
Appendix

AGARWAL, G.S., *The Study of Effectiveness among the Secondary School Teachers in relation to Professional Attitude, Anxiety, Risk-taking Behaviour, Experience and Location of the Schools in the Moradabad District*, Ph. D. Edu., Rohelkhand U., 1986

The major objectives of the study were (i) to find out the relationship between teaching efficiency and attitude towards the teaching profession, (ii) to find out the relationships between teaching efficiency and anxiety, teaching efficiency and risk taking behaviour and teaching efficiency and total teaching experience, and (iii) to know the effect of location and sex of secondary school teachers on their teaching efficiency, professional attitude, risk-taking behaviour and anxiety.

The population of the study was defined as teachers of all the schools of district Moradabad. In all, 732 teachers were selected on the basis of randomization. The Teachers Rating Scale, Professional Attitude Inventory, Anxiety Scale and Risk-taking Behaviour Questionnaire were administered individually among sample subjects to collect the data. The conclusions were drawn with the use of t-test and multiple correlation and regression statistics to analyse the data.

The major findings of the study were: 1. A significant and positive relationship was found between teaching efficiency and professional attitude, teaching efficiency and risk-taking behaviour and teaching efficiency and teaching experience. But the relationship between teaching efficiency and anxiety was significantly negative. 2. Sex influenced significantly the teaching effectiveness, professional attitude, risk-taking behaviour and anxiety on the first two variables. Male teachers

scored a significantly higher mean value, but on the last two variables, female teachers had higher mean values than their male counterparts. 3. Rural teachers were found more effective than urban teachers. 4. Science subject teachers showed significantly higher teaching efficiency than arts subjects teachers. 5. Multiple-correlation and regression analysis led to the conclusion that female teachers were not as effective as male teachers.

AWASTHI, V., *Developing Training Strategy for Science Teaching by Using Concept Attainment Model*, Ph.D. Edu., DAVV, Indore, 1988

The objectives of this study were (i) to study the effectiveness of two training strategies, namely, Continuous Demonstration with Pair Practice (CDP-Practice) and Intermittent Demonstration with Quadro Practice (IDQ-Practice) in terms of understanding of the theory of the Concept Attainment Model (CAM), (ii) to study the effectiveness of CDP-Practice and IDQ-Practice in terms of teaching competency as measured through the Teaching Analysis Guide (TAG), (iii) to study reactions and willingness to implement the model in schools by trainees undergoing training through the IDQ-Practice and the CDP-Practice treatments, (iv) to study the effectiveness of CDP-Practice and IDQ-Practice in terms of pupil reactions towards the CAM used in the study, (v) to study the effectiveness of CDP-Practice and IDQ-Practice in terms of pupil achievement in science concepts.

The sample consisted of 22 B.Ed. trainees and 162 IX

grade pupils studying in schools situated in Indore city. The post-test parallel group design was employed. The data were collected with the help of the Theory Check-up developed by Bruce, Indore Theory Check-up, Teaching Analysis Guide, Reaction Scales, Willingness Scale and Achievement Test for science concepts. The data were analysed with the help of ANCOVA, Trend Analysis and t-test.

- The findings were: 1. The two training strategies, viz., CDP-Practice and the IDQ-Practice, were equally effective as was evident through the understanding of the theory of the model. 2. The trainees trained through the IDQ-Practice strategy attained higher teaching competency scores than those trained through the CDP-Practice strategy. 3. The teaching competency scores of the trainees at school stage occasions were significantly higher than that at laboratory stage occasions. 4. There was a significant effect of interaction between training strategies and occasions upon development of teaching competency. 5. After practising, under simulated conditions, the trainees of the IDQ-Practice group exhibited more favourable reactions than those of the CDP-Practice group. 6. At the end of coaching in the school, both the groups of trainees had expressed equally favourable reactions towards the CAM. 7. Both the groups of trainees expressed a low level of willingness to implement the CAM in their schools. 8. The two training strategies, viz., CDP-Practice and IDP-Practice, were equally effective in terms of pupils' reactions. 9. The pupils taught by the trainees of the IDQ-Practice group achieved significantly higher scores than the pupils taught by the trainees of the CDP-Practice group.

AYISHABI, T.C., *A Comparative Study of Certain Cognitive Abilities of Disadvantaged and Advantaged Students of Standard VIII*, Dept. of Education, Calicut U., 1988 (SITU Council of Educational Research sponsored)

The major objective of the study was to find out whether there was a significant difference between the select cognitive abilities of disadvantaged and advantaged students at the beginning of a formal operational stage. The study also had the objective of finding out whether the basal variables used to distinguish the disadvantaged and the advantaged students had either a single or interaction effect on cognitive abilities.

The selected cognitive abilities included the abilities

to deal with problems of Verbal Analogy, Verbal Classification, Proverbs, Verbal Reasoning, Verbal Comprehension and Interpretation, Numerical Reasoning, Formulation, Figure Analogy, Figure Classification, Figure Series, Figure Matrices, Figure Rotation, Figure Assembling, and Block Counting, comprising verbal, numerical and spatial abilities.

The study was conducted on a state-wide sample of 860 standard VIII students of Kerala selected by the stratified random sampling technique, from which the required samples and sub-samples were identified. The strata were identified on the basis of sex-typing, locale, management, and efficiency level of the schools. The SC/ST students of large families with low SES, living in remote rural areas were identified as the disadvantaged students and the higher caste students of small families with high SES living in urban areas were treated as the advantaged students. Standardized tests were used to collect data regarding all the cognitive abilities. The tools used were the Kerala University Verbal Group Test of Intelligence, the Kerala University Test of Science Aptitude, the Kerala Nonverbal Group Test of Intelligence for secondary schools, the Kerala University Paper Form Board Test, and the Kerala Test of Spatial Ability (Block Counting). The analyses included a test of significance for difference in mean scores and two-way classification analysis of variance with a 2×3 or 3×3 factorial design.

The findings of the study were: 1. The disadvantaged students especially the girls, differed in their cognitive abilities of all kinds (verbal, numerical, and spatial) from their advantaged counterparts at the beginning of the formal operational stage. 2. Parental attitude towards girls' education and the incidence of domestic work by the children did not affect cognitive abilities. 3. SES had a consistent significant effect on cognitive abilities. 4. Family size, caste, locale, and sex did not affect cognitive abilities to a considerable extent. 5. SES did not have considerable interaction effect with family size, caste, locale, and sex on cognitive abilities.

BAVEJA, B., *An Experimental Study of Information Processing Models of Teaching in Schools of India*, Ph.D. Edu., Del. U., 1988

The objectives of the study were (i) to develop a teaching programme in a specified content area in biology based on information processing models of teaching designed to teach concepts inductively, viz., concept at-

tainment and inductive thinking models, (ii) to compare teaching programme based on the two information processing models with the traditional teaching programme in biology with respect to concept attainment, (iii) to study the effect of the teaching programme based on the two models of teaching, on retention, (iv) to identify the thinking strategies used by learners while they engaged in the process of concept attainment, (v) to identify the most effective thinking strategy among the strategies used by the learners, (vi) to explore the possibility of teaching thinking and to determine the instructional conditions leading to the learning of effective thinking strategies, (vii) to analyse the concepts and generalizations formed during inductive thinking exercises, (viii) to determine the effect of a teaching programme based on models of teaching on the ability to form conceptual systems, (ix) to investigate the relationship between learning of effective thinking strategies and mental ability, and (x) to determine whether the teaching programme based on concept attainment and inductive thinking models of teaching improved critical observation, interest in biology and interest in classifying data observed outside the classroom.

A purposive sample consisting of 99 students of class IX of Motilal Nehru School of Sports, Rai, Haryana, was selected for the investigation. Matched pair design (wherein subjects were matched on scores of pretest) and quasi-experimental design were used. Different sections of class IX were assigned to two different research designs randomly. The control and the experimental groups were equated on the variables, age, previous scholastic achievement, pretest and general mental ability. After the treatment, all the groups were administered post-test and delayed post-test to measure concept attainment and retention respectively. An interview was conducted to appraise interest in biology, critical observation, and interest in classifying data observed outside the classroom. Data were analysed through the use of t-test and chi-square techniques. Content analysis was used to study thinking strategies and inductive mental processes.

The findings were: 1. The teaching programme in biology based on the information processing models of teaching, specifically designed to teach concepts, viz., concept attainment and inductive thinking, was more effective than the traditional programme for concept attainment and retention. 2. Experience with the teaching programme based on the two models of teaching resulted in improved ability to form conceptual systems. 3. Experience with the inductive thinking model deve-

loped mental abilities such as differentiation, comparison and contrasting, interpreting, inferring and extrapolating and generalizing. 4. Learners used different thinking strategies while attaining concepts. Different thinking strategies differed in terms of success in concept attainment. 5. Focusing was the most effective thinking strategy. 6. Learners of different mental ability levels changed their thinking strategies till they discovered the most effective thinking strategy. 7. Certain learning experiences led to the learning of effective thinking strategies. Instructions played an important role in teaching thinking. Thus, thinking could be taught using specific teaching strategies to learners of different mental abilities. 8. Teaching programmes based on concept attainment and inductive thinking models of teaching made learners critical observers and interested in biology and classifying data observed outside the classroom.

BHADURIA, A., *The Perceptions of Academic and Professional Streams' Teachers about the Creative Personality*, Ph.D. Edu., Agra U., 1987

The objectives of the study were (i) to make a comparative study of the perceptions of university teachers of academic and professional streams about the characteristics of a creative personality on the basis of their research orientation and teaching experience, (ii) to make a comparative study of the perception of university teachers of the academic stream of arts, commerce, agriculture and science faculties about the characteristics of creative personality, (iii) to find out the extent of agreement between ranks given to characteristics of the creative personality by various groups of university teachers and those of experts on creative personality, (iv) to make a comparative study of the perceptions of university teachers of professional streams of medicine, law, engineering and education (teacher training) faculties about the characteristics of creative personality, and (v) to find out the extent of agreement between ranks given to characteristics of the creative personality by the various groups of university teachers of professional streams of medicine, law, engineering and education (teacher training) faculties and those of experts on creative personality.

Ranks of the items on the basis of their achieved values and coefficients of correlation by rank difference method were computed by the investigator for scientific

analysis of the data. The stratified random sampling technique was used to select the sample of 600 university teachers (300 from the academic stream and 300 from the professional stream). Seventy-five teachers from each of the eight faculties (arts, commerce, agriculture, science and medicine, law, engineering, education) of these two streams were included in the sample. The sample was further divided into groups on the basis of research orientation and teaching experience of the university teachers of the both streams. The Ideal Student Checklist along with rankings of the experts on creative personality developed by Torrence (1975) was used to collect the data.

The following conclusions were drawn: 1. University teachers of academic and professional streams who were research oriented and not research oriented perceived the characteristics of creative personality in the same fashion. Research orientation did not affect their perceptions. 2. University teachers of academic and professional streams having teaching experience up to five years and of more than five years perceived the characteristics of creative personality almost identically. Teaching experience did not affect their perceptions. 3. The perceptions of characteristics of the creative personality of university teachers of academic streams of arts, commerce, agriculture and science faculties were different from those of experts on creative personality. 4. University teachers of the academic streams of arts, commerce, agriculture and science faculties perceived the characteristics of creative personality similarly. 5. The perceptions of characteristics of the creative personality of university teachers of professional streams of medicine, law, engineering and education faculties were different from those of experts on creative personality. 6. University teachers of professional streams of medicine, law, engineering and education faculties perceived the characteristics of creative personality similarly.

BHASKARAN, P.V., *Finances, Costs and Return of University Education in Kerala: A Study of Calicut University*, Ph.D. Eco., Calicut U., 1988

The objectives of the study were (i) to examine the financial resources position of the Calicut University, (ii) to analyse the growth and changing pattern of expenditure, (iii) to estimate the unit cost of university education at the postgraduate (M.A./M.Com./M.Sc.) and Ph.D. (arts, humanities, and science) levels, (iv) to com-

pute the rate of return (private as well as social) on investment in university education at the postgraduate and Ph.D. levels.

The study covered a period of 17 years (1968-85). It was mainly concerned with two aspects of university education, viz., (a) the finances (sources and growth of revenue and pattern and trends in expenditure), and (b) cost and return. The first part of the study was based on time-series data on receipts and expenditure drawn from the records of the university; the cross-section data collected through a sample survey formed the basis of the second part of the study. The sources of data for the first part included annual reports, annual accounts, financial estimates, audit reports and other published and unpublished records of the university. For the second part of the study, a sample of 493 students and research scholars who underwent the MA./M.Sc./M.Com. and Ph.D. courses (during 1985-86) in arts/humanities/social sciences was selected. Along with this a sample of 1411 persons who had obtained their bachelor, postgraduate and Ph.D. degree from the Calicut University and were employed in various professions in different organizations during the year 1986 was selected. The sample subjects were administered a questionnaire to find out the different costs incurred, annual earnings, earning for unemployment factor, etc. The data so collected were analysed to estimate per student private unit cost and social cost, age-earning profiles, etc.

The findings of the study were: 1. The grants from the state government occupied a predominant place in the revenue resources of the university. The other sources were grants from the UGC and receipts from internal resources (general administration, examination, tuition fees, etc.). 2. Whereas the internal revenue showed a steady growth, receipts from external sources exhibited wide fluctuations. This situation created a kind of uncertainty in the financial position of the university. 3. Receipts increased at a compound growth rate of 15.99 per cent, while the growth rate of expenditure was 17.18 per cent over the 17 years covered by the study. 4. Plan grants to the university were determined by the state government or the UGC without any fixed criteria. This practice affected the development of the university. 5. The amount of non-plan grants was decided by the state government by fixing it approximately five per cent above the actual expenditure during the penultimate financial year. 6. For taking an M.A./M.Com. degree and M.Sc. degree from the university departments the total cost incurred by the student or his parents came to be Rs 10,392.71 and Rs.10,500.60 respectively. The cost for

the government (including the university) to produce these postgraduates amounted to Rs 12,814.15 in case of arts and humanities and Rs.40,045.43 in case of sciences. 7. The average institutional cost per researcher in the faculty of science was 3.37 times higher than that in the faculty of arts and humanities. The average total social cost (public as well as private) per research scholar in sciences was twice that of arts and humanities. 8. Those with M.Sc. qualifications engaged in non-teaching professions enjoyed the highest private rate of return and those who took the Ph.D. degree in arts and humanities were destined to get the lowest private rate of return. 9. Both in the faculty of arts and humanities and the faculty of science, it was the Ph.D. degree holder who got the least social rate of return.

DESAI, P.V., *An Assessment of Information and Reporting System with reference to Elementary Education Programme in Maharashtra State*, S.P. Jain Institute of Management and Research, 1985 (Ministry of Education, Government of India financed)

The main aim of the study was to contribute towards efficient management of the Elementary Education Programme (EEP) at a state level. The specific objectives of the study were, (i) to assist the Department of Education, Maharashtra, in further improving the efficiency of its information and reporting system with reference to EEP, (ii) to highlight the strengths and weaknesses of the information and reporting system (IRS) so that other states could benefit from the experiences of Maharashtra, (iii) to establish the significance of an efficient information and reporting system for the Ministry of HRD, Department of Education, at the centre and in the states as a tool for better management of all educational programmes in the country, and (iv) to identify and highlight important issues in IRS in educationally advanced and backward districts and make a comparative analysis from the managerial viewpoint.

The study employed a descriptive research design and involved extensive field work. The method of simple random sampling was used in order to select the sample. The study covered four districts—Pune, Thane, Satara and Gadchiroli. The sample consisted of 329 subjects of which 90 were headmasters, 90 extension officers, 90 block development/education officers, 45 taluka masters, and six educational superintendents. The data were collected by means of a questionnaire and an interview schedule.

Major findings of the study were: 1. The overall IRS was less purpose-oriented and more a collection of statistical information. 2. There was no correlation between the roles of officials at different levels and in the information reported to them. 3. There was lack of role clarity on the part of school managements and government authorities. 4. There was no uniformity in reporting. 5. Budgeting was not used as an effective tool of planning and control. 6. There was no single mode of sending information to lower levels. 7. Guidelines and instructions were not communicated to lower levels regularly. 8. The Inspection Report was a very important document. 9. Information on dropouts was not reported by all levels in a uniform manner. 10. Gadchiroli district had considerable scope for improvement of IRS. 11. Inspection, though done on a yearly basis, was not uniformly performed. 12. Block Development Officers did not seem to be very effective. 13. Reporting on special schemes was infrequent and ununiform.

GARG, D.P., *Teaching Attitude and Teaching Behaviour of Highly Satisfied and Dissatisfied Teachers of Secondary Level*, Ph.D. Edu., Rohelkhand U., 1983

The study was intended (i) to observe the teaching behaviour of highly satisfied and of dissatisfied teachers, (ii) to assess whether the highly satisfied and dissatisfied groups of teachers differed significantly with respect to their teaching attitude, (iii) to test whether the highly satisfied and the dissatisfied groups of teachers of both the sexes differed significantly with respect to their teaching behaviour, and (iv) to identify the causes of dissatisfaction.

A sample of 400 teachers was selected from Badaun district from 19 secondary schools. The sample was drawn with the help of the multi-stage random-sampling technique. Data were collected with the help of standardized tests (Minnesota Teacher Attitude Inventory, Job-Satisfaction Questionnaire and Flanders Interaction Analysis Category System) and an Interview Schedule developed by the researcher. Mean, S.D., t-test, chi-square test and partial correlation were used to analyse the obtained data.

From the analysis, the conclusions drawn were: 1. The level of job-satisfaction and the attitude of secondary teachers was found not to be correlated with the salary of the teachers. 2. Teachers' attitude, job-satisfaction and teaching behaviour, all these were significantly related with the sex of the subject. 3. Fe-

male teachers had reported a more favourable attitude, a higher level of job-satisfaction and better teaching behaviour than their male counterparts. 4. Both the teaching attitude and job-satisfaction of teachers were identified independently of their teaching experience. 5. A positive and highly significant relationship was obtained between teachers' attitude and level of job-satisfaction. 6. A significant relationship was found between teaching attitude and teaching behaviour. 7. Highly satisfied teachers possessed a more favourable teaching attitude and showed better teaching behaviour than highly dissatisfied teachers. 8. A significant difference was obtained between urban and rural teachers with respect to their teaching attitude as well as job-satisfaction. 9. Urban teachers were observed as being more satisfied and scored higher mean values on the attitude scale than their rural counterparts. 10. The main causes of dissatisfaction reported by the teachers were absence of appreciation for good work, overload of work of a clerical nature, partiality of administrators, lack of autonomy in work and low salary.

GUPTA, N., *A Study of Effective Secondary Teachers in relation to Family Relationship, Personality Factors, Sex and Disciplines of the School on the basis of Different Types of Schools in Rohilkhand Division*, Ph.D. Edu., Rohilkhand U., 1985

The main objectives of the study were (i) to find out the personality factors of effective teachers working in different types of schools, (ii) to know the nature of relationship between teaching effectiveness and different personality factors, (iii) to assess the variation in family relationships among effective teachers of different types of schools, (iv) to determine the effect of sex and discipline separately on personality factors, family relationships and teaching effectiveness.

Cattle's 16 P.F. Teacher Effectiveness Scale (Prمود Kumar & Mutha) and a self-developed Family Relationship Scale were administered among 740 randomly selected teachers to collect the data which were analysed with the help of t-test and correlation coefficient.

The conclusions drawn from the study were: 1. On teaching effectiveness, the central school teachers scored significantly higher mean value than teachers of state government, private and missionary schools. 2. Female teachers and teachers of arts disciplines were found more effective than their male and science discipline counterparts. 3. The variables, teaching efficiency

and family relationships yielded a positive correlation. 4. Out of 16 personality factors, A, B & Q₂ were found to be positively correlated; on the contrary, M & Q₁ were negatively correlated with the teaching efficiency of private school teachers. 5. In the case of government school-teachers, the personality factors A & Q₂ had a significant positive relationship while M & N had a significant negative relationship with teaching efficiency. 6. Factors A, C & E showed a positive and significant relationship with teaching efficiency and factor O yielded a significant negative value of correlation coefficient in the case of missionary schools. 7. Further, among central school teachers, personality factors O, I & Q₄ had a significant and positive relationship with teaching efficiency. None of the factors showed a negative relationship with teaching effectiveness. 8. On some personality factors, viz., A, B, C, E, F, I, N, O and Q₃ significant variations were obtained between effective male and female teachers. 9. On comparing the personality factors of effective teachers of different disciplines, significant variations were obtained on A, C, F, I, M, Q and Q₃ factors.

KASHYAP, LINA, *A Study of Communication between the School-going Deaf Child and His Family*, Ph.D. Social Work, TISS, 1983

The objectives of the study were (i) to trace the emerging patterns of communication between a deaf child and his parents and siblings in these two environments, and (ii) to analyse the influencing factors as perceived by each parent, the problems each parent identified and ways of coping that each devised.

The study was exploratory in nature and was restricted to 100 schoolgoing deaf children of which 52 were male and 48 female, aged between 5 and 14 years from four special schools in Greater Bombay. The tools employed in this study were interview schedule for parents and a questionnaire for teachers for getting their assessment of the child's performance. Chi square was applied to gauge the degree of significance of the relationship between some of the variables.

The main conclusions of the study were: 1. Ninety children had at least one hearing aid, but 63 had never worn one at home and 13 wore it only sometimes. The main reasons for this, according to the mothers, were that the child did not like to wear it and that parents did not think it helpful. 2. Length of schooling had a positive relationship with the child's communication abili-

ty. 3. The child's ability to socialize with peers was significantly related both to his communication ability and academic performance. 4. A majority of parents had poor knowledge of all aspects of the handicap and not a single parent had good knowledge of the available services. 5. Very few parents had good or even average knowledge of the administrative set-up, educational methods, curriculum, etc. of their child's school. 6. Fathers showed greater hesitancy about utilizing the services than did the mothers. 7. The majority of parents felt that their deaf child was aware of his handicap and its consequences. 8. There was a greater amount of communication between mother and child than between father and child. 9. The child communicated most with the mother, next with siblings and least with the father. 10. Medium of instruction at school was significantly related to the communicative patterns (CPs) used by the father-child, child-father and child-mother dyads. 11. The parents' overall extent of communication with the child and their satisfaction with it influenced the CPs when the parents were the initiators. 12. As far as the children's school performance was concerned, less than 50 children were assessed by their teachers as good in communication skills and academic subjects. 13. Sixtyfour were assessed as good in the use of motor skills and only five were found to be poor in socialization abilities. 14. Data showed that the longer the use of a hearing aid, the fewer the children showing poor communication skills. However, only after six years of wearing a hearing-aid did more children show good performance in communication skills. 15. Mass media and special teachers were pointed out as the most frequent sources of information for gaining knowledge of the handicap.

KOHLI, T., *Impact of Home-centre Based Training Programme on Reducing Development Deficits of Disadvantaged Young Children under ICDS Scheme in Chandigarh*, Dept. of Edu., Pan. U., 1987

The objectives of the study were (i) to survey the slum areas and ICDS centres (anganwadis in Chandigarh) and estimate developmental deficits of disadvantaged children coming to these centres, (ii) to develop a low-cost home-centre based affordable helping model which would be effective and practical for reducing developmental deficits of disadvantaged young children covered under the ICDS scheme in Chandigarh, (iii) to develop a positive attitude in parents towards their

children with conspicuous deficits, (iv) to individualize portage training for young children with the help of an adopted form of portage check list developed by Bluma and others, (v) to mobilize parents and to directly involve and train them as home teachers (therapists) for effectively teaching the relevant skills to their young children with developmental delays, (vi) to involve and train a few of the ICDS workers/supervisors in reduction of developmental deficits of young children coming to their centres, (vii) to make a qualitative and quantitative evaluation of the effectiveness of home-centres based training programme on young children up to six years in five different areas of development, viz., socialization, language acquisition, self-help skills, cognitive development and motor development.

The study followed a time-series quasi-experimental design with the pre-school developmentally delayed children acting as their own controls. The sample of 120 pre-school developmentally delayed children belonging to a low socioeconomic status group was selected by administering the Developmental Screening Test (Bharathraj), Vineland Social Maturity Scale and Gesell's Developmental Schedule on 3000 pre-school children of four clusters of 200 anganwadi centres (ICDS) situated in the slum areas of Chandigarh. The subjects were divided into two groups consisting of 39 and 81 developmentally delayed children respectively. The first group was trained by anganwadi workers and the second by their parents for 16 months. Other tools used to collect data were the Developmental Checklist, Parental Attitude Scale (Bhatti), SES (Srivastava), Curriculum Cards and Activity Charts. The data were analysed using coefficient of correlation and t-test.

The study revealed: 1. The home-centre based intervention programme had proved effective in gaining behavioural skills in five areas of development (Soc, LG, SH, CoG and Mot) and thus reduced/minimized developmental deficits of disadvantaged pre-school children. 2. Those children who received training for 11 to 13 months acquired more skills and more DQ gain than those who received training of 8 to 10 months. But developmentally delayed children in 14 to 16 months of training gained higher DQ scores and acquired more skills as compared to those with 11 to 13 months of training. 3. It was proved that the degree of developmental deficits had a partially significant impact on acquisition of skills and individual DQ gain scores. Sex seemed to have had no effect on acquisition of skills and DQ gain scores. 4. The possibility of pseudo-developmental delays in the developmentally delayed

due to environmental deprivation could be corrected through early intervention programmes. 5. It was found that the non-professionals (parents) and the para-professionals (anganwadi workers) carried out early intervention programmes for developmentally delayed children with equal effectiveness. 6. Correlation matrices clearly depicted that there was a positive correlation within and among the different skills in all the five areas of development. 7. The attitude of parents towards their developmentally delayed children was found remarkably changed in the positive direction due to portage training.

MACIA, JOHN, *Organizational Purpose and Distinctive Character of Colleges: A Study of Jesuit Colleges in India*, Ph.D. Social Science, TISS, 1983

The major objectives of the study were (i) to study the similarities among three Jesuit colleges that arise out of a common management and a common system of higher education, (ii) to study the differences that arise out of the particular local and regional environments in which they are situated, (iii) to analyse the empirical data collected on the colleges themselves, and (iv) to explore the relations between the colleges and their context.

The study employed a primarily historical descriptive and exploratory approach. The sample consisted of 879 subjects of which 615 students and 264 teachers from three colleges, one each in Tiruchirapally, Calcutta and Bombay. The method of purposive and stratified random sampling was used to select teachers and students respectively from the three faculties of arts, science and commerce. Data were collected through the methods of observation, interviews, visits, and written documents. The main tool used for data collection was a questionnaire which was developed by the investigator. The data were analysed by statistical techniques, namely, mean, standard deviation, correlation coefficients, and factor analysis.

The major findings of the study were: 1. All three colleges shared several features, such as a liberal humanistic philosophy of education, a concern for academic excellence and institutional prestige, efficiency in management, features that reflected the ethos of the Jesuit order. 2. The peculiar features of each college were also identified, specially the different types of student to which they catered, a greater or lesser concern for the

promotion of social justice and varying degrees of westernization. 3. The common features of the three colleges which reflected the structures of the Indian education system required little elucidation since, being generally shared by all private colleges, they were well known. 4. The religious dimension of education was an integral part of the Jesuit philosophy of education. 5. Non-Christian students felt that these colleges were not used as instruments of conversion to Christianity. 6. Christian students were helped to grow in the knowledge and practice of their faith by regular religious services and by personal contact with Jesuit priests. 7. Non-Christian students were imbued with Christian secular values such as integrity and honesty, hard work and a sense of brotherhood. 8. Students as well as staff perceived, as the first objective, the maintaining and increasing of their institutional prestige, which implied academic excellence. 9. Admission of students on merit as measured by examination results attracted, for many years, a type of student that was predominantly upper caste and upper or middle class. 10. All three colleges differed considerably in terms of both the student population and the attitudes and beliefs of the students.

NAIR, C.P. SREEKANTAN, *A Critical Study of the Education of the Tribals in Kerala with special reference to Wynad Area*, Ph.D. Edu., Calicut U., 1987

The specific objectives of the study were (i) to estimate the educational development of tribals with regard to quantitative expansion in number of schools, number of pupil enrolment and financial investment at various levels, (ii) to study analytically the existing conditions of the personnel (teachers instructing tribal pupils, tribal parents, social workers in tribal area) associated with the education of the tribals, (iii) to study the socio-familial conditions and parental involvement among tribals, (iv) to estimate the nature of interaction of tribal pupils, (v) to examine the suitability of the existing school system and curriculum for tribal pupils, (vi) to locate problems faced by teachers in the implementation of the educational programmes for tribal children and (vii) to make a comparative study of the scholastic attainments of tribal pupils and non-tribal pupils.

Survey reports were used to find out the quantitative expansion of tribal education. All teachers of Wynad area teaching in schools having more than ten tribal pupils formed the sample of teachers (n=454). The tribal pu-

pils in these high schools belonging to five major tribes, viz., Kurichiya, Paniya, Adiya, Uraly Kuruma and Mulluva Kuruma, formed the sample of tribal pupils ($n=462$). Both teachers and pupils were given questionnaires. Besides, 150 tribal parents of 30 hamlets and 30 social workers were interviewed with the help of interview schedules. Participant observation was also used to check and reinforce the data.

The major findings were: 1. The rate of enrolment of tribal pupils at the pre-matric level was growing and quantitative expansion of schools and teachers took place mostly in the plains. Most of the teachers in their schools belonged to forward or backward communities. Scheduled tribe teachers were virtually absent. Educational facilities in tribal belts were scant. The average age of scheduled tribe pupils was higher than that of others in each class. 2. The social-familial conditions of the tribal pupils continued to be poor. Most of the tribes included small peasants and coolies with meagre monthly incomes. More than 70 per cent of them were illiterates. A good percentage of tribal pupils were found to work after school hours, on holidays or even by abandoning school studies. Very few pupils enjoyed residential facilities. 3. Some tribal parents had a negative attitude towards education, especially for girls. Very few of them sought guidance from teachers. They were also not satisfied with the financial and other incentives provided by the government. 4. Most of the teachers and tribal pupils believed that there was normal intermingling between tribal and non-tribal pupils, but there was poor interaction among pupils of different tribes. 5. There was disagreement among teachers and social workers regarding the suitability of the existing curriculum. A normal curriculum with provision for additional job-oriented training for the schools in tribal belts was preferred by the teachers and social workers. Common schools were preferred to special schools for tribals. 6. Teachers confront special problems like poor and irregular attendance of tribal pupils, non-cooperation of tribal parents, lack of school facilities and lack of proper motivation, poor ability to learn and indifference towards education of tribal pupils. 7. Tribal pupils achieved significantly low compared to non-tribals in all school subjects, except in the case of the regional language (Malayalam).

PANDIT, N.L., *The Construction and Standardisation of Aptitude Test of Science for Pupils Studying in Std. IX of Secondary Schools of Saurashtra*, Ph.D. Edu., Bhavnagar U., 1985

The objectives were (i) to construct an aptitude test of science (SAT) for pupils of Std. IX of secondary schools of Saurashtra, (ii) to prepare norms for the test, and (iii) to determine validity and reliability of the test.

The test, consisted of five sub-tests, (i) Science Knowledge Test, (ii) Mathematical Ability Test, (iii) Mechanical Aptitude Test, (iv) Reasoning Test, (v) Space Relation Test.

The sample of 4305 pupils was chosen from 85,263 pupils of the six districts of Saurashtra. A reliability coefficient was worked out by different methods and formulas. Validity coefficients were worked out by correlating the scores on Science Aptitude with that of (i) the Bhavsar Numerical Ability Test, (ii) Trivedi's Test of Mechanical Comprehension, and (iii) Banker's Test of Non-verbal Work.

The analysis revealed: 1. Boys had more aptitude for science than girls. 2. Pupils of urban and rural areas did not differ in aptitude for science.

REYA, H.Z., *The Construction and Standardisation of Silent Reading Test in Hindi for pupils of IX Standard of Secondary Schools of Saurashtra*, Ph.D. Edu., Bhavnagar U., 1984

The objectives were (i) to construct and standardize a Silent Reading Test in Hindi for Gujarati-speaking pupils of standard IX, (ii) to study the role of silent reading in Hindi of pupils of the IX standard with reference to sex, (iii) to study the rate and comprehension in silent reading in Hindi of IX graders with reference to rural and urban area, (iv) to study the relationship between the rate and comprehension of silent reading in Hindi of IX graders, (v) to prepare various types of norms for the test.

The sample consisted of 5544 pupils, out of which boys were 3680 and 1864 were girls. The total sample of the urban area was 3546, out of which 2228 were boys and 1452 were girls. The total sample of the rural area was 2020, out of which 1452 were boys and 568 were girls. The test measured reading rate, reading comprehension, vocabulary and location of information.

Reliability coefficients were worked out by different methods. For concurrent validity, the test scores were correlated with the scores at the annual examination on Hindi subjects of Std. VIII and with scores of six-monthly examinations in Hindi of Std. IX.

Factorial analysis was done by Thurstone's centroid method. The girls read faster than the boys. Pupils of

rural and urban areas did not differ in their reading rate. Urban and rural boys did not differ in reading rate. Urban and rural girls did not differ in reading rate. Reading rate and reading comprehension were positively related. Boys and girls did not differ in reading comprehension in Hindi. Pupils of urban areas comprehended better than those of rural areas. Boys and girls of urban area did not differ in reading comprehension in Hindi. Rural boys had better silent reading comprehension in Hindi than rural girls.

SAXENA, A.B., JADHAO, V.G., RAJPUT, S., RAJPUT, J.S., *A Research Study for Identification of Teaching Skills and Training Strategies for Implementing Environmental Approach at Primary Level*, Regional College of Education, Bhopal, 198.

The study was taken up with the following objectives (i) to produce integrated material for Environmental Studies I (Social Studies) and Environmental Studies II (Sciences) for classes III to V, (ii) to develop a strategy for teaching Environmental Studies I and II in classes III to V through an environmental approach, (iii) to test the relative efficacy of the developed strategies in relation to the methods being used at present for the realization of the objectives of primary education, (iv) to identify teaching skills for teaching through the environmental approach, (v) to develop a strategy for teacher education in identified skills, (vi) to develop a strategy for orientation of teacher educators in the teaching of environmental studies.

A curriculum based on the environmental approach was developed for Environmental Studies I and II. To provide teachers with a more knowledge through theoretical understanding of the approach, instructional material on this approach was also prepared.

As a result of using the environmental approach in the curriculum for science and social studies, its effect on, (i) environmental awareness, (ii) achievement scores in traditional examinations in science and social studies was tested. For testing of environmental awareness, two parallel tests in environmental approach were developed and standardized. The environmental approach was used in ten different schools comprising a total of 293 children. In some cases, control groups were also formed. To find out the effect of the treatment, t-test was used in nine pairs of control and experimental groups and F-ratio in the remaining five pairs. Out of 14 cases, nine pairs showed no significant

difference in environmental awareness as a result of treatment and five developed a significant difference at 5 per cent level. As a result of treatment, there was a significant change in achievement scores in science and social studies in some cases and no change in others. The significant differences obtained in achievement scores do not follow any uniform pattern and hence the results are inconclusive.

Mainly, the results could be attributed to the following reasons : 1. The environmental approach does not make a significant difference in awareness when used for a short duration. 2. In the absence of formal training of teachers in using the environmental approach, the effect of using this approach by the teachers is not significant. The existence of separate disciplines—science, social studies, etc., is also an impediment in using the approach.

SHANKER, V., *A Study of Teacher Responsibility and its Relationship with School Climate and Job-Satisfaction of Teachers at the Secondary School Level in Moradabad District*, Ph.D. Edu., Rohilkhand U., 1987

The main objectives of the study were (i) to find out the degree of responsibility among secondary school teachers, (ii) to study the relationship between teachers' responsibility and school climate, (iii) to know the relationship between the variables, teacher responsibility and job-satisfaction, in the case of secondary school teachers, and (iv) to identify the types of climate prevailing in different secondary schools in Moradabad district.

Out of 900 teachers in the population, 748 were selected randomly. To collect the data, the Responsibility Feeling Scales, Teacher's Job-Satisfaction Scale (JSS) and Organizational Climate Descriptive Questionnaire were administered to the sample subjects. Coefficient of correlation, mean, S.D. and t-test were used to analyse the data.

The main conclusions drawn were: 1. Female teachers of different school climate institutions, excepting autonomous climate, were found more responsible towards their profession than their male counterparts. 2. Science teachers scored a significantly higher mean value on responsibility scale than teachers of the arts stream. 3. Urban teachers, belonging to different climate groups, other than controlled, paternal or closed climate, were identified as more responsible than their

rural counterparts. 4. On the job-satisfaction scale, excepting on 'Responsibility feeling teachers', teachers of the arts stream scored significantly higher marks than teachers of the science stream. 5. Comparing urban and rural teachers, urban teachers were found to express more satisfaction on all the dimensions of JSS excepting 'responsibility not feeling teachers', than rural teachers. 6. With regard to rural schools, it was observed that high 'esprit', 'intimacy', 'central' and 'psychological hindrance' dimension of the Organisational Climate Descriptive Questionnaire had significantly enhanced the sense of responsibility feeling among the teachers of these school. 7. In the case of urban schools, the teachers felt a high sense of responsibility in the schools which had high esprit, high intimacy, high 'humanized thrust' and 'low disengagement' dimensions of organizational climate. 8. Teachers' responsibility towards their profession was not related with 'alienation' and 'production-emphasis' dimensions of organisational climate. 9. Both male and female teachers working in 'autonomous' and 'controlled' school climate were found more responsible and highly satisfied. 10. Teachers of the science stream belonging to 'open', 'autonomous', 'controlled' and 'familiar' climate were found significantly more satisfied and more responsible than the teachers of the same faculty of paternal and closed climate schools. 11. Teachers of the arts stream of familiar, controlled and paternal climate had scored significantly higher mean values on both responsibility feeling and job-satisfaction scales than their counterparts of the remaining three climates (open, autonomous and closed). 12. As compared to rural teachers, urban teachers were found more satisfied with their job. 13. The relationship between teachers' job-satisfaction and organisational climate was found to be significantly high in rural schools in case 'esprit', 'intimacy', 'controls', and 'humanized thrust' dimensions of the Organisational Climate Scale. 14. Almost similar findings were obtained between teachers' job-satisfaction and school climate for urban locality schools, except for the dimension 'controls' of the Organisational Climate. 15. Teachers' job-satisfaction did not show any significant relationship with the dimensions 'Psychophysical Hindrance' and 'Production Emphasis' of the organizational climate scale.

SHARMA, P.C., *Developing a Course in Physics for Higher Secondary Schools*, Ph.D. Edu., Mee. U., 1977

The study was conducted with the main objective of preparing a New Course in Physics for Higher Secondary Students. In addition, other objectives achieved during the study were, (i) the development of a curriculum model based on the systems approach, (ii) an analysis of the PSSC, Nuffield and Central Board of Secondary Education Physics courses, (iii) an exploration of the 'Structure of Physics', keeping in view the latest developments, (iv) definition of the 'mode of enquiry' which maintains the self-generative nature of disciplines, and (v) an exploration of the structure of cognitive behaviours in reference to physics instruction.

The sample consisted of 2400 freshers in class IX taken from 97 randomly selected higher secondary schools of Delhi, 109 physics teachers teaching higher secondary classes, and 21 college/university physics teachers. Three questionnaires, one opinionnaire and four scholastic achievement tests in physics were the tools employed by the investigator at various stages of the research work. A 'specification grid' was used for analysing the content of the physics courses.

The final and the most important outcome of the research was the evolution of a 'new course in physics' which included, (a) desired terminal cognitive behaviours in physics instruction, (b) appropriate content, and (c) instructional material and aids. However, there were a few more equally important findings of pedagogical interest. These findings were: 1. For depth exploration within a restricted domain of curriculum, finer details of the curriculum-model need to be worked out; for this purpose the systems approach to curriculum construction is the most suitable one. 2. Factor analysis of students' mental abilities does not support the hierarchical order suggested in the taxonomy of educational objectives. 3. There exists only a hazy picture of the 'structure of physics'. The proposed structure of 'static and dynamic matter' can provide a better instructional framework. 4. The physics course prescribed for higher secondary students by the CBSE concentrates more on the 'knowledge' aspect of instructional objectives; it is more occupied with the coverage of topics; and the laboratory exercises are meant exclusively for verifying the physical laws or for finding the values of some physical quantities. 5. The PSSC and Nuffield physics courses lay emphasis on the nature, structure, and unity of science; they are more concerned with training of the students in the process of inquiry of science; they prefer depth to breadth of content, and their laboratory exercises are designed to persuade the students to conduct investigations on their own.

SINGH, M.R. (ed.) *UNESCO-APEID Sponsored Joint Innovative Project on Raising the Achievement Level of Children in Primary Education in India*, Tamil Nadu Council of Educational Research and Training (SCERT), Madras, 1987

This project was undertaken in India during 1984-86 along with eight other countries of the Asia-Pacific Region (Thailand, Malaysia, Indonesia, the Philippines, Republic of Korea, Sri Lanka, Japan and China). The project aimed at raising the achievement level of children of primary schools through, (i) increasing the competence of teachers by conducting orientation programmes; (ii) orienting administrators and supervisors; (iii) sensitizing parents towards effective involvement in school affairs and concerns; (iv) improving learning competence of children through better teaching strategies; and (v) measuring the achievement of children through tests and other evaluation instruments.

In all, 2733 fifth grade children, drawn from 61 primary schools of three states, Tamil Nadu, Maharashtra and Delhi, constituted the effective sample. Base-line data for each of these states was collected in respect of each variable. Achievement of children was sought to be raised in scholastic areas (language, mathematics, environmental studies/science) and in the non-scholastic aspect, that is, character development (cleanliness, sense of discipline, respect, dignity of labour, love of nature and patriotism). Multidirectional treatment consisted of orienting the teachers (content diagnosis, instructional materials and aids), sensitizing the parents through newspapers and video tapes and orientation of project staff through inter-state/country visits. The evaluation tools applied were question papers and a five-point rating scales.

Prepost test analysis indicated gains in all the components of character development. Teachers' lifestyle was marked by activity, spoken language, problem solving ability in mathematics and application of an enquiry approach in science. Teachers' behaviour improved in respect of their capacity for evaluation, peer teaching and sticking to project schedule. The inspectorate staff was influenced in initiative, coordination, and supervision competencies. As for parents and the community, their indifference declined and cooperation with the school increased which began to make its contribution towards raising the achievement level of children.

SINGH, SATYANARAYAN, *Longitudinal Study of Wastage and Stagnation in a Government Primary School*, DSERT, Karnataka, 1983

The objective was to locate the factors, other than those already located, through researches like economic conditions of parents, illiteracy of parents, loss of parent or parents, desertion of either parent, broken homes, unattractive, lifeless curriculum, school atmosphere, etc., responsible for wastage and stagnation.

One Government Primary School which had inadequate accommodation, overcrowded classes, understaffing, lack of community participation in solving academic problems, children from poorer section of the community, illiterate and semiliterate parents, was selected as a sample for the study.

The tools used were admission forms with bio-data of the children, attendance and progress performance charts, and participation identity cards. Teachers were oriented in the maintenance of personal records of the children and told how each factor of the record has a bearing on knowing the child intimately and providing guidance in times of need. Programmes for the academic year were drawn up giving wide scope for extra-curricular activities like group games, dramatics, singing, monoacting, etc. Participation of the child in the activities was made compulsory. Participation cards were issued to the children to see that the child actively participated in one or other activity. Group photographs for individual classes were arranged. Supply of free lunch during lunch break was arranged with the cooperation of the local community leaders. Supply of free uniforms from the public was also arranged. The study continued for a period of six years.

The major findings were: 1. The stagnation in standard I to IV gradually reduced, while in standards V to VII it gradually increased. 2. The percentage of retention was more in the case of children hailing from backward class communities (which included all those except Brahmins, SC and ST children). 3. The percentage calculated to actual strength of that particular community in case of SCs and STs seemed high, but when calculated with respect to the total strength of the class the percentage became negligible, while in the case of backward class children, the percentage remained constant. 4. The fluctuations also showed that the attention these children received, both at home, and at school, was very meagre which in no way helped them to compete with the better-offs in their class. 5. The percentage of dropouts was greater in the case of BCs because their per-

centage remained constant when calculated with respect to the total strength of the class, while the percentage of SCs and STs altered widely, even going to the point of insignificance. 6. The percentage of dropouts decreased gradually as they climbed up the ladder and they realized their self importance. Besides, these children, from standard V onwards, invariably got the pre-metric scholarship, in spite of their repeated retention in the same class. They continued to attend to school. This was not so in the case of BC children. This factor compelled parents to withhold a child from attending school. 7. The fluctuation in the rate of dropout showed that no proper care was being taken by the school authorities to take necessary steps to persuade parents to continue to send their wards to school until the child completed at least the basic schooling term of four years.

VARGHESE, N.V., *Education and Labour Market: A Survey of Indian Evidence*, NIEPA, 1986 (IIEP sponsored)

The objectives of the study were (i) to provide an empirical picture of employment and unemployment of the educated in India, (ii) to highlight the salient features of the conclusions arrived at by the studies on the theme of employment and unemployment of the educated in India.

The study followed the document survey method to collect and synthesise the evidence on the theme of employment/unemployment of the educated labour market. The sources of data were, (i) journals which published articles in the area of education and labour market, (ii) discussion with the personnel involved in research in the related areas, (iii) documents carrying information on the theme, (iv) national and state-level surveys having information about the question of employment and unemployment of the educated, (v) census surveys and National Sample Surveys, (vi) reports of and live registers of the Directorate General of Employment and Training.

The findings of the study were: 1. There was a structural shift in employment (between 1971 and 1981) from primary to secondary and then to the tertiary sector of employment. This shift was more pronounced in the case of males, especially in urban areas. 2. The pattern of employment between males and females showed that the share of females in relation to males was substantial in professional and technical categories, with

overcrowding of females in professions like teaching and nursing. 3. The urban labour force improved their educational level over the period under consideration (1971-81). The increase was sharp in the case of workers with education levels of matric and above. It was still higher in the case of workers with graduate level education. 4. Between the two census periods (1971 and 1981), the educational level of the work force had improved. A relatively higher proportion of the lower level educated persons was in the primary sector followed by the secondary and tertiary sectors. With the primary sector, livestock, foresters, etc. showed a relatively higher proportion of educated persons. Within the secondary sector, it was non-household industry that had a higher proportion of educated labour force. In the tertiary sector, it was the service sector which employed a large number of educated persons. 5. Between the sectors (public and private), the public sector witnessed a higher growth rate and improved its share in total employment. Public sector employment was service-sector-centred while the private sector was manufacturing-sector centred. 6. The rate of educated unemployment in the rural areas was higher than in the urban areas. Further, the incidence of unemployment was greater among rural females. 7. Up to the fifties, the problem of unemployment was centred on matriculates. Graduates and undergraduates joined the pool of unemployed in large number in the sixties. 8. At graduate level, the problem of unemployment was faced more by arts graduates, followed by science and commerce graduates. 9. A substantial proportion of the unemployed was third divisioners. 10. In all these years, the percentage of graduate unemployed women was more than that of men and the former were not even seeking jobs. 11. Most of the unemployed matriculates and undergraduates aspired for clerical jobs. Graduates and postgraduates in general education aspired for teaching and administrative jobs. Graduates in professional and technical faculties preferred professional jobs. 12. Within the same level of education, the waiting period for employment was longer among general-education graduates than among professional and technical graduates. This waiting period was lower in the case of persons with first division in comparison with others. 13. Graduates in professional courses earned more than postgraduates from the general streams. 14. Job mobility was higher in the case of graduates employed in metropolitan cities. 15. Among the educated, job mobility was very low in the case of arts, science and commerce graduates and was very high in the case of professional and technical graduates.

Abstract No. 619 in the *Third Survey of Research in Education* contained some major errors. A corrected version is reproduced below:

ZARGAR, A.H., *A Study of Extraversion, Neuroticism and N-Achievement in relation to Intelligence, Creativity and Scholastic Achievement*, Ph.D. Edu., Kashmir U., 1980

The investigation aimed at studying personality correlates like extraversion, neuroticism and n-Ach in relation to intelligence, creativity and scholastic achievement.

The study was conducted on a sample of 435 Bachelor of Arts students. The tools used were the Culture

Fair Test of Intelligence, Scale 3, Forms A and B, Maudsley Personality Inventory, Incomplete Sentences Blank Test (Mukherjee) and Test of Creative Thinking (Mehdi).

The main findings were: 1. A moderate degree of neuroticism, to a specific level, did not impair the level of subjects whereas an extreme degree of neuroticism impaired their performance on intelligence tests. 2. The high and the low neurotic groups did not show any significant difference in creativity. 3. The level of extraversion (high and low) was not related to intelligence. 4. There was no significant relationship between the level of extraversion and scholastic achievement. 5. The high need achievers had a high degree of creativity (verbal) whereas low need achievers had a high degree of non-verbal creativity. 6. The high need achievers had better scholastic achievement than the low need achievers.