

Vocational and Technical Education

M. SEN GUPTA

Arora, P.N.1988. **Educational and vocational aspirations of students of Class XII—preparation of an interview schedule: A pilot study.** Independent study. *National Council of Educational Research and Training.* [ERIC Funded]

Problem: Through a pilot study an interview schedule was developed to assess the educational and vocational aspirations of students of Class XII against their socio-economic background. The interview schedule was tried out and its final version was used in further research work of assessing the educational and vocational aspirations of Class XII students.

Objectives: (i) To develop an interview schedule and then circulate widely the final version along with the tabulation plans, etc. to training colleges for use in research work, and (ii) to assess the educational and vocational aspirations of Class XII students.

Methodology: The interview schedule was tried out in four senior secondary schools of Delhi. Based on the feedback obtained, the interview schedule was circulated among 130 training colleges. For the study, data were collected from 300 students (110 boys and 190 girls). The sample included both high and low achievers and was carried out using the interview schedule. In order to analyse the data bi-variate tables were prepared.

Major Findings: (1) The percentage of boys obtaining marks above 75 per cent was greater than that of girls. (2) Out of 19% of the students whose fathers were postgraduates, about one per cent obtained marks above 75%; out of 10% students whose fathers were professional degree or diploma holders about 1.34% students obtained marks above 75%. (3) None of the boys whose fathers were doctors, engineers or teachers obtained marks less than 45%. (4) 59.39% girls of the science stream belonged to the income group between Rs 10,000 and Rs 20,000, and out of these 31.26% girls aspired to join the medical course. (5) The sex-wise degree of importance of reasons motivating students to pursue higher education was also studied. The reasons regarded most important by boys were (i) a desire to cultivate the right interest, attitudes, morals and intellectual values; (ii) to improve prospects of employment; (iii) to come into contact with learned people in their area of interest; (iv) to develop power of mind; (v) to seek new knowledge. (6) The reasons regarded most important by girls were (i) a desire to cultivate the right interests, attitudes, morals and intellectual values; (ii) to seek new knowledge; (iii) to develop power of mind; (iv) to have a good social life. [Author 1128]

Balasankar, P. 1988. **A study of work experience programmes in the schools of Kerala and**

formulating guidelines for strengthening the programmes. Ph.D., Edu. Univ. of Kerala.

Problem: The study describes the different types of Work Experience programmes in schools of Kerala and arrives at guidelines for strengthening the programmes.

Objectives: (i) To collect information regarding the general set-up, organisation and conduct of the Work Experience programme in schools, (ii) to get the reactions and suggestions of pupils about the present organisational set-up and the conduct of the Work Experience programme, (iii) to appraise selected guide-books on Work Experience, (iv) to collect first-hand information about the working of selected outstanding institutions of south India where Work Experience is an integral part of education, and (v) to gather opinions, viewpoints and suggestions from experts with a view to preparing guidelines for better organisation and conduct of the Work Experience programmes.

Methodology: The sample comprised 300 students (146 boys, 154 girls) from 10 schools, along with 200 teachers' questionnaires on the Work Experience programme and on students' reaction to the programme were administered. A Work Experience Guideline Schedule was also prepared. Means, SDs, CR, and correlations were computed to analyse the data.

Major Findings: (1) Work Experience/tool practice was prescribed in the schools of Kerala from 1974. (2) Even before 1975, 38% of the high schools offered crafts. (3) In high schools, horticulture and agriculture were favoured while in upper primary schools workshop practice and cardboard work were preferred. (4) Teaching the operating principles and producing goods were the instructional strategies followed by the majority of the schools. (5) 'Earn while you learn' programmes were not offered. (6) Correlation of Work Experience with other subjects was not reported. (7) There was practically no evaluation of the Work Experience programme. (8) The time allocation for Work Experience classes was

inadequate. (9) The percentage of students showing interest in Work Experience was low. (10) The attitude of teachers, parents and the public was also not favourable. (11) Financial assistance to the programme was inadequate. (12) Physical facilities for the conduct of the Work Experience programme were poor. [VR 1644]

Bhargava, R. 1991 **A study on the interest and difficulties faced by the students studying in the vocational education stream.** Independent study. Udaipur: State Institute of Educational Research and Training.

Problem: The study investigates into the interest of the students' invocational education, society and employment, and their anxiety for employment. It also identifies the difficulties faced by the students and their possible solutions.

Objectives: (i) To ascertain the selection procedure and criteria for admission to vocational courses, (ii) to list the efforts made by the schools to enrol students in the vocational stream, (iii) to judge the interest of students in vocational education, (iv) to evaluate the efficacy of the vocational education programme, and (v) to know the physical resources available in vocational schools and offer suggestions for further improvement.

Methodology: Thirty-four schools having the vocational stream were randomly selected from all the five ganges of Rajasthan, i.e. Jaipur, Jodhpur, Udaipur, Kota and Churu. Separate questionnaires were administered to 33 principals, 34 vice-principals, 32 vocational teachers, 224 students and 193 concerned parents. Collected data were treated with percentages.

Major Findings: (1) Eighty-three per cent of the students chose vocational education out of their own interest, while a smaller section joined it as they could not get admission in the academic stream. (2) The majority of the students felt that vocational education were 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% 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 per cent of the vice-principals considered vocational education useful and an answer to the unemployment problem. Sixty-five per cent of them had no training in vocational education. All of them said that the budget for vocational education was not allotted in time. (9) The majority of the teachers felt that their students could get employment or become self-employed after passing out from the +2 stage. [JCV 0883]

Bhatnagar, Asha and Gulati, Sushma. 1989. **Vocational behaviour of creative adolescents: A proposed framework for research.** *Indian Educational Review*, Vol. 24(1) :150-56.

Problem: The present investigation is an attempt to focus on the study of the vocationally significant characteristics of creative adolescents at the school stage.

Objective: To make out a case for a research study to investigate the nature and development of the vocational behaviour of creative adolescents in Indian conditions.

Methodology: The study is mainly based on review of literature and library work.

Major Findings: (1) Creative persons are characterised by a number of abilities and personality attributes. (2) It was felt that there was a lack of sufficient empirical evidence with an integrating conceptual framework to support the finding that creative students were

vocationally more mature than the less creative ones. [HLS 1522]

Bhatnagar, K.M. 1991. **The role of industries in promotion of vocational education among rural women: A feasibility study in the state of Haryana.** Independent study. *New Delhi: The Institute of Peace Research and Action.*

Problem : The study addresses the problem of (a) inequalities (male-female differentials) which the rural women face in Indian society in resource allocation for education; lower-labour participation; lower-occupational levels; and lower-income coupled with higher rates of unemployment and longer period of wait for getting employment; (b) the role of industries in promotion of vocational education among rural women as a step to get over the inequalities.

Objectives: (i) To find out whether girl students from rural high schools perceive the need for any vocational education, and if so, to study the related problems and their solutions, and (ii) to find out whether parents would like to send their daughters to a nearby industry as apprentices, and to study the implication.

Methodology: 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 structured 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: (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, etc. More and more girls were found to be keen to learn about modern trades. (2) Vocational education should develop employable skills among school-going girls to

generate income and improve the status of women workers. (3) 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, textbooks, training material, scholarships, systematic training courses and a human resource development policy in Haryana. (4) 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. (5) 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. (6) Some suggested solutions to overcome the above problems were (a) all high schools in rural areas should introduce vocational subjects; (b) a good number of scholarships should be made available to attract an adequate number of girls to such courses; (c) incentives/facilities should be created in terms of special support services and adequate practical training to girls in local industrial units; (d) conveyance charges, free textbooks and uniforms should be given to girls. (e) The school-industry linkage should be developed and strengthened to improve productivity as well as to ensure new avenues of employment. [NR 1238]

Bhattacharya, S.K. 1992. **Design and development of an interactive teaching-learning system for technical education**. Ph.D., Edu. Birla Institute of Technology and Science.

Problem: The study addresses the problem of preparing students to meet the challenge of the rapidly changing technological milieu due to industrial, commercial and social developments at various levels.

Objectives: (i) To develop a work-bench-oriented teaching-learning pedagogy of a reflective nature, (ii) to develop classroom-based activity-

oriented learning experiences, (iii) to develop work-bench-oriented learning experiences using a functional curriculum, and (iv) to experiment with the different types of teaching-learning models so developed and compare their effectiveness.

Methodology: Two hundred and seventy-five students and 27 technical teachers were drawn from four polytechnics. Also, 66 small, medium and large-scale industries were selected through stratified random sampling. Multiple evaluation tools were used for assessing the problem-solving abilities of students. Coefficients of correlation were computed.

Major Findings: (1) There was a significant increase in the performance score of students in the examination conducted by the State Boards of Technical Education (SBTE). (2) There was a significant increase in the performance of students in solving open-ended problems. (3) The correlation of scores in the examination conducted by the SBTE and problem-solving abilities was found to be poor. [MMM 0994]

Biswal, Premananda. 1992. **Vocationalisation of education at the +2 stage in Himachal Pradesh: An evaluative study**. Himachal Pradesh Univ.

Problem: The study evaluates the implementation of the programme of vocationalisation of education at the +2 stage in the State of Himachal Pradesh.

Objectives: (i) To study the development of the vocationalisation of education in India in a historical perspective, (ii) to study the functioning of the programme of vocationalisation of education at the +2 stage in Himachal Pradesh with respect to various implementational aspects, and (iii) to suggest measures for better implementation of the programme in the State.

Methodology: 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% 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 pass-outs 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 analysing the data.

Major Findings: (1) Admission to vocational courses was done on the basis of merit, and an 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 textbooks. (3) The teaching strategies used by the teachers were largely traditional. (4) There was no special arrangement to train 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. [LK 1316]

Choudhury, Kriti. 1990. **A study of the vocational aspirations of Standard IX students of English-medium schools in Pune city.** M.Phil., Edu. Univ. of Poona.

Problem : The study addressed the problem of finding out vocational aspirations and academic choices, and their relationship with parental background related to education and occupation.

Objectives: (i) To find out the vocational aspirations and occupational choices of students,

(ii) to find out academic choices for a future academic career, including the subjects liked most and least, and (iii) to find out parental background related to education and occupation.

Methodology: One hundred and ninety-six students of Standard IX formed the sample. Data were collected through a questionnaire. The study used the descriptive survey method. Percentages were calculated for analysing the data.

Major Findings: (1) The students belonged to early and late adolescence being in the age-range of 13 to 18 years. (2) Forty per cent of the sample-students wanted to be either doctors or engineers. (3) Eighty per cent decided to select the science stream for their future academic career. (4) While 53% of the total sample wanted to go in for a degree, and 34% aspired to have a diploma. (5) The majority of the students liked subjects from the science stream and disliked those from the arts/humanities stream. (6) No relationship was found between occupation of fathers and the occupational choices of the students. [ASB 0055]

Das, R.S. 1991. **An analytical study of the vocational interest of primary teachers.** M.Phil., Edu. Nagpur Univ.

Problem: The study tries to find out the areas of interest of teachers and whether they have taken up the teaching vocation out of interest or were compelled by other reasons.

Objective: To study the professional interest of primary teachers.

Methodology: Two hundred primary school teachers were selected randomly to form the sample. Out of these, 50 males and 50 females (100) were from the urban areas and another 100 were from rural areas. The tool used was the Vocational Interest Record of S.P. Kulshrestha (translated in Hindi). The data were statistically treated to calculate mean, standard deviation and critical ratio. Significance levels were tested and interest in different vocations analysed and compared.

Major Findings: (1) The vocational interest of urban primary teachers (male and female) differed significantly from that of rural teachers. (2) The female primary teachers had higher vocational interest than the male primary teachers. (3) The male primary teachers had more commercial vocational interest than the female teachers. (4) The female teachers had more vocational interest in family functions and aesthetic functions than the male teachers. (5) The rural primary teachers—both male and female—had more interest in the teaching profession than the urban teachers. [GPK 1704]

Dhote, A.K. 1991. **An on-the-spot study of the implementation of the vocationalisation of education programme in the state of Maharashtra.** Independent study. *National Council of Educational Research and Training.*

Problem: The study concerns the implementational aspects of the vocationalisation of education programme in Maharashtra.

Objectives: (i) To collect factual and objective information on various aspects of the implementation of the programme, (ii) to identify and analyse the strong and weak areas of the implementation of the scheme, (iii) to find out the aspirations of students regarding their academic and professional growth, and (iv) to suggest measures for further improvement of the vocational programme.

Methodology: Twenty-five institutions, heads of institutions, teachers and students formed the sample. The tools and techniques used were questionnaires, proformae, discussion and observations. Frequency distributions and percentages were calculated.

Major Findings: (1) Programme implementation in terms of the administrative set-up, the teacher, the infrastructural facilities was going on well. (2) 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. (3) Innovative practices in some institutions significantly facilitated better implementation of the programme. [DVE 1017]

Emmanuel, Mani Alias K.J. 1990. **Vocationalisation of education at the +2 stage—A study of some major problems of vocationalisation of education in Andhra Pradesh.** Ph.D., Edu. *Osmania Univ.*

Problem: The study attempts to identify some of the major problems related to the implementation of the programme of vocationalisation of education at the +2 stage in Andhra Pradesh.

Objective: To highlight the main problems in the way of successful implementation of the vocationalisation of education programme at the +2 stage in Andhra Pradesh.

Methodology: The study used the survey method for collecting data which were then subjected to normal statistical treatment.

Major Findings: (1) There is a felt need for vocational education. (2) The NCERT guidelines were not followed by the State. (3) The State did not have a separate directorate for vocational education to systematically take up curriculum development, training of teachers, curriculum transaction, etc. (4) The scheme suffers due to dual control in respect of academic and administrative matters. (5) An SCVE has not been set up by the state as yet. (6) The facilities, both in terms of manpower and infrastructure, are disorganised and meagre. (7) The teaching faculty is drawn from coordinating institutions on an ad hoc basis. [SSS 0848]

Gautam, Vimallesh. 1988. **An investigation into the educational and vocational interests of students at the delta stages, and their implications for future curricula.** Ph.D., Edu. *Univ. of Lucknow.*

Problem : The study makes an attempt to investigate the educational and vocational

interests of students of Classes VIII and X so as to arrive at implications for their future curricula.

Objectives: (i) To compare the educational and vocational patterns of students at the two delta stages, (ii) to see the effect of sex difference on the educational and vocational interests of students, (iii) to compare the educational and vocational interests of urban and rural students, and (iv) to arrive at the implications of the educational and vocational interests of students at the delta stages for their future curriculum.

Methodology: One thousand students (600 of Class VIII and 400 of Class X) were included in the sample by following the random sampling procedure. Of those selected from Class VIII, 300 (150 boys and 150 girls) were from rural areas, and an equal number from urban centres. Of the Class X students, all the 400 (200 boys and 200 girls) belonged to the urban areas as there were no schools of the 10+2 pattern in the rural areas. The tools used included the Educational and Vocational Interest Forms of S.P. Kulshrestha and an Information Form developed by the investigator. The statistical techniques used for data analysis included mean, SD, correlation and 't' test.

Major Findings: (1) A significant correlation was found in the preference orders of boys of Classes VIII and X in both educational and vocational interest areas. (2) No significant correlation was found in the preference orders of girls of Classes VIII and X in the educational interest area, while in the vocational interest area a significant correlation was noted. (3) In most of the interest areas, significant differences were noted between the scores of the two classes. (4) At the Class VIII level, no significant correlation was found in the interest preference orders of boys and girls in both educational and vocational interest areas, which means that the two groups had different interest preferences. (5) At the Class X level, no significant correlation was found in the preference orders of boys and girls in educational interests, while in the field of vocational interests a significant correlation was

noted between these groups. (6) Significant differences were found between the scores of boys and girls in all the areas of educational and vocational interests. (7) A significant correlation was noted in the preference orders of urban and rural students of Class VIII in both educational and vocational interest areas, which means that their interest preferences were similar. (8) Significant differences in most of the interest areas were found between the scores of rural and urban boys, while in case of girls significant differences could be noticed only in a few interest areas. [RJS 0685]

Gupta, V. 1990. **A study of vocationalisation of education at the +2 stage in the Union Territory of Delhi.** Ph.D., Edu. *The Maharaja Sayajirao Univ. of Baroda.*

Problem: The study centres round the development of vocational education and its implementation in the Union Territory (UT) of Delhi.

Objectives: (i) To study the emergence of vocational education, (ii) to study the implementation of the scheme of vocationalisation of education in the higher secondary schools of Delhi, and (iii) to study in depth the problems of implementation.

Methodology: 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-students and seven experts. The tools used for the study were a General Information Sheet, questionnaires, and an interview schedule. For analysis of data only percentages were used.

Major Findings: (1) In the UT of 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 practicals. (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. (6) Sixty-six per cent of the students opted for these courses on their own without anybody's guidance. (7) Vocational courses were started without taking into consideration the needs of the community. (8) Courses were selected according to the suggestions of a review committee. (9) There was no linkage of these courses with the academic stream courses. (10) However, enrolment to these vocational courses was found to be increasing as passed-out students were being absorbed in the employment market. [MSY 0918]

Guru, G., Dhote, A.K. and Ray, S. 1992. **An on-the-spot study of the implementation of the vocationalisation of education programme in the state of Andhra Pradesh.** Independent study. *National Council of Educational Research and Training.*

Problem: The study addresses the problems of implementation of the vocationalisation of education programme in the State of Andhra Pradesh.

Objectives: (i) To make an on-the-spot assessment of the achievements and failures of the implementation, and (ii) to suggest measures for further improvement.

Methodology: 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 questionnaires, discussion and observation. Mean, percentages and frequency distribution were used to arrive at inferences and conclusions.

Major Findings: (1) The programme of vocationalisation of education got a major boost

with central aid 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 affected 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 programme's implementation. (5) Committed teachers, innovative practices and responsive heads in some institutions were positive features of the programme. (6) Forty-eight per cent of the responding students obtained the first division; 33%, the second division; and 19%, the third division in the last SSLC examination. [DVE 1019]

Javed, Abdul Kureshi. 1990. **A critical study of the vocational interests of the students of arts, science and commerce studying at graduation level in senior colleges in the rural areas.** M.Phil., Edu. *Nagpur Univ.*

Problem: The study probes into the vocational interests of students (arts, science and commerce) at graduate level, and makes a comparative study of the interests of male and female students.

Methodology: All students studying in colleges in the rural areas formed the population for the study, and the sample comprised 600 students (324 male and 276 female). The Vocational Interest Inventory by Kulshrestha (Hindi version) was used. Every vocation was given one mark and these marks were added to get a score from which the inferences were drawn.

Major Findings: (1) Rural students were disinterested in agriculture and more interested

in vocations connected with science. (2) Students from arts and commerce faculties expressed high interest in persuasive and executive vocations. (3) Students of all the three faculties showed low and little interest in social vocations. (4) White-collar vocations were preferred by students; they showed low interest in vocations requiring physical labour. [GPK 1597]

Jayapoorani, N. 1982. **Vocational interests of higher secondary school students.** M.Phil., Home Sc. Coimbatore: Avinashilingam Institute for Home Science and Higher Education for Women.

Problem: The study is aimed at identifying and assessing the vocational interests and aptitude of adolescents.

Objectives: (i) To identify the aptitudes of higher secondary school students, and (ii) to assess the vocational interests of adolescents in higher secondary schools.

Methodology: Five schools from Coimbatore City were selected on the basis of their willingness to cooperate. Two hundred students of both sexes in the age-range of 15-17 years from Standard XI were selected randomly. Fifty higher secondary school teachers were also selected. Separate questionnaires were administered to elicit relevant information from the students and the heads of the institutions. To find out the aptitudes of the students, the standardised Differential Aptitude Test (DAT) by G.K. Bernet, H.C. Seashore and A.G. Wesman was used. The study included the five sub-tests on numerical ability, mechanical reasoning, clerical speed and accuracy, language usage (Part I), spelling and language usage (Part II) sentences. To find out the vocational interest of the students, the Vocational Interest Inventory Schedule by Thurstone was used after modifying it to suit Indian conditions. Test of significance and chi-square were applied in analysing the data.

Major Findings: (1) Natural science, mathematics and English were the subjects preferred by the majority (84%) of the students.

(2) Boys (42%) showed interest in engineering jobs while girls (55%) preferred to work as doctors. (3) Boys and girls (53%) developed their vocational interest during the age-range of thirteen to fifteen years. (4) As regards aptitude, the numerical ability of the boys was found to be better as compared to that of the girls. (5) Boys were better on mechanical reasoning than girls. The difference between the different income groups with regard to mechanical reasoning was not much. (6) There was not much difference between boys and girls or between the income groups on aptitude with regard to clerical speed and accuracy. (7) The difference between boys and girls on language usage (spelling) was significant. Language usage of the high-income group was better than that of the other two groups. (8) Boys had comparatively more aptitude for sentence construction than girls as the boys scored above 55 to 65 percentiles. The difference was significant. (9) All the teachers in the sample showed favourable attitude towards vocational courses as they considered these as job-oriented. In their opinion, 16 years was the appropriate age for introducing these courses. [MC 0091]

Joshi, Devendra. 1990. **Earn while you learn: The functional school educational scheme of Madhya Pradesh (an economic evaluation with special reference to Ujjain division from 1978-79 to 1986-87).** Ph.D., Edu. Vikram Univ.

Problem: The study makes an evaluation of the 'earn while you learn' scheme as implemented in Madhya Pradesh.

Objectives: (i) To take stock of the position of the scheme in the Ujjain Division, and (ii) to study the economic outcomes of the scheme.

Methodology: The educational division of Ujjain was taken as the sample for the study. The schools of the region were surveyed to know the status position. Three separate questionnaires were administered — one to the heads of the institutions, the second to the supervisors of the scheme and the third to the students of the schools where the scheme was implemented.

Major Findings: (1) Fifty-five thousand six hundred twenty-seven students participated in the scheme from 1978-79 to 1986-87. (2) During this period, production worth Rs 7,89,949,00 was recorded and an amount of Rs 97,31,14,000 was distributed amongst the students as remuneration. (3) With an investment of Rs 51,00,000 the production was worth Rs 1,420 per student, and every student earned a remuneration of Rs 174 only. (4) The production by the students was quite praiseworthy, quantitatively as well as qualitatively. (5) The students who participated in the scheme did well in their examinations also. Fifty-nine per cent of the students obtained more than 60% marks in their annual examinations. (6) Students generally took less time than the professionals in producing a particular item of a specified size. (7) Students took a keen interest in the productive work assigned to them. (8) The scheme benefited the pupils of the low income group and improved their retention in the school. [RSD 0208]

Joshi, L.N. 1992. **Vocational achievements and problems faced by students who had passed the +2 vocational education examination.** Independent study. Udaipur: State Council of Educational Research and Training.

Problem: The study investigates the achievements and problems faced by the students who had passed their +2 examination in vocational education from the Rajasthan Board of Secondary Education (RBSE).

Objectives: (i) To get information about the vocational achievements of students who had passed the +2 examination in vocational education from the RBSE, (ii) to obtain information about the loans taken by them, (iii) to gather the opinion of the guardians of the students about vocational education, and (iv) to identify the problems faced by these students.

Methodology: Thirty boys' schools and eight girls' schools were selected for this study. The number of boys and girls who had passed the

+2 vocational examination of the RBSE was 72. In addition, 38 teachers teaching in the vocational schools were also included in the study. The criterion for selection was purposive sampling. Interview schedules for (a) students, (b) teachers, and (c) guardians were used in the study. Percentages were calculated for analysis and interpretation of data.

Major Findings: (1) Only 12.8% students were self-employed and the number of students employed by others was also the same. (2) 7.2% students were working in vocations other than those they had studied. (3) While 15.4% remained unemployed, 51.6% were pursuing higher education. (4) Thus, only 25.6% students obtained jobs through vocational education. (5) No student could get loans from any agency for setting up his own enterprise. (6) About 50% guardians admitted their wards in the vocational education course thinking that their wards would get employment, one-third of the guardians did so for making their wards self-employed while the rest of the guardians were uncertain about the aims of admission of their wards in vocational education courses. (7) A large number of students found the theory portion of their vocational courses very difficult. (8) Students faced problems in doing practicals due to lack of equipment, tools and materials in the laboratories. (9) Schools faced lot of trouble in arranging on-the-job training for students due to lack of cooperation from the concerned agencies. (10) The students who got jobs, too, were not satisfied because of meagre salaries, lack of sufficient skill on their part, and job insecurity. [JCV 1557]

Kaur, D. 1990. **Educational and vocational aspirations of students belonging to different socio-economic locales of Jammu division.** Ph.D., Edu. Univ. of Jammu.

Problem: The study addresses the problem of educational and vocational aspirations of students coming from different socio-economic locales.

Objectives: (i) To study the variables associated with educational and vocational aspirations, (ii) to compare the spectrum of educational and vocational aspirations of boys and girls emerging from the study, with the actual regional requirements, and (iii) to frame suggestions for administrators, guidance workers, teachers and parents to induce appropriate educational and vocational aspirations in students/wards in consonance with the avenues available.

Methodology: The sample consisted of 700 urban students and 625 rural students of three districts of J&K State. The tools used in the study were: an Educational Aspiration Test, a Vocational Aspiration Test, a Socio-Economic Status Scale (urban)/(rural), and an Interview Schedule.

Major Findings: (1) Both educational and vocational aspirations were influenced by sex, socio-economic status and locality, when taken independently; nevertheless group interactions were insignificant, indicating that different sets of conditions might be responsible for the concretization of these aspirations. (2) Urban students differed significantly in their educational preferences as well as vocational aspirations. (3) Rural students largely aspired for a degree in arts while urban students aspired for a degree in science. (4) Rural youth largely aspired for high academic degrees while urban youth tended to aspire for high professional degrees. [SPS 1276]

Makhiza, Lata. 1988. **A study of risk-taking, self-esteem and family planning in relation to vocational interests.** Ph.D., Edu. Agra Univ.

Problem: This research is a study of risk-taking, self-esteem and family planning status in relation to vocational interests.

Objectives: (i) To find out the relationship between risk-taking and vocational interest areas, (ii) to study the effect of the variables in risk-taking in vocational interest areas, (iii) to find out the relationship between self-esteem and

vocational interest areas, (iv) to study the effect of variation in self-esteem on vocational interest areas, (v) to find out the relationship between family status and vocational interest areas, and (vi) to study the effect of variation in family status on vocational interest areas.

Methodology: The sample consisted of 400 male students studying in the undergraduate classes of different colleges of Agra City, in different streams. The variables taken for the study were: risk-taking, self-esteem and family status. The tools used were: a Vocational Interest Inventory, a Risk-Taking Inventory, a Self-Esteem Inventory and a Family Status Inventory.

Major Findings: (1) Risk-taking and vocational interests were significantly related to each other. (2) Risk-taking was significantly and positively related to literary interests, scientific interests, executive interests and outside interests, but negatively related to agriculture and construction, commercial, persuasive, social and household interests. (3) Self-esteem was positively related to social jobs and negatively related to construction and agricultural jobs. (4) Family status was a significant determinant of artistic and agricultural interests. (5) The vocational interests of males showed that they were high on executive, social and scientific jobs; moderately interested in persuasive, artistic and literary jobs; and had low interest in commercial, agricultural, household and constructive jobs. [SS 0806]

Mehta, Perin H. and Gupta, Nirmala. 1990. **Vocationally, who is better informed?** *Indian Educational Review*, Vol. 25(2): 37-47.

Problem: The problem for the study centres around the role of the family, in the form of joint family or nuclear family system, on the career development of students in urban and semi-urban areas.

Objectives: (i) To find out how much information do the students of Class IX have about the occupation they expect to enter, in the urban and semi-urban background, (ii) to study

the sex differences within urban and semi-urban groups of students and differences between students from the joint and the nuclear family set-up, and (iii) to study the differences between students of high and low intelligence, of different sex and age, within the urban and semi-urban groups.

Methodology: Two hundred and eighty-three adolescent boys and girls studying in government schools in urban (Delhi) and semi-urban (Palwal, Haryana) areas, belonging to the middle and the lower socio-economic strata of society formed the sample for the study. The tools used were a Family Information Questionnaire, Raven's Standard Progressive Matrices, and an Educational and Vocational Planning Questionnaire. Students 't' and chi-square techniques were used to analyse the data.

Major Findings: (1) Comparisons on SES, age and intelligence showed significant differences on intelligence between urban and semi-urban students. (2) Semi-urban students were higher on intelligence but were found younger in age as compared to urban students. (3) Within the urban group no significant sex differences on any of the SES, intelligence or age were found. (4) In the semi-urban group also, significant differences were only on SES with girls being higher on SES. (5) The majority of the students lacked adequate and correct information about the occupation they expected to enter. They also had no or inadequate information about the name and location of the institutions giving training. (6) Urban students differed significantly from semi-urban students on the duration of training and on the total information about the expected occupation. Semi-urban students scored higher than the urban students. (7) Significant sex differences were found among urban students on the total information about the expected occupation. No significant differences appeared in the semi-urban group. (8) In the urban group, significant sex differences appeared on nature of work and type of training, with girls having more information on all these aspects. (9) In the semi-

urban group, significant sex differences appeared on need for special training, type of training and duration of training, with girls scoring higher than boys. (10) Comparison of students from the joint family set-up with those from the nuclear family set-up showed no significant differences attributable to acquiring information about the expected occupation. [VKJ 1480]

Misra, C.K. and Verma, A.P. 1990. **A quick appraisal of the centrally sponsored scheme of vocationalisation of secondary education in Uttar Pradesh.** Independent study. *National Council of Educational Research and Training.*

Problem: This study makes an attempt to evaluate the implementation of the centrally sponsored scheme of vocationalisation of secondary education in Uttar Pradesh.

Objectives: (i) To assess the status of implementation of the centrally sponsored scheme of vocationalisation of education at the +2 stage in the state, (ii) to identify the difficulties in implementation of the scheme of vocationalisation of education, and (iii) to suggest remedies to overcome the difficulties faced by the State.

Methodology: Twenty schools from Lucknow, Allahabad, Varanasi, Gorakhpur, Kanpur and Moradabad regions were selected on a random basis. Five hundred students, 55 teachers and 16 principals were interviewed. Data were also collected through the study of available literature, observation and on-the-spot study.

Major Findings: (1) The management system as suggested in the Centrally Sponsored Scheme had not been fully implemented at the directorate, SCERT and district levels. (2) The district vocational surveys were not completed. (3) There was dearth of textbooks, teachers' guides, practical manuals and other instructional materials for almost all the vocational courses. (4) Full-time teachers were not appointed. (5) Of the 200 institutions, work-sheds were constructed in 197 institutions. The majority of the institutions faced shortage of furniture

and library books. (6) No provision was made for raw materials and other contingencies. [DVE 1012]

✓ Mohan, Swadesh and Gupta, Nirmal. 1990. **Factors related to choice of vocational courses.** *Indian Educational Review*, Vol. 25(3): 14-24.

Problem: The authors have attempted to review researches conducted both in India and abroad on the factors leading to choice of vocational and technical programmes by children.

Objectives: (i) To identify the factors that determine the choice of career by children, (ii) to compare the attitude of children who join vocational and technical courses with those who opt for academic courses, and (iii) to determine the socio-educational background of children attending vocational courses.

Methodology: The study was based on review of official documents and research studies on different aspects of vocational and technical education conducted both within and outside India from 1970 to 1987.

Major Findings: (1) Some of the significant factors for joining vocational and technical courses were identified as (a) interest and motivation for a particular kind of activity; (b) personal concerns, assets, set of values cherished; (c) level of self-concept; (d) attitudinal aspects; (e) career maturity, and (f) future prospects. (2) These factors varied in degree from child to child and no generalisation could be made about their relative importance for a child. [PD 1469]

Mohan, Swadesh and Gupta, Nirmal. 1991. **Vocational students' career behaviour and their adjustment in courses at the +2 stage.** Independent study. *National Council of Educational Research and Training*. [ERIC Funded]

Problem: The three studies under the project attempt to describe correlates of choice of vocational subjects in comparison to choice of academic courses by students and the adjustment of vocational students after entry.

Objectives: (i) To collect empirical evidence which will enable the policy planners to introduce reforms in the scheme of vocationalisation of education, and (ii) to develop guidelines for guidance functionaries to help students of Class X to make wise choices at the +2 stage.

Methodology: The sample consisted of all the vocational students belonging to the 13 schools of Delhi Administration which had vocational courses. In all, it included 198 boys and 208 girls in the vocational stream and 166 academic students (which included both, boys and girls). A number of standardised tools, viz. Raven's Progressive Matrices, Agarwal's Career Maturity Inventory, Dua's Academic Self-concept Tool, Dhar's Work Values Inventory, and a number of interview schedules to gather information on educational and career plans, attitudes, adjustment and home background were used. Statistical analysis included application of both parametric and non-parametric tests and qualitative analysis and interpretation of data.

Major Findings: (1) The findings did not, by and large, differentiate between academic and vocational groups on personal characteristics. (2) Significant differences emerged on planning and attitudinal variables among the two groups. (3) Girls in the vocational stream showed a greater sense of satisfaction with availability of vocational curricula than academic girls. (4) Low-SES boys identified more with their vocational courses than middle-SES boys. (5) Low-SES found a sense of security, while middle-SES girls looked for adventure in vocational courses. (6) Boys in the vocational stream showed a decline in career maturity over a period whereas girls in the vocational stream girls showed a rise in career maturity. (7) A rising sense of dissatisfaction was found with the facilities for studying vocational

courses. (8) Boys recommended introduction of vocational courses at the secondary, rather than the senior secondary stage. [VKR 1191]

Muthiah, P.N. 1989. **Vocational education for the disabled students in Tamil Nadu: A survey.** Independent study. *Madurai Kamaraj Univ.* [ICSSR Funded]

Problem: The problem for this study centres around examining the nature and condition of the provisions for vocational education offered to disabled students in Tamil Nadu.

Objectives: (i) To examine vocational education provisions for the disabled students (visually handicapped, speech and hearing impaired, orthopaedically handicapped and mentally retarded) in Tamil Nadu, (ii) to examine the organisation, administration, admission procedures, workshop conditions, curriculum, methodology of teaching and evaluation and counselling procedures, in special schools, (iii) to identify the learning difficulties of disabled students and suggest remedial measures. (iv) to find out whether the vocational training offered in the special schools was in accordance with the vocational interest of the disabled students, (v) to measure the vocational interest of the disabled students of different categories, and (vi) to explore whether the vocational education offered in the special schools paves the way for fulfilling the life requirements of disabled students and whether the special schools mould their personality.

Methodology: Representative samples of disabled students of the final year vocational course from 50 schools offering vocational education in Tamil Nadu were drawn through the random sampling technique. A minimum of 10% of senior teachers from each school were selected for intensive study on the basis of random sampling. 53 principals were also interviewed.

The tools used were questionnaires, interview schedules, Vocational Interest Scales and a check-list. Data were analysed with mean,

standard deviation, 't' values, chi-square values, rank correlation and percentage.

Major Findings: (1) More than 66.67% of special schools were residential in nature. (2) While the facility of free boarding and lodging was mostly available to orthopaedically handicapped students, mentally retarded children received cent per cent medical attention. (3) Disabled students found it difficult to cope up with the school programme which often resulted in disciplinary problems. (4) Principals perceived unsuitable curriculum as the chief cause for indiscipline. (5) There was prevalence of a high percentage of verbal punishment in special schools. (6) The vocational training imparted was not in accordance with the interests and aspirations of the disabled students, rather it was in accordance with the needs and aspirations of the institutions. [NR 1232]

Nakatana, L. and Srinivasan, R. 1988. **A correlative analysis of the performance of students of monotechnic institutions.** Independent study. *Madras: Technical Teachers' Training Institute.*

Problem: The problem for the study relates to the performance of students in their school final examination which forms the basis for seeking admission to polytechnic courses. It attempts to find out if also there is consistency in the performance exhibited by students of the diploma examinations.

Objectives: (i) To find out the mean achievement of students in the school final and diploma examinations, (ii) to arrive at the degree of relationship between the scores in the two examinations, and (iii) to identify the proportion of students obtaining I, II and III Divisions, respectively, in the two examinations.

Methodology: The sample for the study was drawn from specialised technical (diploma level) institutions. The details of marks obtained by the students of three institutions in Madras offering diploma courses in Commercial Practice,

Chemical Technology and Printing Technology were obtained from the institutions concerned.

The sample consisted of 101 students — 30, 32 and 39 students who passed the diploma examination from the institutions of Commercial Practice, Chemical Technology and Printing Technology, respectively.

Major Findings: (1) The mean scores of the three groups of students who completed their diploma courses in Commercial Practice, Chemical Technology and Printing Technology came to 60.34, 76.87 and 63.98, respectively. Their mean scores in the secondary school final examination were found to be 64, 77.81 and 69.38, respectively. Taking all of them together, one combined mean for the entire sample came to 70.65 and 65.00 in the school final and polytechnic diploma examinations, respectively. This showed that their performance in the school final examination was better than in the polytechnic diploma examination. (2) The performance of students of the Diploma in Chemical Technology course was the best as they occupied the first position in both the examinations, among the three groups. (3) The value of correlation coefficients between their total scores in the school final and the polytechnic examinations were found to be 0.41, 0.42 and 0.46, respectively, for the students of Commercial Practice, Chemical Technology and Printing Technology courses. All these values were substantial and found to be significant. The overall correlation was significant. (4) In terms of their total score in the school final examination, out of 101 students only nine scored II and III Divisions. All others obtained the I Division. But in the polytechnic diploma courses as many as 21 were placed in the II and III Divisions, and 80 could secure the I Division. [SSP 1754]

Natarajan, A.V. and Mukhopadhyay, B. 1988. **A study of the influence of factors influencing the performance of Diploma in Commercial Practice students in women's polytechnics in Kerala.** Independent study. *Madras: Technical*

Teachers' Training Institute.

Problem: A large number of students of Diploma in Commercial Practice (DCP) in the women's polytechnics of Kerala were performing poorly, with failures in the range of 70-80%. This study was, therefore, undertaken to identify the factors influencing their performance so as to offer suitable suggestions.

Objectives: (i) To identify the factors influencing the performance of students as perceived by them, (ii) to identify the factors influencing their performance as perceived by the teachers.

Methodology: Data were collected from the final year students of the DCP course and the teachers teaching the course. Two separate questionnaires—one each for students and teachers—were prepared and administered. A total of 90 students and 20 teachers were selected from three women's polytechnics in Kerala.

Major Findings: (1) Fifty per cent of the teachers perceived that the available time was inadequate to complete the syllabus. (2) More than 90% of the students felt that the existing curriculum was difficult. (3) The teachers followed only the lecture method. The practical sessions were few and hence students could not actively participate in learning situations. (4) More than 91% of the students felt that the class tests conducted by the teachers did not help them in preparing for the final examinations and as such were not beneficial to them. (5) Seventy-nine per cent of the students were not using the library facilities. (6) Nearly 60% of the students were not interested in the course, perhaps because they were concerned about the meagre employment opportunities. [SSP 1743]

Pal, Madan. 1990. **Effect of supervisory style and locus of control on the job satisfaction and performance of industrial workers.** Ph.D., *Edu. Panjab Univ.*

Problem: This study addresses the problem of the effect of supervisory style and locus of

control on the job satisfaction and performance of industrial workers.

Objectives: (i) To see if the two measures of supervisory style and supervisory behaviour are overlapping. If the two measures fail to have a significant correlation then job satisfaction, attitude towards supervisor and performance will be studied in relation to supervisory style and supervisory behaviour separately, (ii) to see if there is any discrepancy between the perceptions of the supervisor and the workers about the supervisory style (democratic vs autocratic), (iii) to study the effect of supervisory style (autocratic/democratic behaviour-consideration, initiating structure) and worker's locus of control (internal/external) on (a) job satisfaction; (b) attitude towards supervisors; (c) performance of the workers, (iv) to see the relationship between job satisfaction, attitude towards supervisors and performance, and (v) to see the relationship of job satisfaction, attitude towards supervisors and performance with other demographic variables like age, education, income, job experience, etc.

Methodology: The sample for the study consisted of 32 supervisors (15 autocratic and 17 democratic) and 361 operators. The tools used were Rotter's Internal External Locus of Control Scale (Hindi version), Brayfield and Rothe's Index of Job Satisfaction (Hindi version), an Attitude Toward Supervisor Scale, a Perception of Leadership Orientation Scale, and a Supervisory Behaviour Description Questionnaire (Hindi version).

Mean, SDs, intercorrelations, analysis of variance, 't' values and step-wise multiple regression analysis were computed to analyse the data.

Major Findings: (1) The operators' mean score on job satisfaction under democratic supervisors was found to be slightly higher than that under autocratic supervisors. (2) The ratios for the main effect of locus of control were found to be non-significant on job satisfaction. (3) Significant F-ratios were found for the main effects of consideration behaviour and initiating structure

behaviour on job satisfaction and attitude towards supervisors. (4) A positive and significant relationship was found between job satisfaction and attitude towards supervisors. (5) Those operators were higher on job satisfaction and had more positive attitude towards supervisors, who perceived their supervisors to be democratic, high on consideration or initiating structure or high on both. (6) The job satisfaction of the operators was highest under supervisors who rated themselves, and were also rated by their operators, to be democratic. On the other hand, the job satisfaction of the operators was the lowest under supervisors who rated themselves to be democratic but were rated by their operators to be autocratic. (7) Internally controlled operators showed a more positive attitude towards their supervisors than externally controlled operators. [JNJ 1789]

Patel, Surabhi P. 1991. **A study of the work experience programme in secondary teachers' training colleges.** Independent study. *National Council of Educational Research and Training.* [ERIC Funded]

Problem: The study centres around the programme of Work Experience in secondary teachers' training colleges—its implementation, related problems and remedial actions.

Objectives: (i) To find out the present status of the Work Experience programme in secondary teacher training institutions, and (ii) to suggest appropriate action for its universal introduction and more effective implementation.

Methodology: The sample was a stratified, purposive sample of 50 colleges who responded to the mailed questionnaire.

Major Findings: (1) In the majority of the sample institutions, Work Experience had existed in one form or the other for more than five years but it had neither grown properly nor stabilised itself. (2) In more than half of these institutions Work Experience was neither a compulsory subject for study nor for evaluation; as a result

its teaching-learning was not being taken seriously. (3) The infrastructural facilities, tools and equipment, trained teachers and finances for the programme were far from adequate. (4) The time devoted to teaching its methods and content was also inadequate. (5) The scheme of evaluation in vogue was neither continuous nor comprehensive. [DFSEC 0841]

Pattinthsar, P. 1989. **Economic parameters and interests of vocational stream students.** Madurai Kamaraj Univ.

Problem: The study investigates the economic parameters and interests of vocational stream students and also examines the interrelationship between the two.

Objectives: (i) To identify the economic parameters of vocational stream students, (ii) to find out the interests of vocational stream students, and (iii) to examine the relationship between economic parameters and the interests of vocational-stream students.

Methodology: In order to collect data the investigator developed a score card to find out the economic parameters of the students. For identifying the vocational interests of the students, a three-point Vocational Interest Scale was structured and validated. The sample consisted of 11 schools of an educational district, offering vocational courses to 250 students. The investigator collected and analysed both primary and secondary data.

Major Findings: (1) The parents of the respondents marginally differed in their level of income and expenditure. (2) With regard to vocational interests among the students, the findings revealed that the students of both sexes differed significantly. [GSP 0562]

Pillai, S.S. and Srinivasan, R. 1988a. **A study on the occupational experiences of women technicians.** Independent study. Madras: Technical Teachers' Training Institute.

Problem: The problem for the study centres around analysing the occupational experiences of women technicians.

Objective: To study the different aspects of women technicians' work environment including the nature of the technicians' job and the contributions made by them, their attitude towards their designated position, the average amount of emoluments received, their relationship with their colleagues, and the difficulties, if any, encountered by them in fulfilling their job requirements.

Methodology: The investigators developed a tool to assess Perceptions of Women Technicians (POWT), and to collect information about their job performance. The tool was mailed and a total of 52 responses were received back. Among the respondents, 12 were employed as teachers in the polytechnics while the other 40 were working in different capacities in government and private organisations.

Major Findings: (1) The women technicians working as the faculty in polytechnics found their work interesting. (2) More than 50% of the respondents did not face any difficulties in carrying out their duties. However, they felt that they were made to strain too much both in their work places and at home. (3) In terms of earnings those employed as faculty members seemed to be the privileged group compared to others. (4) All of them expressed that they had a friendly and normal relationship with their colleagues and superiors. (5) The positive aspects of their job as perceived by them were (a) relevance of polytechnic education to their on-the-job performance; (b) ability to adapt to job expectations; (c) security of service, and (d) quest for seeking fresh and new knowledge to do their duties in a better manner. (6) The distressing factors which came in the way of their doing their best were identified as (a) low/inadequate salary not commensurate with the strain involved, (b) no time to concentrate on other matters, and (c) negligible incentives offered. [SSP 1744]

Pillai, S.S. and Srinivasan, R. 1988b. **Technician education students' priorities: A survey.** Independent study. *Madras: Technical Teachers' Training Institute.*

Problem: The problem for the study centres around the technician education courses which are of comparatively shorter duration and lead to specific skill acquisition. These courses have started attracting a large number of students.

Objectives: (i) To identify the factors influencing students to join polytechnic courses, (ii) to find out whether the same factors happen to be the most important ones both for engineering and non-engineering diploma courses, and (iii) to examine whether there are any differences in their priorities between men and women students.

Methodology: A questionnaire consisting of 15 statements to cover the various factors was designed. The students were asked to rank them from 1 to 15 in the order of priority. The tool was responded to by 354 polytechnic students from nine polytechnics in the four southern states.

Major Findings: (1) Seventy-seven out of 354 respondents stated that they joined polytechnic courses because these would help them to attain proficiency in a chosen skill. They gave the least preference to becoming self-employed. (2) The important priorities expressed by the students pursuing diploma courses in engineering related to (a) ease in getting a job; (b) liking for getting a job nearer to their native places; (c) acquiring proficiency in a skill; (d) the courses demanded only the minimum years of study, and (e) opportunities for earning extra money. (3) Students of non-engineering diploma courses expressed their preferences as (a) the possibility of getting a job without waiting for long; (b) liking for getting a job nearer to their places of residence, and (c) the courses involve the minimum years of study. (4) Seventy-four per cent of the women respondents preferred polytechnic courses because they like to be employed nearer to the towns where they lived. (5) Nearly two-thirds of

the men students said that their primary concern was to get a job and start earning at the earliest to support their families. [SSP 1747]

Pillai, S.S. and Srinivasan, R. 1989. **Feasibility of polytechnic-industry collaboration: A survey.** Independent study. *Madras: Technical Teachers' Training Institute.*

Problem: The study addresses the problem of polytechnic-industry collaboration which is considered to be crucial in improving the practical skills of the students and the relevance of their skills for industries. The study was undertaken to identify the extent of industry-institute collaboration maintained, if any, and to analyse other related issues like possible areas of cooperation and constraints, and to offer suggestions to promote the industry-institute ties.

Objectives: (i) To elicit views on the desirability of polytechnic-industry collaboration, (ii) to identify the types of assistance technician institutions could extend to the industries, (iii) to list the possibilities of mutual assistance, (iv) to ascertain whether industries seek/give assistance for particular purposes, (v) to find out the efforts undertaken by the polytechnics to maintain ties with industries, (vi) to list the difficulties experienced in such collaborative ventures, (vii) to identify the causes for lack of collaborative efforts, and (viii) to identify the nature of the rapport existing, if any, between industries and polytechnics.

Methodology: In order to elicit the required data for this descriptive survey a questionnaire-survey of polytechnic-industry collaboration (SPIC), containing 23 items, developed by the investigators was mailed to all the polytechnics in the southern region. The responses received from 42 principals spread over the entire region were analysed.

Major Findings: (1) The low rapport between institutes and industries was mainly due to (a) lack of initiative from either side; (b) reluctance

on the part of the staff to make extra efforts, and (c) non-availability of appointed liaison officers in the polytechnics. (2) One of the constraints in industry-institute ties stated by the principals was that the industries did not generally allow the students from polytechnics to operate the machines, and they were just asked to observe production. (3) In order to encourage industry-institute ties it was recommended that apprenticeship training, and career guidance and counselling programmes should be organised in all industries. (4) One member of the faculty should be assigned the responsibility of coordinating polytechnic-industry ties and the curriculum should be updated with the help of the industries. (5) The measures taken by the polytechnics to promote ties with entrepreneurs included the following: (a) Technical clubs were organised to regularise the programme of experts' lectures for the benefit of the students; (b) Occasional visits by the faculty to nearby industries to have a first-hand knowledge of the latest/modern production processes. (6) Principals unanimously opined that industry-institute ties should be stressed. [SSP 1749]

Pillai, S.S. and Srinivasan, R. 1990a. **A survey of problems of technical students.** Independent study. *Madras: Technical Teachers' Training Institute.*

Problem: The polytechnic courses being demanding and taxing, the study was designed to empirically find out some common problems faced by the students in respect of understanding the content, availability of reading materials, suitable placement and knowledge of modern industrial practices.

Objectives: (i) To prioritise the identified problems in terms of their felt difficulty as expressed by the students, (ii) to establish the severity of the problems in terms of the identified comments, (iii) to find out the differences in the expressed feelings between students of engineering and non-engineering diploma courses, and (iv) to find out the differences in

the difficulties encountered by students of the first, second and third year diploma courses.

Methodology: An opinionnaire, 'Problems of Technical Students', was developed by the investigators. The tool was responded to by 183 polytechnic diploma students spread over the entire southern region. One hundred and two of these were pursuing diploma courses in engineering subjects, and the remaining 81 were from a non-engineering course, namely, Diploma in Commercial Practice.

Major Findings: (1) Nearly 52% of the students found it difficult to complete all the laboratory/workshop exercises in time. (2) No significant difference was found in the perceptions of hostellers and day scholars about the environment in which they were placed. (3) There was no significant difference in the ratings of their difficulties between the students of engineering and non-engineering diploma courses. (4) Compared to the first and the second year, those in the final year seemed to be more concerned about their employment prospects. This was so because a significant difference emerged between the ratings of third year students and others on this count. (5) Students felt that they were not so fluent either in oral or written communication. [SSP 1750]

Pillai, S.S. and Srinivasan, R. 1990b. **Student achievement in technical institutions: An analysis.** Independent study. *Madras: Technical Teachers' Training Institute.*

Problem: Polytechnic courses are comparatively of shorter duration and have wage/self-employment potential. The present study, which is a descriptive one, intends to analyse the achievement of students in technical institutions.

Objectives: (i) To find out the number of students enrolled in the different types of courses offered in polytechnics, (ii) to compute the out-turn of technicians produced and the divisions/grades in which they were placed, (iii) to observe the specific distinctions achieved, if any, by the

institutions, and (iv) to identify the efforts made, if any, by the polytechnics in arranging placement of their alumni.

Methodology: This descriptive research study analysed the examination results of three years in 57 polytechnics in the southern region. Further, required data were collected through a questionnaire developed by the investigators for this purpose and mailed to them. The responses obtained from 57 polytechnics spread over four southern states were analysed and interpreted.

Major Findings: (1) The total number of students enrolled in these institutions was 13,990 in 1986-87, 14,095 in 1987-88 and 14,688 in 1988-89. Of these 22% were girls. (2) The total number of technicians produced in all these institutions came to 4,244 in 1986-87, 4,521 in 1987-88 and 4,633 in 1988-89. Of these nearly one-fourth of the alumni were girls. (3) On an average, about one-fourth of the total number of technicians could secure first division in their final examination while another one-fourth showed poor performance and were placed in the third division. (4) As regards specific distinctions, by an institution, it was noticed that five polytechnics in Karnataka and three in Kerala obtained the first five ranks for the period 1986-89. Further, a women's polytechnic in Tamil Nadu secured 100% results in electronics for two consecutive years. (5) Only nine institutions reported that they organised campus interviews for their students. (6) Most of the polytechnics did not seem to have any liaison with their past students. [SSP 1751]

Pillai, S.S. and Srinivasan, R. 1989. **A comparative analysis of the job experiences of technical versus non-technical women employees.** Independent study. Madras: Technical Teachers' Training Institute.

Problem: Addressing the problem of occupational experiences of women employees, the study makes a comparative analysis of these experiences in the case of technical and non-technical women employees.

Objectives: To study (i) the general inclination of technical and non-technical women employees towards the job in which they were employed, (ii) the specific contributions, if any, made by them, (iii) the social relations on the job with their male colleagues and superiors, (iv) the specific problems faced, if any, and (v) the extent of applicability of their educational backgrounds in the job situations.

Methodology: Apart from the data already available for technical women employees from an earlier study, this study included 31 non-technical women employees from two states; 17 (55%) of them were employed as faculty members in schools and polytechnics, and the remaining 14 (45%) were typists or clerks or were in similar other positions. A questionnaire with 22 items on Job Experiences of Non-Technical Women Employees was administered to collect the data.

Major Findings: (1) Seventy-four per cent of the non-technical women contacted reported that they had very little interest in the jobs held by them. But they had to stay in them in the absence of any other suitable job. (2) While the technically qualified women said that their polytechnic courses were useful in their jobs, in the other group only those employed as faculty members expressed a similar view. (3) Another striking difference in their perceptions was that while the technically qualified women said that they had a quest for more knowledge and expertise, no one in the other group expressed such an opinion. (4) Almost all, including teachers, felt that their jobs were of a routine type and that they did not have anything specifically to report as their contribution to the efficiency of the respective organisations. (5) The respondents stated that they had a smooth relationship with their male colleagues and that they did not face any difficulty in sharing their work with them. (6) While teachers reported that they taught the particular subject in which they were qualified, the non-teaching employees felt that in most situations their jobs did not warrant their expertise. [SSP 1778]

Raina, K.B.; Adithan, M.; Puri, V.P. and Gill, H.K. 1988. **Case studies of the technician education system in States C and D (Northern Region)**. Independent study. Chandigarh: Technical Teachers' Training Institute.

Problem: The study investigates the planning processes and methodology adopted by the Directorate concerned with technician education in respect of various aspects concerning the technician education system.

Objectives: (i) To study the planning process and methodology adopted by the State Directorates in respect of various aspects of the technician education system thereby bringing out its strengths and weaknesses in the States, (ii) to create an awareness amongst the senior planners and administrators of the need to adopt a scientific approach in the state level planning and management of the technician education system, and (iii) to highlight the problems faced.

Methodology: Technical education in the States may be viewed as a system based on the input-process-output model designed to achieve certain objectives within an 'environment', which also provides 'feedback' to improve effectiveness. Therefore, for the purpose of this study the systems approach had been adopted.

Major Findings: (1) The State Directorates have become aware that they should not be merely administrative bodies but bodies involved in professional management of the technician education system in the States. (2) The Directorates wished to strengthen themselves to undertake major activities like monitoring, preparing developmental plans, inspection, evaluation, computerisation, curriculum development and manpower planning. [MMM 1001]

Raizada, P. and Sacheti, A.K. 1990. **A quick appraisal of the implementation of centrally sponsored scheme of vocationalisation of secondary education — Gujarat**. Independent study. National Council of Educational Research and Training.

Problem: This study identifies the problems of implementation of vocationalisation of education at the +2 stage in Gujarat with a view to suggesting suitable remedial action for better and effective implementation.

Objectives: (i) To collect information regarding the status of the implementation, (ii) to analyse the strengths and weaknesses of the implementation, and (iii) to suggest measures for improvement.

Methodology: Seven schools, 32 teachers, 163 students, 3 principals and officers of the Education Department formed the sample. Questionnaires, school visits, interviews, discussions with knowledgeable persons and review of departmental reports were undertaken to collect relevant data. The data thus collected was analysed, interpreted and conclusions drawn.

Major Findings: (1) Certain inadequacies and drawbacks were noticed in the implementational process in respect of selection of institutions, management structure, district surveys, selection of courses, curriculum design, instructional materials, vocational teachers, infrastructural facilities, collaborative arrangement, evaluation and examination, guidance and counselling, students' future, and utilisation of financial assistance. (2) In view of the perceived inadequacies some measures and correctives were suggested in the report. [DVE 1011]

Rathore, B.S. and Saini, J.S. 1988. **Technical entrepreneurs in Chandigarh: A profile**. Independent study. Chandigarh: Technical Teachers' Training Institute.

Problem: The study centres around the problem of motivating the technical diploma holders for taking up an entrepreneurial career.

Objectives: (i) To identify the factors motivating technical persons to opt for an entrepreneurial career, (ii) to determine the criteria for product/project selection, (iii) to find

out the pattern of financing in enterprises promoted by technical entrepreneurs, (iv) to find out the employment generated by technical entrepreneurs, and (v) to find out the problems faced by technical entrepreneurs.

Methodology: The sample was selected through simple random sampling. The tool used for the study was an Interview Schedule.

Major Findings: (1) Desire for independence, feeling of underutilization of one's potential, desire for rapid growth and specialised knowledge of trade/business were the major motives behind starting entrepreneurial ventures. (2) Majority of the technical entrepreneurs started their ventures during 20-30 years of age and they had some prior work experience. (3) The majority of the entrepreneurs emerged from families having a service or agriculture background. (4) Product selection was related either to the previous work experience or to the type of item allotted by a parent unit as an ancillary. (5) Approximately 42% of the respondents established projects in the investment range of Rs 2-5 lakh. (6) Twenty-five per cent of the technical entrepreneurs started enterprises with their own money; 27.1% could manage a loan by putting in 20% or less money; others had to bring in more than 20% as their contribution. (7) Inadequacy of term-loan and working-capital loan were reported by 36.1% and 62.85% respondents, respectively. (8) Sixty-seven point seven respondents were found operating their units in rented premises. (9) On an average, each unit employed seven persons. (10) Credit sales, non-availability of sheds and hurdles in obtaining finance were the major problems faced by technical entrepreneurs. [MMM 1782]

Rathore, B.S., Saini, J.S. and Sharma, D.D. 1991. **Problems and prospects of entrepreneurship promotion in polytechnics.** Independent study. Chandigarh: Technical Teachers' Training Institute.

Problem: The research is a systematic study

of perception of polytechnic teachers and students on institutionalising entrepreneurship in the technical education system.

Objectives: (i) To determine the extent to which polytechnic education prepares a diploma holder for entrepreneurship/self-employment, (ii) to determine the capability of polytechnic teachers for promoting entrepreneurship/self-employment in polytechnic students, (iii) to analyse students' aspirations and reaction to various career options in general, and entrepreneurship/self-employment in particular, and (iv) to identify the major problems in promoting entrepreneurship in polytechnics.

Methodology: A simple random sampling technique was used to select the sample. Three interview schedules were developed and used for collecting the data. Simple averages and percentages were calculated to analyse and interpret the data.

Major Findings: (1) The majority of the teachers perceived that not more than five per cent students opted for an entrepreneurial career. Such students by and large belonged to the traditional engineering disciplines. (2) The majority of the teachers were willing to teach entrepreneurship but for effective teaching they wanted to undergo some training, and expected financial incentives. (3) The teachers felt that poor financial background, lack of entrepreneurial information, lack of entrepreneurial attitude amongst students, lack of trained faculty and inadequate policy support were the main problems in promoting entrepreneurship amongst polytechnic students. (4) About 46% of the students showed interest in being self-employed while the other 54% wanted to go in for a wage career. (5) Of those who wanted to go in for a wage career, the majority were interested in government jobs. (6) Not being aware of facilities and incentives, marketing of products/services, inadequacy of infrastructure and problems in projected formulation were indicated as major problems which prohibit polytechnic students to go in for an entrepreneurial career.

(7) Diploma holder entrepreneurs indicated that industrial visits, project work assignments and guidance and counselling by teachers motivated them to opt for an entrepreneurial career. [MMM 0993]

Rathore, B.S.; Saini, J.S.; Sharma, D.D. and Dhameja, S.K. 1992. **Impact of various assistance schemes on technical entrepreneurs (Haryana State)**. Independent study. Chandigarh: *Technical Teachers' Training Institute*.

Problem: The problem of the study centres around the prevalent unemployment among youth in general, and amongst those technically qualified, in particular. This research project was therefore undertaken with a view to evaluate the impact of various entrepreneurial assistance schemes launched by different support agencies on technical entrepreneurs.

Objectives: (i) To study the general profile, viewpoints and motivational factors of technical entrepreneurs, (ii) to study the various assistance schemes and their utilisation by technical entrepreneurs, (iii) to identify the indicators/parameters determining the success of various entrepreneurial schemes, and (iv) to recommend remedial measures for improving the existing entrepreneurial schemes and suggest new schemes for technical entrepreneurs.

Methodology: The sample was chosen through a stratified random sampling procedure. Data for the study were collected through two interview schedules — one each for support agencies and technical entrepreneurs. Simple averages and percentages were calculated to analyse the data.

Major Findings: (1) The problems faced by technical entrepreneurs included cumbersome procedural formalities, rampant corruption, non-cooperative attitude, red-tapism and wastage of time. (2) The awareness level of the respondents about the schemes launched was found to be unsatisfactory. (3) The support agencies generally reported that the merit of the project, and the

qualifications and experience of the technical entrepreneurs were given special consideration while extending facilities under the entrepreneur schemes. (4) If the project is hi-tech, export-oriented, import-substitute or an environment-friendly one, assistance is provided on a priority basis. (5) The support agencies are emphasising formal training for the loanees while sanctioning funds under various schemes. [MMM 1783]

Robert. 1988. **A study of the socio-economic status and vocational choices of students**. M.Phil., Edu. *Madurai Kamaraj Univ.*

Problem: The problem for the study was to answer questions like; Do the vocational choices of higher secondary students depend upon their socio-economic status? Are the vocational choices of the students related to the vocational aspirations of their parents?

Objectives: (i) To study the socio-economic status of students in higher secondary schools and their vocational choices, and (ii) to study the relationship between the vocational choices of the students and the vocational aspirations of their parents.

Methodology: In the study, 199 higher secondary students from various schools in Madurai and Anna districts formed the sample. Sixty-three parents of the students were also interviewed to ascertain their vocational aspirations for their children.

The Socio-Economic Status Scale (SESS), the Vocational Interest Record (VIR) and the Parental Aspiration on Children's Vocations Questionnaire were used. The mean, SD, 't' test and chi-square test were used for statistical analysis.

Major Findings: (1) The vocational choices of the higher secondary students were independent of their socio-economic status and vocational aspirations of their parents. (2) Both boys and girls had similar vocational choices as regards agriculture, arts, literature, executive work, commerce, science and social work. However,

more girls preferred the vocation 'household work' than boys. [MKU 1054]

Sacheti, A.K. and Raizada, P. 1998: **A quick appraisal of the implementation of the centrally sponsored scheme of vocationalisation of secondary education — Rajasthan.** Independent study. *National Council of Educational Research and Training.*

Problem: The study centres around the scheme of vocationalisation of education launched by the state of Rajasthan during 1987-88 and its implementation with a view to make a quick appraisal of its status and the problems being faced so as to suggest corrective measures for improvement.

Objectives: (i) To collect information on various aspects of implementation of the programme, (ii) to identify the strong and the weak areas of implementation, (iii) to find out the aspiration of students in terms of their academic and professional growth, and (iv) to give suggestions for the improvement of the programme.

Methodology: The present study covered about 11% of the higher secondary schools offering vocational courses. The study team visited a variety of institutions — private, rural, semi-urban and urban with a view to cover the maximum number of courses. Data were collected through five questionnaires administered to (a) state level functionaries, (b) district level functionaries, (c) heads of the institutions, (d) teachers, and (e) students. The responses to items in the questionnaire were analysed and the majority of the data were presented in terms of percentages.

Major Findings: (1) Vocational courses in the State have been introduced mainly in government higher secondary schools. (2) The posts of vice-principal have been filled by promoting general-education staff as per seniority. (3) Out of 34 teachers, 31 were either post-graduates or graduates in the concerned vocational areas.

Twenty-one of them had B.Ed. or M.Ed. qualifications. Only eight teachers had additional qualifications related to vocational courses. The special training organised by the NCERT or the State Education Department was attended by 29% teachers. (4) A significant proportion (67.69%) of students reported that they did not have workshops, and laboratory and library facilities for the given courses in the school. (5) As regards the educational background of the students, it was found that 6.42% were first-divisioners, 41.79%, second-divisioners; and the remaining were either third-divisioners or had 'passed' in their qualifying high school public examination. (6) With regard to parental occupation, it was found that 36.69% parents were government servants, 27.22% were engaged in agriculture-related occupations and 20.14% were doing business of various kinds. 12.59% parents were working in the private sector. (7) Out of the 296 students, 7.43% belonged to the Scheduled Castes, 3.05% to Scheduled Tribes, 1.5% to the backward classes, the remaining 88.17% students belonged to the general category. (8) A significant proportion (60.68%) of students liked to join service whereas 17.65% students preferred to enter business on completion of their course. (9) Regarding the training being received, 34.22% students said that they were getting good training. However, a slightly larger number of students (38.64 per cent) felt that they were not receiving adequate practical training. (10) Hardly any progress was noticed regarding the conduct of the district vocational surveys, instructional material development and teacher training. But, postings of vice-principals, DVEOs and other supporting staff had been completed. (11) Regarding employment of the vocational products on completion of the courses, only isolated cases of gainful employment were reported by the teachers. The majority of the first batch of students joined first-degree courses. [DVE 1010]

Sacheti, A.K.; Raizada, P. and Verma, A.P. 1992. **An on-the-spot study of the implementation**

of the vocationalisation of education programme in the state of Kerala. Independent study. *National Council of Educational Research and Training.*

Problem: The study addresses the problem of effective implementation of the scheme of vocationalisation of secondary education in the State of Kerala with a view to highlighting the positive aspects of the implementation and also suggesting corrective measures for better implementation.

Objectives: (i) To collect information on different aspects of implementation of the programme, (ii) to make an on-the-spot appraisal of the programme as implemented by the State, (iii) to identify and analyse the strong and the weak areas of implementation, (iv) to find out the socio-economic status of the target population and their aspiration in terms of academic and professional growth, and (v) to develop a database of information.

Methodology: The study team visited 19 schools and analysed questionnaires received back from all 19 heads of schools, 65 teachers and 728 students. The tools used were, questionnaires for state level officers, regional level officers, heads of the schools, teachers and students. Data were also collected through interview, on-the-spot observation and from information from official documents and other related material. Mean, frequency distribution and percentages were calculated to analyse the data.

Major Findings: (1) The State Government had created the management structure on more or less similar lines as visualised in the scheme. (2) The course design was bi-focal in nature, i.e. it enabled the students to take up a vocation or to pursue academic courses in the universities or to sit in competitive examinations leading to professional courses. (3) The majority of the vocational teachers were either fresh graduates or postgraduates in the subject concerned, having no practical experience in the field. (4) As regards

the performance of students in the qualifying SSLC examination, it was found that 16.4% students were first-divisioners; 28.9%, second-divisioners; and the remaining, third-divisioners or 'pass' class. (5) 27.9% of parents of the vocational students were involved in agriculture-or-farming related activities; 25.2% were in government service; 9.1% were serving in the private sector. 7.1% parents were engaged in business; 3.3%, as skilled workers; and 19.5% were either retired or involved in activities other than those mentioned above. (6) 53.8% parents had an income of Rs 500 or less per month; 22.3% were in the income range of Rs 501 to Rs 1,000; 17.8% had an income between Rs. 1,001; and Rs. 2,000; 4.8% had an income between Rs 2,001 and Rs 4,000 ; and 1.3 per cent were getting Rs 4,001 or more per month. (7) 11.7% students belonged to the SC category; 1.3% to the ST; 36.0 to the backward classes and the remaining 51% to the general category. (8) More of practical training, recruitment of qualified and trained teachers and reduction in non-vocational subjects were some of the important suggestions of the students. (9) It was found that a significant proportion of the students failed in English (91.86%), mathematics (86.65 %), physics (62.02%) and chemistry (54.07%) in the 1991 final examinations. [DVE 1018]

Saini, J.S. 1992. **Impact of entrepreneurship training on the business performance of entrepreneurs.** Independent study. *Chandigarh: Technical Teachers' Training Institute.*

Problem: A large number of organisations in India offer entrepreneurship-development programmes. There is no study available which compares the business performance of those who started their ventures after entrepreneurship training and those who started their ventures without such training. This study was undertaken to fill this void.

Objectives: (i) To compare the growth rate of employment generated in enterprises estab-

lished by trained and untrained entrepreneurs, (ii) to compare the growth rate of capital investment in enterprises started by trained and untrained entrepreneurs, and (iii) to compare the rate of growth of sales turnover in enterprises established by trained and untrained entrepreneurs.

Methodology: Stratified systematic random sampling was done in the case of trained entrepreneurs and purposive sampling was done in the case of comparable untrained entrepreneurs. Two interview schedules, one each for the trained and the untrained entrepreneurs, were developed. Hypotheses were tested by making use of the 'Z' test.

Major Findings: (1) Trained entrepreneurs in comparison to untrained ones had a significantly higher rate of growth in employment generation and sales turnover. (2) There was no significant difference in the growth of capital invested in enterprises started by trained and untrained entrepreneurs. (3) In absolute terms, after an average operational period of 3.38 years, employment in enterprises promoted by trained entrepreneurs went up from 7.72 to 13.79 persons. (4) In the case of untrained entrepreneurs, employment per unit went up from 8.09 to 9.79 persons. (5) Investment per enterprise started by trained entrepreneurs increased from Rs 2.74 lakh to Rs 4.21 lakh whereas in case of untrained entrepreneurs it increased from Rs 6.91 lakh to Rs 8.56 lakh per enterprise. (6) There was a remarkable improvement in the average annual turnover of enterprises started by trained entrepreneurs as it surged from Rs 3.39 lakh to Rs 13.79 lakh. In the case of untrained entrepreneurs, the average annual turnover per enterprise increased from Rs 8.68 lakh to Rs 12.71 lakh. [MMM 1786]

Saraswathi, L. 1992. **Relationship between personality dimensions and vocational interests of pupils of Standard X.** M.Phil., Edu. Madurai Kamaraj Univ.

Problem: The study is undertaken to investigate and answer the question; "Are the various dimensions of the personality of school students related to their vocational interests?"

Objectives: (i) To assess the various dimensions of the personality of Standard X students, (ii) to assess their vocational interests, (iii) to find out the relationship between the personality dimensions and the vocational interests of Standard X students, and (iv) to find out whether the vocational interests of these students are related to their academic achievement.

Methodology: The sample consisted of 400 students of Standard X drawn from various high schools in and around Madurai City. Data were collected by administering Tamil versions of the Multidimensional Personality Inventory by Manu Rani Agarwal and the Vocational Interest Record by Kamal Trivedi. Pearson's product-moment correlation and chi-square techniques were employed for statistical analysis.

Major Findings: (1) The personality dimensions and the vocational interests of Standard X students were not related. (2) The vocational interests of Standard X students and their academic achievement were not related either. [MKU 1086]

Sastry, L.S. and Pillai, Swaminatha S. 1989. **An action plan to improve the standards of workshop training in polytechnics.** Independent study. Madras: Technical Teachers' Training Institute.

Problem: The present study centres around the problem of identifying the defects in the prevailing system of imparting practical training in polytechnic workshops and suggesting suitable methods to improve the standards.

Objectives: (i) To analyse the methodology being followed in imparting training in workshops, (ii) to analyse the use of equipment for purposes of training, (iii) to analyse the various

exercises to be completed by the students in workshops, (iv) to analyse the various forms of evaluation being followed in workshop training, and (v) to analyse the opinion of students on workshop training.

Methodology: The required information was collected from workshop superintendents, workshop instructors and final year students of polytechnics. Each of these categories of respondents was asked to fill up a separate check-list designed for this purpose. In all, six workshop superintendents, 23 workshop instructors and 111 students responded from polytechnics in Andhra Pradesh.

Major Findings: (1) The students reported that they were not in a position to complete the required number of jobs in workshops. On being asked for the reasons for such a situation, (a) Fifty-three per cent reported 'non-availability of material', (b) Forty-seven per cent reported 'non-availability of equipment'. Besides these, 'power failure' and 'students strike' were cited as other reasons. (2) Eighty-two per cent students felt that they require specific assistance from the staff while doing the workshop practice exercises. (3) Forty-eight per cent of the students felt that the tools have to be introduced to them. Only 10% expressed familiarity with the measuring devices. (4) Seventeen of the 23 instructors felt that evaluation is to be done immediately on completion of the job in hand. (5) The workshop superintendents were in favour of standardising the jobs and prescribing a uniform code to be followed by all the polytechnics in the state. (6) Four out of six workshop superintendents felt that the available equipment could not be put to optimum use due to shortage of skilled personnel. (7) The staff felt that students should be motivated towards workshop training by giving them jobs on utility articles. [SSP 1745]

Saxena, Sneha. 1988. **Vocational development: Relationship between grade level and vocational maturity.** *Indian Educational Review*, Vol. 23(3) : 137-44.

Problem: The present study investigates the pattern of vocational development in Indian students and tries to find out the applicability of the developmental view of vocational behaviour by studying its relationship to grade level.

Objective: To study the developmental trend of vocational maturity scores from Class IX to Class XII.

Methodology: A sample of 700 students (350 boys and 350 girls) of Class IX, X, XI and XII were selected. The Career Maturity Inventory (Hindi adaptation) by Chand, 1979 was used. Significance of difference between means on different grade levels for the seven measures of vocational maturity were computed.

Major Findings: (1) The measures of vocational maturity were characterised by a general developmental trend in the positive direction from Class IX to XII. (2) Class XI students are vocationally more mature than Class X students in respect of independent choice attitudes; knowledge of self and the occupational world; skill of relating capabilities to the demands and requirements of jobs; planning to achieve the goal and being creative in solving problems. (3) Class XII students were found to be more mature vocationally than Class XI students in having greater choice attitudes, more knowledge of the world of work and in planning to achieve the goal. (4) Class XI students were found to be having more self-knowledge, goal-selection skill and problem-solving insight in the career decision-making process than Class XII students. [SPr 1411]

Sen Gupta, Manjit and Raizada, P. 1991. **An on-the-spot study of the implementation of vocationalisation of education programme in the state of Karnataka.** Independent study. *National Council of Educational Research and Training.*

Problem: The study addresses the problem of effective implementation of the programme of vocationalisation of education in the State of

Karnataka. It intends to help the planners and decision-makers in defining future action and taking timely remedial measures for better implementation.

Objectives: (i) To identify impediments to effective implementation, (ii) to elicit views and suggestions of managements, heads of institutions, teachers and students, (iii) to make an on-the-spot assessment of the strengths and weaknesses of the programme implementation and suggest remedies for improvement, and (iv) to project a complete implementational scenario for documentation and as a guide to other states.

Methodology: A purposive sample was drawn with a view to cover: (a) boys' as well as girls' schools, (b) both rural and urban institutions, (c) good, bad and not-so-good institutions, (d) all major areas of vocational courses, and (e) government as well as private institutions. Easy accessibility within the limited time-period available was also an important consideration. The tools used for collection of data included questionnaires, opinionnaires, interview schedules and proformae. Averages and percentages were calculated and graphically represented.

Major Findings: (1) The strong points of programme implementation in the State were: (a) the establishment of a separate Directorate of Vocational Education in 1977; (b) the setting up of the State Council of Vocational Education (SCVE) in 1978; (c) conduct of district vocational surveys for all the districts; (d) introducing vocational courses in both government and private colleges; (e) progressively discontinuing courses as the need dwindled and adding new ones having better demand; (f) conforming largely with the recommended national pattern in terms of curriculum structure; (g) revising the curricula and conducting training/orientation programmes periodically; (h) modifying recruitment rules; (i) follow-up of vocational pass-outs. (2) The weak points of the programme implementation included (a) lack of effort in getting all the courses

recognised by employing agencies; (b) no self-employment support; (c) lack of general awareness about vocational courses; (d) no provision of desirable further education facilities; (e) discontent among the teaching staff; (f) poor and insufficient infrastructural facilities; (g) irregular and meagre payment to part-time staff; (h) non-standardisation and non-accreditation of courses and institutions. [DVE 1016]

Sen Gupta, Manjit and Dhote, Ashok Kumar. 1990. **A quick appraisal of the implementation of the centrally sponsored scheme on vocationalisation of secondary education.** Independent study. *National Council of Educational Research and Training.*

Problem: This study addresses the problem of evaluation/appraisal of the implementation of the centrally sponsored scheme of vocationalisation of secondary education in Himachal Pradesh.

Objectives: (i) To identify the bottlenecks in the way of implementation and suggest remedies, (ii) to know the views of the state, divisional and district-level officers on implementation, (iii) to evaluate the programme implementation through questionnaires and interviews, and (iv) to recommend measures for improvement.

Methodology: The sample consisted of (a) state, divisional, district and board level officers, (b) five schools representing both rural and urban areas as well as good, bad and average schools, covering courses from all major vocational areas, (c) five principals, 19 teachers and 213 students. The tools used were questionnaires, interview schedules and proformae. Qualitative as well as quantitative analysis of the data were undertaken using simple statistical techniques.

Major Findings: (1) The fund released by the Central Government under the CSS was not reaching the concerned implementing officers as the State Government had extended its ban on

expenditure to central schemes also. (2) No effective collaborative arrangements had been made for providing on-the-job practical training to students. (3) Institutional training in the majority of the cases was utterly inadequate. (4) There was complete dearth of instructional materials as per state needs. (5) There was lack of effective communication between the directorate and the institutions mainly because of the absence of any district level management structure for vocational education. (6) Selection of vocational courses was not based on district vocational survey findings, resulting in a mismatch between the courses introduced and availability of job opportunities. (7) Computer labs generally were ill-equipped and ill-maintained. (8) The involvement of the Board of Secondary Education was inadequate in the implementation process. (9) There was no provision for on-the-job training in the curriculum. (10) Non-availability of requisite raw materials was seriously hampering the practical work. (11) Not much progress was made in providing apprenticeship training to the vocational pass-outs. (12) Guidance, counselling and placement services had not been made available to the vocational students. [DVE 1013]

Sharma, Atmananda. 1988. **Effectiveness of the vocational exploration programme at secondary level for vocationalisation.** Independent study. *National Council of Educational Research and Training*. [ERIC Funded]

Problem: The investigator has attempted to study the effectiveness of the vocational exploration programme at secondary school level for vocationalisation.

Objectives: (i) To study the effect of the vocational exploration programme on secondary school pupils, and (ii) to study the effect of the vocational exploration programme among high and low intelligence groups.

Methodology: A total of 130 high school

students comprised the sample, out of which 61 students served in the experimental group and 69 students in the control group. The tools used were the Career Maturity Inventory by Hukum Chand Sharma, A Socio-economic Status Scale and Raven's Progressive Matrices. Mean, SD, 't' test and Stanine Scores were used to analyse the data.

Major Findings: (1) The experimental group differed significantly on their pre-test-post-test score comparison, but not the control group. This indicates that the vocational exploration programme was highly significant in attaining its objectives. (2) Both the high and low intelligence groups gained significantly. This indicates that the self-exploratory unit was equally effective for all levels of intelligence, and that the occupational exploration unit needed improvement to be equally effective for subjects of all levels of intelligence. [CGVM 1872]

Sharma, Keshav and Dhundup, Tsering. 1990. **Tibetan students of Tibetan children's village school: Sex differences in their educational and vocational aspirations.** *Indian Educational Review*, Vol. 25(2): 82-91.

Problem: The study investigates the educational and vocational aspirations of contemporary Tibetan youths. It mainly focuses on personal aspects of the educational process like the students' hopes, beliefs, awareness, motivation and aspiration as refugees in the determination of their educational and vocational goals.

Objectives: (i) To study the sex difference in the educational and vocational aspirations of the Tibetan students, and (ii) to study the viewpoints of educated and employed Tibetan youths regarding their educational and vocational aspirations.

Methodology: The study employed the survey method of investigation. Two types of samples were drawn. Sample 'A' consisted of representatives of the Tibetan youths educated

under the present system and currently engaged in different occupations. There were 150 respondents (98 male and 52 female). 84 of them had educational qualifications above matriculation. Sample 'B' comprised representatives of the secondary students of a Tibetan school. It consisted of 180 students (90 boys and 90 girls) from Classes IX to XII. The tools used were a Sociological Survey Questionnaire, and a set of questionnaires to determine the educational and vocational aspirations. The data were analysed in terms of percentage.

Major Findings: (1) On the basis of the responses to the questionnaire for the determination of educational and vocational aspirations of sample 'B', it was found that there was no significant sex differences in the educational aspirations of the students. (2) The expectation that there was no sex difference in students' vocational aspiration was not found to be true. It was found that as compared to the girls, the Tibetan boys had a greater range of vocational choice, were more ambitious vocationally, and preferred challenging, prestigious, well-paid, creative and adventurous types of jobs. The girls, however, preferred 'clean' jobs characterised by routine work, security, quietness and non-competitiveness. (3) On the basis of the Kuder Preference Record (vocational) classification the order-of-occupational-preference pattern for the sample as a whole was (a) scientific, (b) literary, (c) persuasive, (d) artistic, (e) clerical, (f) social service, (g) computational, (h) outdoor, (i) mechanical, and (j) musical. (4) A significant sex difference was noted (a) in favour of boys in the artistic group of vocations, (b) in favour of girls in the clerical group of vocations. (5) On the basis of the General Awareness Questionnaire, it was found that on the whole general awareness level of the students was poor. [TNSB 1483]

Singh, Chetan. 1988. **An evaluative study of vocationalisation of education in Indian schools.** M.Phil., Edu. Univ. of Delhi.

Problem: The study makes an attempt to investigate the status of vocational education in Indian schools and evaluate the various attempts made in this area.

Objectives: (i) To present an evaluative description of the recommendations of the various commissions and committees in regard to vocational education, (ii) to list the various agencies and study their working methods in relation to vocational education in India, and (iii) to study critically the attempts made to develop vocational education in India.

Methodology: The available literature and documents having reference to vocational education were surveyed. A descriptive and analytic approach was followed in reporting.

Major Findings: (1) There was a lack of organisational facilities for the development of vocational education in India. (2) Students lacked proper attitude towards vocational education. (3) The vocational training given was not helpful to students in starting self-employment ventures. (4) The curriculum of vocational education did not take into consideration the local/regional needs. (5) There was a lack of funds, infrastructure and trained teachers for the implementation of technical education in India. [RDM 0358].

Sinha, M.P. 1988. **Survey of cultivation of edible mushrooms of Orissa as a work experience vocational subject for high/higher secondary schools.** Independent study. Bhubaneswar: Regional College of Education. [ERIC Funded]

Problem: The technique of cultivating mushrooms on a commercial basis has become very common these days. Therefore, a survey of mushroom flora in the State of Orissa is undertaken.

Objective: To study the morphology and anatomy of members of *Agricales* species.

Methodology: The study followed procedures

like collection of specimens, preservation of specimens, field observation, laboratory studies, etc.

Major Finding: On the basis of the study a systematic floristic account of 107 species belonging to 13 families of *Agricales* was reported. [SRA 1126]

Sodhi, T.S. 1988. **Vocational interests and occupational choices of adolescent girls of Chandigarh.** *Indian Educational Review*, Vol. 23(4): 110-20.

Problem: The study centres around the problem of congruence of vocational interests and occupational choices of girls.

Objectives: (i) To study the extent of congruence between the occupational choices and vocational interests of girls, and (ii) to study the extent of the congruence between the occupational choices and vocational interests of adolescent girls on some demographic variables.

Methodology: A stratified random sample of 1,015 adolescent girls of Class X in 20 schools from the revenue area of the Union Territory of Chandigarh was selected. The tools used were an Interview Schedule and an Interest Inventory developed by the author. Percentages and 't' values were calculated to treat the data.

Major Findings: (1) A very small fraction of adolescent girls was able to make correct occupational choices in accordance with their vocational interests. (2) The occupational choices and vocational interests were comparatively more congruent for girls of urban background and those belonging to the high income group as against their counterparts from the semi-urban areas and the low income group. [JPM 1422]

Srinivasan, R. 1988. **Self-perception of technical teachers.** Independent study. *Madras: Technical Teachers' Training Institute.*

Problem: The study addresses the problem of self-perception of technical teachers. It is considered desirable that as a teacher one should

try to understand one's own self. Eliciting self-perception would enable the teachers to realise their roles so that they could contribute their mite in their profession. The term 'self-perception' as used in this study refers to the feelings expressed by the respondents about themselves.

Objective: To analyse the relationship between age, experience, occupational status and self-perception as perceived by the polytechnic teachers.

Methodology: The researcher used the tool, Self-Perception of Teachers (SPOT), which was administered to 58 teachers from various polytechnics in the southern region, who were undergoing a one-year course in the TTTI Madras, in 1986-87. Two separate batches of 29 teachers each were asked to rate themselves on a four-point scale. The sample consisted of 46% demonstrators/instructors and 54% lecturers/associate lecturers. Their ratings were analysed and inferences deduced. The collected data were treated with parametric and non parametric statistics.

Major Findings: (1) There was no significant difference in the self-rating between the two groups of teachers. On the whole, the self-rating of the second batch of teachers was found to be more consistent as it showed a lesser variation. (2) Twenty teachers (ten each in the two batches) rated themselves below their respective groups' mean scores. (3) The chi-square test results revealed no significant relationship between age and their self-perception. (4) No significant relationship existed between their years of experience and their self-perception. (5) In terms of their occupational status, there was no significant relationship between their positions and self-perception as between the lecturers and the demonstrators. [SSP 1748].

Privastava, Laxmi. 1988. **A study of the influence of some variables — academic achievement, personality, socio-economic status — on vocational development.** Ph.D., *Edu. Agra Univ.*

Problem: The research aims at studying the vocational development of the students at different levels of different subjects as well as the impact of academic achievement, personality and SES on vocational development.

Objectives: (i) To determine the relationship between academic achievement and vocational development, (ii) to find out the relationship between socio-economic status and vocational development, (iii) to study the influence of the personality type on vocational development, (iv) to predict the most probable variable that facilitates vocational development, (v) to determine the effect of sex on vocational development, (vi) to find out the effect of the subjects (arts, commerce, science) on vocational development, and (vii) to present a fresh model of vocational development.

Methodology: Six hundred boys and girls of 15 to 24 years of age studying in Classes XII, B.A. and M.A. at different institutions of Agra City formed the sample of the study. The stratified quota random sampling procedure was used in selecting the sample. The tools used for the study included the SES Scale of S.P. Kulshrestha, a Personality Type Test (Introversion-Extraversion), the Vocational Development Inventory of the researcher, and Academic Achievement (from the marks in the final year examinations.) Mean, standard deviation, CR and correlation were calculated to arrive at the findings.

Major Findings: (1) There existed a relationship between academic achievement and vocational development and SES and vocational development. (2) No difference was found in vocational development at the different educational stages. (3) For proper vocational development, an extrovert personality is necessary. (4) Sex difference in vocational development was not significant. (5) Vocational development of commerce students was better than that of science and arts students. (6) Middle SES and academic achievement were the factors which interacted with and led the students to a better vocational development. (7) Vocational

development was largely dependent upon education, which in turn depended upon social status. [SS 0767].

Subramanian, P. 1990. **Socio-economic status of students of polytechnics and their attitude towards manual jobs.** M.Phil., Edu. Madurai Kamaraj Univ.

Problem: In recent years polytechnics have diversified the courses offered and students from all strata of society have been joining these courses. The present study investigates the socio-economic status of these students and also aims at examining their attitude towards manual jobs.

Objectives: (i) To identify socio-economic status of polytechnic students; (ii) to find out their attitude towards manual jobs, and (iii) to examine the relationship between SES and their attitude towards manual jobs.

Methodology: The tools used were a Socio-economic Status Scale and a Manual Jobs Attitude Scale. Percentage analysis and chi-square test were used to analyse the data.

Major Findings: (1) There was a significant relationship between lack of education and manual jobs. (2) Irrespective of educational, social and economic status, the students had a negative attitude towards manual work. (3) There was no significant relationship between personal development and manual jobs. [GSP 0566].

Sungoh, Sherwin. 1988. **A survey of the educational and vocational aspirations of the Doordarshan-viewing pre-university students in Shillong.** M.Phil., Edu. North-Eastern Hill Univ.

Problem: The study surveys the educational and vocational aspirations of those pre-university students of Shillong who viewed various Doordarshan telecasts. The study is undertaken on the assumption that television viewing would influence the educational and vocational aspirations of plus-two level students.

Objectives: (i) To find out the educational aspirations of those pre-university students of Shillong who were exposed differentially to television programmes, (ii) to find out the vocational aspirations of those pre-university students of Shillong who were exposed differentially to television programmes, and (iii) to find out the correlations between the educational and vocational aspirations of the viewers, between their educational aspirations and socio-economic scores, and their vocational aspirations and socio-economic status scores.

Methodology: A representative sample of 300 pre-university students was drawn, which represented males and females, tribals and non-tribals, different SES backgrounds, and students from the arts, science and commerce streams of colleges located in Shillong. The instruments used in the study included the Educational Aspirations Scale by Sharma and Gupta, the Occupational Aspirations Scale by Grewal, the Socio-economic Status Scale (urban) by Kuppaswami, and a Personal Information Blank. Descriptive statistical techniques, apart from correlation and 't' test were used for the purpose of analysing the data.

Major Findings: (1) Female students, rare viewers of TV, and commerce stream students showed significantly higher educational aspirations as compared to their respective counterparts. (2) Male viewers and science students had significantly higher vocational aspirations as compared to their respective counterparts. (3) There was a high negative correlation between the educational and the vocational aspirations of students. (4) Socio-economic status was positively related to the educational aspirations of students. [PPG 0170].

Sungoh, Sherwin, M. 1991. **A study of vocational education and attitude towards vocationalisation of education in East Khasi Hills.** Ph.D., Edu. North-Eastern Hill Univ.

Problem: This study attempts to locate and

describe the vocational education courses available in the East Khasi Hills District and to survey the attitude of the +2 level students towards vocationalisation of education.

Objectives: (i) To study the status of vocational education including problems of vocationalisation of education in the East Khasi Hills District, (ii) to survey the attitude of pre-university students in the East Khasi Hills District towards vocationalisation of education, and (iii) to suggest measures for effective implementation of vocational education in the district.

Methodology: The population consisted of 4,100 pre-university students studying in 14 colleges, out of which a representative sample of 1,100 students was chosen using the stratified random sampling technique. An attitude scale to measure the attitude towards vocationalisation of education was constructed using the Likert method. The split-half and test-retest reliability coefficients, and content and criterion validity as well as percentile norms have been calculated and reported. Mean, SD and 't' test were used to find the significance of mean differences between the various groups.

Major Finding: There was no significant difference in the attitude towards vocationalisation of education between pre-university male and female students; rural and urban students; commerce and science students; but the difference was significant between tribal and non-tribal students; commerce and arts students, and arts and science students. [PPG 0183].

Swain, Bimal Charan. 1992. **The Socially Useful Productive Work Programme at the secondary stage in Himachal Pradesh: An evaluative study.** Ph.D., Edu. Himachal Pradesh Univ.

Problem : The subject Socially Useful Productive Work, was introduced into the school system following the recommendations of the I.B. Patel Committee Report. The subject being activity-oriented, it requires some basic prerequisites in terms of space, teachers, tools,

instructional materials, etc. The present study therefore, investigates the status of its implementation, the problems faced at different levels and the measures to solve those problems.

Objectives: (i) To study the development of the concept of Socially Useful Productive Work (SUPW) in a historical perspective, (ii) to study comprehensively the functioning of the SUPW programme at the secondary stage in H.P., (iii) to study the problems faced by the teachers and heads of the institutions in the implementation of SUPW programme at the secondary stage in H.P., (iv) to study the problems faced by the students in carrying out the SUPW activities at the secondary stage in H.P., and (v) to suggest measures for effective implementation of the SUPW programme at the secondary stage in H.P.

Methodology: The sample comprised 60 craft teachers and other teachers providing instruction in SUPW, 33 heads of institutions, 330 Class X students, 110 parents, the Technical Officer of the Directorate of Education, the Principal of the SCERT and three experts from the Department of Vocationalisation of Education, NCERT, New Delhi. Two questionnaires — one for teachers and the other for the heads of the institutions — were developed, along with five interview schedules and one observation schedule for collecting information about the various aspects of the implementation. A qualitative analysis of the data was undertaken to arrive at conclusions.

Major Findings: (1) The study presented a historical development of the concept of SUPW in India and abroad. (2) As regards the status of SUPW in H.P., the following were observed: SUPW was a compulsory subject having a definite syllabus, however, it lacked flexibility; the majority of the parents and students were aware of and were satisfied with the SUPW activities. Certain weaknesses identified were: untrained teachers, no provision of refresher courses and in-service training for teachers, unavailability of instructional material, non-uniform time allocation, lack of financial assistance, lack of incentive to students and non-involvement of the

community, there was no SUPW cell in the H.P. SCERT. The study suggested that raw material should be provided by the school; incentives should be given to students; community participation should be encouraged and SUPW should be made an examination subject. [LK 1319]

Vaid, D.K. and Sen Gupta, Manjit. 1990. **A quick appraisal of the implementation of centrally sponsored scheme of vocationalisation of secondary education — Goa.** Independent study. *National Council of Educational Research and Training.*

Problem: The study makes an appraisal of the implementation of the centrally sponsored scheme of vocationalisation of education in the State of Goa, with a view to assess the weaknesses and strengths of the scheme and the problems, if any, in its implementation.

Objectives: (i) To collect first-hand information from students, teachers, principals, and state officials regarding the various aspects of implementation of the CSS of vocationalization in the State, (ii) to identify problems and weaknesses in the implementation of the scheme and also to highlight the strong points of the state in this regard, and (iii) to make recommendations for successful implementation of the scheme in the future.

Methodology: 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 113 students and 40 teachers were contacted for the purpose of collecting information through questionnaires. 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. Ratios, percentages, simple average and weighted average were used for the purpose of analysis of

the data. The results so obtained were presented with the help of suitable diagrams and tables.

Major Findings: (1) About 11.2% 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 Programme Assistant, (c) Accounting, Auditing and Taxation, (d) Electronic Repair Technician, (e) Electronic Assembly Technician — in that order. About 71% 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%, the State provided about 62.5% weightage in terms of total time to the teaching of vocational theory and practice. (5) About 62% of the principals/vice principals stated that the practical training given to the students was inadequate. (6) About 74% 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 persons as part-time faculty mainly because of the low rate of remuneration. (8) 76% of teachers had not undergone any specialised training in vocational education. (9) More than 50% of schools had completed the construction of worksheds and purchased the equipment but over 53% of teachers and 80% of the students who were contacted reported that the equipment was not adequate for giving the desired practice. (10) The schools were partially successful in arranging collaboration with neighbouring industry/institutions. (11) About 56% of the students who joined these courses had obtained the Second Division and another 11%, the First Division in their high school examination. (12) About two-thirds 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 students. (14) As

regards vertical mobility, the vocational products were allowed admission to degree-level courses in the academic stream. [DVE 1015]

Verma, Bimla. 1990. **A quick appraisal of the implementation of the centrally sponsored scheme of vocationalisation of secondary education — Delhi.** Independent study. *National Council of Educational Research and Training.*

Problem: This quick appraisal was undertaken to broadly identify the problems and the status of implementation of the programme of vocationalisation of education under the centrally sponsored scheme in the secondary schools of Delhi.

Objectives: (i) To assess the effectiveness of the programme, (ii) to collect information on the various aspects of implementation of the programme, (iii) to identify and analyse the strong and the weak areas of implementation, (iv) to ascertain the aspirations of the students, and (v) to suggest measures for improving the programme implementation.

Methodology: The sample schools were selected in consultation with the officials of the Education Department. Data were collected through (a) a review of departmental reports and records, (b) interviews and discussions with teachers, principals, students and knowledgeable persons during school visits, (c) administering questionnaires to students, teachers, principals and Director and Assistant Director of the Vocational Unit.

Major Findings: (1) In the 107 schools of Delhi, 21 vocational courses were introduced. There were 5,200 students in the vocational stream, of which 40% were boys and 60% girls. (2) Out of those included in the study 50% of the students had offered vocational courses in view of self-employment, 25% with a view to wage employment and another 25% for pursuing higher studies in the same vocational area. (3) 26.12% of the students included in the study obtained the First Division, 53.30% the Second

Division and 20.38% the Third Division in their qualifying high school examination. (4) 86.75% students were from other castes. 12% were Scheduled Castes and Scheduled Tribes while 1.25% of them did not mention their caste. (5) Out of 21 courses, stenography, office management, tourism and travel techniques, life insurance, electronic technology, general insurance, beauty culture, computer techniques, textile printing, and garment design were the most popular courses. (6) Only part-time teachers/professionals were engaged to teach the vocational courses. (7) Vocational surveys were not undertaken. (8) Vocational guidance was inadequate. (9) Most of the schools did not have

separate classrooms, laboratories, library facilities, etc. (10) There was a dearth of suitable instructional materials for these courses. (11) Bridge courses had not been designed. (12) The arrangement for on-the-job training was poor. (13) Recruitment rules had not been amended in most of the cases. (14) Job-linked courses were in greater demand. (15) Collaborative arrangements were not made for most of the courses. (16) General awareness about the vocational programme was poor among students, teachers, and people at large. (17) Financial assistance from the government did not reach the department/school in time. [DVE 1014]

Also See

- ✓ Afshan. 1991. **Gifted rural and urban girls: Their vocational interests and creativity.** M.Phil., Edu. *Univ. of Kashmir*. [AGM 1859] (See in Chapter 11.)
- Antonisamy, M. 1991. **A study of English curriculum in engineering colleges.** M.Phil., Edu. *Alagappa Univ.* [SM 1767] (See in Chapter 1.)
- Baruah, Mukul Kumar. 1988. **Socio-psychological characteristics of professional and non-professional students.** Ph.D., Edu. *Dibrugarh Univ.* [PPG 0168] (See in Chapter 6.)
- Bhagria, Rita. 1992. **The impact of polyvalent education of shramik vidyapeeths on industrial workers.** Ph.D., Edu. *Panjab Univ.* [JNJ 0257] (See in Chapter 29.)
- Bisaria, S. 1991. **Need-based vocationalisation of education for girls.** Independent study. *National Council of Educational Research and Training.* (ERIC Funded). [VKR 1194] (See in Chapter 31.)
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- John, O.T. 1991. **An investigation into the present English curriculum in polytechnics in Tamil Nadu.** M.Phil., Edu. *Alagappa Univ.* [SM 1732] (See in Chapter 13.)
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- Khurana, G.S. and Singh, R. 1992. **An analysis of existing postgraduate course curriculum of extension education at various agricultural universities in India.** Independent study. *Journal of Research*, Vol. 29(1): 139-49. [SPK 1645] (See in Chapter 13.)
- Lal, Alka. 1992. **A study of the personality, mutual perception, attitude and vocational preference of the blinds and the sighted.** Ph.D., Edu. *Univ. of Allahabad*. [PCS 0947] (See in Chapter 27.)
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