2 level in 1977-78 which was extremely mainstream in Maharashtra and has gained adequacy amongst all partners.

According to Report by NSDC (2011), Directorate General of Employment and Training under Ministry of Labor and Employment conducted vocational training courses through 6906 ITIs/ITCs with a total limit of 9.53 lakhs.

A survey conducted by the Federation of Indian Chambers of Commerce and Industry (2011) found that 90% of respondents (companies) were facing a shortage of labour and about 89% of those respondents reported that they have been unable to meet the potential demand for their products in the market due to labour shortage.

According to **Agrawal (2012)**, there was a significant difference between wages of people with vocational education & training (VET) as compared to general secondary graduates in males as well as females.

Kaushik (2014) in her research mentioned that vocational training had been so far successful in India only in industrial training institutes and that too in engineering trades. Her research emphasized that in order for India to enjoy the fruits of the technical fields, there is an urgent need to redefine the critical

elements of imparting vocational education and training to make them flexible, contemporary, relevant, inclusive and creative.

Kumar Pradeep (2015) concluded in his research that the government, corporate sector, social business and non-profit organizations needed to operate in a collaborative ecosystem in order to overcome the challenges of capacity, quality and utilization across vocational education.

Banerjee (2016) in her analysis found that participation in the manufacturing sector was found to increase across all social groups with VET.

Agrawal and Agrawal (2017) found evidence of higher returns to VET as compared to general education.

Kumar, Mandava and Gopanapalli (2019) observed that being in an urban area as compared to a rural area as well as being a male as compared to a female increased the odds of receiving formal training. Also, increased education level as compared to no education and having received technical education as compared to not receiving any technical education increases the odds ratio of receiving formal training.

Aithal Shubhrajyotsna and Aithal P.S. (2020) suggested that in order to encourage self-dependency after 18 years of age, students should develop skills in their interested area and involve in some kind of economic/productive activities so that their dependency on parents could be reduced which is possible through vocational training. They also suggested that vocational training should be based on earn while learn that can further be strengthened at higher education level and the design of undergraduate programme should be such that there should be two skill based subjects focusing on employability skills and entrepreneur ability skills respectively apart from core subjects, non-core subjects, and elective subjects.

Chapter 3

METHOLOGY

3.1 Rationale of the study

Since vocational education is taught in schools of Delhi both in an integrated way and as separate subject, it is important to know how this education is implemented. To study the implementation and to provide feedback, this study was conducted in schools of Delhi.

3.2 Objectives of the study

a) To identify the different trades of Vocational Education in the schools of District West-A.

b) To explore the specificities of Vocational Education Trainer leadership compared to that in general education.

c) To identify current trends in Vocational Education Trainer governance and discuss how they affect Vocational Education Trainer leaders' work tasks and required knowledge, competence and skills.

d) To identify the current practices in the schools of District West-A.

3.3 Delimitation

Keeping the time and budget constraint, only schools of District West-A from Directorate of Education, Delhi has been taken for study.

3.4 Sample size

Among 48 schools of District West-A of Directorate of Education (Zone 14,15 and 16) that have vocational educational as a subject, minimum two schools were selected from each zone. A total of ten schools were selected through lottery system which are follows:

1) GBSSS Rajouri Garden Extension, Id: 1515006

2) SKV Ramesh Nagar, Id: 1516027

3) GBSSS West Patel Nagar, Id: 1516140

4) SKV Ranjit Nagar, Id: 1516021

5) SKV Basai Darapur, Id: 1516019

6) GSBV Moti Nagar, Id: 1516010

7) GGSSS Subhash Nagar, Id: 1515029

8) SBV NO 1 Tilak Nagar, Id: 1514005

9) S V Mansarovar Garden, Id: 1516003

10) Sarvodaya Co-Ed Vidyalaya, L Block, Hari Nagar, Id: 1516003

For the current research, study is conducted on 10 HOS, 12 Vocational Education Teachers and randomly selected 102 students. To randomly select students, we first of all added all digits of school Id till we get a single digit number and then we divide number of students by that single digit (rounded off to nearest figure).

3.5 Tools

Three Questionnaires were developed in a workshop for HOS, Teachers and students consisting of 17, 25 and 17 items respectively. A survey is designed on the basis of pilot study on the vocational teachers and students and HOS of the schools, The questions were standardized and validated in a workshop with the help of 8 expert panel on the basis of their rating.

3.6 Research Method

For the present study quantitative research using a descriptive survey method was used to collect the data from various schools of Delhi to assess the perception of Head of Schools (HOS) , Teachers and Students with regard to the effectiveness of vocational education in the school at senior secondary level. Some open ended questions also included in the survey for the qualitative research and are analyzed using the content analysis.

3.7 Data Collection

Schools were approached physically to collect information from HOS, vocational trainers and students. A general session was held with students to get realistic data. Objectives of the study was shared with HOS and teachers before giving them the questionnaires.

3.8 Data Analysis

The data related to the students, vocational teachers and HOS were collected and analyzed on the basis of the questionnaires filled and percentage method was used to prepare descriptive graphs.

Chapter 4

RESULT AND ANALYSIS OF THE STUDY

Hon'ble Prime Minister, Shri Narendra Modi, has the strength of creating a robust skill training and entrepreneurship development ecosystem in India's journey to economic growth. Technical and Vocational Education and Training (TVET) has been chosen as the theme for 'State of the Education Report for India 2020'.

The vision of making India the 'skill capital of the world', the Ministry of Skill Development and Entrepreneurship has been working in its mission to reinforce skill development efforts across the country. Under Skill India Mission, we have been laying emphasis on Technical and Vocational Education and Training to provide lifelong learning opportunities to the students, enhance their prospects of employability and reduce the demand and supply gap in the workforce global market.

The Ministry's continuous efforts have been instrumental in enabling equitable access and better livelihoods through quality lifelong learning opportunities for all. The support of our vocational teachers has helped create a system that fosters greater participation of the senior secondary students in Technical and Vocational Education and Training initiatives and builds their skills.

Life Long Learning

Whether pursuing personal interests and passions or chasing professional ambitions, lifelong learning can help us to achieve personal fulfillment and satisfaction.

It recognizes that humans have a natural drive to explore, learn and grow and encourages us to improve our own quality of life and sense of self-worth by paying attention to the ideas and goals that inspire us.

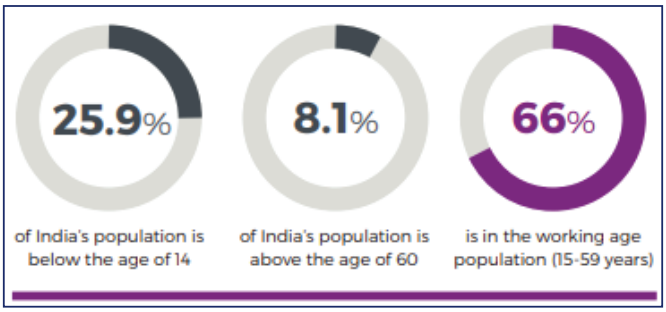
A formal definition of lifelong learning refers to 'All learning activity undertaken throughout life, with the aim of improving knowledge, skills and/or qualifications for personal, social and/or professional reasons'.

Similarly, a formal definition of skills is 'The relevant knowledge and experience needed to perform a specific task or job and/or the product of education, training and experience which, together with relevant know-how, are the characteristics of technical knowledge. (UNESCO, 2020)

Technical and Vocational Education and Training, as part of lifelong learning, can take place at secondary, post-secondary and tertiary levels, and include work-based learning and continuing training and professional development, optionally leading to qualifications.

It also includes a wide range of skills development opportunities for national and local contexts. Learning to learn and the development of literacy and numeracy skills, IT skill, beauty and wellness, automotive skills etc.

The UNESCO, 2020 Report survey shows the following data.



4.1 Principal's perception

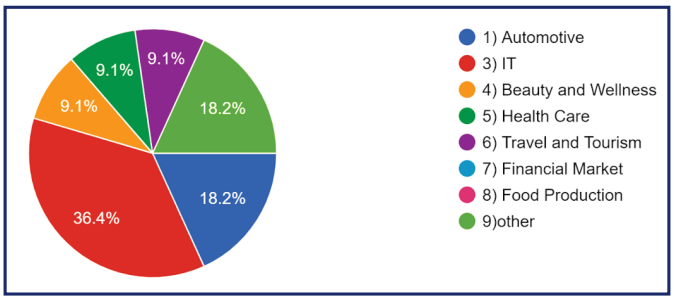
4.1.1 Profile of the HOS

The survey was conducted on 10 Principals where 5 principals were female and 5 were male. The age of the principals is above 45 years to 58 years. There is descriptive analysis done on their responses as their responses are very important for making vocational program successful. They were from the following schools:

GBSSS Rajouri Garden Extension	SKV Ramesh Nagar
GBSSS West Patel Nagar	SKV Ranjit Nagar
SKV Basai Darapur	SBV Moti Nagar
GGSSS Subhash Nagar	SVB NO 1 Tilak Nagar
S V Mansarovar Garden	Sarvodaya Co-Ed Vidyalaya, L Block, Hari Nagar

1(A) There are following vocational programs available. 36.4% principals reported that IT is available in their schools and 18.2% principals reported automotive also available (See figure1). Retail, health care, travel and tourism also avilable in few schools.

Figure 1. Subjects of vocational program running in their school



Name of school/ Name of the Trades	Automotive	Retail	IT	Beauty and Wellness	Health Care	Travel and Tourism	Financial Market	Food Production	Others
GBSSS Rajouri Garden Extension	Yes		Yes						

SKV Ramesh Nagar									Yes
GBSSS West Patel Nagar			Yes						
SKV Ranjit Nagar						Yes			
SKV Basai Darapur			Yes						
GSBV Moti Nagar					Yes				
GGSSS Subhash Nagar			Yes						
SBV NO 1 Tilak Nagar	Yes								
SV Mansarovar Garden		Yes							
Sarvodaya Co-Ed Vidyalaya, L Block, Hari Nagar				Yes					

1(B) 80% school principals have reported that the vocational program had been started in their school before 2020. 60% principals have reported that vocational programs are useful in development of skills, and 30% have reported that it helps in career progression.(See figure 2 & figure 3)

Figure 2. The year of starting of vocational program

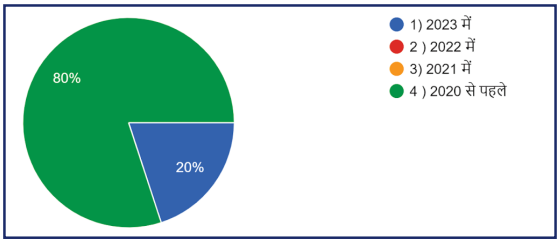


Figure 3. Importance of vocational education

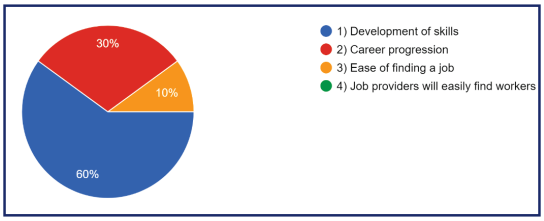
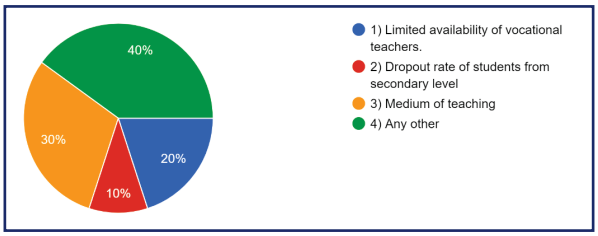


Figure: 4. Impediments in implimenting the curriculum of vocational education

Limited availability of the vocational teachers is reported by 40% of the principals. 30% principals consider dropout rate of students at secondary level is major reason of implementing the vocational education.



1(C) 90% principals reported that they get good financial and infrastructural assistance for vocational educational programs. 60% schools are getting assistance from DOE and 40% schools are getting assistance from SSA. 70% schools have more than 120 students are enrolled in their schools for vocational education. (See figure 5, 6 & 7)

Figure 5: School getting financial and infrastructural assistance for vocational education

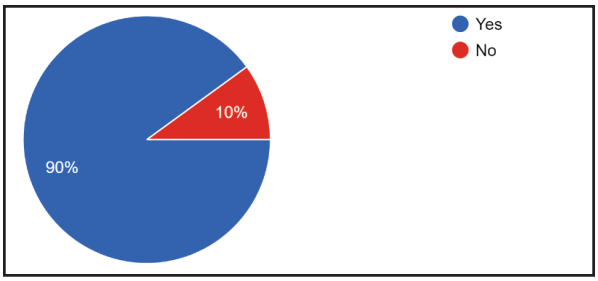


Figure 6: Financial and infrastructural assistance provider

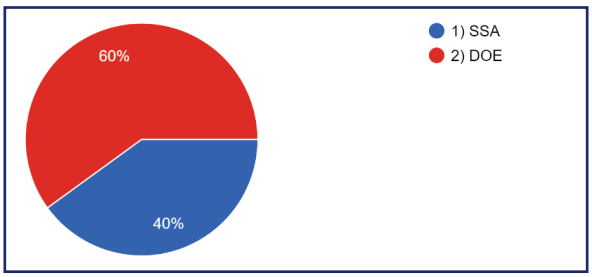
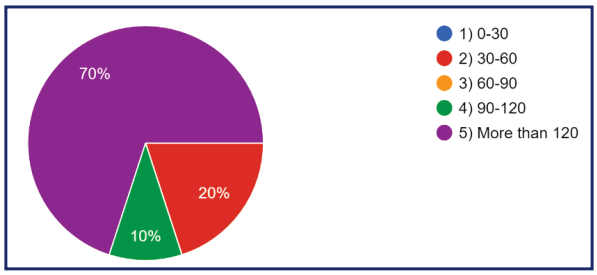


Figure 7. Showing the students enrollemnet in the vocational program



1(D) After analysis of figure 8, 9 & 10 we find that 50% schools principal have reported having 20% vocational teachers, and in two schools having more than 4 vocational teachers. In ninety percent

schools having display of employment opportunities in vocational laboratory and majority(70%) of vocational teachers got in service training.

Figure 8. Showing the vocational teachers working in your school

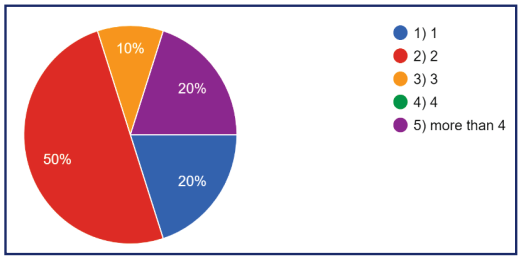


Figure 9. Display of employment opportunities in vocational laboratory

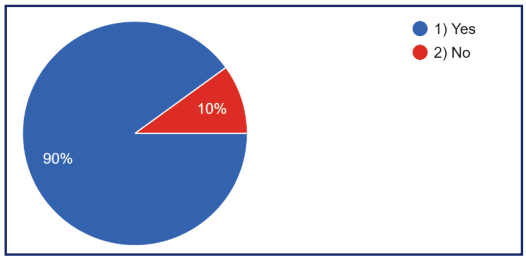
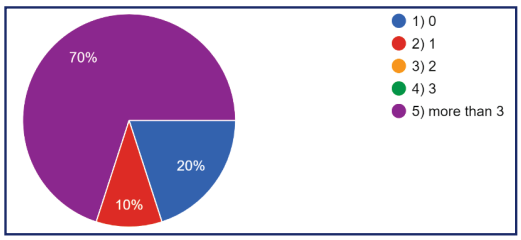


Figure 10. In service training provided to vocational teachers in last five years



1(E) In all orientation of students for vocational guidance in 70% schools is done by HOS, vocational teachers, EVGC. (See figure 11) The 80% principals have reported that experts are usually invited to their schools to promote vocational education.(See figure 12) Maximum(90%) principals believe that vocational programs will help to reduce the dropout in school (See figure 13) and maximum(80%) principals believe that CWSN students (See figure 14) will be benefitted by these programs.

Figure 11. Orientation of students done by

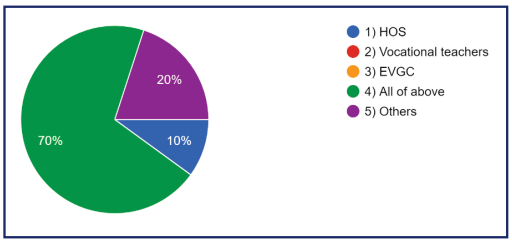


Figure 12. Do. Experts are invited to the school to promote vocational education?

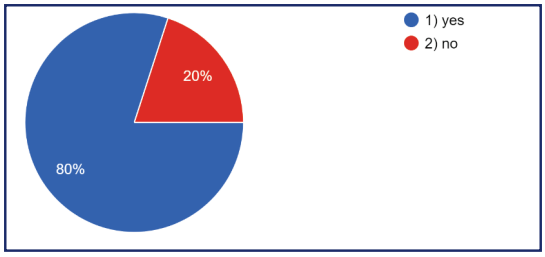


Figure 13. Does vocational programs will help to reduce the dropout in school?

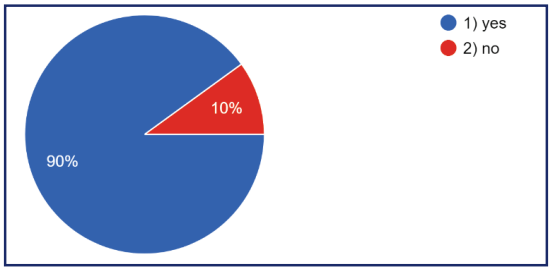
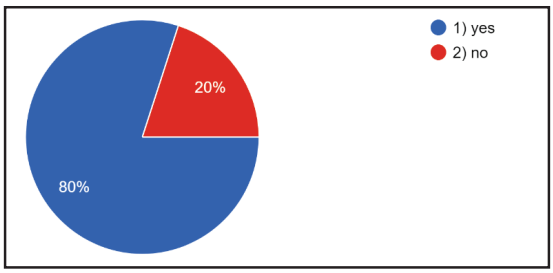


Figure 14. Are CWSN students getting any benefit from vocational education?



View about vocational program

View about vocational education	f
Satisfactory work/ Effective and practical	4
Vocational education provides skill based education and is helpful for the students as it provides options for various career choices	3
Students can sharpen skills and knowledge in specific field.Need of the time for students	4
It helps in carrer of the student. It also help in making pratical knowledge of the field.	1
Free of cost provided by government DOE/ SSA	3

Feedback of principals about infrastructure for vocational education in their school

Feedback about vocational program in the schools	f
Vocational education in being imparted in ICT or Home science lab	1
Laboratory for three trades i.e stenography English, fashion designing and textile design are available in school	2
Fully equipped labs for every vocational subject.	2
In process	1

Feedback about the employment opportunities for students after vocational education

Feedback about the employment opportunities	f
Various sectors in IT, eg Bank, Airport, Aviation etc .in automotive, students will choose mechanical engineering	1
Many opportunities are available for them to work or study further. Being a skill based course, the students can start working immediately after completion of the school/ Business/ freelancing	3
Stenographer grade C and D, Executive Assistant, IT field, fashion designing, self employment, textile design, expert house job work, paramedical course , Automotive wellness, IT retail, travel and tourism	2
Health and wellness, tourism, automotive, beauty, health sector	1
Data Entry Operator	
Junior assistant in government department	1
Many companies influence the selected students like	1
Spa, Mehandi artist, saloon Beauty and wellness	2

4.2 Vocational Teacher Perception

Our study included descriptive information on vocational education and academic courses in secondary schools. The report also included data on teachers' educational and professional backgrounds, class activities, and student assessments.

The State Council of Educational Research and Training also oversees and provides necessary guidance toward the effective functioning of nine District Institutes of Education and Training of Delhi

Providing quality vocational education with an emphasis on skill development at secondary and senior secondary stage (Class 9 to Class 12) is a priority of Government of India. In the absence of any other dedicated government institute in Delhi leading the design, material development and pedagogical excellence of vocational training courses in schools, the restructured SCERT shall have a dedicated division to cater to the same. Further, given the dynamic nature of trades that may be in demand for vocational education over time, for 5-6 major vocational areas (e.g. as IT and IT enabled services, engineering, tourism and hospitality, business and management, health and beauty wellness etc.) that aren't expected to become irrelevant over time. All junior faculty (Assistant Professors), who will have expertise in specific vocational specializations, will be hired on contractual basis to cater to the current mix of trades offered under vocational education in DoE schools.

- Perform periodic needs assessment and gap analysis studies to understand the topmost trades in demand for skilling from industry's perspective.
- In collaboration with national and regional government vocational training institutions (e.g. PSSCIVE Bhopal), NGOs, private skill training institutes and industries, determine the curriculum and pedagogy for the various vocational training options for students in Class 9 – 12 in compliance with NSQF.
- Determine the training needs of all vocational educators in DoE schools and provide in-service training as needed.
- Carry out action-research projects in the fields of vocational training striving to be rigorous, relevant, innovative and current, and with a particular emphasis on determining the impact of various vocational training programmes on labour market outcomes of students.
- Serve as a nodal division in relation to all vocational training related academic support required by DoE, including support on Centrally Sponsored Scheme on Vocationalization of Secondary and Senior Secondary Education (VSHSE).

4.2.1 Profile of Vocational Teachers

This study was conducted on 12 vocational teachers, where 4 male teachers and 8 female teachers were appointed in different schools.

2(A) The figure 1 and 2 show us that the age of the vocational teachers varies as 5 vocational teachers are below 40 years and 7 vocational teachers are above the age of 40 years. The survey has shown that 75% vocational teachers were on contract and only 25% working on regular basis. (See figure 3)

2(B) Qualification of Vocational teachers has shown in figure 4. 41.7% teachers are PG and 33.3% are diploma holders. 25% are graduate vocational teachers.

2(C) Trade of IT is leading as taught in four schools. More than 25 lectures were taken by 58 percent of vocational teachers in a week, 16.7 percent are taking 5-10 lectures per week. 6 vocational teachers has more than 15-20 years of experience.

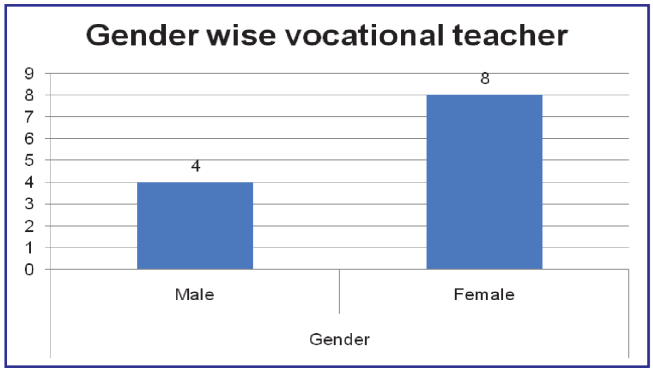


Figure: 1 Gender

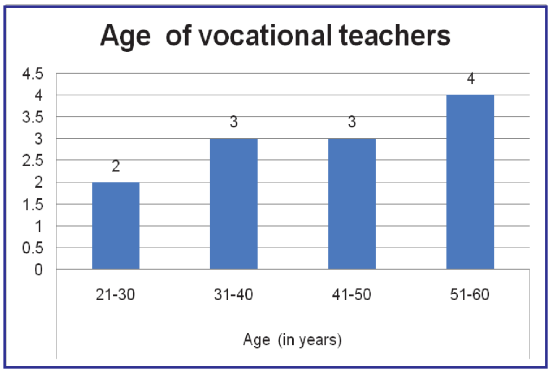


Figure: 2 Age

Figure: 3 Nature of employment

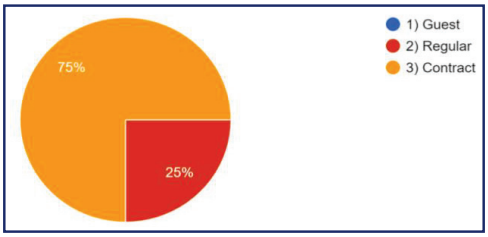


Figure: 4 Qualification

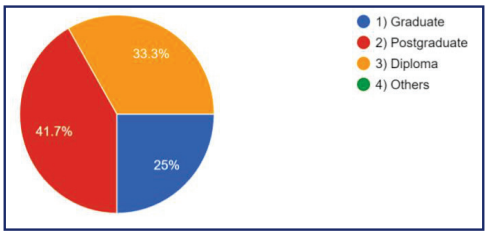


Figure 5 is showing that 33.3% students have joined the IT program under vocational guidance. 16.7% students had joined automotive very few were going for retail and beauty and wellness as per availability. figure 6 is showing that total period teach by the vocational teacher in a week is more than 25 for 58.3%. The range of periods varied from 5 to 25 in others 50% of the vocational teachers are having experience of 15 to 20 years and 33.3% occasional teachers are having experience of 5 to 10 years. in figure 8 it has been shown that 83.3% of vocational teachers are involved with the 11th class training 75% of the ninth class students are getting vocational guidance. The the main reason of the less percentage of the students involved in vocational guidance can be board classes. The next figure which is nine it's showing that maximum schools are having three sections of vocational guidance training which is 41.7%.

Figure 5: Business /Trade of vocational teachers presently working

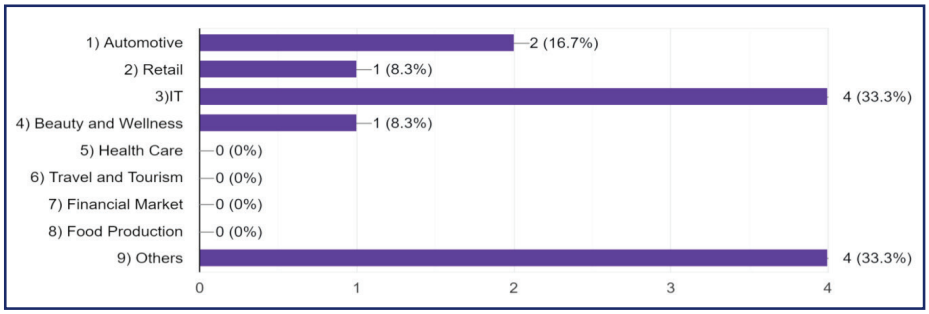


Figure 6: Total periods teach by the vocational teacher in a week

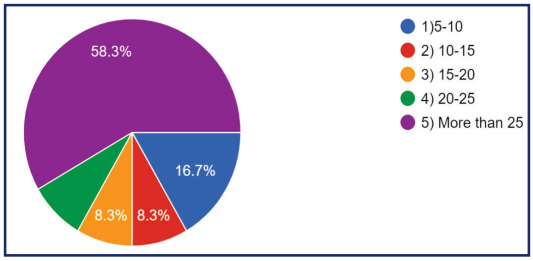


Figure 7: Total experience of the vocational teacher

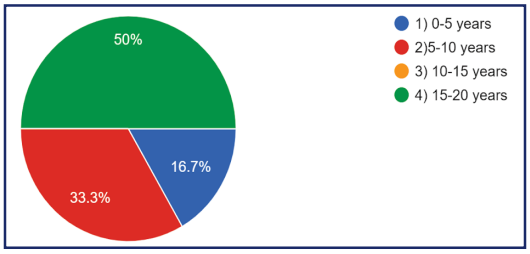


Figure 8: Classes taught by the vocational teachers.

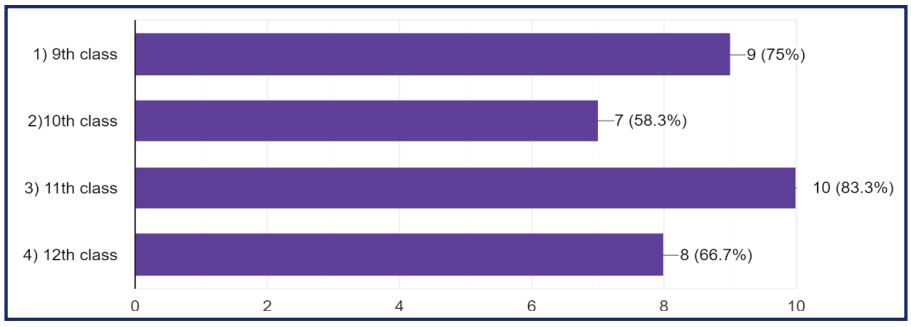
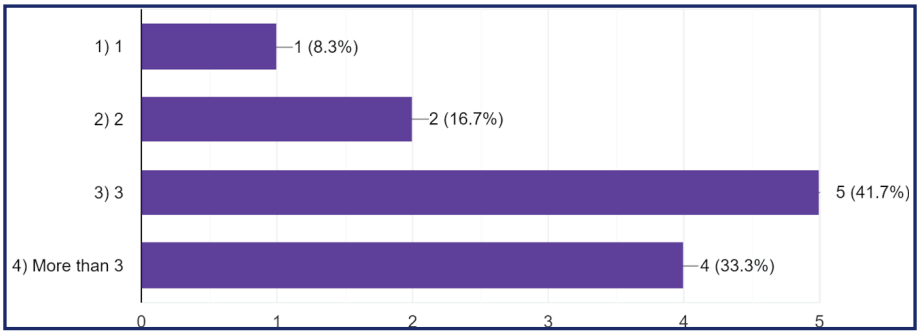


Figure 9: Number of sections for vocational class



Conclusion:

1. The survey has shown that all the vocational teachers used formative and qualitative assessment methods for evaluation of the students.
2. Out of 12 schools, 10 had vocational laboratories in the school.
3. Field visits conducted by the schools in following fields:

   1) Automotive, 2)Retail,3) IT, 4) Beauty and Wellness, 5) Health Care,
   6) Travel and Tourism, 7) Financial Market, 8) Food Production

   (Note:SKV Ranjit nagar conducted maximum field visits in different sectors)

   SKV,Moti Nagar,SBV,Moti Nagar haven't started field visit till date.)

4. Field visit to IT sector is conducted by 4 schools that are GBSSS Rajouri Garden, SKV Ramesh Nagar , GGSSS, Subhash Nagar and SBV No.1, Tilak Nagar.
5. Students' Feedback for the vocational programs:

   a. Interesting subject and they enjoy learning about cars ,road safety and Automobiles (2 Students)

   b. They are happy for practical visits and internships (4 Students)

   c. Students are satisfied by choosing vocational education as they get to know about on job training during their studies and company exposure with is very fruitful for the students. (2Students)

   d. To provide students with competencies needed to obtain job. (2 Students)

   e. The subject is interesting. (3 Students)

2(D) The following laboratory equipments are available in the vocational laboratory :

Vocational Laboratory	Equipments available
Computer-Lab	Server, Printer, PC's, Type writer,

Automotive	Engine chassis with steering wheel, brake, cooling system, hydraulic jack etc.
Retail Lab	Trade info., posters, banners. Mannequins etc.
Beauty and wellness	Dressing mirror and chair
Other	Blocks, colour, brushes etc.

Table: 1. Showing available equipments in vocational laboratory

Trade with Equipment	School Name
Automotive	GBSSS Rajouri Garden , GBSSS Basai Darpur
Computer Lab	GGSSS, Subhash Nagar, SKV, Ramesh Nagar,SBV Tilak Nagar, SKV,SKV,Ranjit Singh, Moti Nagar
Beauty and Wellness	S.Co-ed.Vidhayala L Block Hari Nagar
Not Available any Equipment	SBV , Moti Nagar

Table:2. Showing trade with equipments available in the schools.

2(E) The purpose of vocational guidance program as per ranking provide us the mojor goals:

1. To develop strong work ethic in students (eg. Sense of industriousness and responsibility).
2. To place students in jobs related to training as they leave school.
3. To provide opportunity for students to explore various occupational areas.
4. To place students in jobs related to training as they leave school.
5. To create an awareness of the various jobs for which student might prepare.
6. To provide students with competencies needed to obtain job.
7. To enhance basic life skills (eg.math, reading).

1(F) Vocational teacher's efforts to increase the interest in the vocational programs.

Measures to increase interest	Frequency
Practicals and Industrial visit (Exposure)	4
Providing internship, visits, field work create Interest in students	5
By showing videos ,pictures and guest lecturers	2
Regular teaching learning in welfare of students	1
Motivation video example of real model	1

Table:3. Vocational teachers efforts/ measure to increase interest of the students.

4.3 Students' Perception for Vocational Program Survey Report

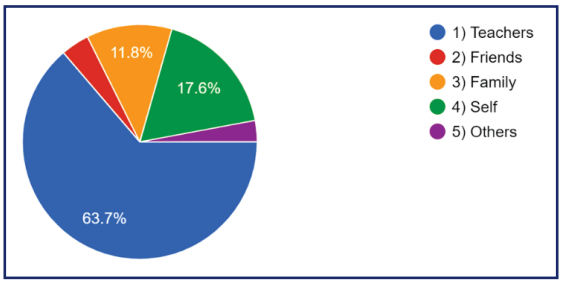
4.3.1 Profile of the Students

The survey was conducted on 102 students of vocational subjects in Delhi. Where 55 students were male and female students were 47. The age of students' ranges from 13 years to 19 years. 25 students reported that children with special need can't do vocational course. On the other hand majority of students 77 were in the favour of vocational courses can be done by CWSN

Age wise Students	No. of students
12-14	30
15-17	64
18-20	8
Total	**102**

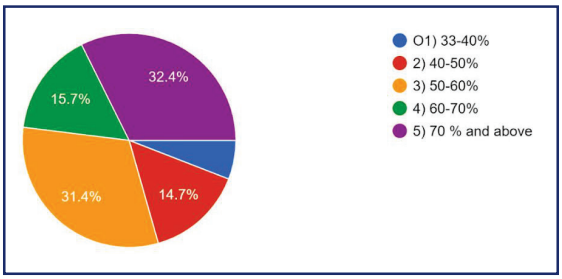
3(A) Figure 1 is showing that people who guide the students choosing the vocational education as subject.63.7% said teachers motivates them to choose the vocational subject.17.6% were self motivated.

Figure 1: Showing the motivators for the vocational course



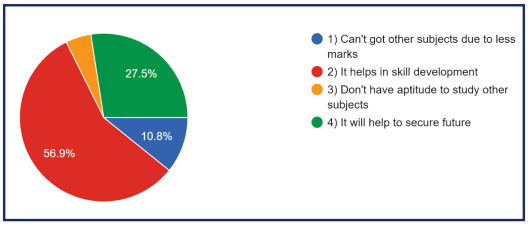
3(B) Figure 2 is showing that vocational subject create interest in all type of academic performer from bright students to average and below average. All have shown interest in vocational subject.

Figure 2: Showing the last year percentage of the students in school subjects



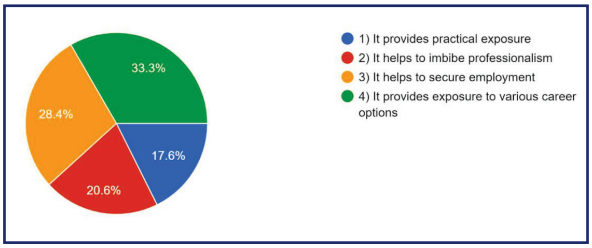
3(C) Figure 3 is showing that the reasons for choosing the vocational education as subject. And the survey shows that the main reason is that it helps in skill development (reported by 57% students) and also helps to secure future (reported by 27 % students).

Figure 3: Showing the reasons for choosing the vocational education



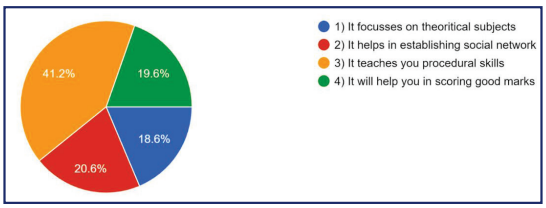
3(D) Maximum students (33.3%) reported that they like the subject because it provide exposure to various career options and 28% reported that it helps to secure employment. 21% students think it imbibe professionalism. As shown in the pie chart Figure 4 given below.

Figure 4: Why do the students like the subject?



3(E) The survey has shown that 41% students considered vocational education as teaching students procedural skills. Around 20% thinks that it helps in scoring good marks and good social network. (See figure 5)

Figure 5: Showing the perception of students towards vocational education



3(F) There is one more conclusion of the survey research on students who had attended i.e. maximum(85.3%) students have attended 5-10 classes per week and 76% students spent 5-10 hours per week in vocaional laboratory. (See figure 6 and 7)

Figure 6. Classes attended in a week laboratory

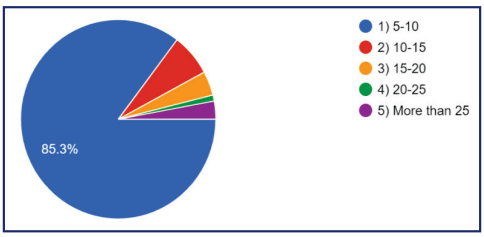
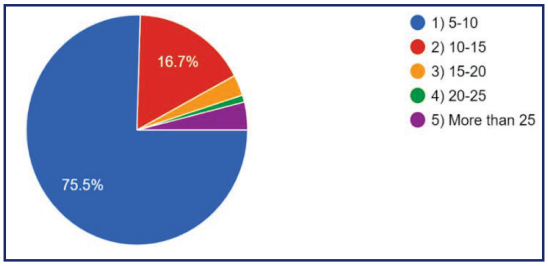
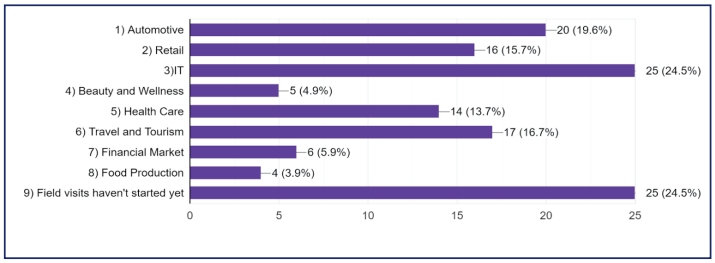


Figure7. Hours spent in vocational laboratories



3(G) The survey has shown that the following field visits has been organized by the vocational teachers, IT sector 25%, automotive 20%, retail 16% etc. (See figure 8)

Figure: 8. Industries field visit during vocational program



3(H) The survey has showed that 34% students perceive vocational education help in preparing for a particular trade. 25 percent think that vocational program focus more on practical work (see Figure 9).The figure no. 10 showing 57 percent students would like to take admission in college and 28 percent in ITI for vocational courses. Maximum students want to recommend the vocational course for siblings and friends (see figure 11).

Figure: 9.Showing the benefits of vocational education

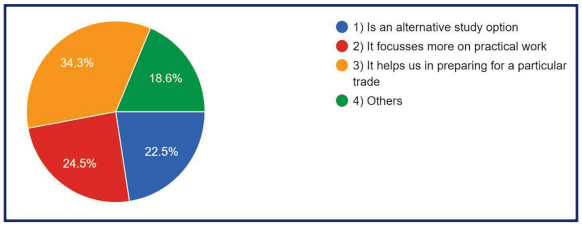


Figure: 10. Showing institution preference in future for vocational courses.

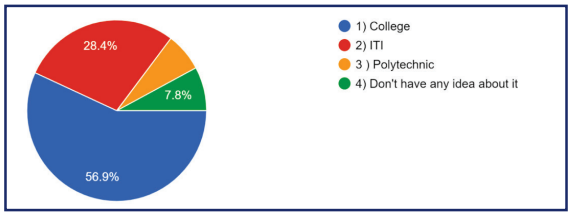


Figure 11.:Showing recommend the vocational course for others.

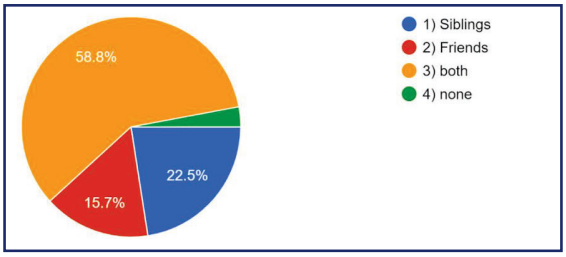
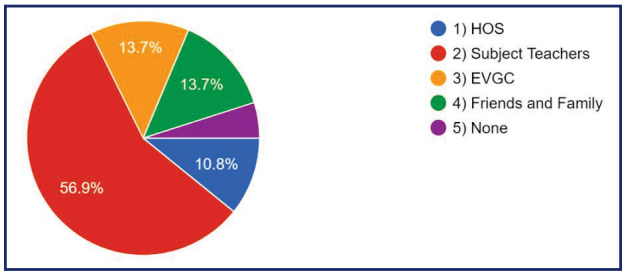
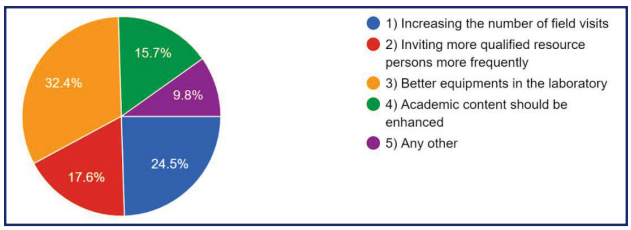


Figure 12. Showing that career guidance given by .



The following pie chart in figure no. 12 has shown that their subject teachers(56.9%), EVGC(13.7%), family and friends(13.7%) help them for career .

Figure 13.How to improve vocational programs.



The present survey has shown (See figure 13) that vocational program can be improved with the help of enriching the laboratory(32.4%), field visit (24.5%) and inviting more qualified resource persons (17.6%) for guidance.

The following career options were choosen by the students for future. The content analysis was done on the basis of the frequency of the responses.

The following career options were written by the students for future. The content analysis was done on the basis of the frequency of the responses.

S. No	Career Option	f
1.	Software Engineer	8
2.	Travelling Guide	6
3.	Doctor/nursing	6
4.	Business	5

5.	IT Teacher	4
6.	Subject Improve/Writer	4
7.	Hand Embroidery	3
8.	Music	3
9.	CA	3
10.	Engineer	3
11.	Beauty & Makeup	3
12.	Data Handling/Data Collection	3
13.	Police	3
14.	Camera/ video Editing	3
15.	Athlete & Coach	3
16.	Scientist	2
17.	Trader	2
18.	Hardware Engineer	2
19.	Sales Person in Automotive	2
20.	Others(Unique Response) a Digital Marketing b Politician c Army d UPSC e Stenographer f Air Hostess g Cyber Café h AC Mechanic i Fashion Designer j Gamer k Communication	1

Chapter 5

SUGGESTIONS AND IMPLICATIONS

The researcher has made following the suggestions and implications on the basis result of the present study :

- Fields visits and internship opportunities should be increased for students to make learning joyful experience for them.
- Adequate enlightenment campaigns should be carried out in order to educate the society about the importance of technical and vocational education.
- Students should be encouraged to participate in the competitions related to their area of vocational study.
- Vocational courses can also be implemented according to the needs and interest of the students.
- Those students who have interest in automotives so also me made aware about traffic rules and road safety. They can also visit helmet manufacturing units for their initial exposure.
- The vocational laboratories must be upgraded with basic knowledge and more qualified resource persons should be timely and frequently be invited for guiding students.
- There would be less dropout rate from the schools due to vocational programs, as more than 120 students have been enrolled in vocational courses so many schools.
- We also suggest to inculcate the value of entrepreneurship among students.
- Awareness should be created at a large level regarding the vocational programs for empowerment of the CWSN students.
- Regular training programs in the form of seminars, conferences, in service training programs, short courses and workshops should be organized at regular intervals to simulate teachers' interest in vocational and technical subjects
- Lifelong learning through an improved skill recognition system; recognition of prior learning whether in formal, non-formal or informal arrangements should be promoted.
- Formal guidance should be given to students in their choice of training and career planning.

BIBILOGRAPHY

Agrawal, T.& Agrawal, A. (2017) Vocational education and training in India: a labour market perspective. J Vocational Educ Train 69(2):246–265

Agrawal, T. (2012) Vocational education and training in India: challenges, status and labour market outcomes. J Vocational Educ Train 64(4):453–474

Aithal ,S. &Aithal P.S. (2020) Analysis of the Indian National Education policy 2020 towards achieving its objectives. International journal of management, technology, and social sciences (IJMTS) ISSN: 2581-6012, Vol. 5, No 2.

Andreev,I. (2023) Lifelong Learning, Demand Generation & Capture Strategist (https://www.valamis.com/hub/lifelong-learning)

Arriagada, A.M. & Ziderman, A. (1992) Vocational secondary schooling, occupational choice and earnings in Brazil. Working Paper Policy Research Paper No. 1037. Population and Human Resources Department, World Bank, Washington, DC

Arum, R. & Shavit, Y. (1995) Secondary vocational education and the transition from school to work. Sociol Educ 68:187–204

Banerjee, T. (2016) Impacts of vocational education and training on employment and wages in Indian manufacturing industries: variation across social groups—empirical evidences from the 68th round NSSO data. Indian J Labour Econ 59(4):489–509

Baqadir, A., Patrick, F. & Burns, G. (2011). Addressing the skills gap in Saudi Arabia: does vocational education address the needs of private sector employers? Journal of Vocational Education & Training, 63:4, 551-561

Campbell, P.B., Elliot J., Laughlin S., & Seusy E .(1987) The dynamics of vocational education effects on labor market outcomes. The National Center for Research in Vocational Education, Ohio State University, Columbus

Cattaneo, M. Alejandra. 2011. New estimation of private returns to higher professional education and training. Empirical Research in Vocational Education and Training, 3:2, 71-84

Dietzen, A. & Wünsche, T. (2011). Companies strategies for competence development and personnel recruitment within employment increasing fields.

Directorate of Vocational Education (2012) Government of Maharashtra State Board of Vocational Education Maharashtra State Board of Technical Education http://www.nsdcindia.org/pdf/education-skill-development.pdf, Feb 21,2012; 7:00pm.

Eichhorst, W., Rodríguez-Planas, N., Schmidl R & Zimmermann, K.F. (2015) A road map to vocational education and training in industrialized countries. ILR Rev 68(2):314–337

El-Hamidi, F. (2006) General or vocational schooling? Evidence on school choice, returns and 'Sheepskin' effects from Egypt 1998. J Policy Reform 9(2):157–176

F.I.C.C.I. (2011) FICCI Survey on labour/skill shortage for industry. http://ficci.in/Sedocument/20165/FICCI_Labour_Survey.pdf. Accessed 07 Nov 2017

Fieger, P. (2015) Determinants of course completions in vocational education and training: evidence from Australia. Empirical Res Vocational Educ Train 7:14

Geiben, M. & Grollmann, P. (2011). Employers' recruitment and induction practices in selected European countries: An indirect measure of quality of the VET system.

Kaushik K. (2014) Vocational Education in India. International Journal of Education and Information Studies. 2014; 4(1):5-58

Kahyarara, G. & Teal, F. (2008) The returns to vocational training and academic education: evidence from Tanzania. World Dev 36(11):2223–2242

Kumar, R., Mandava, S. & Gopanapalli, V.S. (2019) Vocational training in India: determinants of participation and effect on wages. Empirical Res Voc Ed Train 11, 3

Lee, W.S. & Coelli, M.B. (2010) The labour market effects of vocational education and training in Australia. Aust Econ Rev 43(4):389–40

McKinsey and CII. (2004). Made in India: the next big manufacturing export story

M.H.R.D. (2009) Report of The Committee to Advise on Renovation and Rejuvenation of Higher Education.

Ministry of Education, Government of India (1948) Report of the University Education Commission

Ministry of Education, Government of India (1953) Report of Secondary Education Commission

Ministry of Education, Government of India (1977) Report of Review Committee on The Curriculum for The Ten Year Old

Ministry of Education, Government of India (1986) National Policy for Education

Ministry of Education, Government of India (1990) Review of National Policy for Education

Ministry of Education, Government of India (2020) National Policy for Education

Moenjak, T. & Worswick, C. (2003) Vocational education in Thailand: a study of choice and returns. Econ Educ Rev 22:99–107

National Sample Survey Organisation (NSSO) (2006) Status of Education and Vocational Training in India 2004–2005 NSS 61st Round (July 2004–June 2005)

National Sample Survey Organisation NSSO (2015) NSS Report No. 566: Status of Education and Vocational Training in India

APPENDIX
HOS QUESTIONNAIRE

Name of the HOS:..... Name of the School:.....

School Id: ..... Gender:..... Age: .....

Q1. Subjects of vocational education are being taught in your school?

(i) Automotive
(ii) Retail
(iii) IT
(iv) Beauty and Wellness
(v) Health Care
(vi) Travel and Tourism
(vii) Financial Market
(viii) Food Production
(ix) Others

Q2 Vocational education started in your school-

(i) In 2023
(ii) In 2022
(iii) In 2021
(iv) Before 2020

Q3 In your opinion, what is the importance of vocational education?

(i) Development of skills
(ii) Career progression
(iii) Ease of finding a job
(iv) Job providers will easily find workers

Q4. What kind of problems were faced in implementing the curriculum of vocational education?

(i) Limited availability of vocational teachers.
(ii) Dropout rate of students from secondary level
(iii) Medium of teaching
(iv) Any other

Q5 Is your school getting any kind of financial and infrastructural assistance for vocational education?

(i) Yes
(ii) No

Q6 From where is your school getting any kind of financial and infrastructural assistance for vocational education?

(i) SSA
(ii) DOE

Q7 How many students are enrolled in vocational education in your school?

(i) 0-30
(ii) 30-60
(iii) 60-90
(iv) 90-120
(v) More than 120

Q8 Number of vocational teachers working in your school?

(i) 1
(ii) 2
(iii) 3
(iv) 4
(v) More than 4

Q9 Are employment opportunities displayed in the Vocational Laboratory?

(i) Yes
(ii) No

Q10 How many times has in-service training been provided to vocational teachers in last 5 years?

(i) 0
(ii) 1
(iii) 2
(iv) 3
(v) More than 3

Q11 Who oriented the students towards vocational education?

(i) HOS
(ii) Vocational teachers
(iii) EVGC
(iv) All of above
(v) Others

Q12 To promote vocational education, any expert (resource person) is invited to the school?

(i) Yes
(ii) No

Q13 Does vocational education help in reducing the school dropout rate of students?

(i) Yes
(ii) No

Q15 Are CWSN students getting any benefit from vocational education?

(i) Yes
(ii) No

Q15 Express your views about vocational education?

Q16 Tell us about the infrastructure for vocational education in your school?

Q17 Tell us about the employment opportunities for students after vocational education?

TEACHER'S QUESTIONNAIRE

Name of of Vocational Education Teacher:..... School Id: .....

Name of the School:..... Gender:.....

Age: .....

Q1. Nature of your employment-

(i) Guest
(ii) Regular
(iii) Contract

Q2 Your qualifications-

(i) Graduate
(ii) Postgraduate
(iii) Diploma
(iv) Others

Q3 Tell us about your teaching experience?

(i) 0-5 years
(ii) 5-10 years
(iii) 10-15 years
(iv) 15-20 years

Q4. Tell us about the business or trade you teach?

(i) Automotive
(ii) Retail
(iii) IT
(iv) Beauty and Wellness
(v) Health Care
(vi) Travel and Tourism
(vii) Financial Market
(viii) Food Production
(ix) Others

Q5 Classes you are teaching?

(i) 9th class
(ii) 10th class
(iii) 11th class
(iv) 12th class

Q6 Number of sections in your school for vocational education -

(i) 1
(ii) 2
(iii) 3
(iv) More than 3

Q7 How many sections do you teach?

(i) 1
(ii) 2
(iii) 3
(iv) More than 3

Q8 For how many periods do you teach in a week?

(i) 5-10
(ii) 10-15
(iii) 15-20
(iv) 20-25
(v) More than 25

Q9 Measures used to assess performance of students-

(i) Formative assessment
(ii) Qualitative assessment
(iii) Both
(iv) None of the above

Q10 Is there a vocational laboratory in your school?

(i) Yes
(ii) No

Q11 Name the equipment available in vocational laboratory?

Q12 Tell us about the seating capacity of the students in the Vocational Laboratory?

(i) 0-15
(ii) 15-30
(iii) 30-45
(iv) 45- 60

Q13 Have you attended any annual in-service training?

(i) Yes
(ii) No

Q14 In-service training have you attended in last 5 years?

(i) 0
(ii) 1
(iii) 2
(iv) More than 3

Q15 What are the reasons for the slow growth of vocational education?

(i) Lack of adequate infrastructure for vocational education
(ii) There is non-availability of a large number of vocational courses
(iii) Misconceptions about vocational education among students and parents
(iv) All of the above

Q16 Importance of vocational education in today's life?

(i) Vocational education ensures that students are ready for work
(ii) It helps to secure future of students
(iii) Both 1 and 2
(iv) Neither of them

Q17 What effect does vocational education have on economic development?

(i) Better participation
(ii) Availability of skilled workers
(iii) Better means of livelihood
(iv) All of the above

Q18 Do students get any assistance for placement?

(i) Yes (ii) No

Q19 Explain the teaching learning strategies used in the classroom?

(i) Lecture method (ii) Display method

(iii) Question and Answer Method (iv) All of the above

Q20) Is there any field exposure for students?

(i) Yes (ii) No

Q21 Field visits conducted in which sectors?

(i) Automotive (ii) Retail

(iii) IT (iv) Beauty and Wellness

(v) Health Care (vi) Travel and Tourism

(vii) Financial Market (viii) Food Production

(ix) Field visits haven't started yet

Q12 Tell us about the seating capacity of the students in the Vocational Laboratory?

Q22 Please rank the following goals according to overall emphasis given to them in vocational education curriculum available for students.

To place students in jobs related to training as they leave school

To provide students with competencies needed to obtain job

To place students in jobs

To create an awareness of the various jobs for which student might prepare

To provide opportunity for students to explore various occupational areas

To develop strong work ethic in students(eg. Sense of industriousness and responsibility)

To enhance basic life skills (eg. math, reading)

Q23 What measures have you taken to increase the interest of the students?

Q24 Suggest business or trade career paths for students?

Q25 What is the feedback of the students regarding vocational education?

STUDENT'S QUESTIONNAIRE

Name of Student:..... School Id: ..... Student Id:.....

Name of the School:..... Gender:.....

Age: ..... Class .....

Q1. Person guided you in choosing vocational education as a subject?

(i) Teachers
(ii) Friends
(iii) Family
(iii) Self
(iv) Others

Q2 In previous class, your percentage was-

(i) 33-40%
(ii) 40-50%
(iii) 50-60%
(iv) 60-70%
(iv) 70 % and above

Q3 Tell us the reason for choosing vocational education as a subject-

(i) Can't got other subjects due to less marks
(ii) It helps in skill development
(iii) Don't have aptitude to study other subjects
(iv) It will help to secure futur

Q4. What do you like in vocational education?

(i) It provides practical exposure
(ii) It helps to imbibe professionalism
(iii) It helps to secure employment
(iv) It provides exposure to various career options

Q5 Please choose following options that best suited vocational education according to you-

(i) It focusses on theoritical subjects
(ii) It helps in establishing social network
(iii) It teaches you procedural skills
(iv) It will help you in scoring good marks

Q6 In a week, vocational education classes you attended-

(i) 5-10
(ii) 10-15
(iii) 15-20
(iv) 20-25
(v) More than 25

Q7. In a week, hours spent in vocational education laboratory?

(i) 5-10
(ii) 10-15
(iii) 15-20
(iv) 20-25
(v) More than 25

Q8 Industries have you visited during your field visits

(i) Automotive
(ii) Retail
(iii) IT
(iv) Beauty and Wellness
(v) Health Care
(vi) Travel and Tourism
(vii) Financial Market
(viii) Food Production
(ix) Field visits haven't started yet

Q9 Benefits of vocational education for you?

(i) Is an alternative study option
(ii) It focusses more on practical work
(iii) It helps us in preparing for a particular trade
(iv) Others

Q10. From where you can pursue vocational courses after completion of school ?

(i) College
(ii) ITI
(iii) Polytechnic
(iv) Don't have any idea about it

Q11 Can CWSN pursue these courses?

(i) Yes
(ii) No

Q12 To whom will you suggest vocational education courses?

(i) Siblings
(ii) Friends
(iii) Both
(iv) None

Q13. Career Guidance is provided by-

(i) HOS
(ii) Subject Teachers
(iii) EVGC
(iv) Friends and Family
(v) None

Q14 What else can the school/teacher do to improve the teaching of vocational education subjects?

(i) Increasing the number of field visits
(ii) Inviting more qualified resource persons more frequently
(iii) Better equipments in the laboratory
(iv) Academic content should be enhanced
(v) Any other

Q15 Mention career options for yourself?