CHAPTER III

REVIEW OF THE RELATED LITERATURE
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This chapter includes studies related to the present study conducted abroad and in India. Vocational education abroad was launched in 1917. In India, the programme of vocationalization of higher secondary education was introduced in 1976-77. Since then the programme has grown steadily both in its coverage and quality.

The related literature quoted here has been classified under three major heads i.e., Situational analysis of vocational education stream, Vocational maturity of vocational students and Follow-up of the vocational students. Situational analysis of vocational education stream includes vocational choices, factors influencing vocational choices, vocational education training and programmes, evaluation by vocational teachers and administrators, problems encountered by vocational students. Vocational maturity of vocational students includes Vocational maturity in General and sex-differentials regarding Vocational maturity. And follow-up of vocational students has been classified as follow-up in general, job-placement of vocational students and job-satisfaction of vocational students.

Situational Analysis of Vocational Education Stream

Situational Analysis of vocational education stream cover the areas of studies related to vocational choices, factors influencing vocational choices, vocational education training and programmes, evaluation by vocational teachers and administrators and problems encountered by vocational students.
Vocational Choices

Studies Abroad

Watkine (1979) concluded that vocational students perceived that they were enrolled in vocational courses of their own choice. Vocational students apparently felt their enrollment was approved by peers, parents, counsellors and self.

Futrell (1986) indicated that programmes frequently supported the operation of institution (meat-cutting, auto mechanics, welding). Unusual programmes included air engine mechanics, data processing and marine-engine repair. Trends indicated that (1) the types of vocational programmes remained relatively constant (2) course offerings almost doubled (3) an upward trend inmate enrollment was observable and (4) programmes completions fluctuated.

Chapin (1988) showed that career education exists in the curricula of the area vocational schools, that career education elements exist throughout the curricula, and that personnel and programmes that aid in the career education of students, are present.

Studies in India

Bhatt (1972) found that vocational education was established in Germany on stronger grounds as compared to India. In India some provisions exist for the vocational education. Specialised institutions need to be established for different trades, work experience needs to be strengthened in the present educational system. But a study of manpower needs will help in better planning and organization of vocational education.

Reddy (1972) indicated that the subjects hailing from different localities did not differ on vocational needs, power, activity, moral values and services. The occupational choices of the subjects were found significantly related to social status. A disproportionately large number of subjects were desirous of entering the medical field.
Devasthalee (1978) found that the academic atmosphere was in favour of vocationalisation. He recommended that vocational education should begin from fifth standard. Some vocational courses should be introduced for the dropouts. Vocational courses should not be treated as 'extra'. A pupil must be given a certificate for successfully completing a vocational course. In vocational course, emphasis should be on practical aspect. A comprehensive programmes of vocational guidance is essential. A common vocational school should be set up to meet the needs of various neighbouring schools.

Pillai and Thangaswamy (1981) in the study revealed that the match industry and fire works design with plastic, polythene packing materials, motor cycle and scooter technology etc were the most needed to vocations for Madhurai district. Only 5 percent of the students expressed their desire to materials for reading and writing lack of parental co-operation etc.

Singh, Singh and others (1981) showed on the basis of reports of Ambala, Bhiwani, Gurgaon, Kurukshetra, Mahendragarh, Rohtak, Sirsa and Sonepat districts. 73 educational institutions of High and Higher secondary levels were identified. The courses recommended in the identified institutions were boiler attendant for two institutions, stenotypist for eight, stenographer for six, food and fruit presentation for six, poultry farming for nine, building construction technology for three, repairing agricultural implements for fourteen, leather technology for 3, nursing for 8, cutting and tailoring for 15, electronics for 14, brick-making for 2, electrician for 16, fishing for 12, Librarian for 6, interior decorating for 5, Secretarial practice for 7, radio assembling for 3, accountancy for 9, diploma in textiles for 6, cookery and nutrition for 5, tauting technology for 4, weaving master for 4 embroidery for 7, draftsman for 3, plumber for 2, canning for 2, repair to household gadgets for 4, plastic technology for 3, textile dyeing and painting for 5, salesmanship for 10 and automobile technology for 3 institutions.
Sen Gupta and Raizada (1991) found that the state of Karnataka has adopted 41 courses in the five major areas i.e. Engineering and Technology, Para-medical services, Business, Trade and commerce, Agriculture and allied sciences and Home science. Two courses namely, Pre-school education and land survey were of one year duration and the rest for two years duration. The scheme was initially started in 3 districts in 13 institutions with 52 sections and enrollment of 1275 students. There has been rapid growth in the number of sections year after year with the increase in enrollment. Monitoring of the vocational courses was infrequent and inadequate.

Factors influencing vocational choices

Studies Abroad

Winstead (1979) indicated that students served by the vocational and technical education centers tended to be males rather than females. A large number of students were 24 years old and older, a large percentage of students represented low to middle socio-economic class. The low socio-economic level of students were inclined to pursue the area of business and trades and crafts.

Mohagheghzaden (1980) revealed that socio-economic status and Junior high school achievements influence the choice of a vocational education curriculum for senior high school.

Rose (1982) indicated that student had a fairly high level of knowledge of the purpose of the vocational education. Student's level of knowledge of courses in their district increased as they remained in school. Females had more favourable perceptions of the vocational education than did males. Younger students were influenced more than the oldest students to enroll in vocational courses.
Johnson (1984) revealed that the responding student population had a strong interest in pursuing higher education GPA, course requirement and money were found to be perceived as not limiting their college enrollment.

Whitimen (1984) concluded that females are more likely than males to enroll in vocational technical training, a typical for their sex.

Evans (1986) found that vocational training in the United States involves five areas: Secondary schools, Post-secondary schools, Proprietary schools, Formal Apprenticeships and Employee Training Programme. Course areas divided into types of institutions, race and sex. Females are represented most in office and health occupations. Males are over-represented in agriculture, technical trades, and industrial occupation training programmes.

Schneider and others (1987) found that Massachusetts vocational high schools are highly successful in preparing their students for the labour force. The majority made a successful transition to the Job market and earned competitive wages. Both employers and graduates expressed positive opinions about vocational education.

Douglas (1988) revealed that groups surveyed in the Huntsville city school district held a favourable image of vocational education. The significant differences existed between groups that appeared to be mainly a function of the degree of personal involvement with vocational education.

Hazer (1990) found that at least 70% of Iranian students showed positive attitudes towards applying for admission to vocational-technical programmes offered in Community college. The relatively small percentage of students who did not reflect a positive attitude reported that their parents had a high socio-economic background and/or that one of their parents had a university degree. Although Iranian high schools students in general are
dissatisfied with the availability of present post-secondary education options, vocational technical programs appear to be viable alternatives to higher education.

Tseng (1991) stated that female students were more favourable in their attitude toward vocational education than the male students.

**Studies in India**

To the best of knowledge of the investigator, no such studies have yet been conducted in this area.

**Vocational education training and programmes**

**Studies Abroad**

Okechukmv (1979) revealed that vocational and technical educational institutions should be located in towns and cities where students can obtain practical experience from the existing firms, industries, and government offices. Principals should have the power and authority to make important decisions affecting the welfare of their schools. Finally, more money should be voted by Federal and State governments to furnish these institutions with up-to-date equipment and facilities so as to make them more attractive for both students and teachers.

Morelli (1980) found significant difference between perceived post-secondary vocational training needs and availability of a local programme and between grade level and programme length preferences. NO significant difference was indicated between post-secondary vocational enrollment plans ability to meet admission requirements or the presence of family obligations. There was a significant difference between students perceived post-secondary vocational enrollment plans and the presence of defined career goals, attendance costs and availability of transportation.

Malithong (1983) concluded that adult vocational programs are useful and helpful to the learners in terms of acquiring knowledge and skills for their Jobs and enriching
their personal lives. In addition, they also ensure them of their future employment opportunities. However, in order to facilitate this learning, additional and more modern equipment in conjunction with improved sources of information must be provided.

Marrs (1983) recommended that vocational education should continue to be an important part of the school programme for all students. Local communities and Advisory committees should share in formulating vocational curriculum. Federal funding should be used to supplement vocational programmes. Principals should complete one vocational education course and/or internship programme. Vocational programmes should not be limited only to special groups of students but should be provided for all those who need, want, and could use the instruction.

Sullvian (1983) reported in his study that in the period 1961-66 there were rapid developments resulting from Joint-federal provincial vocational education policy. In the period 1967-69 major changes in federal manpower policy resulted in withdrawal of federal aid to secondary technical vocational education. Curriculum reform was instituted in high schools through the credit system. During the 1960's vocational objectives were defined principally in terms of economic and social efficiency, thus limiting equality of educational opportunity.

Price (1985) found that students had fewer opportunities, less variety of course choices the quality of what remained had improved and there were more dropouts. State administrators should support quality of vocational education programmes in order to meet the needs of all students.

Ming (1986) indicated that in china especially to the opening of many high schools the ratio of secondary students going into vocational versus academic education has changed to 60:40. The vocational high schools also stress entrepreneurship, which has been
recognized by the state as a means to reduce unemployment and foster economic development.

Duvley (1988) found that several women's organization emerged as advocates of vocational education programmes for women, planning a major role in their development and implementation.

Kozarek (1988) found that "improving the academic foundations of vocational students" is perceived to be appropriate purpose for vocational education and that compliance with the federal mandate in significantly varying degree is less than 100 percent. Kimberly (1988) found that work experience did not have an effect on the students career related behaviour during the period of study.

Romes (1989) found that vocational education, rather than detracting from basic educational achievements or limiting students self-concepts, i.e., achieving the results for students that its proponents envisaged the study also identified several promising schemes for further research.

Miller (1990) revealed that vocational education must be included in order to implement programmes under new legislative guidelines concerning effective school programmes.

Studies In India

The study conducted by Roy (1978), revealed that there was an increase in the mean vocational development index with increase in vocational status. Only the academic achievement had positive and significant correlation with the vocational development index.

Soundaravalli (1984) revealed that nearly 90 percent of the schools were upgraded as higher secondary schools with vocational and technical streams in the year 1978. Some 21 different vocational subjects were offered in these schools. About 90 percent of the schools functioned well and were able to produce 90 percent results in the public examination.
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. The instructional materials pertaining to curriculum was not adequate in 50 percent of the schools. Only 30 percent schools were fully equipped. Yet nearly 37 percent of the vocational group students went in for higher studies only. The vocational group students, the teachers teaching vocational subjects and the parents of vocational group students showed a favourable attitude towards vocational education.

Mohanty (1986) concluded that very few school imparted vocational and technical education in 1947. By 1971, the total number rose to 106 and 124 in 1981. More men were attracted towards technical and vocational courses than women. Type-writing, music, dance, drama and tailoring had attracted women. There was shortage of skills personnel and an unemployment problem from 1961 to 1981. No follow-up programme was undertaken. Courses in various institutions were need based. Since the employment prospect was bleak, many dropped out. Students coming out successful were technically unsuitable on jobs for want of practical experience.

**Evaluation by Vocational teachers and administrators**

**Studies Abroad**

Bayati (1979) concluded that vocational teachers and vocational schools directors are more concerned with instructional responsibilities than vocational education supervisors.

Shephard (1979) found that the vocational technical teachers generally rated teaching skills as being more important. The teachers with fewer years of education and those without teachers education training rated the skills generally as being more important their ability to perform lower and their willingness to receive assistance as being great.
Robertson (1980) found the differences among the responses of vocational supervisor, principals and teachers on the competencies do not indicate a lack of agreement on the role and functions of the vocational supervisors. However, it appears that there is a greater agreement in the ranking of the competencies between the supervisors and teachers than between either group and the principals.

Fruehling (1980) revealed that conscientious vocational educators assume responsibility for the guidance and placement of students. Vocational educators who know the work personalities of their students as well as the reinforce systems of jobs, are more likely to be able to help the students find appropriate work situations.

Gilbreath (1982) indicated that improvements in vocational education include expansion of programmes, working relationship with business and industry and image improvements. Teachers need skills in the areas of individualization, motivation and teaching the worth of the individual. Vocational education should be a part of well-balanced educational program, meet the needs of business and industry. Teachers need more skills in areas being taught and in computer technical vocational education, graduates need competencies in the basic skills, employability skills, and entry-level skills. Vocational education can help address student needs by introduction at an early age, public relations and providing courses relative to the needs of business and industry. Vocational education should provide a flexible delivery system and more opportunities in apprenticeship programmes.

Malki (1986) concluded that all teachers and administrators with master's degrees and with more years of experience in their positions indicated more favourable attitudes toward vocational education than did their colleagues with less formal education or experience.

Kleinle (1988) recommended that an organized, informative and systematic inservice program should be developed yearly for faculty members. For assessing the
instructional needs of vocational instructors sending schools improve the process of identifying special needs students.

Sanders (1988) revealed that vocational teachers were undecided as to the need for extended programmes. Teachers were generally satisfied with general education components of teacher education programme.

Ambrose (1989) showed that vocational teacher educators must be involved with the trend to integrate basic skills with secondary vocational education. Ratings of inservice providers would indicate that inservice opportunities would be greatly enhanced if vocational teacher educators and business and industry personnel cooperatively offer inservice workshops and courses. Studies must be conducted to discover the barriers to the integration of basic skills with vocational education. Vocational educators must assist in the development of computer software utilized for basic skill instruction. Vocational education policy and decision makers must implement and finance the preceding recommendation.

Shiminski (1990) found that only 5 per cent of new vocational teachers start teaching with full approval. Almost half of all new teachers start teaching without an orientation at their school. Many new teachers identified informal support teacher relationships, but few a formally structured programme. The subjects identified topics that related to teaching skills as being most important to new teachers.

Mallory (1990) revealed that Principals, superintendents, and vocational teachers perceived the activities included under the initiating, coordinating and supporting function as being the responsibility of the principal. Principals were fulfilling the activities related to functions (initiating, coordinating and supporting) for improvement of vocational education instruction. The reasons that were offered by principals, superintendent and vocational teachers most frequently for why principals were not fulfilling their expected
functions for the improvement of vocational education instruction were "low priority item" and lack of knowledge.

Shuheil (1990) found that administrators, teachers and students have positive attitude toward vocational education. Most students indicated that they did not regret enrolling in the type of school and they would recommend vocational schools for their funds. Most students of vocational education come from families with low incomes and low levels of education. Most teachers in vocational schools are non-citizens and have 5 years experience or more. The policy recommended that the Ministry of education should conduct a need assessment to improve the quality of vocational education. The Government agencies: sponsor educational programmes through the media to modify the negative attitudes of the society toward vocational training and become involved to implement policies and to reform vocational education programmes.

**Studies in India**

While investigating the problem the investigator did not come across studies related to this area.

**Problems encountered by the vocational students**

Nwagbaraocha (1978) indicated that vocational and technical education needed more money for equipment and staffs.

Evans (1979) showed that few non-traditional students seek the assistance of guidance counsellor with problems they encounter in sex-taped programmes. Schools related programmes were most often reported of greatest concern by students who did not attribute much concern to any problems they encountered. Educators within school setting are not the greatest concern of problem of most non-traditional students.

Zachary (1984) indicated that there were no statistical differences in curriculum, peer, family, self-related problems. Females encountered significantly more
difficulty in school related problems than males. There was no significant difference in the problems encountered by age groups or by race for post secondary students in gender integrated vocational programmes.

Meyer (1991) found that the evidence presented demonstrates the feasibility of using high school vocational education as a potent instrument for developing skills. The fact that approximate three-quarters of all high school, vocational education is taken by students bound for college or post-secondary vocational-technical school, high school vocational courses needs to be structured, so that maximum continuity is provided between training in high school and training in post-secondary schools.

Studies in India

Munjal (1972) showed that average drop-out percentages for Government Higher Secondary school (Boys) Nilokheri, Government Higher Secondary School (Boys) Narmaul and Government Girls Higher Secondary school, Gurgaon were 29, 37 and 25 respectively. The causes of drop-outs were indifferent attitude of the parents, unsuitable environment, lack of dignity of labour, irregular attendance, socially maladjusted pupils, poverty, faculty curriculum, syllabi, no utilitarian gain, transfer of parents, non-payment of training charges/stipends in due time. Staff of PUTC (mostly on temporary basis) vocation/trade unattractive and low IQ of trainees.

Jain and Kurkulkar (1980) found that in Anantapur district, the existing training facilities were highly inadequate. In Kanyakumari district, on the other hand, though a considerable number of women were trained under various programmes both by the government and voluntary agencies, it was proposed to train 1750 women annually.

Thimmaiah, Aziz and Royappa (1981) found that the courses offered for vocational education were not consistent with the skills identified in shortage category. The
equipment position of the colleges offering vocational courses was quite sound. The colleges depended heavily on part-time teachers to run their vocational courses. A majority of the reported that the students were serious about course work. A majority of the colleges opined that grants received by them were quite inadequate.

Rohidekar and Usha (1981) concluded that the coeducational system was preferred and the teacher pupil ratio should not exceed 1:10. The problems of these institutions included lack of adequate number of teachers with special training, in getting special equipments, special participation.

Raizada, Sen Gupta and Dhote (1981) revealed that in Maharashtra, a total of 23 vocational courses were being run in non-government Junior colleges and higher secondary schools under six groups namely technical, commercial, agricultural, catering and food technology, fishery and paramedical. Inadequacies and drawbacks were found in the scheme in respect of the selection of courses, methods of instruction, provision of vertical mobility, instructional materials, the syllabus and financial assistance.

Vaid and Sen Gupta (1990) found that the state of Goa has not created proper management structure. There is no vocational wing in the State Institute of Education. Also, the vocational cells in the Directorate of Education the board of secondary education are very much understaffed. These shortcomings in the management system are having a worsening impact on the success of scheme of vocationalization in the state. Most important areas that are being neglected as a result of these include development of instructional material, revision of curriculum, survey of man power needs, facilities for apprenticeship training and on-the-Job training modification of recruitment rules arrangements for vocational guidance and counselling and general supervision of the schemes.
Vocational Maturity of vocational students

Vocational maturity of vocational students presents the studies related to vocational maturity in general and sex-differentials regarding vocational maturity.

**Vocational Maturity in General**

**Studies Abroad**

Alexander (1979) concluded that vocational maturity levels of inner city 8th grade adolescent boys were not affected by a career education curriculum. The career education group attained higher mean scores on the attitude scale. Occupational information, subtests of competence test and ground means. The non-career education group achieved either mean scores on the sub tests of the competence test for self-appraisal, Goal selection, planning and problem solving.

Coleman (1979) indicated that the process of vocational education may be influenced by the level of self-esteem and that the race of subject may be associated with the level of both self-esteem and vocational maturity.

Mahy (1980) concluded that eleventh graders were found to be more vocationally matured than 9th grades, sex and geographic location did not appear to have meaningful influence on vocational maturity. Item analyses revealed that for a number of items, the majority of Jamaican students gave the vocationally immature response.

Haigh (1980) suggests that the Korab Collegiate group career counseling program had a significant effect on the vocational maturity of its participants in terms of total vocational maturity and in terms of the attitudinal factors of vocational maturity.

Pavlak (1981) revealed that the variables of twelfth grade vocational attitude maturity and the occupational values of interact and satisfaction, and personal goal were the best predictors of Job satisfaction.
Wenstrom (1981) showed that parents exhibit a profound influence upon students career decisioning in rural high schools. Since students who have not been able to identify a specific career choice, are more greatly influenced by their peers than are students who have selected choice. Occupational information and other reading materials and students in understanding occupational choices available and in selecting career choices counsellors are perceived as having provided little help in career decisioning efforts by students in small rural high schools.

Hamer (1983) found the significant differences between the groups in the areas of career maturity. The traditionally female group indicated a possibility of depending on others for a career decision more often than the non-trade group. Both groups are considered to be career mature.

Weener (1983) found that gender, curriculum, grade point-average, and vocational attitude maturity at grade 12 were significantly related to vocational maturity at age 24 to 27. Family background was not significantly related to vocational maturity at age 24 to 27. Vocational maturity and vocational immaturity was significantly related to the kind of completed post-secondary education degree of certainty about occupational plans, and degree of satisfaction with occupational goals, and progress toward them.

Ugwuh (1984) opened that both IBO students and their parents had favourable attitudes towards vocational education. Neither students, family, income, educational qualifications and occupations nor students academic grades and vocational training, influenced students career choices.

Perrino (1985) concluded that career maturity was promoted through greater internality for both academic and vocational students. The vocational students career maturity was related to achievement.
O'Neil (1985) opined that a majority of directors and counsellors believed that students in Junior high school are neither knowledgeable enough about career nor mature enough to make appropriate career decisions. There was disagreement between directors and counsellors regarding the effectiveness of criteria for predicting success in and completion of vocational programs.

Grunz (1985) indicated that the type of social support offered in a career planning course did not significantly affect the career maturity of students at either level of vocational identity.

Fedoka (1986) showed that seriously emotionally disturbed students were less mature and maintained lower vocational aspirations than their peers, while grade level influenced the degree of career maturity and the decision making process associated with vocational development.

Harper (1987) concluded that career awareness and basic skill development for all students should be stressed at the lower level/grades 6-9. Introductory vocational courses should be provided for all students in grades 9-11 with emphasis placed on the development of employability skills. Job specific training should be provided in grades 11-12 for students who want it. The vocational arena should serve as the technological laboratory centre for each secondary school.

Wilson (1988) indicated in the study that subjects were involved in task and behaviour of several career maturity stages simultaneously. The result supports the need to examine further the application of major career development constructs to women and should address the wide diversity of women students.

O'Neil (1988) indicated in the study that if an individual is able to engage in corrective vocational behaviour he can diminish the level of occupational stress experienced.
Galbraith-Jones (1989) indicated that regardless of the age at which the career decision was made, it was influenced by inner need, ability and traits which surfaced at an early age. The immediate environment was the source of several influential factors including family background, role models, peer and family support and encouraging teacher.

Georgion (1990) concluded that family system dynamics are important determinants of career development in early adolescence and should be taken into consideration both at the level of policy making for career education program.

Haddad (1990) showed that the age in relation to career maturity was found to be statistically significant. No statically significant relationships were found between gender, major field of study, or years worked in current occupation and career maturity of graduate students.

Sellers (1990) showed that there was evidence to indicate that enrollment in a personal orientation course with a career planning focus has a positive effect on career maturity of undecided freshman students. In addition, undecided freshman enrolled in the same course demonstrated far greater career decision making skills in selecting an academic major.

Genrt (1990) suggested that the primary influence agent in making a career program choice is the individual himself/herself. Vocational instructors with whom students have contact also are an important influence in the decision making process. Exploration of various vocational opportunities helps the students in the decision making process. A comprehensive career decision making programmes needs to be provided to students. The state of readiness and maturity level of students differ, which reinforce the need to provide career exploratory experience as well as career decision making programmes. Students have role models other than their parents who influence their career choice. Students are not
significantly influenced by their peers to select a particular career program arguing against the presence of significant peer pressure in the career selection process.

Penick (1990) findings support the notion that family members, perceptions of family functioning contribute to an explanation of differences among students in vocational decidedness and involvement in career planning exploration.

Whipple (1991) analysed that the various dimensions of self-concept and career maturity also showed significant positive changes.

**Studies in India**

To the best of knowledge of the investigator, no such studies have been conducted in India.

**Sex-differentials regarding Vocational maturity**

Magell (1979) revealed that female students career maturity increase as a result of an occupational investigation programme. Female students attitude, self-appraisal and goal selection abilities increase as a result of an occupational investigation programme. Male students attitude related to career maturity will increase as a result of an occupational investigation programme.

Laskin (1979) found that individuals who are more successful in resolving the identity crisis are more successful in coping with age appropriate career decisions and developmental tasks. Boys and girls had similar career maturity scores. Educators and Administrators should consider including a decision-making program in curriculum for middle-class high school students of average or above average ability.

Cherry (1979) indicated that a significant sex difference was found for the change in career maturity.

Smith (1980) showed that there was no significant correlation between attitude school and career maturity. The correlation between race and career maturity was negative,
which means that as career maturity goes up the race variable decreased in significance. The sex variable as correlated with career maturity was too weak to be a statistically significant. There was a negative correlation between curriculum employees and career maturity.

Martinez (1980) concluded that males students were significantly more career mature in their attitudes toward career decisions than females.

Perez (1980) showed that Puerto Rican students differed significantly from white students in one measure of vocational maturity but in other grade level and sex differences were found to be significant in two out of three of the vocational maturity measures employed.

Millanovich (1982) indicated that males to a greater degree than females selected careers that were more consistent with their vocationally-oriented interests.

Anderson (1983) showed that females were significantly higher on choice attitudes and significantly lower on ability/work attributes success. Attribution of success was not significantly related to career-development, however, self-concept was significantly related to self-appraisal and choice attitudes.

Cesarauo-Delacruz (1985) found that a significant difference in the relationship between self-efficacy and vocational maturity was found by sex. Self-efficacy was also found to be related to a career maturity variable for males but not for females.

Stewart (1986) showed that males had lower mean scores than females in each of the career development stages. There was an all female group who had listed their primary occupation as home making. Older student home-makers were not more vocationally mature than younger student-home makers. In adult students, it was found that 28% were primarily concerned with earning a college degree, 26 percent were primarily interested in taking Job-related coursework, and 27% saw college attendance as a means for facilitating a career change.
Mahoney (1986) indicated that the assumed relationships between levels of vocational maturity and job and career satisfaction were unsubstantiated. Females were found to score significantly higher than males.

Rodebough (1986) found that at grade 12, significant factors were decision making, independence, involvement, compromise, self-security, self-assertion, family affiliation, peer affiliation, introversion, intuition and perceiving. Females scores surpassed those of males on factors of career maturity independence, social confidence family affiliation, peer affiliation, teacher affiliation and substance knowledge accuracy.

Fang (1990) analysed that no gender differences existed in career maturity. There were no significant difference among students in vocational industrial, curriculum for the subscales of decision making and world of work information.

Ryan and Rebecca (1990) indicated that subjects with low career decidedness were more likely to believe that external forces are responsible for their career decision making, and tended to be comfortable with their level of career indecision, compared to persons with moderate or high levels of career decidedness. Females with high vocational identity were less likely to be employed as compared to males or to females with low vocational identity. Male subjects believed that a college education is not essential to their career success, while females believed that college is a critical requirement for attaining a good job.

Hall (1991) found that no significant differences at the .05 level of significance were found in intrinsic and extrinsic work values and career maturity by group or by sex of participants between the two groups. However, the intrinsic and extrinsic work values and career maturity scores within each group were similar.
Studies in India

The investigator did not come across studies related to this area.

Follow-up of the vocational students

Follow-up of the vocational students classifies the studies conducted in the areas related to follow-up in General, Job-placement of vocational students and job-satisfaction of vocational students.

Follow-up in General

Studies Abroad

Noriega (1979) indicated that the purpose of follow-up vocational graduates either a mail questionnaire or a telephone survey would be preferable. For a follow-up of employees of graduates of vocational education, the personal interview method was found to be preferable to the other these methods for in-depth evaluation. If more general informations were desired, the telephone survey and the mail questionnaire could be utilized.

Ezeji (1979) found that a greater proportions of persons who enrolled in vocational education programmes for Job-oriented reasons obtained training-related Jobs than persons who enrolled for other reasons. Persons who made personal choice(s) of an occupation obtained training related jobs at a greater rate than person whose occupational choices were influenced by others. Graduates who perceived some relevance between their training and Job requirements found job related to their training at a greater rate than those who did not so perceive their training. Lack of Job placement programmes in vocational institution did not obviate the rate training-related employment among vocational graduates.

Wilson (1980) found significant differences between male and female high school vocational education program graduates in their rates of participation in employment related to their high school. Vocational education program, and part-time employment related
to their high school vocational education programme. Females found employed related to their high school vocational education programme at significantly higher rate than did males.

Oberlander (1980) found that the average employment of the graduates was 3 percent higher than the state average. 29 percent of these graduates continued in higher education compared to the state average of 4 percent. The centres graduate average employment rate was 7 percent compared to 12 percent for Michigan.

Johnson (1980) revealed that okala vocational agriculture completers are generally satisfied with their vocational agriculture programmes. Vocational agriculture is useful to all clientele in the community. Consistent local follow-up activities need to be conducted and combined into state or regional follow-up reports.

Chathie (1980) showed that respondents indicated positive attitude toward vocational education. Vocational students planned either to continue their vocational training (33.3%) or to get a job (33.3%). About 52% of the vocational students took their programme to prepare for a job and evidence, showed that parental influence was a factor of programme choice.

Misley (1980) determined the respondents perceptions to the importance of personal behaviour skills and work attitudes necessary in retaining successful vocational employment. Vocational students, vocational instructors and vocational employees stressed the importance of good personal behavior skills and work attitudes. However, at present, the community colleges vocational curricula remains deficient in requirements related to instruction in work attitudes and personal behaviour skills.

Legg (1982) found that both training related employment and the training related field, completers from post-secondary training sources had a consistent higher placement percentages than completers from secondary sources. Differences between
programme areas had started to develop. But only the training-related field showed that this
difference was significant by the two and one-half year follow-up.

Wardlow (1983) showed that 74% of the vocational graduates went into the
labour market. It was also concluded that vocational education is an effective way to equalize
opportunity. Both vocational and non-vocational curricula were accomplishing the purposes
for which they were designed. Vocational education not only teaches technical know how and
work quality, but teaches good habits, good work attitudes.

Osborn (1988) studied vocational education in the manner traditional to
vocational follow-up studies. He found that the vocational education had little effect on 1986
income except for the small population. But in all groups 1986 occupation was positively
related to income.

Miller (1988) showed that students who develop concentrations in an area of
secondary vocational education were less likely to enrol in college overtime. However, the
patterns of college majors varied significantly with type of secondary vocational education.

Umoren (1989) found that secondary school students followed a highly
comprehensive curriculum but then reported needing guidance and counselling regarding their
post-graduation, occupational and career plans. More students aspired for jobs.

Shavahan (1989) indicated that 75% had participated in post secondary
education and 25% did not continue formal education after high school graduation. Only 11%
of the non-post secondary participants had not taken vocational courses. A significant
relationship did not exist between credits earned in vocational education and homely wages,
number of job changes and job satisfaction. Respondents employed in occupational areas
related to their vocational training earned a significantly higher wage than those employed in
occupations unrelated to their vocational training. A positive relationship also existed
between credits earned in vocational education and satisfaction with high school preparation
for employment. The respondents entering the labour market after high school graduation overwhelmingly evaluated English, Maths, vocational education and social studies as useful to their present employment situation. 46% of graduates classified by the state as vocational completers enrolled in post secondary education and 63% of all respondents took vocational courses during high school. A major criticism of vocational education is that vocational education leads to dead-end Job and to further education.

Palmer (1989) showed that about 23.5% of the graduates who were available for work prior to pursuing further training held jobs related to their training but only 25% of these graduates were considered to be in Jobs directly related to their training. In contrast to these relatively low percentages of the graduates available for work prior to pursing further training, 93% were working (i.e placed in any occupation). Overall, this study found significant systematic relationships between the graduates level of participation in secondary vocational education and their degree of training-related placement. In general the graduates who had a higher level of participation tended to have a higher degree of training-related placement. Finally, this study also found the significant systematic relationships between level of participation and degree of training related placements after controlling unemployment rates. The combination of level of participation and unemployment rates explained 24% of the variance in degree of training-related placement.

Seboda (1989) revealed that 83% of the graduates received associate degrees, and 17% received certificates, 63% had completed career preparation programs and 37% finished transfer programs, even though upon entrance, the most popular career programme was nursing, and the most popular transfer programmes was business administration. 97% of the respondents indicated that they had achieved their goals either completely or partially. 86% were employed either full or part time, and of these 58% were working in Jobs related to their fields of study.
STUDIES IN INDIA

Dhote (1979-82) revealed that the average percentage of students passing successfully with vocational courses is fairly high, i.e., 77.8% in Karnataka, 69.1% in Andhra Pradesh and 67% in Maharashtra. Students going for wage-employment out-number the self-employed ones by more than two and half times. About 59.0 percent of vocational students in Maharashtra joined colleges etc. for further studies followed by 40 percent in Andhra Pradesh and 29.8 percent in Karnataka.

Job-placement of vocational students

Studies Abroad

Westbrook (1980) indicated that 88% of the 1977 pontiac special needs food service graduates had held one or more jobs eight months after graduation from high school of the regular vocational-graduates 82.9% of them had found Jobs for the same period of time. It was found that over 50% of the special needs graduates remained on their first job from 3 to 8 months. 35 of the special needs graduates held at least one job in the food service industry. Special needs graduates performed on their jobs, only 20 of the 43 tasks taught in the food service programme. 48.6% of the special needs graduates were employed at a fast food establishment. Of the eight special needs graduates who were not employed, 62.5% were continuing their education, only 28.6% of the regular graduates were enrolled in a post-secondary institution.

Dunton (1980) found that the area vocational technical schools had the highest percentage of placements with more vocational education programmes and the highest number of placements per programme. School programme in the upper 10% indicated a higher placement rate than those in the lower 10%. The students over 22 years of age, and community Junior college occupational placements indicated that maturity was a positive factor in occupational placement. There were significant differences in placement of
programme completes due to age, sex, race, school attended and between the upper and lower level of the programme.

Astor (1980) found that the age of the graduate and previous work experience prior to attending the community college appear to be influential factors in affecting the type of employment the graduate accepted following gradation. Sex of the graduates was an influential factor in determining the initial salary on the first job as well as current salary. Male graduates were reported as having substantially higher salaries.

Wong (1982) found that the job-placement rate was determined by the number of subjects who secured full-time employment during their active job search period. A total of 42 (84%) self directed subjects and 37 (74%) job development subjects obtained initial employment of the number 25 (60%) and 29 (78%) subjects secured employment related to their vocational training areas respective to the Job search group. There was not a significant difference in the placement rate of subjects with regard to Job search strategy used.

Kampanrana (1983) revealed that 43% of the automotive and 59% of the electronics respondents from two technical institutes in the United States are holding jobs in or related to their field of major study. 85% of the automotive and 82% of the electronic respondents from the four technical Institutes in Thailand are holding Jobs in or related to their fields of major study. A majority (56-58%) of other automotive and electronics graduates in the United States and Thailand had held only one Job in their field of specialization with the exception of automotive graduates (29%) from Okalahomia state technical institutes. 50% of automotive and 45% of electronics respondents in the United States stated that they would like to take additional courses in their major field and 25% of automotive and 20% of electronics responded that they would like to take business courses.
Free (1983) opined that a relationship existed between employer's perceptions of graduates and the way graduates were perceived as students in vocational classes. Graduates vocational instruction adequately prepared them for successful job performance.

Miller (1983) showed that job placement rates for each of the three vocational health occupations groups (Nurse Assistant, Dental Assistant, Medical laboratory Assistant) paralleled the degree of competition from older and higher trained persons. The least skilled occupation, the nurse assistant group experienced the highest job placement rate while the highest skilled occupation, the medical laboratory assistant group experienced the lowest job placement rate, the dental assistant group experienced lower job placement than Nurse Assistant, but higher than Medical laboratory assistant.

Vines (1983) indicated that vocational training under cooperative education could be extremely beneficial for employment success after graduation from high school.

Berke (1984) found that most refugees had Junior high and senior high education and sought leave in the United States for educational and employment opportunities. Most refugees had semi-skilled occupation. More than half (57.1%) were employed full time in house keeping or dirt washing in Minnesota. Most employed disliked their job (70.9%). The unemployed attributed their unemployment to lack of transportation, communications, and skills. Refugees realized the need for new skills (84.4%) to secure employment in Minnesota. Most refugees (91.2%) were unknowledgeable of vocational programmes before their arrival.

Robinson (1984) opined that a majority of graduates and leavers of Northeast Oakland vocational education centre secured either full-time or part-time employment within 18 months after they graduated or terminated their training programme. Those students who dropped from their vocational programme had as high a success rate in securing jobs related to their vocational programme as those who graduated.
Martini (1984) concluded that home school vocational students were more confident about their social skills and more positive regarding their social autonomy. Occupational students were more positive toward their school and peers than home school students were about their school and peers. Occupational centre students were also more positive about their job finding skills and career goals.

Cochran (1984) found that the vocational curriculum offerings coincided with the entry level jobs that were available to secondary vocational graduates. The most frequent suggestions offered by employers for improving vocational education were for the schools to provide opportunities for students to obtain more "hands on" experience basic academic and employability skills. The placement rate of graduates in related occupations was less than 50 percent.

Parker (1984) revealed that there were significantly more students employed who successfully completed a vocational technical class prior to graduating from high school and significantly more students unemployed who did not successfully complete a vocational technical class prior to graduating from high school.

Hill (1985) indicated that workers with post secondary education performs better in a short time and are more likely to be promoted. Job vacancy lengths are long but have not increased overtime. Employers have obtained qualified workers mainly by training and retraining employers. Both education and experience reduce training time. Employers state that they pay for general as well as for specific training. They also provide more general believing to those employers who have higher education.

Yeck (1985) showed that incarcerated women are traditionally oriented in the choice of occupation and prefer conventional jobs. Female offenders are no more interested in 'Realistic' or non traditional jobs than are women in general.
William (1986) indicated that over 89 percent of graduates were employed full time in 1982 and over 71 percent had jobs related to their training.

Arrington (1986) showed that the majority of 1983 vocational agriculture graduates in Florida were involved in agriculture-related occupations. Overall, programme completers had very positive attitudes about vocational agriculture.

Bergers (1988) showed that vocational training is provided in administration, printing and horticulture. Practical training is provided both at the institute and in the individuals' home community. Job placement was 100 percent for the pupils completing the approximately 18-month programme in 1987.

Winterbottom (1988) indicated that most females and males expect career to include a paid job outside. Females and males also choose different fields. Both consider money and skills first in choosing a field, females value money only slightly more than other factors such as the opportunity to care for others, the people with whom they will work and the opportunity to combine work with home and family. There priorities are different. As more females understand the importance of a job and as more males conceptualize career as more than jobs. Students of both sexes feel pressure to make choices early. More females than males report having thought about career without knowing how to pursue their goals. Some doubt their ability to succeed in new and multiple roles because they are still making choices for lesser paid occupations, females especially may need information about financial implications of certain career choices. Students need the help of counsellors.

Sandra (1989) revealed that all respondents reported having worked in at least one job since vocational high school in unskilled and semi-skilled professions in fields other than those in which they were trained. Although all respondents had been employed at least one job since graduation both males and females were unemployed.
Miller (1990) showed that 51.88% of responding graduates believed that they were employed in a job for which they were trained in high school. Survey respondents also indicated at the rate of 68.16%, that they believed their high school vocational training was helpful in their present job. The study also indicated that gender and vocational credits significant predictors of job placement for all respondents while other factors were identified linking successful job placement with high school vocational training.

Stevens (1990) revealed that in the area of economic growth there was a significant difference in income, home ownership and investments. The associate degree graduates starting salary and current salary was significantly higher than the secondary vocational graduates. The lifetime earnings of the associate degree graduate would exceed the secondary vocational graduates by approximately $495,000 or 12%. Also 66% of the associate degree graduates owned homes or investments compared with 48% of the secondary vocational graduates.

Serwell (1991) indicated that special needs completer's employment patterns did not completely parallel to those of regular completers. However, whereas significantly higher active rates were recorded for regular completers, it appeared that gaining employment both groups shared similar employment experiences. The same problems in employment identified in other research as related to gender and ethnicity were reflected within the special needs and regular completer comparisons. Geographic location played an important role in the employment patterns of individual completers and may have been based on the availability of jobs in the local economics. Year-by year analysis revealed few changes in the employment patterns established in the study.

Land (1991) revealed that over 80% of the respondents located their first full-time Jobs within 3 months of programme. Completion over 70% of the respondents indicated that their first full-time job was related to their vocational training. More than 65% of the
respondents retained their first full-time jobs longer than one year. Respondents from all four vocational programmes used personal contacts to find their first full-time job significantly more than by any other job by acquisition method. Only 7% of the graduates indicated that they relocated to find employment of those who moved, other 70% located training-related employment.

**Studies in India**

To the best of knowledge of the investigator, no such studies have been conducted in this area.

**Job-satisfaction of the vocational students**

**Studies Abroad**

Martin (1979) found that both students with low work values and students with high work values received good ratings on job success. Students with low job satisfaction with high work values and students with low job satisfaction and low work values were rated the same on job success by their supervisors. Students with high job satisfaction and high work values and students with high job satisfaction and low work values were rated the same on job success by their supervisors. Supervisors with low job satisfaction and supervisors with high job satisfaction rated students at the same level on job success.

Hendon (1979) revealed that graduates of vocational courses in medical office assistant and fashion design had the highest intrinsic, extrinsic and general job satisfaction while graduates of graphic communications and technical drafting had the lowest job satisfaction. There was a significant Job satisfaction of graduates working in jobs related to their vocational training when compared to graduate working in jobs not related to their vocational training. There was no significant differences in extrinsic or general job satisfaction for those groups.
Burke (1980) indicated that recently graduated high school vocational students do not perceive that their preparation for the world of work was relevant as suggested by the 65% who rated their preparation for their present job as fair or less, by the 84% expressing a low degree of job satisfaction and by the 57% who found hardly any or no use at all for their high school training in their present job. It was suggested that course offerings might be inappropriate or inadequate and that students lacked the maturity to plan themselves for their future.

Garrity (1980) revealed that with over 60% of all graduates going on to some type of post secondary education the vocational graduates earned more and worked more hours than either academic or general curriculum graduates, there was no significant differences in total number of jobs since graduation or Job satisfaction. There was very little mobility with over 84% not moving or moving within the country.

Saleem (1980) found that number and frequency of occupations and industries selected by each program's graduates was unique for each program with an overlap between programmes. The job satisfaction dimension in each programme area was superior to either school or willingness to repeat programme dimension in distinguishing between groups of job selected.

Nabobs (1980) indicated in his study that high vocational satisfaction should be exhibited in those persons who are highly congruent, highly consistent and well differentiated.

Alcinkuoye (1980) showed that for job satisfaction of males those with low socio-economic status tended to be more satisfied with their job, while females with high aptitude and high degree of participation in vocational education tended to be more satisfied with their jobs. For overall job satisfaction without sex differentiation, individuals with high academic achievement tended to have low job satisfaction.
Tatum (1982) opined that employers were equally satisfied with graduates from the two types of business programmes as well as being equally satisfied with graduates regardless of the location of the school where the training was received.

Deen (1984) concluded that volunteer's vocational preferences and vocational placement were compatible, as their fields of training and occupations. Volunteers were consistently satisfied with their placements.

Begley (1985) found that there was no significant difference in job satisfaction between vocational graduates. However, vocational graduates who were working in the vocational area in which they were trained were more satisfied than vocational graduates not working in the vocational area in which they were trained. The job satisfaction of employees did not differ as a result of the type of programme from which the employees received their training or level of education completed.

Martin (1986) found that 68% of the vocational educators were very satisfied with their present jobs, 83% were very satisfied with their present careers and about 61% expressed a high degree of interest in working in the training and development in business and industry.

Fraze (1986) indicated that females completing programme of vocational agriculture in 1980 had increased more than five fold from five years earlier, 18% compared to 3%. Approximately 60% of the programme completed of vocational agriculture had a high employment rate (99%). Job satisfaction scores for programme completers were high for general and intrinsic job satisfaction and average for extrinsic job satisfaction.

Head (1989) showed that 51.94% of the graduates were employed full time in jobs related to their field of study 87.4% were satisfied or very satisfied with their current jobs, and 60% planned to pursue these jobs as long-range career, 89.2 percent of the respondent felt that their programmes provided excellent or good preparation for their current
jobs. 91.8 percent felt that they were better or as well prepared as other employees on the same jobs.

Holt and Flaherty (1989) revealed that 18 of the 20 respondents were employed in the dental hygiene field, with 13 working full time. 58 percent were working in a job setting with only one practitioner. Only 5 percent of the graduates found employment through personal contact, compared with 56 percent of 1987 graduates. 90 percent of the graduates were paid on an hourly basis. Among those employed in the dental hygiene field, 70 percent were very satisfied with their chosen profession. Graduates were well prepared in the skill areas they performed most often.

Flaherty (1989) showed that of the 1986 and 1987 graduates, all were currently employed and 75 percent were working in a field related to their training. The graduates salaries tended to be below those of other career alumni, all were very satisfied with their jobs.

Bezdek (1990) found that employers who were actively involved in programme experienced higher level of career satisfaction, transferring to their personal lives. By educating employers as to their responsibility for career development, employees gained a more realistic expectation of strength and development needs. It was concluded that a management training workshop must be conducted.

Mollel (1990) indicated that both at individual and organizational level of analysis, commodity extension had significantly higher scores on satisfaction with suppression and satisfaction with promotion.

Studies in India

To the best of knowledge of the investigator, She did not come across the studies related to this area.
It is clear from the perusal of investigations carried out so far that although a large number of studies have been conducted abroad to evaluate the vocational education stream, yet the Indian scene presents a dearth of research studies in this area. Moreover, most of the areas related to evaluation of vocational education stream in India have been comparatively neglected by the investigators.

Hence, the area of evaluation of vocational education stream is still largely unexplored especially so in India and call for an extensive research in this field.