CHAPTER - II

REVIEW OF RELATED RESEARCHES
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2.0 Introduction

A research project should be based on the relevant thinking and research that has preceded it. When completed, it becomes part of the existing body of knowledge in the field and so contributes to the thinking and research that follows. The success of a research study essentially depends upon the fact that how far the study is connected with the important and related literature.

No research can be undertaken in isolation of works that have already been done in a problem area which are directly or indirectly related to a study proposed by the researcher. It helps the investigator to develop a thorough understanding and insight into previous work and the trends that have emerged. A careful review of the literature on the problem to be investigated is one of the important steps in the planning of any research study because it helps the researcher to familiarize himself/herself with the area and to prepare an appropriate blue print. By reviewing the related research literature the researcher can avoid unfruitful and useless problem areas. By reviewing of the related literature the researcher can avoid unintentional duplication of well-established findings. Besides these, the review of related literature enables the researcher to define the problem and describe the scope and delimitation. It acquaints the researcher with research methodology used by others, the data gathering tools used, the data analysis procedure and the conclusion drawn. Above all review of literature provides empirical support to the study at different stages.
All the studies conducted so far in India in the area under the present study were reviewed. The studies on vocationalisation of education at Higher Secondary stage prior to implementation of the CSS and studies on the Centrally Sponsored Scheme of Vocationalisation of Education at +2 stage in particular are presented in the following pages.

2.1 Studies on vocationalisation of Education at Higher Secondary Stage Prior to Implementation of the CSS

Bhatt (1972), A study titled, ‘A Critical Study of the Vocational Education in West Germany vis-à-vis the Vocational Education in India’ was conducted by Bhatt (1972). The information about the vocational education in Germany were collected through a questionnaire given to 280 pupils of a few vocational schools in Frankfurt. Also data were collected by conducting interview with the Principals of vocational schools, discussion with their teachers and meetings with the directors and representatives of the industries. For obtaining information about vocational education in India, reports of various commissions and committees on the subjects, other literature available were referred and questionnaire was administered to the personnel in Indian vocational and technical institutions.

The main conclusions of the study are given below with respect to attitudes towards vocational education, its nature, administration, status and special provisions:
1. In Germany, people have more positive attitude towards dignity of labour and hence vocational education was established there on stronger grounds compared to India.

2. The vocational education in Germany is being supported both by public enterprises and government, there exists a sound system of apprenticeship training.

3. Experts in different fields volunteer themselves for the membership of trade examination boards.

4. The vocational education is arranged according to the local needs.

5. Girls also enjoy the same privileges as boys.

6. Vocational schools exist for upgrading courses, guidance bureau help to take up the suitable courses.

7. There is a system of organised transfer from vocational schools to appropriate industry.

8. Provisions for special classes for slow learners and in-service training for those who might have missed the appropriate channel exist.

9. There are vocational teacher training institutions and suitable literature for all trades and vocations is available.

10. There is a balance between vocational and general education.

Devasthalee (1978) investigated into the secondary education curricular (Std. V – X) in the Maharashtra State with a view to revise the context of vocationalisation of Education at all levels.
The techniques used for data collection were interviews, observations of teaching methods and visits to vocational and industrial institutions.

The main conclusions and recommendations of the study were as follows:

1. The academic atmosphere was in favour of vocationalisation
2. Vocational Education should begin from Std. V.
3. Some vocational courses should be introduced for the dropouts.
4. Vocational courses should not be treated as extra.
5. A pupil must be given a certificate for successfully completing a vocational course.
6. In vocational courses emphasis should be on practical aspects.
7. A comprehensive programme of vocational guidance is essential.
8. A common vocational school should be set up to meet the needs of various neighbouring schools.

Bose and Mukherji (1978) carried out a techno-economic survey of the needs for local skills in four blocks of West Bengal so as to work out guidelines for the organisation of the +2 stage of vocational education. The study highlighted the need for diversified courses and general education content in technical and vocational education.

Gayen (1978) in West Bengal identified agriculture, industries, trade and Commerce health and public services as major areas for introducing vocational and technical courses at the +2 stage.
Jain and Kurulkar (1980) made an assessment of the on-going training programmes in relation to the vocational needs of women in Anantapur district in Andhra Pradesh and Kanyakumari districts of Tamil Nadu. They found that though the needs of women were highly diversified and fell into nine categories, the bulk of the on-going training programmes revolved round tailoring, embroidery and agriculture.

Patel (1986) critically examined the organisation of vocational education in the Higher Secondary schools of Gujarat State. The absence of clear guidelines, lack of orientation of teachers, the blind rush to the commerce stream, absence of diversification due to inadequacy of grants were some of the findings of the study.

Saheb (1980) studied in a comparative framework the vocational interest of 455 boys in the vocational stream and 532 boys in the academic stream of English-medium Higher Secondary schools of Tamil Nadu. Students’ academic and non-academic abilities provided the context of study. Vocational interests in ten areas were considered. An adapted version of Thurstones interest schedule was used alongwith other tools and school ratings. The study revealed marked differences between the academic abilities and vocational interest of the two streams of students. Students of the academic stream were better in academic abilities, leadership writing and science talent and displayed interest in physical and biological science. Students of the vocational stream displayed interest in business and computation, were better in social service, music, games and sports. Choice of stream did not depend on the socio-economic status of the students.
Singh et. al. (1981) ‘A vocational Survey of +2 Stage between 1978-80 (Districtwise) in Collaboration with Vocational Education Unit of NCERT, New Delhi and SCERT, Haryana’ was conducted by Singh et al (1981). The main objective of the study was to identify the educational institutions where vocational courses could be started and names of the courses, which could be run in the identified institutions. A sample of 34 statements, five schedules, 3 proformas prepared by the vocational educational unit, NCERT, New Delhi were used for collecting Data and conducting interviews at different levels of administration. Schedules 1 to 5 pertained to information as identification of non-farm establishment, emerging occupational needs of plan schemes, survey of current farm establishment. The reports and documents concerning the All India Educational Survey, Technical and Vocational Education and Training in Haryana 1975, Census Report 1971 District Development Plans, Statistical Abstract Haryana 1978-79 were also consulted.

The conclusions were drawn on the basis of responses received through statements, schedules and proformas.

1. On the basis of reports of Ambala, Bluwani, Gurgaon, Kurushtra, Mahendragarh, Rohtak, Sirsa and Sonepat districts 73 educational institutions of high and Higher Secondary level were identified.

2. The courses recommended in the identified institutions were boiler attendant for two institutions, steno-typist or stenographer for six, food and fruit preservation for six, poultry farming for nine, building construction technology for three, repairing agricultural implements for 14, leather technology for three, nursing for eight, cutting and tailoring for 15, electronics for 14, brick making for two, electrician for 16, fishing for 12, librarian for six, interior decorating
for five, secretarial practice for seven, radio assembling for three, accountancy for nine, diploma in textile for six, cookery and nutrition for five, printing technology for four, weaving master for four, embroidery for seven, draftsman for three, plumber for two, canning for two, repair of house hold gadgets for four, plastic technology for three, textile dyeing and printing for five, salesmanship for ten and automobile technology for three institutions.

‘Vocational Education – Problems and Prospects a Case Study of Karnataka State’ was conducted by Thiammaiah, Seetharamu Azur and Rajappa (1986). All the forty-five colleges offering vocational courses at the +2 level were considered for the study. Data were collected from all the principals, the teachers teaching the vocational courses and the students (18 girls and 118 boys from among the present students and 20 girls and 20 boys from among those who passed out of vocational institutions) were also interviewed.

The major conclusions drawn from the study are as follows:

1. The courses offered for vocational education were not consistent with the skills identified in shortage category and the shortage skill categories did not find a place in the list of courses identified.

2. The proportions of the girls taking up vocational courses increased considerably from the base year 1977-78 through the succeeding years 1978-79 and 1979-80. The proportion of scheduled caste students enrolled also increased.
3. In general there was a rush for vocational courses over the years. Engineering courses were more sought after in urban areas and business courses in non-urban areas.

4. The colleges have greater weightage of the parents traditional occupations while giving admission to students to the various vocational courses.

5. The dropout rate seemed to be higher in courses which were akin to general education courses.

6. Wastage in vocational education was very low as compared to wastage in the general pre-university courses.

7. The equipment position of the colleges offering vocational courses was quite sound.

8. The colleges depended heavily on part time teachers to run their vocational courses.

9. Quite a few colleges found it difficult to get teachers for vocational courses.

10. A majority of the colleges opined that the grants received by them were quite inadequate.

'The functioning of Vocational Education Stream in Higher Secondary Schools in Tamil Nadu' was studied by Suoundaravalli (1984). The sample included the Higher Secondary schools in Salem District where vocational courses were taught. A random sample of 1000 students from all over Tamil Nadu was selected for studying some selected personality, socio-economic and psychological variables of the vocational and academic streams students. Four schools - two where vocational courses had been introduced successful and were functioning well and two where the functioning was not successful were selected for case
study. An information blank was designed and used for collecting and function of vocational data and information regarding the introduction and functioning of the vocational courses. To measure the characteristics of students personality a battery of tests was used. In order to find out the attitude of parents, teachers and students towards vocational education, a vocational attitude scale was prepared by the investigator.

The major findings of the study are as follows:

1. Nearly 90 percent of the schools were upgraded as Higher Secondary schools with academic and vocational streams in the year 1978. Some 21 different vocational subjects were offered in these schools.

2. About 90 percent of the schools functioned well and were able to produce 90 percent results in the public examination.

3. The students were admitted in the vocational stream without any aptitude test.

4. As a result of the introduction of a vocational stream in Higher Secondary schools, many teachers were appointed to teach the vocational subjects to the students but only 20 percent of the teachers were full time teachers and 80 percent of them were part time teachers with a fixed remuneration of Rs. 300 per month.

5. For certain vocational subjects, such as Accountancy and Auditing, there was no external examination in practical as was done for other vocational subjects.

6. Adequate cooperation from industrialists and factory owners was not available.

7. The instructional materials pertaining to curriculum was not adequate in 50 percent of the schools. Only 30 percent of the schools were fully equipped.
8. Though the aim of introducing vocational education was to reduce unemployment and pressure on colleges, yet nearly 37 percent of the vocational group students went in for higher studies.

9. The vocational group students, the teachers teaching vocational subjects and the parents of vocational group students showed a favourable attitude towards vocational education.

"Vocationalisation of Secondary Curriculum in Assam" was investigated by Deshamukyla (1984). The researcher analysed the existing curriculum at the primary and middle stages. Documentary analysis was undertaken, unstructured interviews and informal discussion with officers of the departments of education, educational administrators and policy makers of various states and union territories in general and Assam in particular were carried out. Also a questionnaire was used to determine the attitude of parents, administrators, social workers, teachers towards vocationalisation of Secondary curriculum in Assam. Personal visits of factories farms, industries of different states.

The major conclusions of the study are as follows:

1. The declared national pattern 10+2+3 should be accepted with minor modifications taking into consideration the peculiar problems of the region or locality.

2. The design or types of vocational streams in particular cannot be the same everywhere. On the other hand, in view of the objectives of the secondary curriculum vocational streams should be developed on the basis of the raw
materials available in the locality and their future potentialities leading to some vocations.

3. The secondary curriculum should prepare the pupils to become individually competent. After middle school level 80 percent of the stress should be on vocational/technical education depending on the aptitude of the pupils. However, this may create accommodation and financial problems for the school authority/government. This should be reduced step by step by providing theoretical coaching in the school compound and practical work in local farms, factories, industries, workshop depending on local resources and aptitude of the pupils at the initial stage. Subsequently schools may be developed by setting up laboratories, workshop etc.

4. Phase wise teachers if not found locally may be recruited from outside the state/region provided with necessary orientation to suit the new curriculum.


The study was conducted through a comprehensive survey of the available infrastructural facilities in all schools of the state. A survey was also conducted of the records available with the Directorate of School Education. The records of the directorate concerning various vocationalisation programmes in schools were consulted. The major findings of the study are given below:

1. Nearly fifty percent of students dropped out at various stages between the sixth and tenth Classes. The chances of introducing vocationalisation were only possible from classes VIII to X.
2. The state wise percentage of passes at the SSC public examination in 1983 was around 50.

3. Socially Useful Productive Work (SUPW) was conceived in schools as work-oriented educational activity contributing towards the total development of the learners personality.

4. The revised curriculum had been introduced in all schools in the state in a phased manner from the session 1979-80 onwards. The revised curriculum comprised broadly three parts, viz. language, non-language subjects and activity areas. SUPW was introduced in the school curriculum as one of the activity area subjects with a view to acquainting children with the world of work and service to community.

5. SUPW was given a weightage of 15 percent for Classes VI and VII and eight percent for Classes VIII to X in terms of time.

6. In the implementation of the Socially Useful Productive Work programme in schools, the problems encountered included non-availability of specialized teachers, inadequate physical and infrastructural facilities, non-supply of copies of syllabus, non-availability of funds and absence of guidelines for the disposal of finished products produced in the SUPW programme.

Dhamaskar (1985) conducted a case study on vocational and craft training in Marathwada as part of the project 'A Study of Regional Imbalance in Vocational Education and Manpower Planning in Marathwada'. Questionnaires to elicit information from heads of faculty, trainees, employees were the main tools used.
Semi-government officials and industrialists were interviewed. Some of the major findings were:

1. During the year 1982-83, 2524 seats were available in ITI's for which 2127 applications were received. The number of students admitted during that year was 2552 and the number of stipend holders was 1768.

2. Twenty six out of 64 (40 percent) of the trainees responded that qualifying for employment was their reason for seeking admissions to ITI's, 22 sought admission for self employment three for the sake of gaining knowledge, 12 were not sure of their aim, while one wanted to improve his own agriculture.

3. The main employment markets according to the trainees were factories, industries, motor garages, workshops, ITI’s airport.

4. Thirty-seven out of 64 responded that the training they received was enough for self-employment.

5. The trainees reported that the equipments in the ITI’s were old. ITI’s should accept job work from outside in some trades (turning, fitting, welding) Training should be given in all allied fields. Training should be in keeping with the requirements of the industry.

6. Ten out of 27 ex-students reported that they found the courses very useful in securing jobs, five reported that the courses were useful for self-employment, though other problems like finance were there, seven found the training very useful.

7. Sixteen out of 27 reported that the training was adequate, four however categorically said that it was inadequate two felt that the training was inadequate as far as some organisations like state transport were concerned.
8. Persons trained in ITI's faced serious difficulties in handling modern machinery and equipment in industries as they were trained on old equipment. Some felt that during ITI training, trainees be attached to factories at least for one day a week.

9. Though technical skills given in the ITI's were enough for self-employment, such an endeavour required additional human skills which were not provided in ITIs.

10. The shortcomings mentioned by the trainees were dearth of experienced instructors, inadequate practical work, outmoded syllabus and shortage of modern equipment.

11. Respondents felt that in view of the industrial growth in the region, new trades viz. sugar technology, electronic dairying, electric welding, motor and transformer winding, fabrications, casting and moulding and spinning and weaving should be introduced.

12. Thirty-three teachers out of 35 felt that ITI courses had to be modernized urgently. Similarly training in allied field should be included in each course and that the component of practical work be improved.

13. According to teachers, the minimum level of education for entrance to ITIs should be SSC.

14. Industrialists suggested that training at ITIs should be improved. The minimum qualification for admission should be SSC, admissions should be on merit and there should be more ITIs in the region.
A study of vocationalisation of Education at the Higher Secondary Stage was conducted by M.S. University of Baroda (1985) financed by the planning Commission of India. The sample of 140 Higher Secondary schools was chosen from Maharashtra, Karnataka and Gujarat states. The sample also consisted of 133 principals, 392 teachers and 3405 students of vocational streams of the sample institutions. The instrument used for the study were a general information sheet, questionnaire for principals, teachers and students. The tools were used by the field investigators for data collection. Data were analysed in terms of percentages and interpreted qualitatively. The study revealed the following:

1. In Karnataka there were 31 trades offered, in Maharashtra 24 trades and in Gujarat 21 trades. The common trades were agriculture and farm management, automobile servicing and electrical.

2. The institutions were mostly situated in urban localities.

3. Being a part of formal institution like Higher Secondary schools and colleges the vocational stream did not get adequate facilities.

4. Most of the students were male. In Karnataka and Gujarat most of the students belonged to backward communities. The students of Maharashtra and Gujarat were from high and middle class families whereas in Karnataka most of them belonged to poor families.

5. Most of the principals had no technical education hence they could not pay proper attention to the functioning of the system.

6. Most of the teachers had technical education qualifications. However, because of lack of job security and low salary highly qualified and experienced teachers could not be attracted.

7. Admission was on merit basis. No rush for admission was noted.
8. Except in few cases the courses did not match the local needs of employment as perceived by the principals and teachers.

9. Inspite of declaration of flexible entry points Karnataka did not give recognition to the products of vocational stream for enrolment in professional courses.

10. The syllabi were very lengthy and could not be completed in time.

11. Practical experience could not be provided to the students appropriately because of lack of funds, lack of transportation and lack of cooperation from teachers.

"Management Education in Marathwada – A Case Study Report" was prepared by Bapat (1985) for the project, “A Study of Regional Imbalance in Vocational Education and Manpower Planning in Marathwada”. Forty Students drawn on a random basis, 20 employers and some teachers of the management course formed the sample. Questionnaires were administered to the students who had already passed the management courses as well as their employers. Interviews were conducted with teachers, ex-students and employees.

Some of the findings are given below:

1. In 1985 Aurangabad had 15,000 industrial workers. This number would cross 25,000 within 10 years which means that Aurangabad alone would require 1000 managers. The rest of Marathwada would similarly require large number of managers. In 1985 the MBA course was conducted at only 2 centres, viz. Aurangabad and Nanded with an admission capacity of about 35 each. As such
to meet the future needs of Marathwada the region would require one more
centre conducting an MBA course with a capacity of 30-35 students.

2. The content of MBA course conducted in Marathwada was comparable with
that of courses conducted in other universities in Maharashtra. However, there
was paucity of staff.

3. Admission to the MBA course were regulated by an initial test followed by
group discussion and personal interview. Admission were given faculty wise
to avoid injustice to arts, Science, Commerce as initially engineering graduates
used to top the test.

4. The course consisted of a foundation course specialized courses in
management fieldwork and practical training for a period of six weeks. The
total duration of the course was 5 semesters.

5. Almost all MBA degree holders got employed. About 62.5 percent were
employed in Marathwada, 15 percent in other parts of Maharashtra, 15 percent
in Metropolitan cities of India and 7.5 percent in the rest of India. No one had
been employed abroad. Their average monthly income in 1984-85 was Rs.
1646.00. About 62.5 percent got jobs within 30 days of declaration of
examination results, 20 percent had to wait for six months while 2.5 percent
had to wait upto to 12 months. The rest were already employed or were self-
employed.

6. Students opined that entrance to the MBA course should be exclusively on the
basis of admission tests, with more emphasis on case study discussion.
Simultaneously practical training and project work should be given better
weightage in evaluation communication skills and human relations should be
taught in management training.
7. Students opined that MBA degree had increased their employability status and effectiveness. There should be more opportunities during the MBA course to work in groups and with groups. The MBA course was good for prospective managers. However, it was not effective for a person wanting to become an entrepreneur.

Vocationalisation of Education at +2 stage (Commerce Stream) was studied by Gokhale (1984). The sample of the study included two colleges of Nagpur City. Data were collected by administering a questionnaire on 40 students of the +2 stage and observation of laboratory practices. The study showed that the vocational courses were useful as compared to general courses but failed to prepare a student for any job or self-employment venture. The government was not providing any job or financial assistance to the students passing out with vocational courses. It was found that the practical training imparted by visits to different institutions and by arranging guest lecture was not sufficient. The teachers needed to be trained on all practical aspects in their respective subjects. The service conditions of teachers teaching vocational subjects were such that they kept good teachers away from these subjects. The grants provided by the government were insufficient for imparting practical training.

Mohanty (1986) conducted a survey of vocational education in the state of Orissa since Independence. An inventory was developed and sent to 113 vocational and technical schools. Thirty heads of institutions and a number of officials were
interviewed by the investigators. The study revealed that a very few schools were imparting vocational and technical education in 1947 and by 1971 the total number rose to 106 and by 1981 it increased to 124. More men were attracted towards technical and vocational courses than women. The courses which were attended by women include typewriting, music, dance, drama and tailoring. It was observed that the students coming out successfully were technically unsuitable on jobs for want of adequate practical experience.

Gogate (1987) conducted a study on vocationalisation of Education at Higher secondary Stage in Andhra Pradesh, Tamil Nadu and West Bengal financed by Planning Commission. The sample included 68 schools (54.84) percent out of 124 schools imparting vocational education at +2 level in Andhra Pradesh. Twenty two schools from urban and 46 were from rural areas, 26 heads of institution, 87 teachers of vocational subjects 272 students and 80 past students. The tools/technique used in the study included questionnaires for teachers, students and interviews for heads of institutions and past students. In Tamil Nadu out of 969 schools imparting vocational education at +2 level 208 schools (21.47%); 65 urban and 143 rural were contacted either by post or through visits. Similar information were collected from 57 heads of institution 211 teachers of vocational subjects, 605 present students and 158 past students. In west Bengal out of 57 schools, 45 institutions sent their information. Altogether 24 heads of institution, 89 teachers of vocational subjects 317 present students and 52 past students participated in the study. Questionnaire and interview schedules were used as the tools for collection of data. Some of the important findings were (state wise) as follows:
Andhra Pradesh

1. Andhra Pradesh was one of the two states in the country where +2 classes were either attached to schools or to colleges or were allowed to develop as independent junior colleges.

2. Vocational education at the +2 stage existed only in +2 classes attached to Government schools. Almost all schools which had a multipurpose stream prior to 1970 were converted into vocational Higher Secondary schools to avoid wastage of infrastructure which already existed. Private management institutions wanted to introduce vocational courses but were not able to do so in the absence of financial help from the state government.

3. Most schools teaching agricultural and technical subjects had collaborative arrangements with some other government institutions. But these collaborating institutions often looked down upon vocationalisation at the +2 stage. This arrangement did not work satisfactorily. The collaborating institutions were far away from the Higher Secondary schools and when students went there, they were almost lost to their parent institutions. Contact with students became difficult. This perpetual dependence on collaborating institutions was not considered healthy. Coordination between these institutions was often difficult. In one case it so happened that those who framed the time table in these institutions had done it in such a way that students who offered vocational subjects had to miss teaching of core subjects. State government had accepted this arrangement to avoid extra expenditure on laboratories, workshops and agricultural farms.
4. Vocational education has been introduced in all the five areas namely agriculture, engineering, health, commerce and home science. However vocationalisation had been introduced in only 108 institutions out of 752 imparting education at +2 level.

5. Most of the institutions imparting vocational education being government they had no financial difficulties. In practice the head were unable to spend these funds owing to various reasons.

6. There existed a few institutions which taught vocational education on a no grant basis. Unless the management of these institutions raised sufficient funds, vocational education in them suffered.

7. The pharmacy course taught at the +2 level in the state had a special problem as the course was not approved by the pharmacy council of India (PCI). However the state Government had approved it.

8. In Andhra Pradesh, English was the only medium of instruction allowed for vocational subjects and students found this medium very difficult.

9. Staff engaged in teaching vocational subjects was either inadequate or untrained. In Andhra Pradesh regular teachers were sent on deputation to vocational stream. These teachers had no heart in vocational education.

10. In the twin cities of Hyderabad-Secunderabad, it was very difficult to get admission even to +2 classes in the general stream. Students therefore get admission through vocational courses where admission was available and switched to traditional courses after standard XII. Teachers felt that because of this phenomenon unwanted elements got admitted to vocational courses.
11. It was very peculiar that in Andhra Pradesh, students did not want to go in for vocational education, students and parents had lost faith in it as students found it very difficult to get jobs or get admitted to further courses. At some places, teaching of vocational subjects had to be discontinued for want of students.

12. The NCERT reviewed vocational education in Andhra Pradesh in 1981. The state government had also appointed a committee to review the position. A need was felt for the state government to take immediate step to accept the recommendations of these committees and expand vocational education in the state in the right direction.

**Tamil Nadu**

1. In Tamil Nadu, +2 classes were attached to schools only. Similarly almost all the multipurpose schools which were established as a result of the recommendations of the Mudliar Commission were converted into Higher Secondary schools imparting vocational education.

2. Tamil Nadu is the only state that had introduced vocational education on such a large scale. Vocational courses existed in about 950 schools in all the six vocational areas (agriculture, engineering, commerce, home science, health and miscellaneous) and in as many as 67 subjects.

3. Vocational education was introduced in government as well as in private schools in the state. Private schools had to raise their own funds for non recurring expenditure and meet recurring expenditure from fees collected from students. These funds were often inadequate and ultimately vocational education suffered.
4. Most of the teachers had to work as part time teachers. This was a big problem in the state. For taking twelve periods a week they were paid Rs. 300 per month. Some teachers put in double part time work in the same school and earned Rs. 600 per month only.

5. As vocational education was very rapidly introduced in the state on a very large scale at the +2 level, it resulted in oversupply and unemployment of skilled workers on a very large scale. Only 10 percent of ex students who were contacted were employed. Children from poor families and from lower strata of society who joined vocational education with the hope that they would get jobs were very much frustrated.

6. The Tamil Nadu government had taken a very good step in evaluating vocational education at the +2 stage through a committee.

7. Teachers and students demanded that weightage given to vocational subjects be increased.

West Bengal

1. As compared to states like Maharashtra, Karnataka, Andhra Pradesh and particularly Tamil Nadu, the West Bengal state Government introduced vocational education in only a small number of institutions : 45 as compared to 950 in Tamil Nadu.

2. It was reported that the state government did not give any encouragement to the introduction of vocational education at the +2 stage.

3. Though +2 classes were attached both to schools and colleges in the state, the vocational stream was introduced only in classes attached to schools. Infrastructure for vocationalisation was available in these schools.
4. West Bengal had introduced vocationalisation in three areas only (agriculture, engineering and commerce). They had introduced some courses in paramedical sciences but these had been discontinued. The state did not have courses in home science at +2 level.

5. The state government did not pay any special grant for vocational education. Institutions had to raise their own money for non-recurring items and had to meet the recurring expenditure from fees received from students. This money was often inadequate and hence vocational education suffered.

6. Some junior technical Diploma Institutions had been allowed to conduct XI and XII (Technical) classes. The heads of these institutions were unable to handle the problems of classes XI and XII and there appeared to exist some hidden tension in such institutions.

7. No district wise manpower need surveys had been undertaken. Old multipurpose schools and junior technical institutes were allowed to conduct vocational education at +2 level. This resulted in students of class XII remaining unemployed. They did not even get priority in admission to polytechnic. There appeared to be a lot of frustration among student about unemployment.

8. Many teachers of vocational subjects had to teach these subjects as extra work. They were otherwise fully employed in the same institution or in a nearby institution. The extra salary (allowance) these teachers received was not commensurate with the extra work they had to put in.

9. As compared to other states in the country West Bengal had introduced quite a small number of courses in vocational areas.
10. In West Bengal, a student offering vocational education at the +2 stage had to take core subjects carrying a weightage of 500 marks and vocational subjects carrying weightage of 500 marks. In core subjects 200 marks were allotted to two languages (English and Bengali) and the students had to take three core subjects carrying weightage 100 marks each. Students and teachers had expressed the view that +2 level particularly in the case of vocational students, one language should be considered enough and students be required to study the relevant core subjects carrying weightage 400 marks only.

11. As in the rest of the country, student and teachers demanded that all their needs must be met from the government funds. They needed hostel facilities, industrial visits and tours at government costs.

12. Paramedical course, where they were introduced were extremely popular. However, as these courses were not recognized by the relevant medical/pharmacy council at the All India level, the courses had been discontinued.

13. Statistics in relation to the number of students at the +2 level (general) and the +2 level (vocational) clearly showed that only around one percent of students at this level could offer vocational subjects.

Robert (1988) conducted a study to find out if the vocational choices of Higher Secondary students depended upon their socio-economic status. A socio-economic status scale, the vocational interest record and parental aspirations on children's vocations questionnaire were used to collect data. The findings of the study
revealed that vocational choices of Higher Secondary students were independent of their socio-economic status and also the vocational aspirations of their parents. Both boys and girls had similar vocational choices towards Agriculture, Arts, Literature, Executive, Commerce, Science and Social Work. However, more girls preferred the vocation household work than boys.

Muthiah (1989) surveyed the vocational education system for the disabled in Tamil Nadu. The study found that the facility of free boarding and lodging is enjoyed mostly by orthopaedically handicapped student. Medical attention is given to all mentally retarded children. Disabled students found it difficult to cope up with the school programmes resulting in disciplinary problems. The vocational training imparted was not in accordance with the interests and aspirations of the children. These instead reflected the needs and requirements of the institutions.

“The role of industries in promotion of vocational education among rural women – A feasibility study in the state of Haryana” was conducted by Bhatnagar (1991). The sample consisted of 116 respondents (77 high school girl students, 23 teachers and 16 parents) from the rural areas of Karnal district. A set of three questionnaires eliciting information about all aspects of vocational education was administered to the students, teachers and parents. They were also interviewed. Percentages were calculated to analyse the data.
Major findings of the study are given below:

1. The majority of the girls were aware of the local industrial units. They showed a wide range of interest in vocations related to computers, electrical repairs, printing, the arts, typing, stenography, accounting, beauty parlours, tailoring, music, dance, drama, salesmanship. More and more girls were found to be keen to learn about modern trades.

2. The major hurdles to the development of vocational education and employment opportunities for women in rural areas were identified as lack of adequate training facilities, text books, training materials scholarships, systematic training courses and a human resource development policy in Haryana.

3. Some of the reasons for low participation of women in gainful employment were a) girls looking after household work; b) social customs; c) invisibility of women’s work and competence; d) lack of relevance of the school curriculum.

4. Poor database on the extent and nature of employment of women and the absence of clarity on what constitutes work and vocation for rural women posed definite impediments in assessing women’s actual productive participation in the economy.

A study entitled ‘A Study on the Interest and Difficulties faced by the Students studying in the Vocational Education Stream’ was conducted by Bhargava (1991). Thirty Four schools having the vocational stream were randomly selected from all the five gauges of Rajasthan i.e. Jaipur, Jodhpur, Udaipur, Kota, Churu. Separate questionnaires were administered to 33 principals, 34 vice principals, 32 vocational
teachers, 224 students and 193 concerned parents. The study revealed the followings:

1. Eighty-three percent of the students chose vocational education out of their own interest, while a small section joined it as they could not get admission in the academic stream.

2. The majority of the students felt that vocational education was purposive, interesting and important for enhancing employability and national development.

3. The majority of the parents opined that their wards were interested in vocational education and that it was better than academic education as it prepared them for employment and self dependence.

4. Only 35 percent schools had trained staff.

5. The number of students in the vocational stream was decreasing progressively because of non-availability of trained teachers, lack of proper guidance and inadequate physical facilities.

6. The criterion of admission was the interest of students and their parents.

7. In most of the schools there was lack of space, teaching aids and subject teachers.

8. Ninety-seven percent of the vice principals considered vocational education useful and an answer to the unemployment problem. Sixty-five percent of them had no training in vocational education. All of them said that the budget for vocational education was not allotted in time.

9. Majority of the teachers felt that their students could get employment or become self employed after passing out from +2 stage.
Biswa (1992) studied the vocationalisation of education at the +2 stage in the state of Himachal Pradesh. A cluster sample of government senior secondary schools which responded to the questionnaires was chosen for the study. The total sample consisted of 22 principals, 65 teachers and 30 percent of the students in vocational courses at the +2 stage (Classes XI and XII) in 12 government senior secondary schools of six districts. Data were also collected from the ex-students of the stream, from policy resource agencies and from 100 persons from the nearby community. The tools used were questionnaires and interview schedules. Analysis of variance was used for the purpose of analyzing the Data. The major findings of the study are given below:

1. Admission to vocational courses was done on the basis of merit and on increasing trend of enrolment in the vocational stream was noticed from 1988-89 to 1990-91 in the state.

2. The implementation was deficient in terms of infrastructure, teaching and non-teaching staff, funds, proper management system, supervision, need-based curriculum development, publicity linkage between SUPW activities and vocational courses, coordination and cooperation among various departments, collaboration with employing agencies, on-the-job training facilities, placement facilities, incentives and text books.

3. The teaching strategies used by the teachers were largely traditional.

4. There was no special arrangement to training vocational teachers.

5. Vocational students were not interested in self employment.

6. Lack of adequate knowledge and understanding of the scheme was noticed among personnel involved in the process of implementation.
2.2 Studies on the Centrally Sponsored Scheme of Vocationalisation of Education at +2 Stage

Misra and Verma (1990) who made a quick appraisal of the implementation of the CSS of vocationalisation of education at +2 stage in Uttar Pradesh found that the management system as suggested in CSS had not been fully implemented at various levels. The district vocational surveys for identification of courses and institutions were not completed. There was dearth of text books, teacher guides, practical manuals and other instructional materials in almost all the vocational courses. No full time teachers were appointed. The in-service teacher training programmes organised were grossly inadequate while work sheds were constructed in 197 out of 200 institutions, the majority of them had a shortage of furniture and library books. No provisions was made for raw materials and other contingencies.

Sen Gupta and Raizada (1991) made an on-the-spot study of the implementation of vocationalisation of education programme in the state of Karnataka. The study team had discussion with state level authorities and collected available material. Visits to the institution, discussion with the head, teachers and students, observation of laboratories, workshops, work shed farms, classrooms were carried out to collect the necessary data. Administration of questionnaires to the Principals, concerned teachers and vocational students was also done. The sample of institutions consisted of sixteen junior colleges.
The recommendations made by the study team are as follows:

1. Steps should be taken both at the national and state levels. To stabilize, standardize and accredit vocational institutions and courses.

2. Monitoring of the vocational courses is infrequent and inadequate. It should be done more frequently particularly at the central level.

3. All vocational courses run by the state and U.T.s should be covered under the Apprenticeship programme.

4. Teachers should be paid regular salaries. Discontent regarding service conditions require to be looked into expeditiously to create a conducive academic climate.

5. Principals of institutions who are responsible for conducting vocational courses should also be suitably remunerated. This measure would go a long way in improving the implementation.

6. All central and state government organisations/undertaking should prefer vocationally trained students to general students in selection of jobs.

7. A cell should be created at the district level to channelize and guide those students who want to set up self-employment ventures.

8. Vocational courses being practice oriented utmost importance should be given to quality of training. This would mean providing adequate and appropriate equipment, raw materials, storage facilities, furniture, instructional materials etc.

9. Sustained efforts are required to provide on-the-job training to students.

10. Vocational courses should be taught both full time and part time teaching staff as per national norms.

11. Government grants should reach the institutions well in time to avoid delays.
12. Seats in general academic courses should be proportionally reduced in an institution to accommodate vocational courses.

13. A firm decision should be taken at the Government level to stabilize vocational scheme and remove all doubts about its continuance.

14. Vocational courses should gradually develop into a distinct alternative channel. It should assert itself as a complementary system both on the administrative as well as academic fronts.

15. Periodical retraining of teachers is an essential requirement. The training programme should be arranged for both context and pedagogy to bring in vigour and quality in training.

The problems of vocationalisation of education at +2 stage in Andhra Pradesh was studied by Emanuel (1990). The findings of the study indicated that there is a felt need for vocational education. The guidelines framed by NCERT with regard to vocationalisation of education at +2 stage were not followed by the state. The state did not have a separate directorate for vocational education to systematically take up curriculum development training of teachers, curriculum, transaction etc. The scheme suffers a lot due to dual control in respect of academic and administrative matters. An SCVE has not been set up in the state as yet. The facilities both in terms of manpower and infrastructure are disorganized and meager. The teaching faculty is drawn from coordinating institution on an ad hoc basis which affected the scheme adversely.
Vocationalisation of education at the +2 stage in the Union Territory of Delhi was studied by Gupta (1990). Twenty three schools offering ten vocational courses were selected through the purposive sampling technique. All the 332 students pursuing these courses and all the 33 teachers teaching these courses were included in the study. Only 12 Principals could be contacted and relevant data collected. The study also included 56 ex-student and seven experts. The tools used for the study were a general information sheet, questionnaires and interview schedule.

Major findings of the study are given below:

1. In Delhi vocational courses were introduced in schools based on the availability of teachers and infrastructural facilities.
2. Most of the schools had part time teachers to teach the courses.
3. The schools did not have adequate consumables for practical.
4. Students from all sections of the society joined the vocational courses.
5. Most of the students joining vocational courses had obtained the second division in the qualifying public examination of Class X. Sixty six percent of the students opted for these courses on their own without anybody’s guidance.
6. Vocational courses were started without taking into consideration the needs of the community.
7. Courses were selected according to the suggestions of a review committee.
8. There was no linkage of these courses with the academic stream courses. However, enrolment to these vocational courses was found to be increasing as the students completing vocational courses were being absorbed in the employment market.
Dhote (1991) made an on the spot study of the implementation of the Vocationalisation of education programme in the state of Maharashtra. Twenty-five institutions, head of institutions, teachers and students formed the sample of the study. The tools and techniques used were questionnaires, proformas, discussions and observations. Frequency distributions and percentages were calculated. The findings showed that programme implementation in terms of the administrative set up, the teacher, the infrastructural facilities was going on well. Lack of suitable instructional materials, inadequacy of on-the-job training, non-recognition of the vocational courses for employment were some of the major lacunae inflicting the programme. Innovative practices in some institutions significantly facilitated better implementation of programme.

Guru and Ray (1992) conducted an on the spot study of the implementation of the vocationalisation of education programme in the state of Andhra Pradesh. Seventeen institutions, principals, 58 teachers, students eight district vocational education officers and four state level officers formed the sample. Relevant factual data were collected through questionnaire discussion and observation. Mean and percentages were calculated and frequency distribution were used to arrive at inferences and conclusions. The study revealed the following:

1. The programme of vocationalisation of education got a major boost with central and under the centrally sponsored scheme (CSS) and expanded rapidly from 1987-88.
2. The implementation suffered due to delay in the creation of posts and the appointment of personnel as per the proposed management system and lack of appropriate and adequate staff at the state district and institutional levels.

3. Lack of timely monitoring adversely affecting the building up of the infrastructure and the establishment of the school-industry linkage.

4. Inadequate vertical and horizontal linkages, lack of suitable instructional materials and on the job training, no change in recruitment rules and non-recognition of vocational courses for employment and no follow up of vocational graduates for placement etc. were some major lacunae adversely affecting the programmes implementation.

5. Committed teacher’s innovative practices and responsive head in some institutions were positive features of the programme.

6. Forty eight percent of the responding students had obtained the first division. 33 percent the second division and 19 percent the third division in the last SSLC examinations.

Sacheti, Raizada and Verma (1992) studied the implementation of CSS of vocationalisation of education at the +2 stage in the state of Kerala. Data were collected by administering questionnaires to state level functionaries, heads of school (19) teachers (65) and students (728). The study revealed that the management structure was created as per CSS, the course design was bifocal, enabling students to either take up a vocation or pursue higher academic or professional education. The majority of the teachers teaching vocational subjects were fresh graduates or post graduates having no practical experience. Out of the
vocational entrants 16.4 percent had obtained the first division 28.9 percent the second division and the remaining the third division or pass class in the qualifying public examination. About 28 percent of the parents were engaged in agriculture or farming related occupations while 25.2 percent were government servants, 53.8 percent parents had a monthly income of Rs. 500/- or less, 22.3 percent earned between Rs. 501-Rs. 1000/-, 17.8 percent between Rs. 1001/- to Rs. 2000/-, 4.8 percent between Rs. 2001/- to Rs. 4000/- and only 1.3 percent earned Rs. 4001/- or more. It was found that 11.7 percent of the vocational students belonged to the SC category, 1.3 percent ST, 36 percent BC and 51 percent from the general category.

Vaid and Sen Gupta (1990) had a quick appraisal of the implementation of Centrally Sponsored Scheme of Vocationalisation of Secondary education in Goa. The sample consisted of eight schools covering 10 vocational courses out of a population of 24 schools running 12 different vocational courses. A sampling procedure combining judgement and convenience was adopted for the selection of the sample. A total number of 223 students and 40 teachers were contacted for the purpose of collecting information using questionnaire. Data for the study were collected by administering questionnaires followed by interviews of officials of the Directorate of Education, Principals, Vice- Principals, Vocational teachers and students. Ratio, percentages, Simple average and weighted averages were used for the purpose of analysis of the data. The study revealed the following:

1. About 11.2 percent of all the Higher Secondary students in the state had been diverted to the Vocational stream.
2. The most popular Vocational courses in the state were:

   a. Office Management, b) Computer Technique, c) Accounting, Auditing and Taxation, d) Electronic Technician and e) Electronic Assembly Technician in that order. About 71 percent of all the Vocational students had opted for these five courses in the state.

3. No systematic Vocational survey was conducted for identifying the Vocational courses and the institutions.

4. As against the National recommendation of 70 percent the state provided about 62.5 percent weightage in terms of total time to the teaching of Vocational theory and practice.

5. About 62 percent of the principles/vice principles stated that the practical training given to the students was inadequate.

6. About 74 percent of the students and teachers reported that the availability of instructional material was inadequate.

7. Though there was no problem with regard to availability of full time teachers for these courses, some schools experienced difficulty in getting the right type of person as part-time faculty mainly because of the low rate of remunerations.

8. Nearly 76 percent of teachers had not undergone any specialized training in Vocational education.

9. More than 50 percent of schools had completed the construction of work shed and purchased the equipment but over 53 percent of teachers and 80 percent of the students who were contacted reported that the equipment were not adequate for giving the desired practice.

10. The schools were partially successful in arranging collaboration with neighbouring industry/institution.
11. About 56 percent of the students who joined these courses had obtained the 2nd division and another 11 percent the first division in their high school examination.

12. About two-third of the students reported that they had joined the Vocational courses because they wanted to get a job early.

13. There was virtually no effort made in the state to provide Vocational guidance to the student.

14. As regards vertical mobility, the Vocational stream products were allowed admissions to degree level courses in the academic stream.

Joshi (1992) conducted a study to find out the problems faced by students after passing the +2 vocational examination. The study which included 72 vocational stream products of Rajasthan reported the following findings:

1. Only 12.8 percent of vocational products were self employed. The percentage of student obtaining wage employment was also similar.

2. About 7 percent were in vocations other than those they had studies.

3. Fifteen percent were unemployed and 51.6 percent had opted for higher education. No student could get loans from any agency.

4. A large number of students found the theory portions of the vocational curriculum difficult. Their practical training was inadequate due to lack of tools, equipment and materials.

5. Even those student getting jobs remained dissatisfied because of inadequate salaries, lack of desired competencies and insecurity of jobs.
A case study by PSSCIVE (1995) on successful students of Business and Commerce vocational course reported by Dr. Vipin Kumar Jain is as follows:

Office management, typing and shorthand and secretarial work are required of one level or the other for successful execution of work in well planned manner at every place in any business or office. This area therefore provided large number of job opportunities. Today many schools of our country are conducting courses in office management, secretarial practice, shorthand and typing at the +2 level under vocational education. Many students have been successful in getting gaining employment after completing these courses. Presented here are some success stories of students for motivation of others.

1. Shri Shankerlal obtained vocational education in Office Management in the year 1991 from Govt. High School, Sirohi (Rajasthan). Today he is successfully running his own “Bharat Typing Institute”, Shankarlal purchased the machinery and furniture from some persons in installments. Having paid all the installments and other business expenses he is now making a respectable living.

2. Jaswinder Sing of Patiala, Punjab obtained vocational education in Secretarial Practice in 1989 from his state government school. He is employed as a reporter in Punjabi at the Punjab Vidan Sabha and drawing a salary of Rs. 5500/- per month. Jaswinder is working with complete dedication and sincerity in this area as a result of which he is highly placed and is holder of all India record in Punjabi shorthand for the past two years. Jaswinder was motivated by his family to join this vocational area. His father and grandfather were highly qualified in typing and shorthand work of their period. After
completing his high school education Jaswinder first started his own typing institute and later joined Govt. job. In addition to his job and business Jaswinder has successfully obtained a M.A. degree in Punjabi also.

3. Vijendra Singh of Chirawa (Raj.) has established his own business after having successfully completing the vocational courses in Hindi Shorthand. Vijendra Singh was motivated by his teachers that vocational education is helpful in gaining self employment. Vijendra Singh is the proprietor of Vijay type and Photostat. He has invested Rs 1,25,000 in his business and is now making sufficient profit also.

**Kant** (1996) prepared a report on placement of vocational pass outs is Chandigarh as stated below:

The success of any programme is judged from the quality of its end product. How positive/effective the imparting of vocational training has been can be calculated by looking at the placement record of vocational pass outs. Vocational education unit has been facing difficulty in keeping an updated follow-up record of students after they have completed their 10+2. For these consecutive years follow up cards were posted at the residential address of students. It was found that in some cases, the children have moved off from the given addresses and the letters were returned undelivered. Some children did not care to write back. Those who wrote back, were not open enough to frankly admit that they were doing some job or the other, perhaps with the intention that of otherwise stated. Vocational educational unit may help them in finding a better placement. Despite all these problems faculty of vocational education unit has been able to
keep track of a good number of its student. Incidentally, vocational education unit has also been writing to some identified prospective employers and sending them addresses of boys and girls pass outs of vocational stream. There was a positive response to this correspondence and about 10 students could find placement. As per information collected, a good number of students have found wage or self employment in the private sector. Students passing out of courses covered under Apprentices Act have found placement in Government as well as in private sector for undergoing one year Apprenticeship Training during which they earn stipend money (Rs.770/-) of which half is paid by Board of Apprenticeship Training and the other half is paid by the employing organisation. Some pass outs prefer to pursue higher education whether in the vocational stream or academic stream. Several students of dress designing and textile designing have opened their own boutiques or are working as wage earners in established boutiques. They have been participating in fashion shows and poster making competitions and have been earning a good name for their institution by way of bringing prizes. A student of Hotel management has joined the Merchant Navy and several other students of this course have been working in local hotels and restaurants earning Rs. 2000/- to Rs. 3000 per month. Most of the pass outs of Medical Lab. Technology, X-Ray Techniques and Ophthalmic Technique Vocational courses have been working in private laboratories and clinics earning a four figure salary. Some boys of MLT have opened their own laboratories. As per records available students of Commerce based courses prefer to go in for higher education in academic stream and vocational stream in that order. Some however go in for wage or self employment. Boys and girls of engineering based vocational courses undergo Apprenticeship Training and seek wage employment. Some of them, it
has been learnt have been able to get admission to diploma courses offered by polytechnic institutions while some pass out students of MLT, qualified and got admission to the 3 year degree course in MLT at Post Graduate institute of Medical Education and Research. Some others, as also pass outs of ANM vocational course are doing 3 year diploma course in general nursery in Punjab and Haryana. Students of ANM have been getting themselves registered with Punjab Nurses Registration Council (PNRC). This Registration serves as a green signal to them for higher professional mobility.

Some case studies by PSSCIVE (1996) on a successful students of building construction vocational course revealed the following:

At +2 level building construction is a vocational course under Engineering and Technology area. This course is being taught in different schools of the country. After completing this course many of the students have been successful in getting employment. In Government Lalchand, Higher Secondary School, Sihora District Jabalpur of M.P., The Building Construction Vocational Course is being taught since last many years at +2 level. The success stories of some students who have done this course are given here.

Shri Pramod Kumar Soni, Prakash Chandra Chakravorthy, Rajesh Kumar Asahu and Pradeep Kumar Soni completed their Building Construction Vocational Course in 1st Division in 1992. After completing the course, all the four students decided to go for self employment. The Municipal Council Sihora Dist. Jabalpur registered them in the capacity of map and estimate as makers. Presently these
vocational students are running successfully their own Builders and Consultant institute/office. They have all important machines in their institute through their enterprise all of them are living a respectable life by earning about Rs. 2800/- per month each. It is clear from the above success stories that if proper vocational skills are developed in the process of the education it leads to success. To encourage vocational education and to develop required competencies as well as entrepreneurial qualifications is the need of the present society. By doing this it is possible to develop a positive co-relation between education and employment.

Mr. P. Keshava, the son of a humble and pious clerk working as Secretary, Milk Producers Cooperative Society, Belal, Dist. Dakshin Karnataka, gives credit to vocational course for his present position and successful career in a short span of time. He joined the vocational course in Dairying and passed the same in 1987 with 72 percent from Shri D.M. College, Ujire. After completing his SSLC, he opted for vocational stream than academic stream because this would prepare him for gainful employment and make him middle level professional.

His first appointment was a tutor in the same college from where he passed out. He was getting Rs. 375/- p.m. for 2 years. During his job as tutor he came in contact with the father of a missionary organisation who motivated him for managing an agriculture farm with diversified activities at Nagaland. He worked for two years as a farm manager and was getting Rs. 1500/- p.m. plus free lodging and boarding facilities. He had to leave the job due to long distance from his town and personal family reasons. Mr. Keshava returned with a lot of practical experience and skills. He started veterinary dispensary with the assistance of
Manipal industrial trust and started earning Rs. 1500/- p.m. from the services he was rendering to the farmers having Dairy animals. He changed the job to widen experience base and joined a Milk Producers Cooperative Society as Secretary. He is now earning about Rs. 2250/- p.m.

He is happy with work and achievement in the last nine years. He is extremely satisfied with the course and therefore, always suggests to his friend, neighbours and relatives for job oriented vocational courses. He plans to establish a dairy farm after a period of four years at his native village. He also aspires for higher education Diploma in Dairying which he intends to do through open learning system to upgrade his knowledge and skills. He owns a motor cycle and discharges his duties of artificial inseminator and pharmacist in Dairy.

According to Mr. Keshava it was the practical training at the dairy farm of D.M. College and dedication of a retired teacher which motivated him to undertake a variety of jobs in Dairying profession. He is of the opinion that Dairying course cannot be transacted without a dairy farm either available in the school or in the neighbourhood. Apprenticeship training will be beneficial. He strongly feels that the Government should come out with programmes and schemes for supporting vocational courses pass outs for self/wage employment.

A report prepared by PSSCIVE (1997) on Success and Vocational Education revealed the following:
Vijay Vyas passed his Higher Secondary from M.P. Madhyamik Shiksha Mandal in 1985 and in order to build future in the technical field he appeared in P.E.T. examination but his name figured in waiting list and this list did not get cleared and then he took admission in B.Com. 1st year. However he was interested in technical education. On the basis of his interest and continuing search he got admission in Class XI in 1987 electronics technology vocational course conducted by the Demonstration Multipurpose School, NCERT. He passed the two year course in first division. During studies he obtained the required practical knowledge and skills related with Electronics.

After completion of this course he got offers for jobs but not taking this course as an ultimate goal he took admission for the computer management diploma in the Somayan Institute of Management studies and Research Centre, Mumbai on the basis of vocational course at Higher Secondary level. While doing Diploma he also joined a private computer firm in Mumbai with an aim to acquire practical knowledge and learnt computer repairing and assembling. After getting Diploma he started computer training and repairing institute in his home town Bhopal. In the institute the students were trained and maintenance of computer centre of the private institutions was also undertaken. He made his own identify through computer work and later on he got an opportunity to work as a Instructor and in charge computer centre at Government Engineering College, Bhopal. During 5 years of his service he trained many students of degree level. He did graduation during the service thereafter he completed Post Graduate Diploma in Computers from A.P. S. University Rewa and also received training for computer network. In 1995 he got selected in the PSSCIVE as a computer operator Gr.II.
Today he is discharging his official responsibility excellently. He says, "Vocational Education has shaped my life. I am very happy".

A case study by PSSCIVE (1997) on a successful student of Stenography vocational course revealed the following.

Shri Praveen Katolkar after passing his Xth was in a dilemma to chose a right path for a successful career. According to him most of his seniors who took higher education like B.Com., M.Com., B.A., M.A., B.Sc., M.Sc. etc. were searching for jobs and due to lack of any specialized skills none of them were getting a job. His elder brother and parents guided him at that time to join stenography vocational course in Demonstration Multipurpose School Regional College of Education, NCERT Bhopal. It was a two year course in which the student were trained in different area of skills such as shorthand, typing, office management, secretarial practice etc. He then registered his name in the local employment exchange. After six months he received an interview call letter form the Employment Exchange for the post of Stenographer in PSS Central Institute of Vocational Education (NCERT), Bhopal. He succeeded in the interview because he had practical skills and knowledge of stenography. So at the age of 20 years he became an independent earning person earning more than Rs. 4000/- p.m. He would like to suggest to his young friends to join the vocational course after 10th class for a better career.

A success story reported by the Director, Directorate of Vocational Higher Secondary Education, Thiruvananthpuram, (1998) showed the following:
B.N.V. Vocational Higher Secondary School, Thiruvananthapuram, an unique institution has started production of electronic chokes in the School for supplying to the local customers. This idea was mooted by Smt. Resmy S. Vocational Lecture in Maintenance and Repairs of Radio and Televisions under the management of Smt. K.T. Rakhamani Amma, Principal of that School. The electronic ballast is used to illuminate fluorescent lamp even at low voltage. Since low voltage is a serious problem in Kerala, this product has very good market potentiality. By engaging the students in this production process they get the practical and opportunity to earn their livelihood. Thus the principle of earning while you learning is practiced here.

A report prepared by Goud (2002) provided by a part time Lecturer in Nursing, Govt. Jr. College for Girls, Mahabubnagar (A.P.) is as follows:

Government Junior college for Girls, Mahabubnagar is running Nursing [MPHW(F)] Vocational Course since 1994. Dr. G. Kashinath Goud is working as part-time lecturer since 1994. He is working very hard to motivate students to join "Nursing Intermediate Vocational Course" as it is job oriented, beneficial and useful course for girls. Dr. Goud is popularizing the course by:

i) giving an up-to-date knowledge to the nursing students, including health education and the latest information about health problems and their management from all over the globe.
ii) encouraging the students to join nursing profession as a service to people, not only for earning money as in rural areas service to the poor people is an important factor.

iii) motivating the students to participate in the national and state health programmes, such as Pulse Polio Programme, Nutrition Programme and various health awareness programmes e.g. Family Planning, various deficiency diseases, effects of tobacco, gutka, drugs, alcohol and many more on health.

iv) Creativity awareness regarding increase in nutritional disorders and infectious diseases.

Since 1996, Dr. Goud is maintaining a follow-up record of students who had successfully completed the course and their present status regarding vertical mobility and placement in job. Most of the students have passed with 1st division and joined higher education in nursing course. After completion of their higher education, some of them got government services. Many ex-students are working in various private nursing homes and hospitals at Mahabubnagar and Hyderabad. A very few students could not succeed in the course.

A report by Prasad (2003) coordinator of Swami Vivekanand Junior College Chembur, Mumbai showed the following:

Swami Vivekanand Junior College, Mumbai had started vocational courses at +2 level in the year 1988-89 with three vocational courses (Electronics Technology, Maintenance and Repair of Electrical Domestic Appliances and Cookery). Three more vocational courses (Purchasing, Store Keeping, Medical Laboratory Technician and Building Maintenance) were started in the year 1990-91. In the
year 1993-94, Marketing and Salesmanship and Creche and Pre-School Management were introduced. Accounting and Auditing, Banking, Travel & Tourism and X-Ray Technician courses were implemented in the year 1997-98. The vocational course Computer Techniques was introduced in the year 1999-2000. The college has full-time Assistant Teachers and Instructors in all vocational courses. At present, 13 vocational courses are successfully offered by 25 teachers. Students and parents have been showing interest in vocational courses and due to increasing demand vocational courses are continuously running in the institute. Every year four to five students get ranks among the first 15 students of Higher Secondary Board merit list. The institute is a recipient of the Best vocational Institute Award 2000 by the PSSCIVE (NCERT), Bhopal. The institute regularly organizes, projects exhibition to improve student communication skills to boost their confidence. Thus theoretical knowledge gets practical experience.

2.3 Implications for the Present Study

From the studies reviewed and presented in the preceding sections it is evident that many studies have so far been conducted on Vocationalisation of education at Higher Secondary stage. However, hardly any attention has been given to comprehensive evaluation of Vocationalisation of education at +2 stage. Of the studies reviewed it was found that the studies conducted so far dealt with individual aspects and none of the study presented a comprehensive picture of evaluation of the different aspect of the CSS of vocationalisation of education at +2 stage. Therefore the present study is an attempt in this direction.