

## Secondary Education

C.L. ANAND

Agrawal, Kusum. 1986. **A study of the effect of parental encouragement on the educational development of students (secondary stage)**. Ph.D., Edu. Hemvati Nandan Bahuguna Garhwal Univ.

*Problem:* The study focuses on the educational development of secondary school pupils as influenced by parental encouragement.

*Objectives:* (i) To make a comparative study of the effect of parental encouragement on the educational development of the varied groups of pupils at the secondary stage, (ii) to make a district-wise comparison of pupils belonging to different groups in relation to the effect of parental encouragement on their educational development, (iii) to compare the different educational groups of the 'father-absent' boys and girls in relation to the effect of maternal encouragement on their educational development, and (iv) to make a comparison amongst the different educational groups of the 'mother-absent' boys and girls in relation to the effect of paternal encouragement.

*Methodology:* A stratified random sample of 500 boys and 500 girls studying in Class XI was chosen from 12 higher secondary schools in the Garhwal region of Uttar Pradesh and divided into three groups — high, middle and low educational-development groups, based on their previous examination scores in the first division, second division and third division, respectively. The data

were collected by using the 'Parental Encouragement Scale' developed by the investigator. The analysis was based on percentage, mean and product-moment correlation.

*Major Findings:* (1) Parental encouragement and educational development were found to be positively correlated. (2) Parental encouragement was found to have a pervasive influence on the educational development of high-development group, regardless of gender, district and urban-rural variations. (3) The urban boys belonging to the higher group were found significantly superior to the rural boys in educational development. (4) Likewise, the urban girls belonging to the higher group differed significantly from the rural girls of the same group. (5) It was found that when sex differences were taken into account, the girls belonging to urban as well as rural areas were significantly higher in parental encouragement in all the three groups as compared to their male counterparts. (6) Irregular results were found amongst the different educational groups of pupils in relation to the influence of parental encouragement in the different districts of the Garhwal region. (7) The high-achieving groups of the 'mother-absent' boys and girls received significantly more paternal encouragement than the other groups. (8) Identical results were obtained in the case of the 'father-absent' boys and girls, who were found to have received significantly more maternal encouragement. [KBB 0548]

Amirthalingam, P. 1991. **Involvement of parents of underachievers in the government higher secondary schools.** M.Phil., Edu. Alagappa Univ.

*Problem:* In view of the significant role of parental involvement in the academic achievement of pupils and specially for those who are underachievers an attempt is made to investigate the involvement of parents of underachievers, studying in the Government Higher Secondary School, Karaikudi.

*Objectives:* (i) To identify the underachievers, (ii) to conduct case studies for finding out various dimensions of parental involvement, (iii) to develop a tool for measuring parental involvement, (iv) to determine the level of parental involvement, (v) to find out the relationship between parental involvement and factors such as religion, caste, family status, docility, educational qualification, income, occupation, etc. and (vi) to suggest measures for increased parental involvement to help underachievers.

*Methodology:* The sample consisted of all the underachievers studying in Class XII in the Government Higher Secondary School, Karaikudi, identified by following the case study method. Based on these case-studies, a 110-item questionnaire was prepared, covering various dimensions of parental involvement. The gathered data were analysed by doing percentage analysis which determined the level of parental involvement. Chi-square analysis was done to find out the association between parental involvement and the variables in the study.

*Major Findings :* (1) On all the demographic and other criterion variables, most of the parents of underachievers did not devote any time to their wards' educational development. (2) They did not take interest in their physical and intellectual development. (3) They did not pay attention to inculcating good study habits. (4) By and large, the parents neither provide adequate facilities for studies nor did they show any interest in their wards' co-curricular activities. [SM 1769]

Bhatta, Ganesha H.S. 1989. **Secondary education : A systems approach.** Ph.D., Edu. Univ. of Mysore.

*Problem:* The study is concerned with an appraisal of the secondary education system based on the systems approach.

*Objective:* To examine the overall performance of the secondary school system with regard to three major output variables namely, achievement, equality and relevance.

*Methodology :* A 12% random sample was drawn from the universe of 1,818 secondary schools spread in the urban and rural areas of Karnataka State. Another sample, for a micro-level study, consisting of nine government and nine private schools was chosen out of these, in each of the categories of good and poor schools (based on the results obtained at the state-level SSLC examination). The descriptive method of research, especially survey techniques (using schedules) was used. The collection of data was phased out in view of the separate macro-level and micro-level studies in the design. The systems-analysis technique was used for the analysis of data.

*Major Findings :* (1) The study revealed an overall considerable expansion of secondary education in Karnataka State inasmuch as the number of students appearing in the school final examination has been steadily growing. (2) It was, however, found that the proportion of successful students at the state-level examination had vacillated between 36 per cent and 58 per cent of the students who appeared in the examination in successive decades. (3) Though the growth of secondary education during the past three decades showed a positive upward trend, two types of inequalities were found to exist: (a) disparities between the sexes and the social groups such as between SC/STs, backward castes and others; and (b) inter-regional, inter-district and rural-urban disparities. (4) Analysis of the performance of secondary schools based on the systems approach model revealed that

process variables contributed to a greater extent to variations found between good and poor schools. (5) When the relevance of the secondary education system was analysed in a macro and micro perspective, the system of secondary education was found to have contributed to modernisation as well as equalisation of opportunities. [MKh 1203]

× Budhdev, P. and Ravina, V. 1989. **A study of the attitudes of secondary school students towards various school subjects.** Ph.D., Edu. Saurashtra Univ.

*Problem:* The attitudes towards various school subjects of secondary pupils, both in the total sample as well as in sub-samples based on intelligence, SES, gender and academic achievement, were studied.

*Objectives :* (i) To study the effect of six independent variables i.e. sex, intelligence, SES, grade, achievement and category of school, on the attitudes of secondary school pupils towards various school subjects, i.e. Gujarati, Hindi, English, Sanskrit, mathematics, science and social studies, (ii) to compare the attitudes of pupils towards each two of the aforesaid seven subjects, (iii) to compare the attitudes of pupils towards various school subjects through the longitudinal method, (iv) to study the effect of Mastery Learning Strategy (MLS) on the attitude of Grade VIII pupils toward mathematics, and (v) to locate the basic factors among the attitudes towards the seven subjects under study.

*Methodology :* A stratified random sample of 2,258 pupils (1,293 boys and 965 girls) was chosen from 18 Gujarati-medium schools of Rajkot City. The tools used in the study included an Attitude Scale developed by the investigator using semantic differential techniques, Desai-Bhatt Group Intelligence Test (Verbal), Desai's Socio-economic status Scale; and the scores obtained in the S.S.C. examination in each of the subjects were taken as the achievement index. The data were analysed by means of F-test,

correlation 't'-test and factor analysis techniques.

*Major Findings :* (1) Girls were reported to have a better attitude than boys towards Gujarati, mathematics, Hindi, social studies and Sanskrit while boys showed a better attitude than girls towards science. (2) The high-intelligent group of pupils had a better attitude towards mathematics and English than the low-intelligent group. The attitude of the low-intelligent group towards Hindi was found to be better than the attitudes of those belonging to the high-intelligent group. (3) The high SES group of pupils had a better attitude towards mathematics and English than the low-SES group. (4) The group from Good category schools had a better attitude towards mathematics, science and English than the group from Poor category schools. The attitude of the group from Poor category schools had a better attitudes towards Hindi than the group from Good category schools. (5) It was found that Grade VIII students showed a better attitude towards English and Sanskrit than the students of Grades IX and X. The Grade IX students had a better attitude towards Gujarati, Hindi and social studies than the students of Grades VIII and X. The attitude of Grade X students was better than that of the students of Grades VIII and IX. (6) The correlation between achievement and attitude towards mathematics, Hindi, science, English and Sanskrit was found positive and significant. (7) The differences between the mean attitude scores in mathematics and social studies, Hindi and social studies and Hindi and Sanskrit were not found to be significant. (8) As per the longitudinal method of research, the attitude of the pupils towards different subjects (except Gujarati and social studies) was found to vary from time to time. (9) MLS was found to have a positive impact on the attitude of pupils towards mathematics. (10) Factor analysis revealed that three basic group factors were found among seven school subjects. These were : (a) attitude towards logical subjects; (b) attitude towards familiar language; and (c) attitude towards non-familiar languages. [DAU 0017]

Chaudhari, R.B. 1990. **Higher secondary education in the state of Gujarat : Development and problems.** Ph.D., Edu. *South Gujarat Univ.*

*Problem :* The study is focused on the development and problem of higher secondary education in the state of Gujarat.

*Objectives:* (i) To trace the history of higher secondary education in the state of Gujarat, (ii) to study the development of higher secondary education, (iii) to find out the extent of realisation of the objectives of higher secondary education, (iv) to study the results of public examinations at the higher secondary level, and (v) to make suggestions for solving the problems of higher secondary education in the state of Gujarat.

*Methodology :* A stratified random sample of 152 higher secondary schools out of a total of 1,517 from the state of Gujarat was chosen. The data were gathered from 72 principals and 448 teachers by using a rating scale developed for the study. The other sources used included historical documents, reports of education commissions, reference books, journals, etc. The non-parametric technique of chi-square was used for analysing the data.

*Major Findings :* (1) During 1976-77, there were as many as 755 higher secondary schools in the state of Gujarat, and after a decade, i.e. in 1986-87 the number at the plus two level shot up to 1,517. (2) In the year 1982-83, the largest number of higher secondary schools was in Kheda District while in the Dang District the number of secondary schools in the same year was as low as three. (3) The percentage of growth of the higher secondary schools in 1984-85, 1985-86 and 1986-87 rose to 2.8, 2.3 and 2.6, respectively. (4) The number of secondary pupils in 1977-78 was 45,927 which increased to 1,44,930 in 1986-87. (5) There was an adequate supply of educational literature and other materials but the pupils were found not using these properly. (6) The results of the final examinations were also found to be not satisfactory. [US 1580]

Chelini, A.B. 1991. **Achievement of basic understandings and skills through higher primary education.** Ph.D., Edu. *Univ. of Mysore.*

*Problem:* The study deals with certain problems associated with achievement of basic understandings and skills at the upper primary stage of education in the state of Karnataka.

*Objectives:* (i) To assess and compare the achievement of the elementary (higher primary) school leavers in respect of basic understandings and skills in non-language subjects — science, mathematics and social studies, (ii) to compare the achievement of students in different subjects, and (iii) to study the relationship between achievement and certain variables namely, SES, intelligence, locale of the school, type of school management, medium of instruction and sex.

*Methodology :* A sample of 24 schools from Mysore Taluk was chosen by means of the stratified random sampling technique. All students studying in Class VII of these schools were included for the study. The final sample of students consisted of 1,150 boys and girls. The data were gathered by administering Achievement Test in science, mathematics and social studies. Tests of intelligence and Socio-economic status (SES) Scales were also used. Two-way ANOVA and 't' test were employed to analyse the data.

*Major Findings :* (1) The highest number of concepts measured by any student was 39 (out of 65) in science, 28 (out of 38) in mathematics and 30 (out of 41) in social studies. Only 26% of students were found to have mastery over more than 50% of the concepts in science. (2) The achievement of students in science was better as compared to that in social studies and mathematics, the achievement in mathematics being the lowest. (3) The interaction effect of intelligence and SES on achievement was not found significant in the case of science and social studies but was significant in mathematics. However, SES interacted significantly with locale, type of school and medium of instruction. It also showed

significant effect on the achievement in science and mathematics but not in social studies. Intelligence and locale were not found to have any significant interaction effect over the achievement in any of the three subject areas. But intelligence interacted significantly with the type of school and had a significant interaction effect over the achievement in all the three subject areas. (4) Students of the high-SES group had a higher mean score on the test of basic understandings and skills. It was lowest in the case of low-SES group in all the three subjects. (5) The high-intelligence group's performance was better as compared to that of the middle-intelligence group. (6) Urban and English-medium school students performed better than their rural counterparts in the Kannada-medium schools. (7) The achievement of girls was higher than that of boys in social studies but in mathematics boys were found to be superior to their girl counterparts. (8) Students of the private schools were found to be better achievers in all the three subjects as compared to those of the government schools. (9) The majority of the higher primary school leavers did not have mastery in more than 50% of the basic understandings and skills in all subjects. [BNS 0972]

Das, Bijoy Laxmi. 1988. **A study of secondary school-teachers' job satisfaction and job motivation in Cuttack district of Orissa.** M.Phil., Edu. Pune: *Indian Institute of Education*.

*Problem:* The study pertains to an investigation into job satisfaction and job motivation in relation to age, sex, qualifications, environment and type of school, in the Cuttack District.

*Objectives:* To study the extent of job satisfaction in and motivation of : (i) rural and urban teachers; (ii) trained and untrained teachers; (iii) male and female teachers, (iv) government school and privately managed school teachers, and (v) teachers from different age-groups.

*Methodology :* The sample consisted of 230 secondary school teachers drawn-randomly from 35 government and privately-managed schools in the Cuttack District. The tools used included the Job Satisfaction Scale developed by S.P. Anand, and Kaur's Motivational Scale. The data were analysed by using the statistical techniques of 't' test, percentages, chi-square and product-moment correlation.

*Major Findings :* (1) It was found that 92% and 24% of the rural and urban teachers, respectively, were positively motivated towards teaching, and 62% and 46% of the trained and untrained teachers, respectively, and 53% each of the male and female teachers were positively motivated towards teaching. (2) Again, 77.6% and 25.33% of the government and privately managed school teachers, respectively, were positively motivated. 2.64% and 47% of rural and urban teachers, respectively, 67.33% and 20% of the trained and untrained teachers, respectively, and 65% and 26% of female and male teachers, respectively, were found satisfied with their profession. (3) Teachers who were motivated were also found highly satisfied in their jobs. [ASB 0035]

Deb, Madhu and Nanda, P. 1989. **Class X students from rural and urban areas : Their attitudes towards school.** *Indian Educational Review*, Vol. 24 (4): 113-19.

*Problem :* The present study is undertaken to study the attitudes of Class X rural and urban pupils towards school.

*Objectives :* (i) To find out the difference in the attitude of rural and of urban students towards school, and (ii) to find out sex difference in the attitude of rural and of urban pupils towards school.

*Methodology :* A random sample of 160 students studying in Class X, from rural and urban areas, representing both boys and girls, was chosen for the study. Gopal Rao's School

Attitude Inventory was used for gathering the data. Mean, SD and 't' test were used for analysing the data.

**Major Findings :** (1) The urban students scored higher as compared to the rural students as regards their attitude towards teachers. (2) Significant differences were also noticed in the students' attitude towards school. The urban students scored much higher than their rural counterparts. (3) The urban students showed a positive attitude towards the school programme as compared to that of the rural students. (4) Significant differences were found in the mean values of rural and of urban students in the attitude towards social acceptance. (5) Significant differences were not found in the attitude of rural and of urban parents towards school. (6) No sex differences were found to exist in the attitude towards school. [SPr 1455]

Devarajan, G. 1992. **Impact of socio-economic factors on the reading habits of students in the secondary schools of Kerala : A pilot study.** Independent study, *Univ. of Kerala*. (ICSSR Funded)

**Problem :** The study addresses the problem of ascertaining the impact of socio-economic factors on the reading habits of students in the secondary schools of Kerala.

**Objectives :** (i) To analyse the impact of socio-economic factors on the reading habits of pupils, (ii) to identify pupils' preference as regards the type of reading materials, (iii) to find out the type and sources of materials they select for their preparation for examinations, (iv) to study the impact of radio, television and computer-aided teaching on their reading habits, (v) to find out the relationship between SES background and pupils' reading habits, (vi) to study the variation, if any, in the nature of reading habits amongst those hailing from schools situated in the urban, semi-urban and rural areas, the degree of variance between socio-economic variables and reading materials and the influence of age and gender on reading habits, and (vii) to make

suggestions for improvement in the reading habits of students studying in the secondary schools of Kerala.

**Methodology :** The sample consisted of the Class VIII, Class IX and Class X students of 32 schools in the Kotayam educational district, selected by using the stratified random sampling technique. The data were gathered through structured questionnaire and interview. The first part of the questionnaire pertained to the socio-economic background of the pupils. The second part contained items meant to ascertain reading habits. The questions were both open-ended as well as closed-type. Percentages and F-ratios were used to treat the data.

**Major Findings :** (1) Irrespective of the socio-economic background, the majority of secondary school pupils were found to be interested in various types of books especially novels, with books on science subjects being their second choice. They showed very little interest in geography books. (2) Readers of Malayalam language books formed the single largest group. (3) Textbooks were reported as the main source for the preparation of examinations. (4) Dictionaries were found as the most popular, and encyclopedias as the least popular reference materials. (5) The majority of students showed interest in reading sensational items of news in the newspapers. (6) A vast majority of pupils listed to radio and watched TV programmes, and did not feel that these would cause hinderance in their reading activities. (7) A higher percentage of students from rural areas were found to be reading literature, especially novels, as compared to their urban counterparts. (8) A higher percentage of male pupils were found to be reading novels than their female counterparts. (9) More students from rural and backward communities were found to be reading story-books of a general nature whereas the urban students showed a preference for reading detective stories. (10) There was a significant difference in the choice of story-books by students from various income groups. [NR 1244]

Gautam, N.P. 1988. **A study of productivity-oriented education with reference to the new pattern of education (10+2+3)**. Ph.D., Edu. Univ. of Bombay.

*Problem* : The study traces the development of education in India from 1854 onward with special reference to the reforms in the area of work experience, socially useful productive work and vocationalisation of education.

*Objectives* : (i) To trace the historical background of productivity-oriented education, (ii) to compare the recommendations of various commissions and committees on productivity-oriented education, (iii) to identify the elements of productivity-oriented education in the 10+2+3 pattern, (iv) to evolve a curriculum for productivity-oriented education, (v) to find out the latest trends in productivity-oriented education and their implementation, and (vi) to study the futuristic dimensions of productivity-oriented education.

*Methodology*: The study followed the historical survey and operational methods adopting as a whole, the multidisciplinary approach. Data were gathered from educationists and education officers by way of ascertaining their views. Questionnaires and opinionnaires were used for this purpose. Interviews were also conducted for gathering information and views.

*Major Findings*: (1) Various commissions and committees and the National Policy on Education (1986) recognised the need for human resource development through technological innovations. (2) Many of the social and moral problems concomitant to development can be resolved by linking education with industrial growth. (3) SUPW and vocationalisation of education help to develop personal, social and occupational skills. (4) Although productivity-oriented education satisfies the accountability requirements of institutions, it was faced with many operational problems in its implementation. (5) Schools were found to have no linkages with industrial and commercial centres. (6) The majority of the

educational institutions were found not keeping abreast of the current trends and developments in education. (7) The existing system of 10+2+3 pattern of education has failed to implement the desired productivity-oriented curriculum. [GJK 0226]

Ghalsasi, P.G. 1988. **A descriptive and experimental study in the field of study habits/skills of students in secondary schools**. Ph.D., Edu. Univ. of Poona

*Problem*: The study is concerned with identifying the factors which affect the study skills of secondary school students. A programme to develop the desired study skills was prepared and tried out.

*Objectives*: (i) To find out the trends and patterns in the existing study habits of students, (ii) to explore the relationship between study habits and socio-economic background, (iii) to prepare a programme to develop the desired study habits/skills, (iv) to find out the effect of the programme on study habits and academic performance, and (v) to ascertain the teachers' views about students' study habits/skills.

*Methodology* : A random sample of 950 students studying in Classes VIII, IX and X was chosen from Pune City. Another sample of 45 teachers teaching science in those schools was also chosen using random tables. The data were collected by administering Palsane's Study Habits Inventory, Nafde's Non-Verbal Test of Intelligence and a questionnaire developed by the investigator. Academic achievement was taken as scores from the school records. Solomon's Four Group Experimental Design was used for finding out the efficacy of the programme developed.

*Major Findings* : (1) Significant differences were not noticed between the study habits scores and the achievement scores. (2) The majority of the students had no clear idea about the purpose of studying and the objectives of schooling, their response being 'better jobs', 'knowledge', 'social status', etc. (3) Nearly 60% of the students could

do silent reading but there was lip movement and murmuring during silent reading. (4) Nearly 25% of the students could not get time for studying at home. (5) Over 70% of the students did not prepare a timetable for studies. (6) Not more than 50% of the students got guidance from parents. (7) The analysis of variance of study habits indicated that the treatment through the programme provided was effective in changing the study habits in the desired direction. (8) The analysis of co-variance of academic achievement indicated that treatment through the programme was effective in improving the achievement in the positive direction. [KC 0083]

Gill, Satindra. 1990. **The systems analysis approach to the study of secondary school in the Union Territory of Chandigarh.** Ph.D., Edu. Panjab Univ.

*Problem:* Using the systems analysis approach, the study looked into the system of secondary education, subjecting all inputs to analysis.

*Objectives :* (i) To identify the inputs and separate them (theoretically) in order that each of the inputs could be subjected to suitable analysis, (ii) to study the student input with reference to the students, social, personal, family and academic background, (iii) to study teacher input with reference to the teachers' academic professional and socio-economic status, (iv) to study the organisational climate, (v) to study the input of the leadership style of the head of the institution, (vi) to study the teacher morale, (vii) to study the academic motivation, study habits and academic achievement, (viii) to study the nature and extent of the physical facilities, and (ix) to study the innovations of the secondary schools in the Union Territory of Chandigarh.

*Methodology:* As many as 400 teachers (230 male and 170 female) belonging to 130 secondary schools of Chandigarh were randomly selected and these, along with 2,580 students of these schools, formed the sample. Tools used were

Questionnaires, Halpin's Organisational Climate Description Questionnaire, Leadership Behaviour Description Questionnaire by Halpin and Winer, Purdue Teacher Opinionnaire by Ralph Bantley; Junior Index Motivation by Fryniier, Achievement Motivation Scale by Prayag Mehta, Study Habits Inventory by Wrenn and Adaptability Scale by Buch. Statistical analysis was done by using mean, SD, correlation, stannine scale, and the multiple correlation technique.

*Major Findings :* (1) The quality of inputs were not found to be keeping pace with the changing demands. (2) The quality of output in terms of the academic achievement of the students and the innovativeness of the schools was found to be just average. (3) The secondary schools in Chandigarh were found not functioning smoothly as over 50% of these had a closed climate. (4) The quality of the input of teacher morale was found to be low. [JNJ 0298]

Haridas, M. 1992. **A critical appraisal of the Navodaya Vidyalaya scheme as implemented in Kerala.** Independent study. Thiruvananthapuram: Centre for Tropical Studies. [ERIC Funded]

*Problem :* The present investigation is the first longitudinal study of its kind to appraise the functioning and performance of the Navodaya Vidyalays at the earliest stage of the implementation of the scheme.

*Objectives :* (i) To examine the representation given to the underprivileged sections by way of admission, (ii) to evaluate the infrastructural facilities in each school with reference to the objective of development of the total personality of the pupil, (iii) to assess the curriculum and instructional methodology and to identify the limitations, if any, (iv) to evaluate how far the scheme has succeeded in reducing the gap in pupil achievement between the socially and educationally underprivileged, on the one hand, and the elite group on the other, and (v) to present an account of the perceptions of and reactions about the scheme from a cross-section of the people.



**Methodology:** A purposive sample of 160 pupils and 44 teachers, all belonging to two Navodaya Vidyalayas located at Iduki and Ernakulam and 160 parents of the concerned pupils was chosen for the study. The data were gathered by conducting interviews with the help of schedules on physical facilities, parental particulars, information about teachers, particulars of drop-outs, opinion of local community leaders and opinion of principals. The academic achievement scores of the entrance test were used as the base for assessing the progress in all subsequent tests conducted by the schools through their periodical examinations. The statistical techniques used included percentage, mean, SD and 't' test.

**Major Findings :** (1) The representation given to the various groups was found as per national norms. (2) Admission quotas conformed to 75% as reserved for rural areas. (3) There was no separate provision for representation to low-income groups. One-third of the total number of seats were found to be for the low-income groups and 36% were for those belonging to the middle-income groups. (4) Nearly 40% of the children came from households where none of the parents had passed the secondary examination. Only 10% of the households were found to have at least one member possessing a university degree. (5) Seven drop-outs during the first two years were reported on account of poor food and meagre hostel accommodation. (6) Both the schools had fairly extensive campuses of over eight hectares each. The building conformed to the design furnished by the NBO. (7) Laboratory accommodation and equipment were found to be inadequate. (8) Health care facilities were not found to be satisfactory. (9) The recreational facilities were also inadequate. (10) All the staff were found to be properly qualified. (11) The curriculum followed was the same as for all CBSE-affiliated schools, the medium of instruction being English. (12) Special talents in music and sports and craft were being encouraged. (13) The pace-setter role, as expected from these

schools, was not evident as they were rather isolated from other schools. (14) Remedial teaching for the educationally backward children was attempted in one school and the result was encouraging. (15) It was found that there was no significant gap in the performance of the rural and urban children as well as performance between boys and girls. (16) SC/ST students as compared to others were found to be poor at the entry point. (17) Parental educational level income and occupation were found to have a sustained influence over their wards' performance. (18) The community leaders were nearly unanimous in their opinion that the Navodaya Vidyalaya Scheme was fulfilling its objectives though a small number felt that it would create two classes of citizens. (19) The scheme was thought to be generally helpful in the promotion of the objectives of national integration. [SKB 1210]

James, Langstieh. 1989. **A study to identify the causes of the inadequate qualitative progress of high school students of Meghalaya.** Independent study. Shillong: State Council of Educational Research and Training.

**Problem :** The study is concerned with locating the possible causes for the comparatively poor performance of candidates in the HSLC examination of the Meghalaya Board of School Education.

**Objectives :** (i) To identify the probable causes leading to poor attainment of students in the HSLC examination, (ii) to formulate principles to help students regarding regular study, (iii) to help them to learn to raise questions when in doubt about the lesson, and (iv) to help them to learn to pay more attention in the class.

**Methodology :** A total number of 2,110 students of Classes IX and X selected randomly from the high schools located in the Khasi and Jaintia Hills formed the sample. The data were gathered with the help of a questionnaire. The statistical techniques employed included frequency distribution and percentage index.

*Major Findings* : The study revealed certain facts related to poor performance in the majority of the schools covered in the investigation. Some of these pertained to : (1) inadequate time devoted to teaching. (2) non-completion of homework by pupils. (3) failure to provide individual attention to students. (4) Poor performance of students both at the school as well as in the HSLC examination conducted by the Meghalaya Board of School Education. [PPG 0174]

Kaul, C.L. and Gupta, J.K. 1990. **A sample study of school library facilities and their utilisation in secondary and higher secondary schools of four selected states.** Independent study. *National Council of Educational Research and Training* [ERIC Funded]

*Problem* : The study looks into the school library facilities and their utilisation in four selected states with the assumption that books are a powerful medium of education, and hence the importance of a school library.

*Objectives* : (i) To study the availability of school libraries, their accommodation, furniture, seating capacity, etc., (ii) to study the utilisation of library facilities — issue of books, periodicity of issue, number of books in circulation, etc., (iii) to find out the type of books available, (iv) to study such aspects as the cataloguing system adopted, the stacking arrangement, time for which school libraries remain open, the staff available, and (v) to find out the expenditure on various items connected with school libraries during the year 1984-85.

*Methodology* : Two samples of ten per cent of high and higher secondary schools from each of the four states — Assam, Gujarat, Haryana and Tamil Nadu — were selected. From these, subsamples of two per cent of each of the two types of schools were taken. The data were collected through a questionnaire developed for the purpose of the study. For analysis the data were processed on computer and coding was

entrusted to the concerned state governments.

*Major Findings* : (1) Though libraries were found to exist in all the high and higher secondary schools of the four states, they had a very large clientele to cater to in proportion to the meagre collection of books. (2) As for the high schools, only a small fraction of schools, i.e. 43.8% in Assam, 36.8% in Gujarat, 35.3% in Haryana and 29.1% in Tamil Nadu, had separate accommodation for libraries as compared to the corresponding percentages of 61.5%, 84.9%, 60.0% and 72.4% among higher secondary schools in these states, respectively. (3) The libraries of high and higher secondary schools generally were found to function in single-room accommodation. (4) The reading-room space did not appear to be sufficient to allow room for display of newspapers and magazines. (5) Stacking facilities were mostly found to be meagre. Schools had generally one or two almirahs to stack books. (6) Catalogue cabinets, dictionary stands, newspaper racks, magazines racks and working tables were rarely found. (7) The schools adopted the closed-shelf system to stack books. They generally used locked almirahs after stocking books. (8) The accession register was the main record maintained, respectively, by 82.1%, 70.2% and 58.8% of high schools in Assam, Gujarat and Tamil Nadu. The situation was better in the case of higher secondary schools in all the states except in Haryana where the percentage was found to have declined to 74.3%. (9) Books were issued generally on the issue registers. (10) Most of the school libraries worked for up to two hours each day. These did not open on holidays. Only a few schools had the provision of library periods in their timetables. (11) Both high and higher secondary schools were found to subscribe to one or two newspapers and a few magazines. (12) There was no provision of full-time librarians in schools. (13) There was considerable variation in expenditure on different items connected with school libraries. [VKR 1177]

Maheshan, Girija. 1989. **A critical study of some problems at the +2 stage of education in Karnataka.** Ph.D., Edu. *Karnatak Univ.*

*Problem:* The problem is devoted to studying certain issues at the +2 stage of education in the state of Karnataka. Where should the +2 stage be located? What should be the administrative set up at the +2 stage and the professional courses for the junior college teachers? Attempts were made to seek answers to questions such as these.

*Objectives :* (i) To study the relative advantages and disadvantages of the +2 stage of education, treated in the three types of institutions - composite junior colleges, composite degree colleges and independent junior colleges, (ii) to examine in detail the present administrative set-up for the three types of institutions and to suggest appropriate machinery for effective administration, and (iii) to develop practical and dynamic professional courses for the junior-college teachers.

*Methodology :* A sample of 56 principals of the composite degree colleges and 247 principals of composite junior colleges from Dharwad, Belgaum, Bijapur and Karwar was chosen randomly for the study. The data were gathered by administering questionnaires to the subjects, soliciting their views and opinions. The percentage analysis technique was used for analysing the data.

*Major Findings :* (1) The advantages of delinking the +2 stage from the composite junior colleges were that this measure will do away with dual control and would help to set-up appropriate machinery for the periodic inspection necessary for qualitative improvement. (2) The disadvantages were that this move entails heavy financial commitment on the part of the state and the managements and there would not be enough work-load for teachers in rural areas. (3) The advantages with regard to delinking of the +2 stage from the composite degree colleges were that the move will enable the degree colleges

to concentrate on the improvement of academic standards at the graduation level. This measure brings institutions offering the +2 stage of education under a common umbrella, which facilitates the periodical academic supervision necessary to ensure qualitative improvement of the +2 stage. The disadvantages of this move are : it involves a loss of income to the degree colleges; it entails a heavy financial commitment on the part of the state and the managements; and it involves a permanent blocking of the promotional avenues of teachers. (4) The academic control of the +2 stage and the authority to start fresh junior colleges vests with the Board. (5) Administrative control was exercised by the Directorates of Public Instruction, Collegiate Education and Pre-University Education, respectively, for the +2 stage located in composite junior, composite degree and independent junior colleges. (6) The comments of principals and teacher-educators revealed that the draft syllabus was excellent and unexceptionable. The proposed diploma for junior college teachers needs 40 full days; the part-time course will be prolonged to 100 days with two hours schedule per day. [KR 0588]

Majumdar, Tarun Ranjan. 1988. **Secondary school education in Calcutta: A study of the total system.** Ph.D., Edu. *Calcutta Univ.*

*Problem:* Reform and change at the secondary level of education in India, particularly since the reports submitted by the secondary education commission followed by the Kothari Education Commission, gained increasing significance, demanding continuous observation and follow-up from scientific, objective standpoints. In the state of West Bengal this created a significant awareness out of which emerged the present problem undertaken as a work of survey-based investigation and research from a holistic perspective.

*Objective :* To make an in-depth study of the secondary school system in relation to its significant components — schools, pupils,

teachers, guardians, curriculum, timetable and environment — in order to locate its points of weakness as well as potentialities revealing thereby a real picture of the system.

*Methodology* : The data were gathered both from primary as well as secondary sources. Documents and records constituted the primary source of data. A field sample survey based on representative number of all types of secondary schools of Calcutta as samples yielded the primary data which was analysed to arrive at certain definite conclusions.

*Major Findings* : (1) Many changes brought about at the stage of school education in West Bengal after Independence had often been implanted in haste without necessary care and precaution, as a result of which the expected objectives and targets could not be achieved. (2) Curricular and organisational changes created certain gaps and confusion. (3) Pupils faced problems under the pressure of abrupt changes. (4) Guardians expressed fears and difficulties in regard to their wards' education. (5) The educational environment in schools was found to be far from satisfactory, lacking in many essential requirements. (6) The relationship among the components under study revealed certain discordant features disturbing the equilibrium of the total system and its smooth functioning. (7) Teachers' orientation and awareness did not tally properly with the process of changes. [SPB 0198]

Mohanty, P.K., 1990. **A study of staff relations in higher secondary schools.** Ph.D., Edu. Utkal Univ.

*Problem*: The study centres upon the problem of staff relations in the higher secondary schools of Orissa. The teacher's personality and mental health were analysed, together with their sociometric structure.

*Objectives*: (i) To make a study of the sociometric structure of teachers in higher secondary schools, (ii) to study the teacher-relationships along with the principal-teacher

relationship and the pupil-teacher relationship, and (iii) to study teacher personality factors and their mental health.

*Methodology*: The sample included 136 teachers, 338 students and 8 principals, chosen randomly giving due representation to gender and SES. The tools for collecting data included Sociometric Test, Cattell's 16 Personality Factors Questionnaire and the RCE Mental Health Scale by S.P. Anand. Both parametric and non-parametric statistical techniques of data analysis were used which included 't' test, analysis of variance and chi-square.

*Major Findings* : (1) The study established that when analysed school-wise, staff relationships were not found to be very congenial. (2) The sociometric structure of teachers varied from school to school. (3) Sociograms and bar diagrams indicated a poor relationship between principals and teachers, both males and females. (4) As regards personality tests, one-way analysis of variance indicated a large number of teachers to be outgoing, intelligent, sober, practical, pleasant, experimenting and relaxed. (5) The analysis also indicated some teachers to be disturbed, expedient, suspicious and undisciplined. (6) Nearly half of the teachers in the sample studied were found to be mentally unhealthy. [KCP 0403]

Mohapatra, T. 1991. **Problems of secondary school teachers: A comparative study of government and private school teachers.** Ph.D., Soc. Utkal Univ.

*Problem*: The present investigation is concerned with the problems of secondary school teachers in the comparative perspective of government and private school teachers in the Cuttack District of Orissa. It is on the lines of a case study.

*Objectives* : (i) To study the structure and pattern of the secondary schools of Cuttack town (government and private schools separately) including the total teacher's strength, (ii) to trace

out the teachers' image and interaction and also their relation with the school curriculum and curricular activities, (iii) to critically examine their freedom, initiative and creativity in relation to textbooks, syllabus, examination and evaluation, (iv) to study their different roles in relation to social change and modernisation, (v) to critically analyse their alienation in society, their job satisfaction, aspirations and causes of frustration, (vi) to assess the importance of the National Policy on Education (1986) in relation to the secondary school teachers, and (vii) to examine the aims and objectives of teachers' organisation in Orissa.

*Methodology:* A purposive random sample of 400 teachers (200 males and 200 females) drawn from 12 schools was so chosen that 100 teachers each were from the government schools and another 100 each from the privately-managed schools. The tools used included a questionnaire, an observation schedule and structured interviews.

*Major Findings :* (1) Teachers, both male and female, came from all classes of society, but the majority of them were from the lower and lower-middle-class income groups. As compared to the male teachers, most of the female teachers came from families belonging to the higher SES. (2) The private school teachers were found more qualified than the government school teachers. In private schools, teachers having higher qualification were found working in a lower cadre due to lack of vacancies in the higher cadres. (3) The number of secondary schools in Cuttack town was not adequate to feed the number of students demanding schooling in the urban area. The classrooms of both government and private schools are found to be crowded or even overcrowded in spite of there being a number of sections in each class. (4) The infrastructural facilities, such as library facilities, laboratories with equipment, hostel facilities, teachers' quarters were found to be better provided in the government schools than in the private schools. The performance of students in the final HSC examinations was also found to be better in the

government schools. (5) As regards the present system of education, about 70% of teachers felt that the present system of education creates unemployment. (6) The majority of teachers did not attach importance to religion. (7) About 83.75% of teachers were found in favour of a materialistic approach for the improvement of our society. (8) A majority of teachers did not bother about cordial relationship with their colleagues. (9) Teachers didn't bother to keep contact with the guardians. (10) The vast majority of teachers opined that the prescribed syllabus is not suitable to fulfil the aims and objectives of education. (11) As regards the textbooks of secondary schools, most teachers expressed dissatisfaction with the existing process of selection of writers and of topics of the text. [KCP 0448]

Mulia, R.D. 1992. **A comparative study of IQs of the students of secondary schools of Ahmedabad District in the context of their standards, sex and area.** *Experiments in Education*, Vol. 20(3): 63-71.

*Problem:* The study is undertaken to examine the impact of grade, sex and area on IQs of the secondary school pupils.

*Objectives:* (i) To study the effect of grade, sex and area (urban-rural) on IQs, and (ii) to find out the interaction effects of the independent variables on the level of IQs of the secondary school pupils from the Ahmedabad district.

*Methodology:* Eight schools from Ahmedabad City and eight schools from eight different talukas of Ahmedabad District were selected randomly. A separate grade-wise and sex-wise alphabetical list of pupils was worked out for each school selected in the sample. From this list, 30 boys and 30 girls were selected at random from each class. Thus, the total sample consisted of 720 pupils. The stratified random sampling technique was used to draw a representative sample from the population. The Mini Intelligence Test (Vocabulary Test) of J.H. Shah was used to measure

the deviation IQs of the pupils. The data were analysed using analysis of variance.

*Major Findings:* (1) The main effect of grades was significant. The IQs of the pupils of standard IX were found higher than those of their two counterparts. (2) The main effect of sex was not significant; that is, there was no significant difference in the IQs of boys and girls. (3) The main effect of area was significant. The IQs of urban pupils were higher than those of rural pupils. (4) The interaction effect between grade and sex only was significant. [JHS 0716]

Murugesan, A. 1988. **A critical appraisal of life-oriented education implemented in the secondary schools of Anna district.** M.Phil., Edu. Madurai Kamaraj Univ.

*Problem:* The study is designed to find answers to the questions; whether the schools have adequate infrastructure to impart practical skills to students under the life-oriented education programme (LOE) and whether the headmasters, LOE teachers and students have a favourable attitude towards the LOE scheme.

*Objectives:* (i) To study the nature of the infrastructure available in schools for the LOE programme, (ii) to find out the types of attitudes of the headmasters, LOE teachers and students towards this programme, and (iii) to study the nature of the vocational skills imparted under the LOE programme.

*Methodology:* The sample of the study was 120 pupils of Standards VIII and IX from eight high and higher secondary schools where LOE had been implemented in Anna District in the state of Tamil Nadu. A Check-list to assess the infrastructure facilities available in schools for the LOE programme and an Attitude Scale to measure the attitudes of teachers, students and headmasters were constructed and used. One Questionnaire to find out students' involvement in productive work was also constructed and used. Percentage and Pearson's product-moment correlation were used for statistical analysis.

*Major Findings:* (1) Only 40% of the schools had the facilities of workshop, workshed or farm, etc. for imparting practical skills to LOE students. (2) All the schools had no separate room for LOE classes. (3) The LOE teacher's salary was low. (4) Only 10% of the schools could get help from the nearby private institutions, industries or workshops for imparting practical skills. (5) The attitude of the headmasters, the LOE teachers and students were highly favourable towards the LOE programme. [MKU 1055]

Nayal, Gopal Singh and Nayal Shanti. 1989. **Differential personality profiles of high school drop-outs and stay-ins.** *Indian Educational Review*, Vol. 24(3): 103-109.

*Problem:* The investigation concentrates on studying the personality profiles of drop-outs and stay-ins in high schools.

*Objectives:* To find out the differential personality profiles of high school drop-outs and stay-ins.

*Methodology:* A stratified random sample of educational institutions was drawn from the totality of the concerned secondary schools of rural as well as urban areas in Almora District. Then 200 drop-outs and 200 stay-ins from different secondary schools of Almora District were randomly selected for the sample. The Hindi adaptation of R.B. Cattell and Hela Belef High School Personality Questionnaire (H.S.P.Q. Form A) developed by S.D. Kapoor was used to collect data. As regards statistical techniques, means, SDs and 't' values were computed to analyse the collected data.

*Major Findings:* (1) Rural stay-ins were less outgoing, more intelligent, more active, more mild, more tender-minded, more controlled and relaxed, whereas rural drop-outs were observed to be more outgoing, less intelligent, inactive, aggressive, tough-minded, less controlled and more tensed. Rural drop-outs and rural stay-ins differed significantly on seven personality

traits out of fourteen. (2) Urban drop-outs and urban stay-ins differed significantly on the B, G, I and Q4 personality traits. Urban drop-outs were observed to be less intelligent, of weaker super-ego strength, tough-minded and more tensed in comparison to urban stay-ins. [Spr 1443]

Palanivelu, S.P. 1992. **Development of education in S.M.S.V. Higher Secondary School.** M.Phil., Edu. *Alagappa Univ.*

*Problem:* The investigator attempts to analyse the impediments that hindered the development of education in that institution, to devise and implement needed action programme to overcome these impediments and to identify how far the impact of the action programmes influenced the development of education in S.M.S.V. Higher Secondary School.

*Objectives:* (i) To find out the factors, if any, that come in the way of the development of an educational institution, (ii) to devise and implement action programmes for the development of the educational institution, and (iii) to identify the impact of the action programmes in terms of student/teacher/parent opinions on the development of the educational institution.

*Methodology:* The sample consisted of 60 students drawn randomly from S.M.S.V. Higher Secondary School. The Attitude Towards the Development of Educational Institution was used as a tool. The case study method was also used. The responses of pupils, teachers and parents were scored as a five-point scale. Mean, SD, Coefficient of Concordance Scores were used to analyse the collected data.

*Major Findings:* (1) Students were more favourable towards general upkeep, maintenance of discipline, performance of extra-curricular activities and eliciting public cooperation in S.M.S.V. Higher Secondary School. (2) Students were favourable towards the admission procedures followed, maintenance of discipline, proper conduct of examinations and utilisation of funds collected in S.M.S.V. Higher Secondary

School. (3) Teachers were more favourable towards the general upkeep, the admission procedures followed, maintenance of discipline, conduct of examinations and proper utilisation of funds in S.M.S.V. Higher Secondary School. (4) Teachers were favourable towards the performance of extra-curricular activities, and eliciting public co-operation in S.M.S.V. Higher Secondary School. (5) Parents were more favourable towards the general upkeep and maintenance of discipline in S.M.S.V. Higher Secondary School. (6) Parents were favourable towards the general upkeep, the admission procedure, conduct of examinations, performance of extra-curricular activities, proper utilisation of funds and eliciting public cooperation in S.M.S.V. Higher Secondary School. (7) Students, teachers and parents were more favourable towards the general upkeep, admission procedures followed and maintenance of discipline in S.M.S.V. Higher Secondary School. (8) Students, teachers and parents were favourable towards the conduct of examinations, performance of extra-curricular activities, proper utilisation of funds and eliciting public cooperation in S.M.S.V. Higher Secondary School. [SM 1776]

Pathan, S. Swahela. 1988. **Teachers' and students' attitudes towards self, education, pupils, each other, management and parents in a few single sex and coeducational secondary schools in Pune city.** M.Phil., Edu. *Pune: Indian Institute of Education.*

*Problem:* The attempt is to study whether co-educational institutions are better than single-sex schools with regard to psychological health and development and social cooperation, and to highlight the existing problems.

*Objectives:* (i) To study the attitudes of children from boys' (single-sex) schools, from girls' (single-sex) schools and from mixed schools, and of male teachers from single sex and mixed schools, of female teachers from single sex and mixed schools, towards self, education, the

management, each other and parents, and (ii) to study the comparative effect of single-sex schools and coeducational schools on the attitudes of children towards education, discipline, and peer-group mixing.

*Methodology:* The sample was chosen from the schools located in the camp area, the city area, and the Deccan Gymkhana area of Pune city. The schools were single-sex and coeducation, and offered English and Marathi medium, and the sample consisted of 180 boys and 180 girls, 17 male teachers and 73 female teachers. A questionnaire-cum-attitude scale was used for the study. Mean, SD and 't' value were used for the analysis of the collected data.

*Major Findings :* (1) Seventy-four per cent of teachers were in favour of coeducation and 26% against, 68% of students were in favour of, and 32% of students were against coeducation. (2) Boys and girls from coeducational schools with English and Marathi medium showed better attitude towards self compared to single-sex school students. (3) Girls and boys from coeducational Marathi medium schools differed significantly in their attitude towards other pupils as compared to single-sex school children. (4) Girls from single-sex schools were found to have a favourable, and boys from single-sex schools an unfavourable attitude towards teachers. (5) Students from coeducational schools with English medium had a favourable attitude towards teachers. (6) Male and female teachers from coeducational English-medium schools were found to have better self-concept. (7) Male teachers from coeducational English medium schools had a favourable attitude towards education. (8) Female teachers from single-sex schools had favourable attitude, and male teachers from single-sex schools had an unfavourable attitude towards pupils. (9) Teachers from single-sex English medium schools and teachers from mixed schools with English-medium had respectively, a favourable and an unfavourable attitude towards pupils. (10) Male teachers from single-sex schools with

English medium had a favourable attitude towards pupils as compared to male teachers from single-sex schools with Marathi medium. [ASB 0046]

Patil, M.K. 1990. **A study of the secondary school drop-outs of Sambalpur district.** Ph.D., Edu. Utkal Univ.

*Problem:* The study centres upon the problems of the secondary school drop-outs of Sambalpur district in the state of Orissa.

*Objectives :* (i) To know the trend and ascertain the magnitude of educational wastage in the schools of Orissa with special reference to Sambalpur District, (ii) to find out the causes of secondary school drop-out in the district, and (iii) to identify the rural-urban character of the factors of drop-out in the district.

*Methodology:* The study was conducted in two phases. In Phase I of the study, data were collected on the drop-outs numbering 1,392, in the responding secondary schools between 1978-79 and 1980-81. In Phase II of the study a personal interview was conducted on a stratified and cluster sample. The tools used included a Survey Questionnaire, a General Information Blank, and an Interview Schedule (structured). The following methods/techniques were then used: the apparent Cohort Method for calculating wastage; Shevsky's method of social area analysis adapted to determine SES; the frequency-distribution method to determine the relative importance of the factors and causes of drop-out; and the Spearman rank correlation coefficient were used to treat the data.

*Major Findings :* (1) The average rate of wastage during 1951-81 in the schools of Orissa was 71% by Class V, 79% by Class VII and 90% by Class XI. The girls recorded a higher rate of wastage than the boys all through. (2) The two equally formidable causes of drop-out were found to be financial hardship; and failure in class examinations. (3) Educationally, the drop-outs aspired to a High School Certificate, and



occupationally to clerical service. In the urban areas, aspirations were a little higher. (4) The phenomenon of drop-out was found to occur at a time following the class examination, and in between in the last two classes of high school. (5) The drop-outs came from families with low SES. (6) All the mothers, 95% of the fathers, 92% of the elder sisters and 83% of the elder brothers had either not been able to go to a high school or dropped out of it. (7) A significantly positive relationship was found between the drop-outs as follows : (i) liking for the subject and the subject teacher; and (ii) liking for the subject and marks secured in the subject. (8) The age of the drop-out was found to be higher than the median age. (9) The drop-outs were found to be with a positive attitude generally. [KCP 0401]

Rajam, G. 1990. **A study of peace concepts in the higher secondary textbooks of Tamil Nadu.** M. Phil., Edu. *Alagappa Univ.*

*Problem :* The researcher attempts to study the peace concepts in school textbooks so as to give suggestions for promoting education for peace which is the urgent need of today, and which, perhaps, is the one peaceful way to 'peace' itself.

*Objectives :* (i) To find out the distribution of the peace concepts introduced in the higher secondary textbooks, (ii) to find out 'Exact', 'Similar' and 'Related' concepts of peace in different forms, incorporated in the language and humanities textbooks at the higher secondary level, (iii) to find out whether there is any significant difference in the distribution of the different forms of peace concepts in the language and humanities textbooks at the higher secondary level, and (iv) to find out whether there is any significant difference in the distribution of different forms of peace concepts.

*Methodology:* The higher secondary textbooks were the sampling documents for the study. English, Tamil, history, economics and commerce

textbooks were taken as they have greater scope for elaboration and explanation of peace concepts. Nearly 90 peace concepts were enumerated after a careful study of the popular definitions of peace. The list was sent to experts on peace studies for their opinions and concurrence. After the experts' opinion, these peace concepts were further categorised into four different forms, namely, Individual, Social, National and International. Each form of the peace concept was further divided into three levels, Exact, Similar and Related concepts. Mean, SD and 't' test were used to analyse the data, apart from the qualitative analysis.

*Major Findings:* (1) The distribution of peace concepts was greater in history textbooks and less in commerce textbooks. (2) Among the four forms of concepts, the societal concepts had larger distribution and the international concepts have less distribution at higher secondary level. (3) Among the four forms of concepts, the societal concepts had a larger distribution, and the international concepts have less distribution in Standard XI textbooks. (4) Among the four forms of concepts, the societal concepts had a larger distribution, and there was no treatment of international concepts in the commerce textbooks of Standard XII. [SM 1765]

Satrusalhya, Jayanti, 1991. **A study of co-curricular activities implemented in the secondary schools of Cuttak District,** Ph.D., Edu. *Utkal Univ.*

*Problem :* The problem is related to the study of implementation of co-curricular activities in the secondary schools of Cuttack District.

*Objectives :* (i) To study the provision of co-curricular activities in the secondary schools of Cuttak District, (ii) to study the influence of co-curricular activities in developing healthy attitudes among the secondary school pupils, (iii) to study the role of co-curricular activities in socialising children's behaviour giving them proper citizenship training and cultivating

humanitarian virtues in them, (iv) to study the role of co-curricular activities in helping the students to take up responsibilities when they become adults, (v) to find out the causes of non-implementation of co-curricular activities, and (vi) to suggest measures for the successful implementation of co-curricular activities in the secondary schools of Cuttack District.

*Methodology* : The random sampling method was used to select 100 schools out of a total of 843 in the Cuttack District of Orissa. From these schools, 500 teachers and 3,000 students were selected randomly for the study. Questionnaire, and personal group interviews were used in the process of collecting data. The collected data were analysed qualitatively.

*Major Findings* : (1) Though the sample included subjects from both the sexes and sex as a variable of study was not taken, there was difference in interest towards co-curricular activities between boys and girls. (2) There were some common activities, viz. sports and games, drama, debate, N.S.S., N.C.C., school magazine, Cultural activities, parents' day, library work, first-aid, etc., in which both boys and girls were equally interested. (3) The provision for co-curricular activities available to the children was too insignificant to fulfil their adolescent needs. (4) Though there existed provision for various types of co-curricular activities, very few activities were found to be actually implemented. (5) It was not possible on the part of the institutions to implement all co-curricular activities due to lack of finance, space, time, experts, staff, equipment, leisure, etc. (6) The present overcrowding in school was also responsible for meagre pupil participation. (7) Equal and adequate financial and technical assistance for implementing all co-curricular activities was not provided. (8) The provisions for activities like gardening, plantation, Red Cross, cycling, *saferai*, first-aid, etc. were found to be insignificant. [JKS 0707]

Shah, D.A. 1989. **An operational research technique of network analysis applied to the**

**higher secondary classes of the state of Gujarat.** Ph.D., Edu. South Gujarat Univ.

*Problem*: This study centres around the impact of network diagrams having in-built system of sequencing activities.

*Objectives*: (i) To bring up the achievement of students of higher secondary classes studying the different topics of chemistry with the help of network diagrams, and (ii) to evaluate the effectiveness of network diagrams having an in-built system of sequencing activities.

*Methodology*: From Jeevan Bharati School of Surat City, all 102 students studying in the science stream of Standard XI were selected as sample. Grewal's Science Attitude Scale, Desai-Bhatt Group Test of Intelligence, Building Construction Network, Opinionnaire Network Diagrams of 11 topics of chemistry of Standard XI and 14 topics of chemistry of Standard XII developed by the investigator were used for the data collection. Mean, SD, 't' ratio and percentages were used for the analysis of data.

*Major Findings*: (1) It was concluded that the teacher referring networks for teaching has helped to uplift the achievements of the group of pupils. (2) Referring the networks for learning had been found more fruitful and higher achieving compared to the method of teaching teaching by referring the networks by teachers. (3) Low achievers of the learning through networks have been found on an average equal to the high achievers of the traditional group of pupils taught by traditional method. [US 1849].

Sayed, Nurjehan, A. 1990. **The relationship between cognitive style and the personality variables of secondary school students.** *Indian Educational Review*, Vol. 25 (4): 18-26.

*Problem*: The study concentrates on exploring the relationship between cognitive style and the personality of students studying in the secondary schools of Karnataka State.

*Objectives* : (i) To identify the field-dependent

and field-independent pupils in the sample under study, (ii) to find out the personality factors specific to the two groups, and (iii) to find out if significant differences exist between the two groups on certain personality factors.

*Methodology:* Adopting the stratified random sampling technique, 20 schools were selected from the Dharwad District of Karnataka State, giving due representation to boys' and girls' schools, management of schools, locality of schools and medium of instruction. The data were gathered by administering Witkins' Group Embedded Figures Test (GEFT) and Cattells' Jr.-Sr. High School Personality Questionnaire. Mean, SD and 't' tests were used to treat the data.

*Major Findings :* (1) Significant differences were found between the field dependent and field independent groups on the personality factors A, B, C, D, E, G, and  $Q_4$ . The field dependent students were found to be reserved, less intelligent, affected by feelings, excitable, assertive, having weaker super-ego, uncontrolled and tensed. The field-independent students were found to be warm-hearted, more intelligent, emotionally stable, undemonstrative, obedient, having stronger super-ego, controlled and relaxed. (2) No significant differences were found between the field-dependent and field-independent groups on the personality factors F, H, I, J, O and  $Q_2$ . (3) The principal component analysis revealed that there was a definite difference between the field-dependent and field-independent groups on the factor structure as far as the personality variables were concerned. [SPr 1461]

Tripathi, Awadhesh and Tiwari, B.D. 1991. **Effect of dependence proneness and demonstration on verbal problem-solving in Grades VIII and IX children.** *Indian Educational Review*, Vol. 26 (4):136-42.

*Problem :* The present experiment is conducted to study the relationship between dependence proneness and problem-solving behaviour with a different kind of verbal problem not traditionally used in experimental studies of

problem-solving. The task required its segmentation into components based on perceived meaning of the sentences and comparison among different segments.

*Objectives :* (i) To find out experimentally whether low dependence-prone subjects would solve the problems more efficiently as compared to high dependence-prone subjects, (ii) to study the effect of demonstration on the improvement, if any, in the performance, (iii) to investigate the effect of demonstration and the interaction effect of demonstration and dependence-proneness on verbal problem-solving, and (iv) to see the differential effect of demonstration on the problem-solving of the individuals with high and low degree of dependence-proneness.

*Methodology :* One hundred and twenty boys studying in Grades VIII and IX, their age varying between 12-15 years, served as subjects. They were selected on the basis of their scores on the Dependence-Proneness Scale of Tripathi.

*Major Findings :* (1) The findings revealed a significant difference between the performance in problem-solving by high and low dependence-prone persons and that low dependence-prones are more efficient in such tasks than high dependence-prones. (2) The main effect of demonstration on performance has been found statistically significant. (3) The present investigation indicated that dependence-proneness was an important component of the entering behavior of subjects, and that the effect of demonstration on performance in problem-solving showed a trend that LDP subjects gained slightly more than HDP subjects though it did not show statistical significance. [SP 1920]

Verma, B.P. and Tiku Asha. 1990. **Learning styles of high school students: Effects of socio-economic status and general intelligence.** *Indian Educational Review*, Vol. 25 (1): 31-40.

*Problem :* The present study explores the main and interaction effects of socio-economic status and intelligence on the learning styles of high school students.

**Objectives:** (i) To study the effect of socio-economic status on the learning styles of high school students, (ii) to ascertain the effect of intelligence on the learning styles of high school students, and (iii) to analyse the interaction effect of socio-economic status and intelligence on the learning styles of high school students.

**Methodology:** A sample of 300 students (both male and female) was selected from seven institutions of Shimla city. The institutions were selected by a random sampling method. Then one section from each institution was selected randomly. Thus the random cluster sampling technique was employed in the selection of the initial samples.

The tools used included the Socio-economic Status Scale by Lokesh Koul, the Group Test of

General Mental Ability, and the Student Learning Style Questionnaire, an adapted form of Anthony Grasha and Sheryl Reichman. A two-way analysis of variance was employed to analyse the obtained data.

**Major Findings:** (1) The main effect of socio-economic status was not found to be significant. Not a single learning style out of six, was seen to be affected by the socio-economic status of the students. (2) No significant difference was found between high- and low-intelligent students on independent, dependent, participant, collaborative and competitive learning styles. (3) The interaction effect of socio-economic status and intelligence was not significant on any of the learning styles of the high school students. [SPR 1487]

## Also See

Abraham, Usha P. 1991. **A study of awareness, attitudes and skills of secondary school students of Hyderabad and Ranga Reddy Districts on population issues.** Ph.D., Edu. *Osmania Univ.* [SSS 0852] (See in Chapter 32.)

Agrawal, Archana. 1992. **A social, psychological and educational study of Scheduled Caste students studying in high schools of Lucknow city.** Ph.D., Edu. *Univ. of Lucknow.* [RJS 0669] (See in Chapter 30.)

Agarwal, Kanta Prasad. 1988. **Types of schools and corresponding factors as predictors of creativity at secondary level.** Ph.D., Edu. *Jamia Millia Islamia.* [SPR 0595] (See in Chapter 11.)

Akpan, Asuquo Asuquo. 1991. **A path-analysis model of mathematics problems-solving for secondary school students.** *Indian Educational Review*, Vol. 26(2), 30-45. [SPR 1498] (See in Chapter 20.)

Alavandar, R. 1992. **A study of selected variables relating to the English reading competency of high school pupils.** Ph.D., Edu. *Annamalai Univ.* [MDa 1375] (See in Chapter 01.)

Alexander, Benny. 1990. **A study of the relationship of critical thinking, science aptitude and socio-economic status to the science achievement of second year P.U.C. students.** M.Phil., Edu. *Bangalore Univ.* [MKh 0312] (See in Chapter 19.)

- Alexander, P. 1989. **A study of classroom interaction in teaching science at higher secondary level.** M.Phil., Edu. *Madurai Kamaraj Univ.* [MKU 1062] (See in Chapter 23.)
- Amrithagowri, R. 1983. **A study on the effective methods to impart population education to higher secondary school students.** M.Phil., Home Sc. *Coimbatore: Avinashilingam Institute for Home Science and Higher Education for Women.* [MC 0087] (See in Chapter 32.)
- Anand, S.P. 1989. **Mental health of high school students.** *Indian Educational Review*, Vol. 24(2): 14-24. [SPR 1428] (See in Chapter 7.)
- Arora, Reeta. 1988. **Role of parent-child relationship and teacher-student relationship in the academic achievement of higher secondary school students of both sexes.** Ph.D., Psy. *Agra Univ.* [SS 0801] (See in Chapter 38.)
- Asthana, Sita Rani. 1989. **Political education: A critical study of its needs, concept, content and method at the secondary stage.** Ph.D., Edu. *Univ. of Allahabad.* [PCS 0943] (See in Chapter 18.)
- Banerjee, N. 1988. **An investigation into the problems of adjustment of blind students reading in secondary schools of West Bengal.** Independent study, *Vishwa Bharati, Shanti Niketan.* (ERIC Funded). [SRA 1112] (See in Chapter 27.)
- Barua, A.P. 1989. **Causes of failure in Higher Secondary Leaving Certificate Examination.** Independent study. *State Council of Educational Research and Training, Assam.* [PKB 1612] (See in Chapter 35.)
- Baskaran, K. 1991. **Achievement motivation, attitude towards problem-solving and achievement in mathematics of Standard X students in Devakottai educational District.** Ph.D., Edu. *Alagappa Univ.* [SM 1768] (See in Chapter 38.)
- Bhadury, J. 1989. **The effect of feedback in improving personality, desirable behaviours, values and teacher perception among secondary and senior secondary school students.** Ph.D., Psy. *Utkal Univ* [KCP 0383] (See in Chapter 06.)
- Bhagat, Mathema, Sundar Shyam. 1988. **Wastage of teacher education in secondary schools of Nepal as related to intelligence, personality, vocational aspirations and attitude towards teaching of drop-outs from profession.** Ph.D., Edu. *Panjab Univ.* [JNJ 0284] (See in Chapter 34.)
- Bhargava, Shiv Ganesh. 1992. **Attributional analysis of teachers' expectation in secondary schools.** Independent study. *Bombay: Indian Institute of Technology, Department of Humanities and Social Sciences.* (ERIC Funded). [SKB 1216] (See in Chapter 25.)
- Bhatnagar, Asha and Gupta, Nirmala. 1988. **Career maturity of secondary students: Effect of a guidance intervention programme.** *Indian Educational Review*, Vol: 23(4), 42-50. [HLS 1418] (See in Chapter 12.)
- Bhattacharyya, Anjana. 1989. **A cross-sectional study of some differential aptitudes of secondary school students.** Ph.D., Edu. *Univ. of Kalyani.* [PDR 0635] (See in Chapter 6.)
- Bhattacharya, M. 1988. **An investigation into the learning disabilities developed by**

- secondary school students in the area of equation-sums in algebra.** Ph.D., Edu. *Univ. of Kalyani*. [PDR 0632] (See in Chapter 27.)
- Bisaria, S. 1991. **Mobility patterns and professional commitments of higher secondary teachers: A pilot study.** Independent study. *National Council of Educational Research and Training*. (ERIC Funded). (VKR 1193) (See in Chapter 25.)
- Chakraborti, Manas. 1990. **To study the organisational climate of secondary schools in West Bengal and to correlate it with other relevant variables.** Ph.D., Sci. *Calcutta Univ.* [SPB 0195] (See in Chapter 37.)
- Chander, Prabhat. 1990. **A study of the educational and vocational interest patterns of tribal high school students and their relationship with intelligence, socio-economic status and educational achievement.** Ph.D., Edu. *Himachal Pradesh Univ.* [LK 0245] (See in Chapter 30.)
- Chandna, Sunanda. 1990. **Self-concept, parental influence, socio-economic status and sex in relation to career attitudes among high school students.** *Indian Educational Review*, Vol. 25(1): 135-139. [SPR 1495] (See in Chapter 12.)
- Chandra, Joice G. 1988. **Correlates of written English at the plus two stage.** Ph.D., Edu. *Univ. of Madras*. [DRG 0096] (See in Chapter 1.)
- Chel, Madan Mohan. 1990. **Diagnosis and remediation of underachievement in compulsory mathematics of madhyamik examination in West Bengal.** Ph.D., Sc. *Univ. of Calcutta*. [SPB 0194] (See in Chapter 20.)
- Chezian, G. 1988. **Efficacy of Tamil textbooks in improving and developing values among high school students.** M.Phil., Edu. *Alagappa Univ.* [SM 1736] (See in Chapter 1.)
- Choudury, Birendra Nath Roy. 1990. **Aesthetic interest of pre-adolescent pupils of the secondary schools of greater Gauhati and its bearing on educational planning and organisation: A critical study.** Ph.D., Edu. *Gauhati Univ.* [RD 0139] (See in Chapter 36.)
- Darchingpuii. 1989. **A study of science achievement, science attitude and problem-solving ability among the secondary school students in Aizawl.** Ph.D., Edu. *North-Eastern Hill Univ.* [PPG 0180] (See in Chapter 19.)
- Das, R.C. 1991. **A study of the methods adopted by selected secondary schools in India for development of moral and ethical values and measurement of value judgement of students of Class IX of these schools.** Independent study. *Bhubaneswar: Regional College of Education*. (ERIC Funded). [Author 1198] (See in Chapter 22.)
- Dass, Charan. 1991. **Achievement motivation, adjustment and creative thinking of college athletes in relation to their performance in track events.** Ph.D., Edu. *Punjabi Univ.* [AK 1844] (See in Chapter 21.)
- Datta, K.L. 1989. **Differences in scientific creativity among high school students.** Ph.D., Edu. *Univ. of Jammu*. [SPS 1279] (See in Chapter 11.)
- De, Dilip. 1991. **A cross-sectional study of professional traits of secondary school teachers and their impact upon classroom communication.** Ph.D., Edu. *Univ. of Kalyani*. [PDR 0619] (See in Chapter 25.)

- Dembla, Pratibha. 1990. **A comparative study of competitiveness and cooperativeness in higher secondary, graduate and post-graduate students in regard to their territoriality, socio-economic status and academic differences.** Ph.D., Psy. *Agra Univ.* [SS 1788] (See in Chapter 6.)
- Deota, N.P. 1990. **A study of the characteristics of effective leadership behaviour of secondary school principals.** Ph.D., Edu. *The Maharaja Sayajirao Univ. of Baroda.* [MSY 0905] (See in Chapter 6.)
- Deshpande, A.R. 1992. **An enquiry into the development of curriculum in mathematics at the secondary stage of education in Maharashtra State.** Ph.D., Edu. *Nagpur Univ.* [GPK 1693] (See in Chapter 13.)
- Donga, Kurjibhai M. 1989. **A study of memory and affecting variables of students studying in Standards VIII to XII.** Ph.D., Edu. *Saurashtra Univ.* [DAU 0009] (See in Chapter 08.)
- D'Leema, S.U. 1988. **A study of financial problems of unaided recognised secondary schools and aided recognised secondary schools of North-West Bombay in relation to their academic performance.** Ph.D., Edu. *Univ. of Bombay.* [GJK 0235] (See in Chapter 5.)
- Ekpo, Johnson. 1991. **Chemistry laboratory safety skills and practices: Students' self-evaluation in selected secondary schools in Akwa Ibom state.** *Indian Educational Review*, Vol. 26(2): 107-115. [SPr 1503] (See in Chapter 19.)
- Fonseca, J. 1988. **An analysis of the relationship between the political system and education with particular reference to primary and secondary education in Bombay (1901-1960).** Ph.D., Ed. *Univ. of Bombay.* [GJK 0225] (See in Chapter 4)
- Gawande, E.N. 1988. **A study of the relationship between achievement motivation and scholastic achievement of higher secondary students of class XI Amaravati district of Maharashtra state.** M.Phil., Edu. *Univ. of Poona.* [ASB 0043] (See in Chapter 38.)
- Gomathinayagam, S. 1992. **The perception of teachers towards the supervisory procedures adopted in the higher secondary schools of Tamil Nadu.** M.Phil., Edu. *Annamalai Univ.* [MDa 1377] (See in Chapter 37.)
- Gore, C.V. 1990. **A study of future orientation of IX Grade boys and girls with high level of creativity with respect to certain cognitive and non-cognitive variables.** Ph.D., Psy. *Nagpur Univ.* [GPK 1593] (See in Chapter 11.)
- Grewal, J.S. 1988. **A study of the perceptions of secondary school learning environment by the students, staff and administration.** Independent study. *Regional College of Education, Bhopal.* (ERIC Funded). [SRA 1129] (See in Chapter 37.)
- Gujarathi, Nalini M. 1992. **Preparation of an integrated programme of training in scientific creativity and experimental study of its effects on students of 9th grade.** Ph.D., Edu. *Shreemati Nathibai Damodar Thackersey Women's Univ.* [AGB 1286] (See in Chapter 11.)
- Gupta, Arun K. and Gangal, Renu. 1989. **Value emphasis as perceived by pupils of primary, middle and high school stage in different institutions.** *Indian Educational Review*, Vol. 24(1), 133-142. [CGVM 1520] (See in Chapter 22.)
- Gupta, Krishna Kumari. 1988. **The creative development of secondary school children**

- in relation to sex, intelligence and urban and rural background.** Ph.D., Edu. *Agra Univ.* [SS 0825] (See in Chapter 11.)
- Gupta, S.K. 1991. **A study of the impact of training in career awareness and career decision-making skills upon occupational attitudes and guidance needs of secondary school students.** Ph.D., Edu. *Barkatullah Vishwavidyalaya.* [JSP 0559] (See in Chapter 12.)
- Harikrishnan, M. 1992. **A study of academic achievement of the students of the higher secondary stage in relation to achievement motivation and socio-economic status.** M.Phil., Edu. *Annamalai Univ.* [MDa 0989] (See in Chapter 38.)
- Idayavani, S. 1991. **Developing a video programme on weathering and work of the rivers in physical geography for higher secondary students.** M.Phil., Edu. *Madurai Kamaraj Univ.* [MKU 1078] (See in Chapter 23.)
- Ingle, V.N. 1990. **A study of leadership qualities of Standard X students in secondary school.** M.Phil., Edu. *Nagpur Univ.* [GPK 1709] (See in Chapter 6.)
- Jain, Brij. 1987. **A study of English language teaching in secondary schools of Gujarat state.** Ph.D., Edu. *The Maharaja Sayajirao Univ. of Baroda.* [MSY 0922] (See in Chapter 1.)
- Jain, S.L. and Burad, G.L. 1988. **Low results in mathematics at secondary examinations in Rajasthan.** Independent study. *State Institute of Educational Research and Training, Udaipur.* [JCV 1558] (See in Chapter 20.)
- 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. Coimbatore.* [MC 0091] (See in Chapter 26.)
- Jayashree, S. 1989. **Identification of the difficulties in teaching and learning English as a second language among the high school students.** M.Phil., Edu. *Alagappa Univ.* [SM 1759] (See in Chapter 1.)
- Jehan, Anwer. 1988. **A comparative study of the problems experienced by secondary school teachers under different managements in Andhra Pradesh and their impact on performance of students.** Ph.D., Edu. *Osmania Univ.* [SSS 1030] (See in Chapter 37.)
- John, C.D. 1988. **Familial and school correlates of creativity: A study of standard IX students.** M.Phil., Edu. *Bangalore Univ.* [MKh 0313] (See in Chapter 11.)
- Joshi, Manju. 1988. **A study of the effect of test anxiety and intelligence on performance of high school students in a segment of science, following programmed instruction in linear and branching styles.** Ph.D., Edu. *Himachal Pradesh Univ.* [LK 0236] (See in Chapter 23.)
- Joshi, V. 1987. **A study of the effectiveness of school television programmes in science at the secondary school level.** Ph.D., Edu. *The Maharaja Sayajirao Univ. of Baroda.* [MSY 0925] (See in Chapter 23.)
- Kalimuthu, T. 1991. **Developing a video programme on environmental pollution in biology for higher secondary students.** M.Phil., Edu. *Madurai Kamaraj Univ.* [MKU 1077] (See in Chapter 23.)



- Kanwar, L.N. 1989. **A study of socialisation practices at home and school and development of personal achievement motivation among secondary school pupils in Assam.** Ph.D., Edu. *Dibrugarh Univ.* [KCP 0525] (See in Chapter 3.)
- Kasat, B.S. 1991. **In-depth study of the causes of large failures in mathematics at S.S.C. examination of Marathi medium high school students in Palghar Tehsil.** M.Phil., Edu. *Univ. of Poona.* [ASB 0034] (See in Chapter 20.)
- Kasat, G. 1990. **An evaluation of physical education programme at secondary school level in Vidarbha region.** Ph.D., Edu. *Nagpur Univ.* [GPK 1621] (See in Chapter 21.)
- Katre. 1991. **A study of some models of efficient and inefficient administration and management at the secondary school level in Pune district.** Independent study. *Univ. of Poona.* (SCERT, Maharashtra Funded) [KC 0079] (See in Chapter 37.)
- Kaul, Phool. 1992. **An investigation into the relationship of maturation of space concept and mental imagery with achievement of concepts of polygon among the middle and secondary grade pupils of English medium schools in Delhi.** Ph.D., Edu. *Jamia Millia Islamia.* [SPR 0614] (See in Chapter 20.)
- Kaur, Sawarnjit. 1991. **Evaluation of guidance services in high/higher secondary schools of Punjab and Chandigarh.** Ph.D., Edu. *Punjab Univ.* [JNJ 0259] (See in Chapter 12.)
- Khan, Khushnuma Begum. 1987. **A study of innovative proneness and its correlates in the secondary schools.** Ph.D., Edu. *The Maharaja Sayajirao Univ. of Baroda.* [MSY 0924] (See in Chapter 11.)
- Khatoon, Fareeda. 1988. **A study of mathematical aptitude among boys and girls and its relationship with interests and vocational preferences at the secondary school level.** Ph.D., Edu. *Osmania Univ.* [SSS 0842] (See in Chapter 20.)
- Khiangte, Varparhi. 1988. **Non-cognitive correlates of creativity among the secondary school students.** Ph.D., Edu. *North-Eastern Hill Univ.* [MAS 0743] (See in Chapter 11.)
- Kidwai, Zeenat. 1991. **Development of an environmentally oriented curriculum in geography at secondary stage.** *Indian Educational Review*, Vol. 26(3): 87-94. [MPR 1509] (See in Chapter 33.)
- Konwar, L.N. 1989. **A study of socialisation practices at home and school and development of personal achievement motivation among secondary school pupils in Assam.** Ph.D., Edu. *Dibrugarh Univ.* [PPG 1812] (See in Chapter 6.)
- Krishnan, Navaneetha J. 1990. **Identification of problem-solving strategies in mathematics among high school students in Devakottai Educational District.** M.Phil., Edu. *Alagappa Univ.* [SM 1764] (See in Chapter 20.)
- Kulshrestha, Pradeep Kumar. 1992. **The effect of school environment on adjustment, study habits and achievement of high school students.** Ph.D., Edu. *Agra Univ.* [SS 1351] (See in Chapter 38.)
- Kumar, Sudhir M.A. 1992. **Socio-educational correlates of creativity among secondary school students in Arunachal.** *Indian Educational Review*, Vol. 27(1): 98-106. [SPR 1894] (See in Chapter 11.)

- Kumar, Yogesh. 1989. **A comparative study of adjustment, attitude, interest and level of aspiration of the tribal and non-tribal students of the secondary level of the Lohit District in Arunachal Pradesh.** Ph.D., Edu. *Dibrugarh Univ.* [PPG 0167] (See in Chapter 30.)
- Kumari, Kamlesh. 1992. **Creativity of IX Graders in relation to their socio-economic status, achievement motivation and adjustment.** Ph.D., Edu. *Punjabi Univ.* [AK 1714] (See in Chapter 11.)
- Lalitha Bai, T.K. 1992. **A comparative study of the cognitive factor structures of the high-average and low-achievers in secondary school mathematics.** Ph.D., Edu. *Univ. of Kerala.* [VR 1640] (See in Chapter 20.)
- Lalsangliani. 1991. **An investigation into the socio-economic and academic problems of high school teachers of Champhai sub-division, Mizoram.** Ph.D., Edu. *North-Eastern Hill Univ.* [PPG 0177] (See in Chapter 25.)
- Macfarland, M. Claire. 1988. **A study of the effects of the effective classroom communication programme on secondary school teachers.** Ph.D., Edu. *Univ. of Delhi.* [RDM 1320] (See in Chapter 25.)
- Malhotra, V.K. 1988. **A critical study of the existing facilities of science teaching and construction of evaluation instruments for its supervision in different types of secondary schools in Delhi.** Ph.D., Edu. *Univ. of Delhi.* [RDM 0348] (See in Chapter 19.)
- Mandlia, Shyam Singh. 1988. **Attitudes of secondary stage students towards science curriculum and its relationship with achievement motivation.** Ph.D., Edu. *Univ. of Rajasthan.* [JKS 0699] (See in Chapter 19.)
- Manocha, Vineeta. 1991. **Development of textual material of biology for Class IX using Bruner's concept attainment model of teaching.** Ph.D., Edu. *Devi Ahilya Vishwavidyalaya* [PKS 0653] (See in Chapter 24.)
- Manu, Patrick. 1992. **A study of certain cognitive and affective styles of leadership potential of +2 students in India.** Ph.D., Edu. *Agra Univ.* [SS 1354] (See in Chapter 6.)
- Mehdi, Baqer. 1988. **Instructional development and social objectives of education at the secondary stage.** Independent study. *National Council of Educational Research and Training.* (ERIC Funded). [SRA 1119] (See in Chapter 13.)
- Mehra, Vandana. 1988. **Effectiveness of an integrated system of instruction for concept and principle learning in different school climates at secondary level.** Ph.D., Edu. *Panjab Univ.* [JNJ 0283] (See in Chapter 23.)
- Misra, C.K. and Verma, A.P. 1990. **Quick appraisal of centrally sponsored scheme of vocationalisation of secondary education in Uttar Pradesh.** Independent study. *National Council of Educational Research and Training.* [DVE 1012] (See in Chapter 26.)
- Mittal, S.C. 1990. **An intensive study of secondary and higher secondary school buildings in the States of Himachal Pradesh, Karnataka, Madhya Pradesh and Orissa on sample basis.** Independent study. *National Council of Educational Research and Training.* (ERIC Funded). [VKR 1176] (See in Chapter 37.)

- Mlanga, Andrew Titus Omolo. 1992. **Perceptions of high school teachers, students, parents and educational administrators regarding the principles, practices and procedure of curriculum development programmes for high schools in Nairobi, Kenya.** Ph.D., Edu. *Panjab Univ.* [JNJ 0278] (See in Chapter 13.)
- Mohanty, S. 1988. **An appraisal of teaching science in the high schools of Cuttack city.** Ph.D., Edu. *Utkal Univ.* [KCP 0445] (See in Chapter 19.)
- More, R.T. 1988. **A study of relationship between personality, aptitude for teaching and effectiveness of secondary teachers.** Ph.D., Edu. *Nagpur Univ.* [GPK 1700] (See in Chapter 25.)
- Mukhopadhyaya, Dilip Kumar. 1988. **Identification of school climate and study of its effect on the scholastic achievement and development of certain personality characteristics of students of secondary schools.** Ph.D., Edu. *Visva-Bharati.* [AS 1648] (See in Chapter 38.)
- Nagpure, V.R. 1991. **A critical study of the system of teacher education of secondary level in Maharashtra.** Ph.D., Edu. *Pune: Tilak College of Education.* [ASB 0052] (See in Chapter 25.)
- Nair, Sankaran C.K. 1984. **Factors related to under achievement in biology of secondary school students.** Ph.D., Edu. *Univ. of Calicut.* [KSP 0551] (See in Chapter 38.)
- Nair, Viswanadhan P. 1987. **A comparative study of certain cognitive, affective and social variables which discriminate between high-creative and low-creative under-achievers in secondary school science.** Ph.D., Edu. *Univ. of Calicut.* [KSP 0556] (See in Chapter 38.)
- Nambiar, Appanu M.P. 1989. **A comparative study of the educational performance of secondary school children of educationally forward and backward areas of Kerala.** Ph.D., Edu. *Univ. of Calicut.* [KSP 0555] (See in Chapter 38.)
- Nellaiappan, N.O. 1992. **A study of scientific attitude and interests among higher secondary biology students in relation to their learning environment.** Ph.D., Edu. *Annamalai Univ.* [MDa 0988] (See in Chapter 19.)
- Ngailiankim, Caroline. 1988. **An investigation into the attitude and study habits related to achievement in mathematics of Class IX students in Shillong.** M.Phil., Edu. *North-Eastern Hill Univ.* [PPG 0171] (See in Chapter 38.)
- Padhan, G. 1990. **A study of creative thinking in relation to socio-economic status and scholastic achievement of the higher secondary students of Baroda city.** M.Phil., Edu. *The Maharaja Sayajirao Univ. of Baroda.* [MSY 0934] (See in Chapter 38.)
- Padmanaban, T. 1992. **A study of values of high school pupils in relation to certain selected variables.** Ph.D., Edu. *Annamalai Univ.* [MDa 0991] (See in Chapter 22.)
- Panchbhai, P.V. 1990. **A survey of reactions of primary and secondary school teachers of western Nagpur regarding the comprehensive in-service education programme for the guidance of the teachers under the National Education Policy.** M.Phil., Edu. *Nagpur Univ.* [GPK 1600] (See in Chapter 25.)
- Pandhari, A.S. 1988. **A study of language, memory and process as factors affecting students' learning of mathematics in Standard XII.** Ph.D., Edu. *Univ. of Poona.* [ASB 0047] (See in Chapter 20.)

- Pandit, B.L. 1989. **Identification and measurement of chemistry laboratory skills of senior secondary school students of Delhi.** Ph.D., Edu. *The Maharaja Sayajirao Univ. of Baroda*. [MSY 0904] (See in Chapter 19.)
- Panigrahi, Sudarshan C. 1989. **Transfer from Serial to Paired Associate Learning among Grade X students of Orissa.** *Indian Educational Review*, Vol. 24(4): 98-104. [SPR 1453] (See in Chapter 8.)
- Parasnis, H.N. 1990. **Development of a problem-solving ability test for students of Standard IX.** Independent study. *Pune: State Council of Educational Research and Training*. [HP 0374] (See in Chapter 8.)
- Pati, S. 1992. **A study of the administrative and supervisory problems of secondary school headmasters of Cuttack-I circle, Cuttack.** M.Phil., Edu. *Utkal Univ.* [KCP 0477] (See in Chapter 37.)
- Patted, L.B. 1992. **A critical study of qualitative improvement of secondary school teacher preparation in Karnataka State.** Ph.D., Edu. *Karnatak Univ.* [KR 0590] (See in Chapter 25.)
- Pennamma, V.V. 1991. **Patterns of occupational choices of secondary school pupils and school leavers.** Ph.D., Edu. *Univ. of Kerala*. [VR 1655] (See in Chapter 12.)
- Perumal, V. 1989. **A comparative study of the outcomes of the teaching selected unit in commerce by different teaching strategies at the higher secondary stage.** M.Phil., Edu., *Madurai Kamaraj Univ.* [MKU 1061] (See in Chapter 24.)
- Phitaktanakhom Phramaha Chartchai. 1990. **A study of the socio-economic conditions and guidance services in the secondary school of the Nonthaburi province, Thailand.** Ph.D., Edu. *Univ. of Poona*. [ASB 0051] (See in Chapter 12.)
- Purohit, P. 1989. **A study of the role of the secondary school teachers' organisations in relation to the qualitative improvement of secondary education in Orissa after Independence.** Ph.D., Edu. *Utkal Univ.* [KCP 0414] (See in Chapter 37.)
- Radhamonyamma. 1988. **Evolving instructional techniques appropriate to the development of various scientific skills among secondary school pupils in Kerala.** Ph.D., Edu. *Univ. of Kerala*. [VR 1641] (See in Chapter 19.)
- Raghavendra, G.V. 1984. **A comparative study of value preferences of the socially disadvantaged and the socially non-disadvantaged secondary school pupils.** M.Phil., Psy. *Sri Venkateswara Univ.* [PVD 0110] (See in Chapter 22.)
- Rajagopalan, S. 1991. **Analysing the teaching behaviours of language teachers in higher secondary schools.** M.Phil., Edu. *Madurai Kamaraj Univ.* [MKU 1083] (See in Chapter 1.)
- Rajaram, S. 1992. **An investigation into the relationship between certain variables and achievement in history of the higher secondary students in South Arcot district.** M.Phil., Edu. *Annamalai Univ.* [MDa 1395] (See in Chapter 38.)
- Ramani, M.V. 1989. **A comparative study of the outcomes of teaching of some selected units in electronics by different strategies at the higher secondary level.** M.Phil., Edu. *Madurai Kamaraj Univ.* [MKU 1060] (See in Chapter 24.)

- Rao, K.N. and Gupta, M.K. 1990. **Study of science laboratories in secondary schools in selected states.** Independent study. *National Council of Educational Research and Training.* (ERIC Funded). [VKR 1182] (See in Chapter 19.)
- Rao, Prakasa D. 1990. **Educational administration of Visakhapatnam Municipal Corporation as viewed by teachers of primary and secondary schools.** Ph.D., Edu. *Andhra Univ.* [SCS 1567] (See in Chapter 37.)
- Ravindra, M. 1989. **Secondary school teachers' disposition towards profession and change-proneness in relation to their perception of leaders' behaviour.** M.Phil., Edu. *Bangalore Univ.* [MKh 0316] (See in Chapter 25.)
- Rawat, S. 1992. **A study of the expectations and realities of job, job satisfaction and value: Pattern of secondary school teachers in relation to their sex.** Ph.D., Edu. *Rohilkhand Univ.* [BS 1371] (See in Chapter 25.)
- Rawther, Shahul Hameed Y. 1989. **A comparative study of the aims of education at primary and secondary levels as perceived by different sections of the community.** Ph.D., Edu. *Univ. of Kerala.* [VR 1656] (See in Chapter 15.)
- Reddy, Bhoom N. 1991. **Teaching aptitude and attitudes of secondary school teachers in Andhra Pradesh.** Ph.D., Edu. *Osmania Univ.* [SSS 0847] (See in Chapter 25.)
- Reddy, Mahender S. 1989. **The development of reasoning and creativity among Standard IX students.** M.Phil., Edu. *Annamalai Univ.* [MDa 1393] (See in Chapter 11.)
- Reddy, Ramachandra B. 1978. **A study of verbal classroom behaviour of high school science teachers in relation to certain personality characteristics and their attitudes towards pupils and certain classroom practices.** M.Phil., Edu. *Sri Venkateswara Univ.* [PVD 0133] (See in Chapter 25.)
- Reddy, Ramachandra B. 1990. **Teaching behaviour of high school teachers in relation to certain factors.** Ph.D., Edu. *Sri Venkateswara Univ.* [AVRR 1311] (See in Chapter 25.)
- Reddy, Ramana I.V. 1974. **Academic adjustment in relation to scholastic achievement of secondary school pupils: A longitudinal study.** Ph.D., Psy. *Sri Venkateswara Univ.* [PVD 0108] (See in Chapter 38.)
- Sacheti, A.K. and Raizada, P. 1990. **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.* [DVE 1010] (See in Chapter 26.)
- Sahni, Renu. 1991. **Cognitive and non-cognitive factors leading to success in computer science: A study in senior secondary schools in Delhi.** Ph.D., Edu. *Jawaharlal Nehru Univ.* [SCG 0153] (See in Chapter 19.)
- Sam, Udaya Kumar. 1992. **The teaching of general science and the development of scientific attitude in secondary school students in relation to achievement in general science.** M.Phil., Edu. *Annamalai Univ.* [MDa 1577] (See in Chapter 38.)

- Samuel Premela Goodchild. 1988. **Personality, socialisation and moral development of high school students.** Ph.D., Edu. *Univ. of Poona.* [ASB 0053] (See in Chapter 6.)
- Sapru, A.K. 1988. **Personality correlates (extraversion, introversion, neuroticism and delinquency) and reaction to frustration among high and higher secondary school boys of Srinagar District.** Ph.D., Edu. *Univ. of Kashmir.* [AGM 1861] (See in Chapter 7.)
- Sarma, Madan Mohan. 1991. **Errors in the written English of Assamese learners at the higher secondary level: A study of pedagogical implications.** Ph.D., Edu. *Dibrugarh Univ.* [KCP 0524] (See in Chapter 1.)
- Sarma, M.S.R. 1991. **A study of the administrative behaviour of the principals as perceived by teachers in relation to job satisfaction of teachers and student achievement in junior colleges.** Ph.D., Edu. *Andhra Univ.* [SCS 1841] (See in Chapter 37.)
- Saroja, D. 1991. **Effect of humanistic orientation training of teachers on personal and cognitive growth of secondary school students.** Ph.D., Edu. *The Maharaja Sayajirao Univ. of Baroda.* [MSY 0930] (See in Chapter 25.)
- Savadamuthu, T. 1988. **Leadership behaviour and teacher morale of secondary school teachers.** M.Phil., Edu. *Madurai Kamaraj Univ.* [MKU 1057] (See in Chapter 25.)
- Saxena, P.L. 1990. **A study of the elements which affect the job satisfaction of lecturers working in higher secondary schools of Madhya Pradesh.** Ph.D., Edu. *Rani Durgavati Vishwavidyalaya.* NNS 0737] (See in Chapter 25.)
- Saxena, S.P. 1988. **Sequential attainment of concept in chemistry through periodic table at the secondary stage.** Independent study. *Bhopal: Regional College of Education.* (ERIC Funded). [CGVM 1134] (See in Chapter 19.)
- Selvaraj Gnanaguru, A. 1992. **A study of some factors related to reading achievement in Tamil in secondary schools of Tamil Nadu.** Ph.D., Edu. *Annamalai Univ.* [MDa 0990] (See in Chapter 38.)
- Sen Gupta, Manjit and Dhote, Ashok Kumar. 1990. **Quick appraisal of the implementation of the centrally sponsored scheme on vocationalisation of secondary education.** Independent study. *National Council of Educational Research and Training.* [DVE 1013] (See in Chapter 26.)
- Setia, Seema. 1992. **Socio-psychological and educational factors of differential learning rate in modern mathematics at the senior secondary stage.** Ph.D., Edu. *Punjab Univ.* [JNJ 0258] (See in Chapter 20.)
- Shah, Hansa Malukchand. 1992. **An investigation into the values of higher secondary school students of Saurashtra.** Ph.D., Edu. *Saurashtra Univ.* [DAU 0003] (See in Chapter 22.)
- Shahnawaj. 1990. **Environmental awareness and environmental attitude of secondary and higher secondary school teachers and students.** Ph.D., Edu. *Univ. of Rajasthan.* [JKS 0698] (See in Chapter 33.)
- Sharma, Arun Kumar. 1989. **Effects of linear and branching instruction strategies on the performance in social studies of tribal high school students of Himachal Pradesh in relation to academic motivation and test anxiety.** Ph.D., Edu. *Himachal Pradesh Univ.* [LK 0241] (See in Chapter 23.)

- Sharma, Atmanand. 1987. **Effectiveness of vocational exploration programme at secondary level for vocationalisation.** Independent study. *National Council of Educational Research and Training*. (ERIC Funded). [CGVM 1872] (See in Chapter 26.)
- Sharma, Atmanand. 1987. **Development of criteria for electing a stream and courses within a stream at higher secondary stage.** Independent study. *National Council of Educational Research and Training*. (ERIC Funded). [MSG 1155] (See in Chapter 38.)
- Sharma, A.P. 1988. **Poor achievement of secondary school pupils at O level in W.A.S.C. in Sokoto state, Nigeria: Administrative factors.** *Indian Educational Review*, Vol. 23(3): 27-40. [TNSB 1406] (See in Chapter 38.)
- Sharma, Madhuri. 1988. **A study of factors in pupil academic achievement in different streams of courses of the higher secondary stage.** Ph.D., Edu. *Agra Univ.* [SS 0831] (See in Chapter 38.)
- Sharma, Sarita. 1990. **Effects of socio-cultural disadvantage on cognitive and non-cognitive variables: A study of secondary school students of Haryana.** Ph.D., Edu. *Kurukshetra Univ.* [CLK 0332] (See in Chapter 9.)
- Sharma, Suman. 1988. **A study of attitudes and frustration in relation to caste, sex and residential area among primary and secondary teachers.** Ph.D., Edu. *Agra Univ.* [SS 0812] (See in Chapter 25.)
- Shrinivasan, T.K. 1991. **A study of the affective behaviour of mathematics students in the higher secondary school in Madhya Pradesh.** Ph.D., Edu. *Rani Durgavati Vishwavidyalaya*. [NNS 0738] (See in Chapter 6.)
- Singh, Daljit. 1991. **Creativity and intelligence as correlates of teaching effectiveness of secondary school teachers.** Ph.D., Edu. *Punjabi Univ.* [AK 1854] (See in Chapter 25.)
- Singh, R.D. and Verma, S.C. 1992. **Mathematics as a function of intelligence, sex and age: A study of attitudes of high school students.** *Indian Educational Review*, Vol. 27(1): 47-55. [SPr 1891] (See in Chapter 20.)
- Singh, Satvir. 1990. **An intensive study of teaching aids at middle and secondary stages of school.** Independent study. *National Council of Educational Research and Training*. (ERIC Funded). [Author 1178] (See in Chapter 23.)
- Singh, Triveni. 1988. **A study of teaching efficiency in relation to job satisfaction and socio-economic status of secondary school teachers.** Ph.D., Edu. *Avadh Univ.* [RSSu 0857] (See in Chapter 25.)
- Sinnathambi, V. 1991. **Developing a video programme on energetics in chemistry for higher secondary students.** M.Phil., Edu. *Madurai Kamaraj Univ.* [MKU 1079] (See in Chapter 23.)
- Solachi, T. 1991. **A study of availability and utilisation of educational technology in higher secondary schools in Pasumpon Thevar Thirumagan district.** M.Phil., Edu. *Alagappa Univ.* [SM 1729] (See in Chapter 23.)
- Solanki, Kantilal N. 1992. **A study of the relationship between educational management and organisational climate of the secondary schools of Saurashtra region.** Ph.D., Edu. *Saurashtra Univ.* [DAU 0010] (See in Chapter 37.)
- Soman, N.B. 1990. **A survey of the problems of secondary school students staying in**

- hostels and the problems of administration of these hostels in the State of Maharashtra.** Ph.D., Edu. *Univ. of Poona*. [KC 0078] (See in Chapter 37.)
- Srivastava, R.K. 1988. **A study of needs in relation to creativity among high school pupils.** Ph.D., Edu. *Hemwati Nandan Bahuguna Garhwal Univ.* [KBB 0543] (See in Chapter 11.)
- Sudha, B.G. and Parveen Taj. 1992. **Insecurity among high school students: Effect of intelligence and traditionality-modernity.** Independent study. *Indian Educational Review*, Vol. 27(1): 86-92. [SPr 1892] (See in Chapter 7.)
- Sundararajan, S. 1988. **An evaluation of the teaching of biology at the higher secondary stage in Tamil Nadu.** Ph.D., Edu. *Annamalai Univ.* [MDa 1281] (See in Chapter 19.)
- Swain, Bimal Charan. 1992. **Socially useful productive work programme at the secondary stage in Himachal Pradesh: An evaluative study.** Ph.D., Edu. *Himachal Pradesh Univ.* [LK 1319] (See in Chapter 26.)
- Taj, Haseen. 1992. **Social-psychological and situational correlates of administrative behaviour of secondary school heads.** Ph.D., Edu. *Bangalore Univ.* [MKh 0321] (See in Chapter 37.)
- Tapodhan, H.N. 1991. **A study of professional attitudes of secondary school teachers of Gujarat state.** Ph.D., Edu. *Gujarat Univ.* [JHS 0728] (See in Chapter 25.)
- Teerapong, Phramaha. 1988. **A comparative study of the perception of problems by the administrators of formal and non-formal educational institutions at the secondary stage in Bangkok area of Thailand.** Ph.D., Edu. *Panjab Univ.* [JNJ 0279] (See in Chapter 29.)
- Vaid, D.K. and Sen Gupta, M. 1990. **Quick appraisal of the implementation of centrally sponsored scheme of vocationalisation of secondary education—Goa.** Independent study. *National Council of Educational Research and Training*. [DVE 1015] (See in Chapter 26.)
- Vaidya, D.S. 1991. **A study in the context of life/human values in the physics textbook of Standard X.** M.Phil., Edu. *Nagpur Univ.* [GPK 1595] (See in Chapter 22.)
- Verma, Bimla. 1990. **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*. [DVE 1014] (See in Chapter 26.)