CHAPTER - I

INTRODUCTION
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1.1 Background of the Study

Every country develops its system of education to express and promote its unique socio-cultural identity as well as to meet the challenges of the times. There are moments in history when a new direction has to be given to age-old processes. The system of education in India has undergone changes from time to time. But it has not been adequately realistic and related to life, needs and aspirations of the people. Sporadic changes brought about in the same have not been well planned and properly implemented in the past. India has now faced challenges from the continuing revolution in the world of technology and from so many problems relating to the quality and security of life. The country has thus faced the challenges internal as well as external and education is the most effective instrument to meet these challenges. Education can enable people to acquire knowledge, skills, values that are essential for building a dynamic, vibrant and cohesive nation capable of providing its people with better, fuller and more purposeful life.

The country has now entered the twenty first century impregnated with many issues of unprecedented nature and characteristics. With a view to equipping children of today who will be the citizens of tomorrow, education has to be reoriented and revamped. Education in India stands at crossroads today. Neither normal linear expression nor the existing pace and nature of improvement can meet the needs of the situation.
Every human being is a positive asset and a precious national resource which needs to be cherished, nurtured and developed with tenderness and care, coupled with dynamism. Every individual has his own growth problems. The catalytic action of education in this complex and dynamic situation should be planned meticulously and executed with great sensitivity.

It is universally acknowledged that education is a necessary pre-requisite for human resource development leading to better mental health, physical health and nutrition, improved socio-economic opportunities and more congenial and beneficial natural environment for all. This has been envisaged in our National Policy of Education (1986) which has emphasized on universalisation of elementary education and eradication of adult illiteracy as a first step. With the growing number of educated unemployed in the country, a need was however, felt to establish meaningful linkages between the world of work and the world of education. Vocational education has thus been recognized as another priority area by our National Policy on Education.

Vocationalisation of Education is the most important element in the 10+2+3 pattern. The two years of Higher Secondary stage of education is important because it marks the terminal stage for formal schooling for half of those students who join it. It is also important because it provides the bridge between the general education of the secondary stage and higher education in colleges or other professional or technical institution.
1.1.1 Meaning of Vocationalisation of Education

Vocationalisation means learning of a skill or some related skills by studying technologies, applied sciences and other practical activities. It includes those practical subjects which help to equip students with knowledge, skills and disposition that will prepare them to become skilled workers. Thus, vocationalisation means training in a particular vocation at the school stage, Higher Secondary stage or degree level. The UNESCO (1974) defined vocational education as a “comprehensive term embracing those aspects of the educational process involving in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understandings and knowledge relating to occupations in various sectors of economic and social life. Such an education would be an integral part of general education and a means of preparing for an occupational field and an aspect of continuing education”.

Vocationalisation of education prepares ground for efficient workers for the fast developing country and also creates a sense of dignity of labour among the students. The main aim of vocationalisation of education is to provide that education and training to the students which allows them to contribute their best to the development of society around them and to employ the skills so developed to their own satisfaction as well as towards building up of the society in which they live.

Vocationalisation of education aims at increasing the employment potential of the people through education for selecting vocations or for self-employment in agriculture, industry and related occupations including art and craft, agro-
industries, mechanization etc. It helps individuals to be more productive through 
preparation for specific competencies in different vocations. It cannot however, be 
equated with mere technician training, it is essentially education in the broader 
sense of the term. It prepares the individual for understanding the social needs and 
conditions, and to realize his own potentiality so that both can be correlated for 
bringing about economic development of the country in particular and creating 
atmosphere of self-realization of individuals and prosperity of the nation in 
general.

In view of the rapid technological development, vocationalisation of 
education implies introduction of diversified technical and vocational education 
programmes, which need to be designed not as narrowly conceived vocational 
education, but as vocationally biased and vocationally based education of 
developing positive attitudes and interests in students for some definite vocational 
work during their post-school-stage. The Secondary Education Commission 
(1952-53) therefore states, “There should be much greater emphasis on crafts and 
productive work in all schools and in addition diversification of courses should be 
introduced at the secondary stages so that a large number of students may take up 
agricultural, technical, commercial or other practical courses, which will train their 
varied aptitudes and enable them either to take up vocational pursuits at the end of 
secondary course or to join technical institutions for further training”.

In vocationalisation of education, diversification is the key word, the aim 
being to channelize a considerable segment of student population into programmes 
of education in much wider fields in conformity with their interests aptitudes and
abilities. In the absence of such a diversification leading to a meaningful and productive terminality of formal schooling, the country may have no other choice than to go for the more expensive and often unproductive higher education on a much larger scale in order to cope up with the consequences of universalization of elementary education as the national goal. Vocationalisation of Higher Secondary education is also an important step for the effective correction in the supply system of manpower to keep pace with the planned developmental activities.

1.1.2 Need for Vocationalisation of Education

Education is going through a period of intensive change and reorientation. A multiplicity of national models, forms and structures have emerged in an effort to cope with the rapid technological advances and the changing needs of the labour market. Rapid strides in the sphere of technology and maintenance of a high pace of economic growth require a qualitative transformation in the work force towards a manpower equipped with a high degree of skills in widely diversified vocational fields. The educational scenario is undergoing rapid and profound changes. The factors behind these changes are varied. Some of the factors of significance in the present context are: (a) The economy becoming global and competitive; (b) The changing profile of the learner; (c) Technology becoming all persuasive; (d) Changing expectations of employers; (e) Expansion in the service sector; (f) Harnessing of renewable and non-conventional sources of energy. These change factors have far reaching educational implications while preparing the youth for tomorrow’s work force. Similar vibrations of different intensity are being felt all over the globe. American 2000: An Educational Strategy declares that education is the key to America’s international competitiveness. The British Government has
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also resolved that people of all ages must acquire the skills necessary to maintain Britain's position as a leading industrial and trading nation. Australia also acknowledges the need to build an enterprise culture in order to find a place in the extremely competitive world. China and Japan are trying to cope with the progress of society and changes in the times. Kairamo, K (1989) maintains that in Europe, particularly in Belgium, France, Italy, Netherlands and Sweden a trend towards vocationalisation of secondary education is pretty clear.

Vocationalisation of education makes it possible for an individual to get a job or be his own master by either starting a new productive activity or a service which may satisfy a felt need of the community. It widens the educational horizon of the individual and enables him to reach higher levels of achievement through self-learning. It makes education more relevant and meaningful to students and accelerates the pace of progress adequately. Mahatma Gandhi viewed education as a means of all round development of the personality and desired that craft or manual work should occupy a central position in the system of education. This was called as Basic Education.

In a developing country like India where industrial and agricultural production is gathering momentum, where science as well as technology has opened new vistas and where trade and commerce are expanding rapidly, vocationalisation of education has been felt extremely important. It is required for optimizing the utilization of manpower resources and improving potentiality of individuals for increasing production and improving services at various levels and quarters.
With a view to making students capable of sharing equitably the benefits of economic development, necessary endeavours should be made for developing various facilities and improving the equality of life throughout the country, particularly in the rural areas. It is necessary to develop the potential for rural agricultural resources from lower grassroot level to middle class vocations. The proper preparation for these vocations implies a good quality general education supported with considerable practical training. It needs mixed technologies of agriculture, industry, commerce and other disciplines. The general education at present does not enable youths to secure any worthwhile jobs. Even young people with brilliant university education are remaining unemployed or underemployed. Majority of them are getting themselves trained again for skilled jobs. This process is not only time consuming and expensive but also frustrating and wasteful. Hence, diversification of courses at the secondary stage with adequate facilities for vocationalisation would help solve this problem.

Vocationalisation of education starting from the secondary stage would facilitate the development of all round personality. By working with their hands, adolescents can learn dignity of labour and experience the joy of doing creative work. It would be educative as well as interesting to produce with efficiency and integrity the things of utility and beauty. It can train practical aptitudes, facilitates favourable attitudes and promote cooperative work towards better life and happier world.

In the present day context of rapid industrialization and economic development it is felt that the general education system is not adequate to meet the
growing demands of the diversifying economy. It is generally felt that the varied needs of the growing economy can be effectively met through diversified vocational courses at the Higher Secondary stage. The aim of vocational education at the post secondary stage is to provide diversification in educational opportunities to enable the students to select vocations according to their aptitude, interest and abilities thereby improving their competence for wage and self-employment. It is a strategy for giving full package of competencies for absorption into the work force.

1.1.3 Vocationalisation of Education: Past and Present

Education in our country was generally identified with liberal education and it can be traced back to the year 1854, when the wood’s despatch for the first time highlighted the need for introduction of occupational education for a sizeable segment of the student population. In other words, the history of vocationalisation of education in India dates back to the year 1854 when Wood’s Despatch highlighted the need for vocational education for a large segment of the student population. But the report of Woods Despatch eventually did not make any significant impact until the Indian Education Commission known as Hunter Commission (1882) was set up to examine the problems of education as a whole especially of technical and vocational education. It stated that the curriculum of the secondary education should be divided into two parts. One part of the curriculum to have subjects that are to be useful for higher studies and the other part of the curriculum to have vocational, occupational and practical subjects. However, recommendations of the Commission were not implemented.
Thirty years later the Calcutta University Commission known as the Sadler Commission (1917) recommended that “the intermediate colleges must be regarded as fulfilling a double purpose. In the first place, it must provide training so as to qualify its students for admission to the university, in different faculties or in other institutions of higher or technological training. In the second place, it must provide training suitable for students, who after completing the courses will proceed directly into various practical occupations. As the system develops we should expect to find an increasing number of students entering upon the intermediate courses solely with a view to preparing for various practical careers”.

The Hartog Committee of 1929 recommended that more boys should be diverted to industrial and commercial careers at the end of the middle stage as preparation to special instruction in technical and industrial schools.

The Sapru Committee (1934) emphasized the vital role of vocational education in the country’s economic development. The Sapru Committee recommended 11 years of school education, 5 years for primary, 3 years for lower secondary and 3 years for Higher Secondary with vocational studies commencing after 11 years of education. The main purpose of the Sapru Committee was to find ways and means of solving unemployment problem through diversified courses at the secondary stage.

The Wood-Abbot Commission (1936) examined certain problems of education, specifically the vocational problem, and as a result of this, a network of polytechnics were established in the country. The duration of polytechnic courses
was two or three years depending upon the courses offered in such institutions. These courses were offered in Engineering or Technical schools. The Abbot Wood Report had two parts, Technical and General. Abbot was the author of the report on Technical Education and Wood on General Education. The main recommendations of Abbots report are as follows:

1. The expansions of vocational education should not greatly outstrip the development of industry.

2. General and vocational education are not to be regarded as essentially different branches but the earlier and later phases of a continuous process. Each subject in the vocational school has its origin in the non-vocational school.

3. Vocational education must be based on an adequate general education. The entrance standard should not, as a rule be below that reached at the end of the middle school. Pupils from this stage can be admitted to junior vocational schools pupils who have successfully completed the Higher Secondary school course can be admitted to senior vocational schools.

4. The junior vocational school, receiving its pupils at the end of class VIII and providing a three-year course would be parallel to the Higher Secondary school. The senior vocational school, receiving its pupils at the end of Class XI and providing a two-year course would be parallel to the Higher Secondary school.

5. Part time schools should be provided for the further education of young men already in employment.

6. A limited number of Higher Secondary schools should have an agricultural bias.
7. The government should establish a vocational training college, working in close association with an ordinary training college.

During the period of Indian renaissance the existing education, administration and culture were examined and necessary reforms were brought about. Rabindranath Tagore deplored the ineffectiveness of the bookish education and laid stress on the role of manual work in education for harmonious development of personality. Mahatma Gandhi not only insisted that manual work should find a place in the school curriculum but also it should be productive as well as medium of education. That is why the following resolution was passed at the National Education Conference at Wardha in 1937.

"The conference endorses the proposal made by Mahatma Gandhi that the process of education throughout this period (seven years) should center around some form of manual and productive work, and that all the other abilities to be developed or training to be given should as far as possible be integrally related to the central handicraft chosen with due regard to the environment of the child. The resolution also added "The craft, if taught efficiently and thoroughly, should enable the school to pay towards the cost of its teaching staff". Thus craft or manual work was to be an integral part of Gandhian education and also a source of income for the school.

This idea of Gandhiji was translated into action by the Hussain Committee in the form of basic education which was adopted as the National Education of the Country in 1938. However, in course of its implementation several practical
difficulties were experienced and controversies arose. In spite of certain shortcomings, basic education was successfully organized by many Gandhian institutions and voluntary organizations.

This was followed by the Sargent Report of 1944 which restated more or less what Sapru Committee had recommended. It further recommended that the first year of the intermediate should be transferred to the high school and the second year to the university and also to introduce two streams – (a) Academic (b) Technical with the objective “to provide good all round education combined with some preparation in the later stages for careers which pupils will pursue on leaving the schools.”

In independent India, the Radhakrishnan Commission (1948) also known as University Education Commission recommended that in order to direct the students to vocations at the end of Class X a large number of intermediate colleges should be opened. “The aim of these colleges would be to meet a variety of needs of our young men and women by giving a vocational bias to their courses by retaining at the same time their value in a system of general education as preparation for university courses.” Here again the stress was on preparation for higher studies rather than making some of them terminal.

The secondary education commission also known as Mudaliar Commission (1952) reiterated that “the secondary education is a complete unit by itself and not merely a preparatory stage, that at the end of this period the student should be in a position, if he wishes to enter into responsibilities of life and take up some
vocations.” It also recommended diversification of the courses at the secondary stage. A chain of multipurpose schools were established in response to these recommendations throughout the country. In 1955, the All India Council of Technical Education was set up to advise the union government on all aspects of technical education at the diploma as well as degree levels. It was about the same time that a network of Industrial Training Institutes (ITI) to train the base level industrial workers was started. To bridge the gap between the ITI’s and Polytechnics, Junior or technical schools were started with a view to continuing education with technical training for certain types of operational jobs in industries.

Some basic academic considerations again compelled the government to appoint the Education Commission of 1964 under the Chairmanship of Dr. D. S. Kothari to reexamine the entire educational system of the country keeping in view the National goals, improvement of quality, and standard of education. The Kothari Commission considered the undesirable effect of uncontrolled admission to the universities on one hand and the resulting unemployment problem of the graduates on the other. It came to the firm conclusion that for majority of the occupations, which the university graduates seek, the university degrees are not necessary and these jobs can be competently performed by well trained Higher Secondary students. Therefore, the commission suggested that at the Higher Secondary stage there need be two distinctive streams. One preparing students for advanced education in the universities and the professional colleges and the other preparing for a variety of occupations immediately after completion of vocational studies which fit them into these vocations.
The commission was of the view that secondary education is called a link in between university and elementary education. It serves two main purposes: i) It prepares a student for the university and ii) it enables him to adopt different walks of life. But the prevailing system of secondary education is almost exclusively a preparation for the university and it is necessary to diversify and vocationalise it so that it also becomes terminal for a majority of students. The Education Commission observed, “We visualize the future trend of school education to be towards a fruitful mingling of general and vocational education – general education containing some elements of prevocational and technical education and vocational education in turn, having an element of general education. In the kind of society, in which we will be living increasingly in the coming years, a complete separation between the two will not only be undesirable but impossible.”

The commission suggested restructuring of education (10+2+3) and recommended distinct streams of general and vocational education at Higher Secondary stage to intercept the goal-less climb-up of the youth on the educational ladder and divert them to productive path. The commission felt that it should be possible to divert 50 percent of students to the vocational stream. The Commission further states, “Another programme which can bring education into closer relationship with productivity is to give a strong vocational bias to secondary education and to increase the emphasis on agricultural and technological education at the university stage. This is of special significance in the Indian situation where, as we have pointed out, the educational system, has been training young persons so far mostly for government service and the so called professions.”
The Parliamentary Resolution on National Policy of Education (NPE 1968) accepted the recommendations of the Education Commission (1964-66) and emphasized the effectively terminal nature of the vocational stream of studies. The National Policy on Education emphasized the need to increase facilities for technical and vocational education and that these facilities should conform to the requirements of developing economy and real development opportunities. It was after national policy of Education was introduced in the country that a separate Higher Secondary (+2) stage was created.

In 1975, the Central Advisory Board of Education (CABE) in its meeting endorsed the Policy Resolution and resolved to adopt 10+2+3 pattern of education and reiterated that the +2 stage of education should be regarded not merely as a college preparatory, but a period for preparing an increasingly large number of school leavers for different vocations in life. The CABE entrusted NCERT to prepare curricula and help the state Governments in implementing vocational education.

Considering the recommendation of the Iswarbhai Patel Committee (1976), the National Council of Educational Research and Training (NCERT) in 1976 prepared a document, “Higher Secondary Education and its Vocationalization” and was presented to the country setting out a model conceptual framework for implementation. The document asserts that “Vocationalisation is a major transformation in education and cannot be achieved without important structural and functional changes in the whole set up”. Accordingly, vocational education programme at Higher Secondary stage was initiated in 1976. Thus after 1976
many states started vocational stream in Higher Secondary Schools. However, the progress made in this direction was far from satisfactory. In 1977, the working Group on vocationalisation of education constituted by the Ministry of Education, Government of India, presented the scheme of implementation and its financial implications. In the year 1978 the National Review Committee reviewed the NCERT document, studied the syllabi and courses of the CBSE and a few state Boards and in its report entitled, “Learning to do” gave detailed concrete recommendations for introduction of vocational courses at the Higher Secondary stage. The joint session of the Chairman/Secretary of Boards and Directors of Education of the states/UTs recommended that state boards should review their courses in the light of the course patterns and other suggestions made by the working group and the national review committee to suit the needs of the community.

The document ‘Challenge of Education – a Policy Perspective’ published (1984) by the Ministry of Education, Government of India, initiated a nationwide debate on all major issues in the domain of education. In 1985 the National working group on Vocationalisation of Education, led by Dr. V.C. Kulandaiswamy, undertook extensive review of vocational education in the country and provided guidelines for the development of the programme. It formulated the concept of vocationalisation at different levels and recommended the linkages required among different agencies running vocational programmes, setting up of a well knit management system, an action plan for promotion of vocationalisation in the country and liberal central financial assistance for achievement of the target fixed. Once again realizing the need for
vocationalisation of education in the country the national policy of Education (NPE) 1986 states, "The introduction of systematic, well planned and vigorously implementation programmes of vocational education is crucial in the proposed education reorganization. Vocational education will be a distinct stream intended to prepare students for identified vocations spanning several areas of activities". Thus after the National policy of Education 1986 and its Programme of Action (POA) a centrally sponsored scheme of vocationalisation of education at the +2 stage was implemented throughout the country with effect from 1988.

The programme of Action document for implementing the National Policy on Education has reviewed the present status and streamlined the programmes of vocational education design to be suitable for various stages of education.

1. Primary Stage: At the primary stage of education from classes I to V socially useful productive work (SUPW) or work Experience (WE) forms an integral part of the curriculum in many states. In spite of its importance for developing favourable attitudes the actual realization of the objective both in coverage and quality is far from satisfactory. At the higher primary or middle school stage SUPW or WE programmes aim at developing desirable attitude, confidence and adequate psychomotor skills to students who are to enter the world of work directly or through certain occupational training courses.

2. Secondary Stage: At the secondary stage covering classes IX to X, the SUPW/WE programmes are viewed as a linear extension of that for the middle stage. The activities at the secondary stage are expected to enable students to opt for vocational programmes at the +2 level with better appreciation and
understanding since a significant number of students drop out after this stage, these programmes would, by the modest preparation of students before they leave the school, enable them to choose suitable occupation. Such prevocational courses are to be handled by teachers with specific skills and competencies.

3. Higher Secondary Stage: The vocational courses at the Higher Secondary stage should be regarded not as a preparation for the college but as a period for preparing for different vocations of life. The need for vocationalisation 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 students population has been covered by vocationalisation (1976-85).

4. Tertiary Stage: It is felt that one of the factors responsible for the slow progress of vocationalisation of secondary education is lack of opportunities for the vocational passouts for their professional growth and career advancement. The current bias against vocational education will not disappear unless a reasonable chance of a worthwhile employment or an advantage in moving upwards into a professional or general programme of education is provided to the pupils of vocational courses at the secondary level. Such programmes could include diplomas and special degree courses, general degree courses and professional degree courses.

5. Other Formal Education Stage: The country has developed a network of vocational schools, vocational institutions and polytechnics over the years. Nearly 2% of the school going children enter such institutes like ITI's, junior technical schools. These institutions handle full time students who meet the need of organized sector. The Kothari Commission has visualized that at 8+
about 20% of the students will step off the general stream and enter schools of vocational education. Similarly, a large percentage of 10+ students need be diverted to such vocational institutions. Hence expansion of facilities are badly necessary for accommodating a large number of students in the vocational schools.

6. Apprenticeship Training: The production of the vocational stream at +2 level are quite distinct from those from ITI's and Polytechnics who have been covered under the craftsmen and technician apprenticeship training schemes. 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 apprenticeship scheme as an important catalyst for the promotion of vocational education. At present a few of the 120 vocational courses offered at the +2 level in the country are selected for the special vocationalised education training scheme launched by MHRD.

7. Other Vocational Courses: The vocational courses in Higher Secondary schools and vocational and technical training schools/institutes cater only to the needs of the organized sectors of economy. But it is the unorganized sectors which absorbs the bulk of work force. One sees the situation of mounting unemployment among the educated on one hand and shortage of plumbers, car mechanics, electricians, carpenters on the other. The dropouts from different classes of the school constitute a large pool of unskilled labour force who need opportunities for training in some skills or trades in order to enable them to take up some gainful employment.

8. Special Groups: The tribal and rural population do not have adequate access to school education, vocational courses in school or other vocational institutes.
There is also a need of special vocational courses for rural women whose earning could be augmented through vocational training. Handicapped and disabled persons have also no adequate avenues to acquire suitable productive skills for making their living meaningful and self-reliant.

9. Tertiary Level Programme: While analyzing the reasons of slow growth of vocationalisation of secondary education, there is lack of opportunities for the vocational graduates for their professional growth and career advancement and chances of worthwhile employment. In addition to these it states that opportunities for further education for students of vocational stream in the +2 are almost non-existent. Therefore, there is a need of appropriate tertiary level programmes for providing opportunities for the vocational graduates.

10. Generic Vocational Courses: The revised policy formulations provide for generic vocational courses (GVC) for the students of the academic stream. The GVC aims to develop those employment related skills which cut across various vocations and are needed by all members of the educated workers regardless of the persons occupations. The information technology, computer applications, word processing, interpersonal skills, problem solving, leadership are some of the skills which might form the curriculum of such a course. This is a step towards improving the quality of general education for the future technology oriented society.

1.1.4 Models of Vocational Education

Broadly speaking, there are three models of imparting vocational education or their variations. These are: (a) acquiring vocational skills through
apprenticeship where the father or an experienced teacher passes on occupational skills to the son or disciples. After the industrial revolution, this got structured in the form of on the job training; (b) vocational education in separate schools or technical institutions imparting vocational instruction mainly skills along with a little bit of theory. The schools that were opened based on this model were independent of and different from the secondary education system. (c) Vocational subjects are taught in secondary/high schools side by side with general education. The approach underlying this model stems from the philosophy that vocational education should concern itself with the broadest possible knowledge about occupations and not merely about training in specific and narrow skills associated with different occupations.

In India, the system of vocational education has been of the mixed type. Model (a) has been in operation through enactment of the Apprentices Act 1961. The second model is followed in the vocational and technical schools run by the Ministry of Labour and others whereas the vocational education at the +2 stage is largely based on the third model.

In the existing system of general education from classes I to X, vocational education does not find a place but SUPW/WE forms an integral component which aims to provide the students at all levels of school education “purposive” meaningful manual work resulting in goods or services which are useful to the community. This is often regarded as a chronological derivative of the work experience concept of the Kothari Commission than it is rooted initially in Mahatma Gandhi Basic Education. There are a variety of alternative avenues
available to students in the field of vocational-technical education. These include technician courses in polytechnics, craftsmen training programme in Industrial Training Institutes (ITI) paramedical courses in nursing, dental and pharmacy schools, other specific courses offered in forestry schools, veterinary and animal husbandry schools, commercial institutes, fishery schools fine arts etc.

1.1.5 The Centrally Sponsored Scheme (CSS) of Vocationalisation of Education at Higher Secondary Stage

As stated earlier, the CSS of Vocationalisation of Education at +2 stage was started in 1988 after implementation of the NPE-1986. The main objective of the CSS is to provide diversification of educational opportunities so as to enhance individual employability, reduce the mismatch between demand and supply of skilled manpower and provide an alternative for those pursuing higher education under this scheme. Vocational education is a distinct stream and the courses are provided in general educational institutions i.e. Higher Secondary Schools. Under this scheme assistance is given by the government of India to the state governments, union territory administrations and non-government organization for the purpose of running the vocational courses. The pattern of financial assistance for various items of expenditure under this scheme varies from 50 percent to 100 percent but for most of the items of expenditure 100 percent assistance is given by the Centre. The pattern of assistance for the various items of expenditure is given in Table 1.1.1.
Table 1.1.1
Sharing Pattern for Meeting Expenditure on Vocationalisation

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Item</th>
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<tbody>
<tr>
<td>1</td>
<td>Apprenticeship training</td>
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<tr>
<td>2</td>
<td>Evaluation &amp; Monitoring</td>
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<td>3</td>
<td>Distt Vocational Surveys</td>
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<td>Curriculum development workshop</td>
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<td>Resource persons-training courses</td>
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<tr>
<td>11</td>
<td>Workshop/Laboratory building</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>Vocational wing of Directorate of Education</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>13</td>
<td>District Vocational Wing</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>14</td>
<td>SCERT Vocational Wing</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>15</td>
<td>Vocational School Staff</td>
<td>75</td>
<td>25</td>
</tr>
<tr>
<td>16</td>
<td>Raw materials/contingency</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>17</td>
<td>Vocational guidance</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>18</td>
<td>Examination certification</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

Management of Vocational Education

Management is critical to the implementation of a complex programme of Vocationalisation of Education. The following management structure was envisaged under the CSS of vocationalisation.
### Management System and Vocational Education

<table>
<thead>
<tr>
<th>Function</th>
<th>Policy &amp; Coordination</th>
<th>Research Development &amp; Implementation</th>
<th>Administration/Supervision</th>
<th>Examination &amp; Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>Joint Council of Vocational Education (JCVE)</td>
<td>Central Institute of Vocational Education (PSSCIVE)</td>
<td>Bureau of Vocational Education (BVE), MHRD</td>
<td>All India Board of Vocational Education</td>
</tr>
<tr>
<td>Regional</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>State</td>
<td>State Council of Vocational Wing in SCERT/State Institute of Vocational Education (SCVE)</td>
<td>Vocational Wing in Directorate of Education</td>
<td>State Boards</td>
<td></td>
</tr>
<tr>
<td>Districts</td>
<td>District Vocational Education Committee (DVEC)</td>
<td>Vocational Wing in District Education Office/District Vocational Education Office (DVEO)</td>
<td>--</td>
<td>Principal/Vice Principal</td>
</tr>
<tr>
<td>School</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

**National Level**

i) A Joint Council of Vocational Education (JCVE) is set up under the chairmanship of Union Education Minister and incorporates representation from all existing vocational authorities/councils and some state governments.

The JCVE performs the following functions:

- Planning and co-ordination of vocational programmes conducted by different organization/ministries.

- Lays down guidelines for:
  - Assessment of manpower needs
  - Development of vocational programmes at all levels
  - Development of bridge/transfer courses
- Training of teachers and educational administrators
- Development of text books and instructional materials
- Accreditation and certification of vocational courses including those conducted by non-governmental organizations.

- develops schemes for creating vocational facilities at different levels.
- Evolves scheme for involvement of public/private sector industry in vocational education.
- Prepares schemes for undertaking programmes of vocational education for workers and imparting vocational education through non-formal programmes.
- Periodically review vocational programmes
- Identify and support non-government organization engaged in vocational training of special disadvantaged groups

A Bureau of Vocational Education is established by the Department of Education to:

- provide secretariat support to the JCVE particularly in regard to planning, programme development, laying down guidelines and coordination;
- implement and/or oversee the implementation of the programme of vocational education keeping in view the recommendations/decisions of the JCVE;
- co-ordinate manpower requirements at national level;
- work towards modification of employment/recruitment qualifications necessary for the furtherance of vocational education;
- maintain linkages with national, regional and state level agencies related to vocational education;
- provide financial support for vocational education programmes;
- take steps for involvement of non-governmental organizations;
- monitor the programme; and
- undertake all activities expected to be done by the Central Government in this regard.

ii) A constituent of NCERT, Pandit Sunderlal Sharma Central Institute of Vocational Education, functions as the apex level research and development institution. The specific functions are the following:
- To ensure comparability in quality and standards (including those of the teaching profession) in both formal and non-formal vocational education programme through the country.
- To undertake and provide guidelines in curriculum developments, training, research and monitoring and evaluation etc. to state government and other institutions.
- To conduct orientation programmes for various types of functionaries such as school principals, state officials, survey workers etc.
- To organise short term teachers training programmes.
- To offer in-service courses for SIVE/SCERT personnel.
- To evolve an information system for vocational education and to function as a clearing house of information for national as well as international courses.
- To develop multi-media packages of instructional materials.
- To develop, in co-operation with appropriate agencies of adult education and those set up by other ministries/departments, non-formal, flexible need-based vocational programmes for neo-literates youth, school drop-outs, persons engaged in work the unemployed and partially employed.

- To provide academic/technical support to the Joint Council of Vocational Education and Ministry of Human Resource Development.

**Regional Level**

i) Boards of Apprenticeship Training are augmented to cater to the training needs of vocational students after they complete the vocational courses at the +2 stage.

ii) The Regional Institute of Education (RIE) under NCERT function as regional Vocational Teacher Training institutions in addition to performing R & D functions.

**State Level**

i) The State Council of Vocational Education (SCVE) is a counter part of the JCVE and functions as the overall policy formulating and coordinating body for vocational education and training at the state level. The specific functions performed by the SCVE keeping in view the guidelines of the JCVE are as follows:

- To prepare norms for the selection of institutions and collaborating institutions and for appointment of full time and part time teachers.

- To develop norms for vocational courses in terms of equipment, raw materials and contingent expenditure.
- To advise the state government regarding the constitution of district vocational committees.
- To periodically review the programme.
- To take measures for establishing correlation between employment opportunities (self and wage) and vocational courses.
- To ensure timely appointment and placement of teachers.
- To organise vocational guidance programmes and coordinate the placement of students.
- To supervise the vocational education institutions.
- To monitor the implementation of the programme.
- To keep close liaison with the state and national level agencies.
- To perform functions expected to be performed by the state directorate.
- To work towards modification in the employment/recruitment qualifications necessary for the furtherance of vocational education.
- To coordinate with various departments of the state governments and their agencies for facilitating apprenticeship/practical training of vocational students.
- To facilitate financial assistance to those seeking self employment. The SCVE is a high level body and its membership includes representatives of concerned departments of the government, private sector organization/associations, other bodies, concerned with vocational education and training, employment and self-employment and influential persons who are effective in implementing the programme. The SCVE functions through standing/ad hoc committees constituted for specific purposes.
ii) The Directorate of Education in the states/UTs provides the administrative leadership to the vocational education programmes. To avoid duality of control at the school level, instead of creating an entirely new organization a separate vocational wing is set up within the Directorate of Education. The Vocational Education Wing of the Directorate of Education is manned by a mix of experts from various vocational areas and educational administrators appointed either on full-time basis or their services obtained on deputation from various departments/institutions. The size of this vocational wing of the Directorate depends on the students population being covered in the state and other local considerations. A suggested organizational pattern is indicated in Table 1.1.2, Table 1.1.3 and Table 1.1.4. The major functions of this wing of the Directorate are as follows:

- To provide secretariat support to the SCVE.
- To coordinate the state and district level committees.
- To select institutions for offering vocational courses
- To arrange for deputation of teachers of in-service training courses.
- To supervise the vocational education institutions.
- To monitor the implementation of the programmes.
- To ensure timely appointment and placement of teachers.
- To organize vocational guidance programmes and coordinate the placement of students.
- To keep close liaison with the state and National level agencies.
- To perform functions expected to be performed by the State Directorate.
Table 1.1.2: Staffing Pattern for the Vocational Education Wing of the Directorate of Education (Larger states)(Category A)

<table>
<thead>
<tr>
<th>Posts</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Director</td>
<td>1</td>
</tr>
<tr>
<td>Joint Directors</td>
<td>2</td>
</tr>
<tr>
<td>Dy. Director</td>
<td>1</td>
</tr>
<tr>
<td>Asst. Director</td>
<td>2</td>
</tr>
<tr>
<td>Research Assistant</td>
<td>1</td>
</tr>
<tr>
<td>Section Officer</td>
<td>1</td>
</tr>
<tr>
<td>Assistants</td>
<td>4</td>
</tr>
<tr>
<td>Accountant</td>
<td>1</td>
</tr>
<tr>
<td>Stenographers Gr. C</td>
<td>3</td>
</tr>
<tr>
<td>Stenographers Gr. D</td>
<td>3</td>
</tr>
<tr>
<td>LDC’s</td>
<td>3</td>
</tr>
<tr>
<td>Peons</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 1.1.3: Staffing Pattern for the Vocational Education Wing of the Directorate of Education Medium States (Category B)

<table>
<thead>
<tr>
<th>Posts</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint Director</td>
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</tr>
<tr>
<td>Dy. Director</td>
<td>2</td>
</tr>
<tr>
<td>Asst. Director</td>
<td>1</td>
</tr>
<tr>
<td>Research Assistant</td>
<td>2</td>
</tr>
<tr>
<td>Section Officer</td>
<td>1</td>
</tr>
<tr>
<td>Assistants</td>
<td>2</td>
</tr>
<tr>
<td>Accountant</td>
<td>1</td>
</tr>
<tr>
<td>Stenographer Gr. C</td>
<td>1</td>
</tr>
<tr>
<td>Stenographer Gr. D</td>
<td>3</td>
</tr>
<tr>
<td>LDC’s</td>
<td>2</td>
</tr>
<tr>
<td>Peons</td>
<td>5</td>
</tr>
</tbody>
</table>
Table 1.1.4 : Staffing Pattern for the Vocational Education Wing of the Directorate of Education Smaller States (Category C)

<table>
<thead>
<tr>
<th>Posts</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dy. Director</td>
<td>1</td>
</tr>
<tr>
<td>Asst. Director</td>
<td>3</td>
</tr>
<tr>
<td>Research Assistant</td>
<td>2</td>
</tr>
<tr>
<td>Superintendent</td>
<td>1</td>
</tr>
<tr>
<td>Assistants</td>
<td>2</td>
</tr>
<tr>
<td>Accountant</td>
<td>1</td>
</tr>
<tr>
<td>Stenographer Gr. C</td>
<td>2</td>
</tr>
<tr>
<td>UDC’s</td>
<td>3</td>
</tr>
<tr>
<td>Peons</td>
<td>2</td>
</tr>
</tbody>
</table>

iii) In the SCERT's/SIE's a separate wing is supposed to be established to provide R&D support to the programme at the state level. This vocational wing is expected to perform the following specific functions:

- To develop curricula and instructional materials in coordination with the Board of Secondary/Higher Secondary/Junior College Education.

- To conduct district vocational surveys.

- To develop awareness programmes for popularization of vocational courses.

- To organise in-service teacher-training programmes in collaboration with other expert institutions.

- To collaborate with RCEs, Agricultural universities, ICAR institutions, Secondary Teachers Training Colleges, state Departments concerned with various areas of development.

- To organise training, vocational guidance and placement activities.
- To provide academic support to the state council of vocational education on matters of policies and programmes.

A suggested organizational pattern for the vocational wing of the SCERT's/SIE's is indicated in Table 1.1.5:

<table>
<thead>
<tr>
<th>Posts</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Professor (Head of the Vocational Wing)</td>
<td>1</td>
</tr>
<tr>
<td>2. Lecturer (Educational Planning)</td>
<td>1</td>
</tr>
<tr>
<td>3. Readers</td>
<td>5</td>
</tr>
<tr>
<td>4. Lecturers</td>
<td>5</td>
</tr>
<tr>
<td>5. Consultants</td>
<td>5</td>
</tr>
<tr>
<td>Supporting Staff</td>
<td></td>
</tr>
<tr>
<td>6. Stenographer Gr. C</td>
<td>5</td>
</tr>
<tr>
<td>7. Office Superintendent</td>
<td>1</td>
</tr>
<tr>
<td>8. Accountant</td>
<td>1</td>
</tr>
<tr>
<td>9. Assistants</td>
<td>2</td>
</tr>
<tr>
<td>10. LDCs</td>
<td>2</td>
</tr>
<tr>
<td>11. Peons</td>
<td>4</td>
</tr>
</tbody>
</table>

**District Level**

A District Vocational Education Committee (DVEC) is constituted which is amalgamated as sub-committee of the District Board of Education (DBE). The DVEC is composed of all concerned District level officers or their nominees and representative of employers organizations, professional institutions, voluntary organizations and parent teachers association along with heads of vocational institutions. The DVEC with its secretariat located in the vocational education wing of the District Education officer performs the following functions:
- Promote and popularizes vocational education programmes in the district.
- Maintains links with the Directorate of Education, State Institute of Vocational Education and governmental and non-governmental organizations in the District.
- Identifies vocational courses suited to local needs.
- Identifies locations for vocational schools.
- Facilitates on the job training and apprenticeship of vocational students.
- Supervises institutions industry linkages.
- Ensures recognition of vocational courses and subsequent placement of vocational products.
- Reviews the vocational education courses run in schools to ensure quality and continued relevance.

The suggested organizational pattern for the vocational wing of the Distt. Education office as in Table 1.1.6:

<table>
<thead>
<tr>
<th>Posts</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Additional DEO</td>
<td>1</td>
</tr>
<tr>
<td>2. Dy. DEO</td>
<td>2</td>
</tr>
<tr>
<td>3. Superintendent</td>
<td>1</td>
</tr>
<tr>
<td>4. Research Assistant</td>
<td>2</td>
</tr>
<tr>
<td>5. Stat. Assistant</td>
<td>1</td>
</tr>
<tr>
<td>6. Accountant</td>
<td>1</td>
</tr>
<tr>
<td>7. UDC</td>
<td>1</td>
</tr>
<tr>
<td>8. LDC</td>
<td>2</td>
</tr>
<tr>
<td>9. Stenographer Gr. D</td>
<td>1</td>
</tr>
<tr>
<td>10. Peon</td>
<td>1</td>
</tr>
</tbody>
</table>
Curriculum

The curriculum is need based socially relevant and should lead to meaningful self or wage employment. The nationally recommended curriculum design consists of the following components:

1. Languages 15%
2. General Foundation 15%
3. Vocational Theory and Practice (including on-the Job training) 70%

On the job training as integral component of vocational curriculum is necessary for developing skill and competencies. The GFC curriculum developed by NCERT is recommended as a compulsory component of all vocational courses at the +2 stage.

The vocational courses are grouped under the following major areas:

1. Agriculture
2. Business and Commerce
3. Engineering and Technology
4. Health and Para-medical Services
5. Home Science

The NCERT has developed minimum vocational competencies based curricula for 59 vocational courses. These curricula list job opportunities, job description, specific competencies on the basis of job analysis, marking scheme, objectives, syllabus, content-theory and practice, list of equipments and reference books. Detailed specifications for equipment may have been worked at the state
level. The SIVE/SCERT is to develop curricula for other locally relevant vocational courses by involving subject experts, teachers and professionals from the field.

School Level

A senior staff member is in charge of the management and actual implementation of the vocational course. He needs to build up contacts and linkages with the community.

Selection of Institution

In the selection of institution for the introduction of vocational course it should be well connected, it should have electric & water supply, it should have reasonably large campus to allow expansion and should have a reasonable building and teacher support. The proximity between schools and collaborative institutions must have sufficient existing enrolment at the secondary stage to be able to provide the desired intake of student (20-25) in each vocational course.

Selection of Courses

Every selected school is expected to offer 3-4 vocational courses in selected areas so that the vocational wing in the school is a viable unit and also to provide the flexibility of choice to students according to their aptitudes interests and abilities and it is imperative that students are trained in such occupational areas wherein self or wage employment opportunities are assured.
Assessment of Manpower Needs

In order to bring about improvement in job opportunities for vocational students it is essential to make a reasonably accurate assessment of locally available and emerging occupations and the employment potential in the area/district. Information in this is necessary for identifying training needs and facilities available. At the macro level such information is required for planning curricula, location of vocational schools and provision of vocational facilities, recruitment of teachers etc. It is therefore necessary to have realistic estimates of manpower needs on a long term and continuing basis. District vocational surveys are to be conducted so as to assess the manpower requirements of the areas, the range of available occupations, trends of emerging vocations, levels of competence required, duration for which the demand is likely to subsist and the extent to which educational and training facilities are available in the neighbourhood.

Area vocational surveys require a great deal of technical expertise, a team of experts are identified in the SIVE/SCERT at the state level who organise district vocational surveys. Some other capable group/organization are entrusted this task. The data is subjected to periodic review and updated at least once in five years. Manpower projection at central level in areas of Health, Banking, Tourism, electronics can be used.

Instructional Material

The NCERT has developed a variety of exemplary instructional materials for a few vocational courses which could be considered for adoption/adaptation by the states. For the remaining courses, the state agencies can select courses which
are relevant to the state and for which NCERT assistance is provided in the
development of instructional materials in English and Hindi. Private publishers
can be assigned the task of instructional material development with assured
procurement or buy back basis. Curriculum development centres established in
professional institution could help in the development of instructional materials.
With regard to non-print material the CIET alongwith SIETs would develop model
audio and video material in as many courses as possible.

**Equipment and Raw Materials**

The POA has suggested development of linkages between vocational
schools and user organizations to ensure optimum resources utilization. The
curricula developed by the NCERT list the entire range of equipment required for
each course. The state agencies would assess the minimum requirement of
equipment for development of basic skills and arrange to provide this to the
institution. On an average an amount of Rs. 75,000 would be provided under the
scheme per vocational course for acquiring necessary equipment/facilities. The
state Governments have to bear the costs of extra classrooms and subject teachers
which may be required in schools teaching foundation course. However, a
maximum amount of Rs. 75,000 will be provided for construction of work
shed/laboratories required for each vocational course. Maintenance of equipment
is responsibility of the state government. Raw materials, consumable materials
like chemicals and breakable wares are important in conducting practical training
for vocational courses. The norms specify range from Rs. 250 for Home Science
course to Rs. 500 for a paramedical course per student per annum. The state
government is expected to shoulder this responsibility and ensure that the
requirement for consumable are fully provided to the vocational schools on a continuing basis.

**Selection of Teachers**

Vocational courses are to be conducted with the help of full time as well as part time teachers. The full time teachers will be appointed to teach as well as to coordinate the general organisation of the instruction and also the work of the part time staff. The qualification of full time teachers vary with reference to each group of vocational course and availability of qualified persons at the salaries prevalent in the school system. Generally, a Master’s degree will be the basis qualification for selection of vocational teachers. In courses for which post-graduate are not available (medical and technological areas) degree or diploma will be the minimum basis qualification for the purpose. The part time teachers are obtained from amongst the professional in the concerned vocation even though they may not have formal qualification (degree/diploma). The collaborating institution is the main source of supply of part-time teachers. In addition retired people from different vocations could be employed on part-time basis.

**Training of Teachers**

Pre-service programmes for fresh entrants, training programmes and periodic refresher courses for in-service teachers and package training programme for part time teachers is a regular feature to meet the requirement of vocational teachers for the scheme of vocationalisation. To meet the requirement of training, a centrally coordinated programme of short term teachers training is organised using the available infrastructures in organizations like RIE, ICAR institutions,
agricultural universities, Central training institutes, bank training colleges, medical colleges, home-science institutions, selected secondary teacher training colleges. The PSSCIVE (NCERT) acts as the principal coordinating agency for the training programme.

**Practical Training and Apprenticeship**

Practical work and training are very important components of vocational education. The practical work would be arranged in institutions like polytechnics, in nursing schools and through work benches identified in commercial and industrial establishments, hospitals and farms depending on the nature of the vocation and intensity of practical training required for the course. The Government department themselves would be in a position to extend training facilities in many vocational areas and provide part-time faculty for instruction as well as for monitoring the progress of the student at the “work bench”. Training arrangement are also located in the unorganized sector.

**Evaluation and Certification**

The performance of students in vocational courses are periodically and continuously evaluated which are conducted through the concerned fulltime teacher of the course and involving part-time teachers and the concerned collaborating agency. Besides the internal evaluation the board conducts a final external examination following the same mechanism as for the academic stream. In both the internal and terminal evaluation assessment of practical skills are important component to be judged by practical work/assignment.
**Educational and Vocational Guidance**

One trained graduate teacher in each vocational school has to be trained in vocational guidance. This VGT devoted at least half of his working time at the school for running the vocational guidance programme. One trained counselor is appointed at the district level to organise and run the career advise centre and assist the vocational guidance teacher at the school level. The State Bureaus of Educational and Vocational Guidance undertakes the responsibility of training the required number of vocational guidance teachers for their states in consultation with PSSCIVE (NCERT).

Vocational guidance activities of the school has two broad objectives:

i) To provide necessary guidance to students, parents and teachers regarding suitable educational and vocational choices.

ii) Helping in actual administration and smooth functioning of the scheme

Specifically the guidance programmes are directed at the following outcomes.

- Most of the vocational courses being employment oriented in nature, information regarding job opportunities, mobility etc. will be gathered and made available by the vocational guidance teacher (VGT).

- The VGT helps the school graduates in finding on-the-job training and/or placement by working in collaboration with employers and the employment exchanges.

- He maintains liaison between pupils, schools the employment agencies at local, district and State levels and helps the educational management administrators in identifying the available infrastructure for vocational training in the neighbourhood.
Evaluation and Monitoring

Evaluation and Monitoring is to be a built in feature of the programme. Monitoring of programme implementation has to be done at various levels viz. National, State, District and institutional level. The feedback mechanism ensures identification of deficiencies in instructions, administrations, financial management etc. so that the functionaries at each level are able to take timely decision to fill in the gaps in policy making, direction, budgetary etc.

Assistants to Voluntary Organizations

The Role of voluntary agencies/expert groups is crucial to the programme of vocationalisation of education. Voluntary/Non Governmental Organisation with at least 3 years standing and qualified to take up innovative programmes in the field of vocationalisation of educational and registered under the Societies Registration Act, 1860 or similar enactments will be eligible for financial assistance for taking up innovative programme for promotion of vocationalisation on project basis. These project activities may include design and conduct of vocational courses teacher training programmes, development of instructional materials, textbooks, preparation of general infrastructure books, audio-visual material, creation of proper environment evaluation of the programmes etc.

Procedure for Grant to States / UT Governments

The state Government / UT Administrations are expected to prepare a project report in respect of the programmes to be taken up by them under the scheme during the year for which grants are sought and during the remaining years of the plan period. These proposals are examined in the Ministry and grants
disbursed to states on that basis. Fifty percent of the approved grant for an year are released as first installment and the remaining 50 percent after the State Government reports utilization of at least 75 percent of amount released earlier. The request for release of second installment in the second and subsequent years must be accompanied by an implementation report and a detailed statement of accounts in respect of preceding year.

*Procedure for Grant to Voluntary Organisations*

On the basis of the proposal approved for the voluntary agency, the grant is released every year in two installments. 50 percent of the years grant in the first installment and the remaining 50 percent after the agency reports utilization of at least 75 percent of the grant sanctioned earlier. The request for release of second installment must be accompanied by a progress report and statement of expenditure. Grants in the second and subsequent years are releases on similar basis provided that before the release of second installment of grant in a year, utilization certificate and audited account in respect of the grants released in the proceeding years should also be furnished.

As far as the voluntary agencies, public trusts and non profit making companies are concerned in order to be eligible for financial assistance under this scheme they should—

i) have a proper constitution of article of association

ii) have a properly constituted managing body with its powers and duties clearly defined in the constitution
iii) Be in a position to secure the involvement on voluntary basis of knowledgeable persons for furtherance of their programme

iv) Not be run for the profit of any individual or a body of individuals

v) Not discriminate against any person or group of persons on the ground of sex, religion, caste or creed

vi) Not directly function for the furtherance of the interests of any political party

vii) Not in any manner incite communal disharmony

Any agency eligible to receive assistance must make an application addressed to the Ministry of Human Resource Development (Department of Education) Government of India, New Delhi through the State Education Department (with a copy endorsed directly to the Ministry). Application should cover activities proposed but these can be for a shorter or longer period as the programme may require. The State Government should give its views within a period of three months.
regarding the agency's eligibility, suitability relevance of the proposal and the capacity of the agency to implement it.

Conditions of Grant

i) The grant receiving agency is required to execute a bond on a prescribed form (appended). The bond should be supported by two sureties if the agency is not a legal entity.

ii) An agency in receipt of financial assistance is open to inspection by an officer of the union Ministry of Human Resource Development or the State Education Department.

iii) The accounts of the project shall be maintained properly and separately and submitted as and when required. They should be open to check by an officer deputed by the Government of India or the State Government. They shall be open to check by the controller and auditor General of India at his discretion.

iv) The audited accounts together with the utilization certificate in the prescribed form duly countersigned by the Chartered Accountants are required to be furnished within six months in respect of a preceding year or after expiry of the duration for which grant is approved.

v) The agency shall maintain a record of all assets acquired wholly or substantially out of Government grant and maintain a register of such assets in the prescribed proforma, such assets shall not be disposed of, encumbered or utilized for the purposes other than those for which the grant was given, without prior sanctions of the Government of India. Should the agency cease to exist at any time, such properties shall revert to the Government of India.
vi) When the State Government/Government of India have reasons to believe the sanctioned money is not being utilized for the approved purpose the payment of grant can be stopped and the earlier grants recovered.

vii) The institution must exercise reasonable economy in the working of the approved project.

viii) The grantee agency should furnish to the Ministry of Human Resource Development reports as prescribed.

ix) The decisions of the Secretary to the Government of India in the Ministry of Human Resource Development, Department of Education, on the question whether there has been breach or violation of any of the terms and conditions mentioned in the sanctioned letter shall be final and binding on the grantee.

1.1.6 Present Position of Vocationalisation of Education in Goa

In the state of Goa, vocational courses under the CSS were started from the academic year 1988-89. Prior to that different types of courses, which were of bifocal nature were being run in the state. Such courses aimed at preparing students for wage or self employment. However, because of various factors these courses were not successful in achieving their objectives.

The Goa, Daman and Diu Board of Secondary and Higher Secondary Education organized an orientation programme cum seminar on vocationalisation of education in collaboration with National Council of Education Research and Training (NCERT) and Department of Education from 26-29 September, 1986.
The objectives of vocational education accepted by various seminars conducted at national and state level can be summed up as follows:

1. To fulfill the national goals of development and the removal of unemployment and destitution.

2. To impart education relevant to productivity, economic development and individual prosperity.

3. To meet the needs for skilled and middle level manpower for the growing sectors of economy, both organized and unorganized.

4. To attract sizeable segment of population to varied vocational courses so as to reduce the mad rush to general education.

5. To prepare students for self-reliance and gainful employment.

One of the major recommendation of the vocational seminar organised by this Board was that manpower requirements should be assessed through vocational surveys which should reveal employment potential of different vocations in terms of wage and self employment, infrastructure facilities for on the job and apprenticeship training, availability of expertise and suitable institutions for offering vocational courses at 8+ and +2 level. As a follow up of this recommendation the Board of Studies in Technical and Vocational Education appointed a committee on 16-10-1986 to conduct preliminary manpower needs survey, identify courses to be introduced and the institutions which could conduct them. Shri Erasmo Sequeira was the convener and the other members of the committee were Dr. J.C. Almeida, Shri Ramesh Chowgule, Dr. H.Y. Karapurkar, Shri R. D. Taleigaon, Director of Statistics, Secretary, Goa Chamber of Commerce
and Shri G.L. Pernekar. It was agreed upon that vocational courses on the suggested national pattern of giving about 70 percent of the total time to vocation theory and practice would be started in place of the earlier bifocal courses in the state.

The centrally sponsored scheme of vocationalisation of education was introduced in Goa in 1988-89. In the year 1988-89, there were 10 courses introduced in 16 Higher Secondary Schools. These courses are: (1) Office Management (2) Industrial Management (3) Insurance (4) Accounting, Auditing and Taxation (5) Marketing & Sales Management (6) Computer Programmer (7) Electronic Assembly Technician (8) Electronic Repair Technician (9) Auto Servicing Technology (10) Dress Making Embroidery and Fashion Coordination.

In the year 1989-90, two Home Science based courses such as Food Production and Food and Beverage Service were introduced. In the year 1998-99, two new agriculture based courses such as Horticulture and Floriculture were introduced in different Higher Secondary Schools. Tourism and Travel Technique and Bakery and Confectionary are the two courses introduced in the year 1999-2000. The first paramedical course Health Care Assistant was introduced in the year 2003-04. Thus, at present (2004) there are 16 vocational courses introduced in 42 Higher Secondary schools. The courses have been grouped as follows:

I. Agriculture

   1. Horticulture

   2. Floriculture
II Business and Commerce

3. Accountancy & Auditing
4. Industrial Management
5. Insurance
6. Marketing & Salesmanship
7. Office Secretaryship/Stenography

III Engineering and Technology

8. Auto Engineering Technology
9. Computer Technique
10. Electronic Technology
11. Maintenance & Repairs of Electrical & Electronic Domestic Appliances

IV Home Science

12. Commercial Garment Designing and Making
13. Bakery and Confectionery
14. Catering and Restaurant Management

V Humanities and others

15. Tourism and Travel Technique

VI Health & Paramedical

16. Health Assistant.

The details regarding the schools having different courses and enrolment have been given in Table 1.1.7.
<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Course</th>
<th>No. of Schools</th>
<th>Enrolment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Electronic Technology</td>
<td>06</td>
<td>253</td>
</tr>
<tr>
<td>2</td>
<td>Insurance</td>
<td>04</td>
<td>193</td>
</tr>
<tr>
<td>3</td>
<td>Accountancy, Taxation &amp; Auditing</td>
<td>10</td>
<td>407</td>
</tr>
<tr>
<td>4</td>
<td>Office Secretaryship and stenography</td>
<td>19</td>
<td>756</td>
</tr>
<tr>
<td>5</td>
<td>Auto Engineering</td>
<td>10</td>
<td>320</td>
</tr>
<tr>
<td>6</td>
<td>Computer Software</td>
<td>10</td>
<td>474</td>
</tr>
<tr>
<td>7</td>
<td>Maintenance of electrical &amp; Electronic Domestic Appliances</td>
<td>10</td>
<td>430</td>
</tr>
<tr>
<td>8</td>
<td>Marketing Salesmanship</td>
<td>01</td>
<td>57</td>
</tr>
<tr>
<td>9</td>
<td>Industrial Management</td>
<td>01</td>
<td>51</td>
</tr>
<tr>
<td>10</td>
<td>Floriculture</td>
<td>02</td>
<td>6</td>
</tr>
<tr>
<td>11</td>
<td>Horticulture</td>
<td>05</td>
<td>25</td>
</tr>
<tr>
<td>12</td>
<td>Commercial Garment Designing &amp; Making</td>
<td>15</td>
<td>631</td>
</tr>
<tr>
<td>13</td>
<td>Catering and Restaurant Management</td>
<td>05</td>
<td>419</td>
</tr>
<tr>
<td>14</td>
<td>Tourism and Travel Technique</td>
<td>03</td>
<td>142</td>
</tr>
<tr>
<td>15</td>
<td>Bakery and Confectionary</td>
<td>02</td>
<td>133</td>
</tr>
<tr>
<td>16</td>
<td>Health Care Assistant*</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* The course was introduced in 2003-04 in one school with an enrolment of 25 students.

However, it needs to be mentioned here that recently (October, 2004) the Government of Goa has decided to discontinue some of the commerce based subjects like Office Secretaryship/Stenography and Accountancy and Auditing in some of the schools, from the year 2005-06.

Over the years there has been substantial increase in enrolment in the vocational streams. It has increased from 830 students in 1988-89 to around 4300 students in 2002-03. The state has diverted a substantial percentage of Higher Secondary school students to the vocational stream.
1.2 Need and Significance of the Present Study

As stated earlier, realizing the importance of vocationalisation of education at Higher Secondary stage in the country the NPE –1986 and its programme of Action (POA) suggested for the introduction of vocational courses at the (+2) stage as a distinctive stream. Accordingly, the Centrally sponsored Scheme (CSS) of vocationalisation of Education at Higher Secondary stage was started in 1988-89 in different states/union territories in the country. In the same year the scheme was also implemented in the state of Goa. The scheme was initially started in 16 Higher Secondary schools in Goa and has been extended to 42 Higher Secondary schools so far and the number of courses has increased from 10 to 16 over the years.

There are no two views about the fact that evaluation forms an important part of any scheme or programme that is being implemented. Scholars are of the view that evaluation should be an inbuilt feature of any programme/scheme for its quantitative expansion and qualitative improvement and the scheme of vocational education cannot be an exception. The purpose of evaluation is to judge the relevance/effectiveness/appropriateness of the instructional facilities curriculum, methods and techniques of curriculum transactions, human and material resources etc. of a programme/scheme. Results of an evaluation study ultimately helps in taking the necessary measures for improvement.

After the implementation of the CSS in Goa, a study entitled ‘Quick Appraisal of the Implementation of Centrally Sponsored Scheme of Vocationalisation of Secondary Education’ was conducted by Vaid & Gupta
As the title suggests, the study was aimed at making only a quick appraisal of the implementation of the CSS of Vocationalisation of Education in the state of Goa. It examined various aspects of the scheme in order to identify the strong and weak points in its implementation and made recommendations for improvement. However, the study had many limitations. The study was conducted in just 5 days. The data were collected only from those teachers who were present at the time when the researchers visited the schools. None of the aspects were studied in depth. Moreover, the scheme was just one year when the study was conducted and not a single batch of students had completed the course. Now nearly 14 years have passed since the implementation of the scheme and no studies have so far been conducted. Many students have already successfully completed the vocational courses so far. Hence, it was considered the right time to evaluate all aspects of the scheme.

The knowledge relating to the existing management system and functions of different agencies of the CSS would be useful for the policy planners in education in strengthening the management system in the state. The study would reveal how adequately the institutions are equipped to conduct the vocational courses effectively and the problems if any faced by the institutions. Such knowledge would help the policy planners and school authorities to take necessary steps to improve institutional facilities. The findings relating to the on-the-job training (OJT) and apprenticeship facilities would be useful in taking suitable measures to bring qualitative improvement of OJT programme and to strengthen the industry-institution linkages. The study would bring to light the extent to which the enrolment target in the vocational stream has been achieved. Since many
students have already successfully completed the vocational courses it is necessary to examine the relevance of the vocational courses in Goan situation and the problems, if any, faced by the graduates of the vocational stream in getting employment and pursuing further studies. The knowledge relating to these aspects would be useful in taking decisions regarding continuation of existing vocational courses and the provisions for guidance and placement services for the graduates of the vocational stream. There are no two views about the fact that the success of a course depends to a great extent on the attitude of the students who study the same. Therefore, it was considered necessary to find out the attitude towards vocational courses of the students studying in the vocational stream. The study relating to the profile of the students would be helpful in understanding the background of the students who join the vocational stream.

1.3 Specification of the Problem

1.3.1 Objectives of the Study

The study was conducted with the following objectives in mind:

1. To study the appropriateness of the management system of the centrally sponsored scheme of vocationalisation of education (CSSVE) at +2 stage in Goa.

2. To study the adequacy of financial resources for the CSSVE in Goa.

3. To study the extent to which the enrolment target in the vocational stream has been achieved.
4. To study the enrolment trends in the vocational stream from the starting of the course till 2002-03.

5. To find out the appropriateness of the educational qualifications and experiences possessed by teachers teaching in the vocational stream.

6. To study the in-service teacher education programmes conducted for the teachers teaching in the vocational stream.

7. To find out the adequacy of number of teaching and non-teaching staff appointed in different schools in the vocational stream.

8. To study the adequacy of the physical facilities available in different institutions for the vocational stream.

9. To study the adequacy of the facilities available in terms of laboratories, workshops, plots, equipments, materials and teaching aids in different institutions.

10. To study the appropriateness of the evaluation system followed in the vocational stream.

11. To study the appropriateness of organization of on-the-job training programme in different courses.

12. To study the apprenticeship facilities available for different vocational courses.

13. To study the relevance of vocational courses in Goa.

14. To study the problems, if any, faced by the students graduating from the vocational stream in terms of
   a) getting employment
   b) pursuing further studies.

15. (a) To study the direction and intensity of attitude towards vocational courses of the students studying in the vocational stream.
(b) To study the attitude towards vocational courses of students in relation to family economic status, parents educational qualifications, academic achievement and types of vocational courses.

16. To prepare the profile of the students studying in the vocational stream.

1.3.2 Definition/Operational Definition of Terms/Variables

1. Vocational Higher Secondary Schools: It includes those schools, which are covered under the CSS of vocationalisation of Education and hence having the vocational stream. The vocational sections of the schools are considered for investigations.

2. Vocational Subjects: All the subjects developed by NCERT and the Government of Goa and introduced in the Higher Secondary schools in Goa under the CSS of Vocationalisation.

3. Attitude Towards Vocationalisation of Education: ‘An attitude is an emotion or effect that is directed towards a specific person, object or situation’ (Beck, 1996). In the present study attitude is defined as the feeling of the student towards the vocationalisation of education at +2 stage. The sum total of the scores obtained by a student on the Likert type attitude scale developed by the investigator is considered as his/her attitude scale.

4. Academic Achievement: The marks obtained by a student at the Std. X examination conducted by the Goa Board of Secondary and Higher Secondary Education will be considered as academic achievement of the student. The total marks obtained in all the subjects were converted into percentages for the purpose of analysis.
5. **Family Economic Status**: The total monthly income of the family and the assets possessed by the family converted into rupees were considered as family economic status in the study. The procedure followed in obtaining family economic status score for each student has been given in Chapter III, Section 3.7.

6. **Parents Educational Qualification**: Educational Qualifications of parents were labeled into Seven as follows: Illiterate, upto Std. IV, Std. V-VII, Std. VIII-IX, Std. XI-XII, Bachelors Degree, Masters degree and above.

### 1.3.3 Scope and Delimitation of the Study

The study intended to evaluate all aspects of the centrally sponsored scheme of vocationalisation of education at Higher Secondary stage in Goa. However, the study was delimited in different aspects as follows:

1. The Principals of all the 39 schools were included only in the first phase of the study.
2. The students of Class XII of 21 schools participated in the study.
3. The students who had graduated from the +2 vocational stream in the years 1992, 1994, 1996, 1998 and 2000 were included in the study.
4. The researcher could collect data only from 409 graduates of the vocational streams. The findings of the study can be generalized to the entire state of Goa.