
Appendix

BASU, C. K., *Development of Science and Mathematics Concepts in Children at Primary Grades in India*, NCERT, New Delhi, 1977.

The main objectives of the study were : (i) to investigate the differences in the timing and ways of acquisition of certain basic concepts in science and mathematics between urban and rural children at the primary grades (III to V) in the age group 7-11 years; (ii) to determine the sequence of development of science and mathematics concepts in urban and rural children; and (iii) to develop strategies by which the results of the study may be used to guide curriculum development work in science and mathematics, especially in the areas of design and production of curriculum materials (texts, aids and apparatus) and the development of appropriate teaching methodology.

The study found that, on the whole, the urban children were faster in the acquisition of the science and mathematics concepts selected for the study. The urban children of all the grades performed better than the rural children of their respective grades on all the tasks designed to study the development of concepts. Among the concepts selected for the study, the performance of the rural children was found to be comparable to that of the urban children with regard to the development of the concept of weight. The easiest of all the concepts was the concept of number for the urban group while for the rural group the easiest was the concept of weight. The concept of energy was found to be the most difficult for both rural and urban children even at the fifth grade level.

BOSE, P. K. and MUKHERJEE, S. P., *A Techno-Economic Study of Local Skills in West Bengal: A Sample Survey of the Districts of Malda and Howrah*, Cal. U., 1978. (NCERT financed)

The study had the following objectives : (i) to identify the skills and vocations for which suitable courses need to be provided at the higher secondary stage (+2); and (ii) to prepare an overall goal of the

programme for the rural transformation through development of employable skills.

The study was conducted in three districts, namely, Howrah, Malda and Midnapur, jointly by the University of Calcutta and IIT, Kharagpur. The IIT, Kharagpur, made a similar study on Midnapur and therefore the present report in a way covers all the three.

The major findings of the study were as follows :
A. Howrah — (i) Important differences existed in occupational distribution of employed workers in the four blocks covered for this purpose. (ii) The two most important occupations of the people of Howrah came out to be agriculture and manufacturing. (iii) Nearly nineteen percent of all the registrants with the employment exchanges in the district were skilled or semi-skilled workers.
B. Malda — (i) A little below thirty percent of all self-employed persons were engaged in cultivation, while slightly over one-fourth of all of them were weavers. (ii) The percentage of employed persons engaged in cultivation was almost the same as among self-employed persons. (iii) Lack of formal education in general and of technical education in particular was evident among industrial workers in the district. (iv) The existing training facilities were located in only one institution, namely, the Industrial Training Institute at Malda in which one-year as well as two-year courses in several engineering trades were being offered.

DAS, R. C. and PASSI, B. K., *Experimental Studies on Differential Effectiveness of Microteaching Components*, NCERT and Department of Edu., Indore U., 1977.

The main objectives of the studies were : (i) to compare the effectiveness of microteaching technique with different modifications in its component in the development of General Teaching Competence (GTC); (ii) to compare the retention level of GTC of student teacher over a period of time; and (iii) to study the change in attitude towards teaching in the group of

student-teachers trained through microteaching technique and otherwise.

Twentytwo colleges of education and university departments of education participated in the experiment.

The following were the main findings of the study: (i) General teaching competence of student-teachers trained through microteaching with perceptual modelling did not differ significantly from those trained under microteaching with either symbolic or audio-modelling. (ii) GTC (General Teaching Competence) scores of student-teachers did not differ significantly when trained through microteaching with varying sources of feedback. In other words, the feedback given by peers or college supervisors or self feedback by audiotape had similar effects on development of general teaching competence. (iii) Microteaching under simulated conditions and that under real classroom conditions did not produce different effects on the development of general teaching competence. (iv) The change in the nature of component skills in a set did not have differential effects on the teaching competence of student-teachers when trained through microteaching. (v) Development of general teaching competence was not effected significantly if the same or different teaching unit was taught in the 'reteach' session of microteaching. (vi) Planned variations in the microteaching components such as modelling, feedback, conditions, etc., did not produce significant changes in either the 'retention level' or the 'cumulative effect' of general teaching competence when microteaching was followed for some period by usual practice teaching.

DESAI, H. G., Under-Achievement Syndrome among High Ability High School Boys, Sau. U., 1977. (Sau. U. financed)

The investigation was undertaken to determine whether high ability high school boys, classified as high and low achievers, differed significantly on certain variables.

The study was based on 456 male students studying in nine different divisions of grade nine of a high school. A numerical ability test, a nonverbal intelligence test and a general ability test were used to define high ability. The top ninety-nine students were designated as high achievers. Achievement in mathematics was decided on the basis of a specially prepared 100 multiple choice item test. Of the ninety-nine high ability students, those who secured a position in the fourth quartile of the achievement scores distribution, were designated as high achievers and those in the first quartile as low achievers. The correlates considered

fell into personal factors, family-related factors, social-status factors and study-related factors.

The high ability high school low achievers in this study had less favourable attitude to the subject, came from families with very strict standards of discipline, kept very busy in domestic work, did not receive any outside help for study, and described themselves as less regular in work.

DESAI, H. G., Perception of Self and Others as Related to Group Membership of College Students in Saurashtra, Dept. of Edu., Sau. U., 1978. (UGC financed)

The study aimed at finding out the perception of self and others as related to group membership of college students.

Operationally self-concept consisted of the subject's responses to three sets of elements, namely, self, college and social milieu. An instrument in which each element was described with bipolar adjectives in semantic differential format was developed and administered to 3300 college students belonging to thirty-nine colleges.

The following were the major findings: (i) All groups reported favourable perceptions of themselves. (ii) The college was seen less favourable by all the groups. (iii) 'Opportunities for making friends' received highest positive perceptions, while groups' perception of social activities received lowest positive perceptions. (iv) Rajputs tended to report somewhat constrained perceptions of each of the other minority groups; this restraint was marked in their reports about Kunbis. (v) Harijans were perceived in the least favourable light by Kunbis, Rajputs, and Brahmins, with almost similar ratings. Kunbis, Rajputs, and Harijans, with the exception of perception of their own group, have perceived Brahmins in the most favourable light, while Brahmins have perceived all of them in a less favourable light.

GAYEN, A. K., Identification of Job-Oriented Courses for Higher Secondary Institutions-Based on Regional Demand Survey in Midnapore, West Bengal (First Phase), I.I.T., Kharagpur, 1978. (NCERT financed)

The study aimed at identifying locality-based occupational areas which were emerging (or decaying or were stagnant) and ascertaining the employment opportunities in foreseeable future for the qualified and trained personnel in specific vocations.

The community development block, namely, Debra, in the district of Midnapore, West Bengal, was selected.

Data were collected from the various primary and secondary sources, such as (a) District Census Handbook (1961 and 1971), (b) Problems and Prospects: Midnapore District, (c) sample socio-economic surveys with a view to identifying 'developing', 'decaying', 'stagnant' and 'emerging' occupations, (d) assessment of employers of large-scale and small-scale establishments, (e) employment market information studies, and (f) records of views expressed by various institutional workers.

The study revealed that the major area of development could be divided into agriculture, industries, commerce and trade, health and public services.

GOSAI, S. P., Construction and Standardization of a Personality Inventory in Gujarati, Ph.D. Psy., Guj. U., 1975.

The main aim of the study was to construct and standardise a personality inventory in Gujarati.

The inventory was planned to measure general adjustment and adjustment to specific life areas — family, emotional, social, educational and health — for individual ranging from adolescents to adults. Preliminary forms, one for each area, were prepared and each form was administered to about 200 subjects of both the sexes. On the criteria of indices of internal consistency and discrimination, a total of 135 items were selected. These items were administered to 490 students of both the sexes. Items showing satisfactory discrimination index were selected for the final form. For determining norms, the inventory was administered to about 5000 subjects of both the sexes drawn from various colleges — arts, science, commerce, engineering, law, pharmacy, and education — affiliated to the different universities in Gujarat.

The validity of the total inventory was determined by correlating scores with scores on other tests, with teachers' estimates of adjustment of students and with interview data. The test was also validated using contrasted groups like prisoners and normals, and psychiatric patients and normals. The validity coefficients suggested fairly good validity of the inventory. The reliability coefficients by different methods ranged from 0.79 to 0.93.

JANA, M. N., Educational Philosophy of Tagore and its Relevance to Current Educational Thought, Ph.D. Edu., Cal. U., 1976.

The thesis dealt with mainly, some relevant biographical elements of Tagore, his philosophy of life, his philosophy of education, his educational experiments, his ideas in relation to current educational thoughts and his ideas and their relevance to the views

of education commissions and to the current educational trends.

The central point of Tagore's philosophy of life and education was the realisation of *bhuma* (the Infinite) through the pursuit of love. His faith in the teachings of the Upanishads led him to believe that the whole universe was pervaded by one supreme spirit, and nature and man were the manifestations of that spirit.

Nature, man and society were the three important factors in the philosophy of life as well as the philosophy of education of Tagore. The aim of education, according to him, was to develop a 'whole' man, a balanced personality. Such a man should be physically developed, mentally alert and well-equipped, emotionally well-balanced, morally sound and spiritually elevated.

His methods were based on the principles of freedom and joy, love and affection, artistic outlook and creative activity, cultivation of national tradition and international culture. He advocated immediate introduction of mother-tongue as medium of instruction from primary to university stages. Man, nature and atmosphere were the three fundamental factors of his methodology.

Tagore's philosophy of education embraced the educational ideas and methods of Rousseau, Pestalozzi, Spencer, Herbart and Froebel. His point of view was also supported by his Indian contemporaries like Gandhi, Vivekananda and Sri Aurobindo. Tagore's scheme of education was all-embracing. It had, therefore, been seconded by Radhakrishnan Commission and Education Commission.

Tagore's educational aims and his experiments at Santiniketan and Sriniketan fulfilled the modern trends in education, namely, equalisation of educational opportunity, paido-centricism, relating life to productivity, 'siksa to shrama', arousing the spirit of international cooperation and peaceful co-existence.

The world today, therefore, not only recognises him as the poet-prophet, but also as one of the greatest educational philosophers ever born.

JOSHI, D. C., A Survey of University Teaching Methods, Dept. of Edu., MSU, 1979. (MSU financed)

The study aimed at surveying the existing conditions with regard to teaching and evaluation in colleges and universities of India on a small scale.

A total of 190 teachers from eighteen colleges and three universities of the State of Gujarat, Kerala, Andhra Pradesh, Maharashtra, Rajasthan and Uttar

Pradesh formed the sample. The data were collected with the help of questionnaires.

Some of the major findings of the study were as follows: (i) Lecture method seemed to be the most popular technique employed by the teachers of colleges and universities in the degree classes. (ii) The time spent on discussion periods, on an average, was 19.89 and 14.57 percent for degree and postgraduate classes respectively. (iii) Tutorials and seminars were also not very popular teaching techniques at college and university stage. (iv) About seventytwo percent teachers of colleges and universities were interested in the use of audio-visual aids. (v) The majority of teachers felt that the existing system of examination provided incentive to hard work and it had a positively good influence on the teaching. But 44.1 percent of the teachers felt that the existing system of examinations did not assess the students qualitatively.

KAUSHIK, N. R., *An Investigation into the Basic Hindi Vocabulary of Children at the Age 13+ (Eighth Class) in the State of Haryana*, Ph.D. Edu. Kur. U., 1978.

The major objective of the study was to take stock of basic comprehension vocabulary of children by finding out the percentage of children who knew the meaning of different words collected from their textbooks, rapid readers, exercise books, examination scripts and speeches.

The words were collected in two phases. In the first phase 1503 words were collected from the books written for classes V, VI, and VII and were arranged in eight lists of words with five alternate meanings for each word. The lists were given to 250 children. It was found that out of 1503 words, 500 words were known to seventy percent and above and the rest were understood by less than seventy percent of the children. In the second phase 2975 words were collected from the textbooks or supplementary books for children of eighth grade, and the words used by children in their speech and writing. Thus the total number of words collected from the first and second phase by the study were 3978. These words were distributed in sixteen checklists of 250 words each. These checklists were tried out on a representative and random sample of 1537 school children of eighth class drawn from all the seven districts of Haryana State. An alphabetical list of words (glossary) was prepared showing the percentage of students in the sample who knew the meaning and the confidence intervals of these percentages for the population.

The glossary of words thus prepared can be used by textbook writers in the subjects of Hindi, social

studies, general science, etc. The confidence intervals for each word in the glossary indicates the percentage of students in the population who knew its meaning.

KHIRE, U., *Construction of Tests of Mental Abilities*, Dept. of Psychological Research and Testing, Dnyana Prabodhinee, Poona, 1977. (NCERT financed)

The following were the objectives of the study: (i) to construct and standardise tests of mental abilities; (ii) to establish grade norms; and (iii) to see how far abilities under consideration are related to achievement in the school.

A team of experts prepared items referring to Guilford Model, Kuhlmann Scale, and texts and reading books for various grade levels. The sample for the first tryout was fifty highly intelligent boys randomly selected from grades V to XI in Dnyana Prabodhinee school. For the second tryout the sample included sixty boys randomly selected from the top five divisions of grades V to XI from a common school. For item analysis study the second version was administered to a representative sample of 625 boys and 616 girls. The final version of the test was administered to 2273 boys and girls.

The coefficients of reliability by split-half method were found to be low, but the coefficients with regard to validity were quite high.

MAKHIJA, M. L., *Locational Study of Educational Institutions of Udaipur District (A Study Based on Interdisciplinary Approach)*, Ph.D. Geography, Udaipur U., 1978.

The objectives of the study were: (i) to trace the origin of formal educational institutions and their growth in different phases; (ii) to analyse their distributional patterns and spatial arrangements; (iii) to classify them on the basis of management, level, size or number enrolled and courses offered; (iv) to analyse the population served by them and to find relationship between enrolment ratios and elements of population like density, literacy, occupation, urban population and population of S/C and S/T; (v) to analyse the present pattern of physical facilities of movement and their impact on education; and (vi) to examine the existing school network and project a more rational future pattern.

The area under study is a political unit known as Udaipur District of 17267 sq. kms. area having seventeen tehsils. This area is again divided into five minor subdivisions on the criteria of physical and human conditions for spatial analysis of educational pro-

vision. These subdivisions are Central, Eastern, Northern, Western, Southwest and Southern. Sources of information included historical documents, district gazettes, various administrative reports of Mewar and different types of census (1901-1971) and other reports of the various committees and commissions on education. Some useful maps published by survey of India and the census department were used exhaustively. An extensive field survey was undertaken including visits to thirty-two centres on the basis of a detailed form "Educational Centre Information Form" which was designed for the purpose of collection of data on individual institution and its relationship to the surrounding area. Simple statistics like coefficient of correlation, coefficient of equality, index values were used. The various maps were prepared as basic tools for spatial analysis and planning exercises.

Some of the salient features of the research are as follows :

The origin of formal education in the region is traceable in the latter half of nineteenth century when the first school in the state was started in the year 1863. Later on with the efforts of missionaries and the Darbar, educational institutions multiplied and by the end of the nineteenth century the number reached twenty-six. Several natural and human factors were responsible for this growth. The growth has been dealt in four distinct phases. The first phase starts with the dawn of formal education (1863) in the state and ends at the close of nineteenth century. The second phase is comprised of fifty years, i.e., from 1901-1951 with educational institutions numbering 350. The growth of education in this part of the country was slow because of the lack of interest of the then rulers. By 1951, there were 350 educational institutions in the district imparting education largely upto the primary level. The third phase starts when the national plans for development were taken up and phenomenal expansion in education was the result. The number of institutions was reached to 1118. The last phase of growth in educational institutions belongs to the decade 1961-1971 under the plans of national reconstruction when number of educational institutions reached upto 1663.

As far as the distribution is concerned, educational institutions were found unevenly distributed. The study has classified them into four density grades, viz., areas of sparse density, medium density, high density, and very high density. The educational institutions have been classified and details provided on the basis of (i) management, (ii) level of instruction, (iii) size, and (iv) different streams of courses. An attempt

has also been made to analyse the population served by educational institutions. An analysis of the catchment areas and nature of accessibility is also provided.

MALANI, I., *Survey of Problems Faced by the Asian Teachers and Their Attitudes Towards Innovation in Classroom Teaching*, Department of Educational Psychology and Foundations of Education, NCERT, New Delhi, 1975.

The research design principally aimed at gathering data on the sorts of problems Asian teachers, at the lower grades of education, faced in the classroom, and their ways of handling these problems as reflected in their suggested solutions and their attitudes towards innovation in classroom teaching.

The survey included ten percent of the total number of classroom teachers in the first four grades of elementary education, who had more than three years of teaching experience and who were teaching in the capitals of the participating countries. The stratified proportional random sampling was used to select the teacher-subjects in each country. A total of 5223 teachers from the following countries participated in the study : Afghanistan, India (Delhi and Kerala), Indonesia, Japan, Republic of Korea, Malaysia, Philippines, Singapore, Sri Lanka, Thailand and Republic of Viet-Nam.

The problems that many Asian teachers conceived in their minds tended to centre around the teaching-learning process in the actual classroom situation. While the solutions for these problems suggested by teacher-respondents themselves were more or less traditional ones, some interesting relationship between the problem items and the attitude items was revealed. According to the overall rank of the fifteen innovative measures, to which teachers' attitudes were scaled, on the basis of cross-national mean percentages of favourableness, the following innovations were more favoured by teacher-respondents : (i) mastery learning (seventy-eight percent), (ii) educational television (seventy-seven percent), (iii) flexible grouping (seventyfive percent), (iv) programmed instruction (seventythree percent), (v) peer tutoring (seventythree percent), (vi) integrated curriculum (seventytwo percent), and (vii) team teaching (seventytwo percent).

MANDAL, J., *Mass-Copying in Secondary School Final Examinations*, Dept. of Applied Psychology, University College of Science and Technology, Calcutta University and Eastern India Centre for Mass Communication Studies, Calcutta, 1978. (NCERT) financed)

The study attempted to find out the factors asso-

ciated with mass-copying behaviour of the students in the final secondary examinations with particular reference to their home and school conditions.

In this study, a system concept was used. The educational system was conceived to be comprising three subsystems, namely, student subsystem, faculty subsystem and administrative subsystem. The three subsystems were considered interdependent. The study involved ninetytwo non-copying students from non-mass-copying schools and ninetytwo copying students from mass-copying schools. The following tools were used: (i) an information schedule for the collection of information about the students, (ii) an information schedule to collect information about the schools, (iii) a rating schedule for the categorisation of the schools, and (iv) three attitude scales to find out the attitude of the students towards the school, attitude of the students towards the teachers, and attitude of the teachers towards the students.

The following were the major findings of the study: (i) The students participating in mass-copying/copying differed from the students who had no such consistent reports in respect of home and school conditions. The mass-copying students came from relatively poor socio-economic status, parental education being relatively poor, home educational environment unformulated, and facilities inadequate. (ii) The non-mass-copying institutions differed from the mass-copying institutions in respect of faculty subsystem, administrative subsystem and student subsystem.

MINA SWAMINATHAN, An Action-Research Project on Early Primary Education in Delhi, Indian Association for Pre-School Education, Delhi, 1978. (NCERT and ICSSR financed)

The study had the following aims: (i) to follow and critically evaluate the outcomes of the experiment; and (ii) to compare the effectiveness of specific strategies in improving the quality of primary education by measuring specific variables.

The sample comprised 300 children drawn from twelve corporation schools in four areas of South Delhi. One school from each area was put under one of the three different experimental conditions. The three schools in each area were matched as closely as possible for the size of school, number of sections, nature of accommodation, timings, whether co-educational or single sex, and occupational group of parent. The study also involved twelve teachers. The tools used in the study were: (i) the Reading Readiness Test developed by the NCERT; (ii) the Goodenough's Draw-a-Man test adapted by Phatak, and (iii) three classroom observation schedules.

Some of the major findings of the study were as follows: (i) Preschool attendance has a favourable effect on both the achievement and the attendance of children in class I. (ii) Informal methods used in class I can counteract the lack of preschool experience to a large extent. (iii) The use of preschool methods (designated informal classroom) is feasible and can be achieved in a short time with marginal financial inputs in the present administrative set-up, provided adequately trained teachers are used and adequate supervision is provided.

MISRA, Y. N., Educational Adaptation, Social Ambition and Performance of Scheduled Caste Students at the Various Educational Levels in the Rewa District of Madhya Pradesh, Government College of Education, Rewa, 1978. (NCERT financed)

The study had the following null hypotheses: (i) educational adaptation will not vary in terms of caste, parental attitude, school experience, and family experience; (ii) social ambition will not vary in terms of caste, parental attitude, school experience, and family experience; and (iii) performance will not vary in terms of caste, parental attitude, school experience, and family experience.

The study involved scheduled caste student population belonging to Basor, Chamar and Kumhar community at the various educational levels in Rewa district. Besides them, non-scheduled caste student population of the same educational level as well as the same age group and also dropouts who were once studying with scheduled caste students were also involved. Data were collected through interviews and also from records.

The following are the salient findings of the study: The scheduled caste students had not been able to take full advantage of the facilities and programmes instituted by the government. This was due to certain problems inherent in their social background which continued to hinder their development in the field of education. They were prevented at the very start where they did not get a favourable environment to grow up. They also lacked a conducive environment at home which is a pre-requisite for their educational development. The financial assistance provided by the government in the form of scholarship and freeship had been the main source of help which had enabled them to pursue their educational career. However, educational facilities were being availed by those who were economically and educationally better off.

The facilities made available to them had not been fully utilised. The utilisation and non-utilisation of the facilities had been determined by several other

factors such as their family background, attitude of the members of their community, attitude of non-scheduled caste members, teachers' role and attitude, attitude of the members of the family towards education, etc.

This study did not support the idea that drop-outs belong mainly to backward classes. So far the scheduled caste students were concerned, they had generally dropped out at the lower level of their education; and that too due to poverty. They had aspired for service more at the lower level than at the higher level. It was also found that the institutions had failed in providing development needs at the lower level of education which was responsible for their poor adaptation. But the poor adaptation was only at the lower level and not at the higher level of education. Similarly, unwillingness of the parents in sending their children to school was found only partially correct. Sometimes it had not been accepted.

Schools had failed in providing development needs of scheduled caste students. They did not have any new programme except routine activities which might bring the scheduled caste and the non-scheduled caste together socially as well as psychologically. Nothing was done to develop and strengthen human relations. Most of the schools functioned in a mechanical way.

It was only due to poverty that scheduled caste students dropped their education mostly at the lower level (i.e., at the non-collegiate level). Secondly, it was the scheduled caste students at the non-collegiate level who were aspiring more for service.

Non-scheduled caste students aspired for higher education more than scheduled caste students. But within scheduled caste group, most of the students at the collegiate level had also aspired for higher education. The scheduled caste students were not inferior to non-scheduled caste students in respect of their educational adaptation, social ambition and performance. The following factors were found affecting utilisation of educational facilities: (i) their attitude towards education; (ii) education, social status and source background of the family — affect the benefits of educational facilities; (iii) teachers' attitude and role — they affect both educational adaptation and performance, and the utilisation of educational facilities; (iv) parental background of scheduled caste students — parental background includes their level of education, occupation and income; and (v) other persons' attitude towards them — they include not only the members of other communities but the members of their own community.

NAJMI, N. N., *A Study of Educational Administration in Haryana with Special Reference to the Present Decentralization in the State Educational Administration*, Ph.D. Edu., Kur. U., 1978.

The objectives of the study were: (i) to study the historical development of the administrative set up in Haryana from 1947 to the present day with special reference to the agencies involved and organisational patterns worked out by the recent decentralisation of the educational administration in the state; (ii) to analyse the policies and practices of the educational administration and to assess their democratic nature at different levels of findings; (iii) to find out how democratic decentralisation of power helped to shape the educational pattern and growth; (iv) to determine the awareness of educational administrators about democratic philosophy of administration and their readiness to accept it; and (v) to ascertain conditions and describe situations for effective participation by teachers in an administration.

It is a historical as well as normative exploration. Reports, documents, government accounts and other connected literature were used as source materials for collecting data. Normative survey was based on twelve self-constructed questionnaires. Historical part of the study was concerned with exploration of development of growth and organisation of educational administration, whereas the survey part mainly centred round the problems of recent (1971) decentralisation so as to objectively assess the outcome of this experiment in the field of educational administration in Haryana. Twelve self-constructed questionnaires were administered to twelve different categories of educational administrators, teachers and heads of schools. In addition to the questionnaires, data were also collected through personal interviews, records and reports of the state government.

The study has brought out the following points as they existed at the time of the investigation.

The administrative set up in Haryana includes education minister assisted by education commissioner-cum-secretary of education, who frames the entire educational policy for the state. The director of public instruction carries out this policy under the administrative directions of education commissioner and with the technical advice of his joint directors and other headquarter staff. At the district level the district education officer holds the reign of educational administration. He is, however, guided by the director of public instruction in his act of administration and is assisted by subdivisional, and block education officers at tehsil and block levels respectively. He is also

assisted by the principals in the administration of higher secondary schools under his jurisdiction.

A large percentage of responsive heads of primary, high and higher secondary schools, block education officers, district education officers of directorate have suggested that the present decentralisation is a welcome step and is a long awaited measure. They have condemned the office of subdivisional education officers and have recommended for its abolition. They have further suggested for more and better involvement of local resources and community participation at all levels of administration. In order to have categorically sufficient decentralisation in educational administration in Haryana it has been suggested that the director of public instruction should carry on the function of education secretary with two joint directors. The joint directors should be given exclusive powers to make them effective agents of administrative change. The deputy directors of education may be given exclusive powers in regard to their operational area and only cases demanding policy decisions and pertaining to appeals may be sent to the director of public instruction. The post of assistant directors may be abolished. In order to make the district education officer a more effective agent of supervision, administrative functions may be vested in deputy directors of public instruction.

NARSIAN, S. D., *Innovations in Higher Education in India*, Ph.D. Edu., MSU, 1978.

The major objectives of the investigation were : (i) to study the role of the University Grants Commission in initiating the plan of action for examination reforms in selected twelve universities; (ii) to study the channels used by the University Grants Commission for communication of the proposed innovative practices for examination reforms as contained in the plan of action; (iii) to study the reactions of university personnel to the suggested change in the examination system; (iv) to study the extent of adoption of the plan of action by the selected twelve universities; (v) to study the nature and the type of resistance to the proposed change in examination system, and (vi) to suggest a modified strategy for the implementation of the change.

All the twelve universities selected by the University Grants Commission for tryout were surveyed. The population of the sample was the administrators, deans/heads, teachers and students of the twelve universities. Questionnaires, structured and semi-structured interview schedules were used to collect the necessary information.

The study revealed that the efforts made through resource system have proved effective but the adminis-

trative formalities, structural rigidities, absence of sufficient expertise and scientific data regarding suggested change from the universities, and the financial limitations have proved barriers to change. The planned change suggested through the plan of action is a breakthrough in the history of examination reform. The frequency media and directions used for communicating the change in the system have helped to pass on the information to a certain extent to the adopting unit. But the nature of communication utilised for it has proved formal rather than academic. Administrative efforts have not proved sufficient to quicken the process of change. All the twelve universities have accepted change in principle. Internal assessment is practised in all the twelve universities but the nature and extent of adoption of internal assessment differ in each university. Grading system is adopted by five universities while question bank is in practice in two universities only. The major barriers to change are : (i) lack of planning and organised efforts; (ii) lack of communication between resource system and adopter and other agencies; and (iii) lack of adoption of common policy.

NAYAK, T. B., *An Educational Survey of Baster District, Madhya Pradesh*, Board of Secondary Education, Madhya Pradesh, 1978. (NCERT financed)

The aims of the study were : (i) to find out the percentage of the school-going children in the tribal areas of Madhya Pradesh; (ii) to determine the relationship between the teacher and the community and the interest community takes in education; (iii) to find out the cost benefit analysis of the investment on education; (iv) to find out the type of education available for tribal children; and (v) to construct a model of a tribal school.

The entire gamut of education provided in Bastar District was covered. The techniques of social anthropological studies were employed. These techniques were questionnaire, schedule studies and interviews. Statistical analysis was also employed wherever it was necessary.

The study resulted in the following types of findings : Teachers were appreciative of the values of the tribal people. It was generally reported that the tribals were weak in studies. Nearly one quarter of teachers said that the tribals were good in agriculture and gardening and 15.87 percent said that they were good in games. The reason for the weakness of the students was that the local dialect and Hindi were unintelligible to them. It was also found that according to the majority of teachers (eightyseven percent)

the solutions to dropout problems constituted building of pucca houses, changing of the modes of the tribal behaviour, making material aids available to them, etc. Nearly half of the teachers regarded these tribal students uninterested and unenthusiastic about studies. As compared to non-tribals who were uneducated (18.05 percent) their tribal counterparts had the percentage around 57.98. On Minnesota Manipulation Board, the tribals had discouragingly low aspirations but it increased in correspondence with their advancement in learning. On PSM test it was found that the tribal people had very little interest in science but in technical subjects the percentage was a little higher. On another test the pattern of interest was also found. It showed that they were governed by the local familiarity.

PANDA, K. C. and DASH, P. C., *Effects of Simulated Information on Assessment of Cognitive Competence: A Test of Expectancy Hypothesis*, RCE, Bhubaneshwar, 1978.

The study investigated the effects of simulated information on the evaluation of pupils' real classroom performance in arithmetic, social studies, and English under two expectancy conditions (positive and negative), two question types (objective and essay) and two systems of evaluation (marks and letter grades).

Identical answer scripts were given to each of the 120 teachers along with a confidential report containing multiple cues for inducing expectancy to be read before evaluation of scripts. Equal number of teachers were randomly assigned to the positive and negative expectancy conditions. Results were analysed separately for the numerical marks and grades using a 2 (expectancy) x 2 (question type) x 3 (curriculum areas) analysis of variance with repeated measures on last two factors and a t test for the evaluation of overall performance, obtained by using a 5-point scale.

The findings revealed significant main effects for expectancy, question type and curriculum areas. Evaluation scores were high for positive expectancy, objective questions and arithmetic compared to the scores obtained for negative expectancy, essay question and social studies and English. The overall rating of performance revealed a strong expectancy effect. Effectiveness of simulated information containing multiple cues for inducing expectancy and its consequent effect on the evaluation of the pupil's performance in the desired direction had received experimental support.

PANDEY, R. N., *A Psychological Study of Tribal Children (with Special Reference to the Denotified Tribes of U.P.)*, Government Post-Graduate College, Rampur, 1977. (NCERT financed)

The study had the following objectives: (i) to

study the attitude of children belonging to denotified tribes as a factor in occupational mobility and attainment of social status; (ii) to study the incidence of creativity in the tribal children; and (iii) to compare the attainment of high and low achievers of children belonging to denotified tribes.

In order to make the data more reasonable, following precautions were observed in the selection of the sample: (i) all the schools selected for the sample were under the administration of the Government of Uttar Pradesh; and (ii) children of similar educational background were taken in the sample. The following tests were constructed and utilised for the study: (i) test of creativity, (ii) scholastic achievement test, and (iii) attitude scale.

The main findings of the study were as follows: Though all the students in the sample belonged to denotified tribes and were from Government Ashram type schools, they differed considerably in their levels of achievement. These children displayed varying levels of orientation towards the current educational problems and related issues. It was found that some of these children did not seem to be getting full advantage out of education provided to them. They fared very poorly in academic performance. The poor performance highlighted the handicap they suffered from. Some students of Ashram type schools meant for children belonging to denotified tribes did not consider education and related infra-structure as a source of achieving higher social status.

PATEL, B. V., *Construction of Listening Comprehension Test in Gujarati for Pupils of Classes VIII, IX and X to study the Effect of Exercises for Improving It*, SPU, 1978. (NCERT financed)

The problem of this investigation was the construction of listening comprehension test in Gujarati for pupils of classes VIII, IX and X to study the effect of exercises for improving it. The objectives of the study were: (i) to establish norms for listening comprehension in Gujarati; (ii) to study the sex differences with regard to listening comprehension; (iii) to study the relationship between the listening comprehension and age; (iv) to study the relationship between the listening comprehension and socio-economic conditions of pupils; (v) to provide schools with valid and reliable tools to measure listening comprehension; (vi) to prepare and provide schools with exercises (listening improvement programme) to improve listening comprehension; and (vii) to study the effect of exercises on the listening comprehension.

The listening materials were selected keeping in view the difficulty of language material and the inter-

est of pupils. The test items were prepared to test the components of listening comprehension. Seven subtests constituted the test. The experimental try-out was done on a total sample of 1,200 students of classes VIII, IX and X. Item analysis was done and validity and reliability of the test were established. The sample for the final tryout consisted of 2,866 students including both girls and boys drawn from both urban and rural schools. Grade norms, percentile norms and standard scores were established. In the second phase of the project, exercises for improving the listening comprehension of pupils were prepared. The improvement programme consisted of the following three types of exercises : (i) listening games, (ii) developing listening through the use of the textbook, and (iii) listening comprehension exercises based on selected listening material. Equivalent group technique was applied for studying the effectiveness of the exercises. The groups were matched for mean and SD on the basis of the scores on initial test on listening comprehension. The experiment was spread over nine divisions of classes VIII and IX of secondary schools of rural and urban area of the Kheda District including 334 pupils of class VIII and 280 pupils of class IX in experimental group and 319 and 273 pupils of classes VIII and IX respectively in control group. After the treatment was given to experimental group, the listening comprehension test in Gujarati was administered to pupils. Analysis of covariance was used for the purpose of analysing the data and studying the effect of LIP (Listening Improvement Programme).

The following were the important findings of the study : (i) The listening comprehension scores increased from class VIII to class X. (ii) There were no sex differences with regard to listening comprehension in Gujarati. (iii) The urban pupils were superior in listening comprehension to rural pupils. (iv) There was no relation found between age and ability of listening comprehension. (v) A positive relationship was found between SES and listening comprehension. The correlation coefficient was 0.374. (vi) The developed programme was found to be effective and could be used to improve the listening comprehension of pupils.

RAMANATHAN, G., *Towards a Teaching Profession*, Nagpur, 1978. (NCERT financed)

The study attempted to compare training schemes of a sample of training colleges in India with corresponding schemes prevalent in other countries specially in Britain. The latest trends, innovations and development of teacher education in different countries were examined with particular reference to India.

The study arrived at the following conclusions :

(i) The obvious defect of the B.Ed. programme at present is that too much is attempted in too little time. The total time devoted to practical training is too short for acquiring professional competence but too long if only laboratory training is envisaged. The best solution for the problem will be to concentrate upon laboratory experience during the training period and to prescribe a probationary year in continuation of it to be spent as a teacher in any school. It should be left to the students themselves to arrange with school authorities for their induction as probationers at the appropriate time. It would greatly facilitate the implementation of the scheme if in the interests of better teacher training the government would agree to pay a stipend to all probationers. The year in college will be devoted to the disciplinary studies comprising the subject Education and practical training limited to illustrative experience of the techniques of the profession. During the year in school the candidate will give the finishing touches to his theoretical studies and develop practical competence under the guidance of the headmaster or a senior teacher. (ii) Since teaching in primary schools and teaching in secondary schools are the same type of work, there can be only one framework of teacher training for both; their differences in detail will only be a reflection of the differences in age range of their pupils and in their curricula. In the future organisation of teacher education the training colleges should be transformed into colleges of education providing two levels of training, one for primary teachers and the other for secondary teachers. The staff should be common to both, though some should be working wholly in the primary sector and some in the secondary sectors. An important point for consideration in this context is the alignment between the institutional structure of professional education and the career structure of professional practitioners. To keep up the vitality of a profession chances for advancement in careers should be available. That raises the issue of multiple entry to higher stages in professional education. Briefly put, this issue means, in the context of teacher education, that it should be possible to reach higher positions in a teaching career through more than one channel of advance. The professional training of teachers in India has been stagnating at the level it occupied at its inception.

RAWAT, D. S., *A Study to Determine the Impact of Reading on the Achievement of Pupil in Different School Subjects*, NCERT, New Delhi, 1978.

The study aimed at determining the impact of reading on the achievement of pupils in different school subjects.

Children's vocabulary, both spoken and written, was collected for the grades I to V. This was subjected to linguistic analysis and frequency counting. The data resulted into the identification of active vocabulary of the children for different classes. Based on these, reading tests were developed. Seven reading tests for class I and three for class II were developed. These tests were tried out on a sample of 250 children in twelve different dialectical areas of Hindi. Difficulty values and discrimination values were calculated and the tests were revised. These tests were later administered to a sample of around 4100 students of grade I and 4500 students of grade II covering twenty-two dialectical areas in seven Hindi-speaking States. The data were analysed. An attempt was further made to study the impact of reading ability on achievements in different school subjects.

The following were the main findings of the study : (i) There was positive correlation between reading ability and achievement of pupils in different school subjects and general academic achievement. The relationship appeared to be significant. (ii) The rural children showed poorer reading ability in comparison to their urban counterparts. The differences were quite significant. (iii) There were quite marked differences in reading ability of children belonging to different dialectical areas. (iv) The difference in reading ability of children belonging to different Hindi-speaking States was significant. (v) The occupations of the families to which the children belonged did not play any specific role in determining the reading ability of children. (vi) There was no role of sex in determining the reading ability of children.

ROY, B., *A Study of Some Aspects of the Load of Homework in Some Schools in Delhi*, NCERT, New Delhi, 1976.

The investigation aimed at studying some aspects of the load of homework in some schools in Delhi.

The sample consisted of 162 students, 108 parents and sixty teachers. The tools used were : (i) Students information schedule; (ii) Assignment information schedule; (iii) Marks and positions record schedule; and (iv) Parents interview schedule.

The study revealed the following : (i) High achievers always complete the home work. (ii) Many parents could not give time to the students due to illiteracy, lack of knowledge about the subject, professional problems, etc. (iii) There are both good and bad aspects of homework. (iv) A long term policy on homework, supply of textbooks to poor students and proper realisation of work with emphasis on the teacher behaviour patterns and their impact upon students'

academic achievement should be framed. This would generate higher teacher effectiveness through better teacher-pupil relationship.

ROY, B., *A Survey of Students' Most Pressing Problems in Their University Lives*, NCERT, New Delhi, 1978.

The study attempted to make a survey of the most pressing problems of university students.

The sample consisted of 100 male and 100 female students. General Attitude and Personality Inventory having fortytwo items and several sub-items within many of the items was used as the tool of measurement.

The following were the findings of the study : (i) More than sixty percent of the students said that they were fortunate to live in this era. (ii) More than eighty percent believed that their generation would be different from the earlier one. (iii) More than sixty percent felt that they were happy. (iv) More than sixty percent said that they could pursue the course of study which they wanted.

ROY, B. and KUMAR, K., *Social Reinforcement and the Study Behaviour of the Primary School Children*, NCERT, New Delhi, 1978.

The study aimed at finding out how far social reinforcement affects the study behaviours of the primary school children.

The study was carried out twice. The samples for the first study involved three teachers and about 100 students of a school. The samples for the replication study involved three teachers and about 100 students of another school. The data were collected through an achievement test in arithmetic, teachers' rating about students, a non-verbal type analogies test, class tests based upon the topics in Hindi and social studies taught in the class.

The following were the findings of the study : (i) Middle range achievers were the best users of the reinforcers for improvement. (ii) High achievers either improved or remained where they were. (iii) Lower achievers remained unaffected.

SHARMA, A., *Research on Grading Issues*, NCERT, New Delhi, 1978.

In the present investigation an attempt has been made to study the differences in standards in curricular subjects offered at the Higher Secondary Level of Central Board of Secondary Education, New Delhi.

The study was carried out on a large and representative sample of students who appeared in the Higher Secondary Examination, 1975, conducted by the Central Board of Secondary Education. The subject

standards were compared by calculating the average grades for all students offering a pair of subjects and by marking of a specified subject (English) common to all pairs as the reference. Total scores were used which provided a more general type of reference score.

The study has pointed out that no reference test can take into account the influence on examination results of those factors which are external to it, such as the motivation and interests of students, the intrinsic difficulty of subjects or the different methods of management of instruction used for them.

SHARMA, M. L., *Success in Teaching in Relation to Self-Concept, Intelligence, Experience and Academic Achievement of Teachers*, Ph.D. Edu., Pan. U., 1978.

The study aimed at ascertaining the relationship between teaching success and four variables affecting success in the teaching profession. Data descriptive of teaching success were limited to the following criteria: (i) report of the headmaster/principal, (ii) opinion of the colleagues, and (iii) rating of the teacher by the pupils. Four variables were considered to be affecting success in the teaching profession, namely, self-concept, intelligence, experience, and academic achievement.

Product-moment coefficient of correlation between teaching success on one side and self-concept, intelligence, experience and academic achievement on the other, were calculated. Correlations among the latter four variables, taken two at a time, were also worked out to find interrelationship of all of them. Significance of the obtained coefficients of correlations were also tested statistically.

The following conclusions were drawn by the study: (i) Self-concept and intelligence of the teachers correlated significantly with their teaching success. (ii) Experience and academic achievement of teachers had nothing to do with their teaching success as they both correlated insignificantly with teaching success. (iii) Government school teachers were proved superior to private school teachers in teaching success and self-concept, and inferior to them in intelligence, experience and academic achievement. (iv) Female teachers remained superior to male teachers in teaching success and self-concept, and inferior to them in intelligence, experience and academic achievement. (v) Successful teachers were proved superior to unsuccessful teachers in teaching success, self-concept and intelligence, and inferior to them in experience and academic achievement. (vi) Successful female teachers were declared superior to successful male teachers in teaching success and self-concept, and inferior to them in intelli-

gence, experience and academic achievement.

SHARMA, R. K., *A Study to Investigate the Relationship Between 'Output' and 'Input' on Science Education of Higher Secondary Schools of Delhi Administration, Government Boys' Higher Secondary School, Bijwasin, 1978.* (NCERT financed)

The present study aimed at knowing the relationship between some aspect of investment in science education of higher secondary schools of Delhi Administration and the productivity therein. The objectives of the study were: (i) to know the position in respect of provision of opportunities in respect of areas, viz., urban and rural, and in respect of boys and girls schools comparatively; (ii) to compare unit costs of urban schools with those of the rural boys vs. girls and to know their relative position in it; and (iii) to compare costs with the performance in the public examinations in different categories of schools included in the sample of the study to know cost effectiveness and performance efficiency.

An information blank comprising two major sections was designed to collect detailed information in respect of educational cost (input) and performance (output) of science education in higher secondary schools. Part I contained items regarding cost (expenditure) incurred and Part II contained items regarding class XI students' performance in public examination of old higher secondary scheme of Central Board of Secondary School Education, Delhi. The sample consisted of thirtynine schools drawn out of 185 schools by stratified random sampling technique.

The major findings of the study were as follows: (i) Taking into consideration population density, the provision of science education facilities areawise was adequate. (ii) Unit costs worked out for the two areas revealed that the unit cost in the rural areas was much higher as compared to urban area schools, both boys and girls. (iii) 'Output' in science education in higher secondary schools of Delhi Administration was found to be commensurate with the 'input' — man and material resources. (iv) The quality of educational 'Output' was found to be better in the case of girls. (v) The quality of results in urban areas (both boys and girls) was found to be superior to the performance of the students in the rural areas. (vi) Costs were proportionally the same for the schools teaching science according to their size, i.e., the enrolment of students, the courses provided vis-a-vis the medical and non-medical, either or both. (vii) In rural schools, the teaching of science was uneconomical in terms of enrolment in science courses and performance as well in public examination.

SINGH, P., An Investigation into the Empirical Validity of Bloom's Taxonomy of Educational Objectives, Ph.D. Edu., Del. U., 1978.

The study aimed at validating the Bloom's taxonomy of educational objectives by not only analysing the product but also utilizing a process-oriented approach which took into account the need for development of those abilities prior to making students appraisal on them.

The sample of the study comprised 812 students of classes IX, X and XI from eight schools of Delhi representing boys, girls and coeducational institutions financed by government, private, and public managements. The study was based on the syllabus of life science prescribed by the Central Board of Secondary Education, Delhi. Five units of teaching relating to the area of physiology were selected for instructional intervention and for evaluation of students' learning for all the three classes. The study was tabled into four major phases: (i) development and use of objective based instructional materials; (ii) construction and validation of the taxonomic test (post test); (ii) administration and scoring of the post test; and (iv) statistical analysis and interpretation of the data. The reliability of the post test was determined by using the split-half and KR methods and it ranged between 0.856 and 0.941 for the three different classes.

The following were some of the major findings of the study: The hypotheses of the increasing complexity of the mental processes involved in the objectives ranging from knowledge to evaluation, was supported. However, the objective 'synthesis' seemed to be misplaced while the objective 'analysis' appeared to be misleading. (ii) Significant differences existed among the objectives identified as knowledge to evaluation. (iii) Mental processes designated in the taxonomy were learnt behaviours. (iv) Factor analysis did not support the cumulative nature of the taxonomy as only one major factor which may be called general, was traceable. (v) There was a positive impact of objective-based instruction on students' achievement. (vi) Positive correspondence between the process responses as identified by students and the product responses was not demonstrated.

SINHIA, H. C., Scaling of Some Important Attributes of an Effective University Teacher According to the Views of University Teachers and Students, Dept. of Edu., Kur. U., 1976. (Kur. U. financed)

The objective of the study was to know the views of the teachers and students of the university, and to ascribe relative scale position to the important attributes in comparative form.

Eleven statements were framed from the different education commission reports. Each of these statements was combined in pairs with every other statement. Fiftyfive pairs of the statements thus formed were issued to a random sample of 365 post-graduates and sixtytwo teachers of Kurukshetra University. The responses so obtained were put on the psychological scale by Thurstone's paired comparison method separately for the group of teachers and students.

It was found that attributes concerned with teaching were on the top region in both the scales. In the middle region of these scales attributes related to firmness and fairness of teacher towards students were found. In the lower region of both the scales the attributes connected with personality and extra academic life of the teacher were found. The attribute related to appearance was placed at the very bottom of the teacher and students' scales. The teachers and students differed in their views about relative importance of research role of university teachers. The students gave it lesser importance because of examination dominated higher education, whereas the teachers gave it a little more importance because they considered research their most honourable responsibility.

SURVEY AND DATA PROCESSING UNIT, Third All India Educational Survey, NCERT, New Delhi, 1978.

This was the most comprehensive survey of its kind and covered all the areas of education, viz., higher education, school education, technical and vocational education, educational administration and inspection and cultural statistics. In addition, this survey extended to nonformal education, tribal education and facilities for education for the weaker sections of the society.

Keeping in view the extended scope and coverage of the survey, it was decided to involve a number of agencies in the survey to look after different aspects of education. Specially the following agencies were involved: (i) National Council of Educational Research and Training, (ii) Institute of Applied Manpower Research, (iii) University Grants Commission, (iv) National Staff College of Educational Planners and Administrators, and (v) Department of Culture, Ministry of Education and Social Welfare. While different agencies were responsible for organising various areas of the above mentioned survey, the responsibility for organising the survey in the area of school education was that of NCERT. Towards this end as many as twenty-six schedules were canvassed in the area of school education including allied areas like teacher education, pre-primary education, etc.

The major findings were as follows : In India, there were 4,55,729 primary schools, 90,681 middle schools, 33,116 secondary schools, 6,420 higher secondary schools and 3,085 Intermediate and Junior Colleges in December, 1973. The total number of recognised institutions catering to school education in India was 5,89,031.

The percentage increase in the number of primary schools reveals that while in some States and Union Territories the emphasis had been on consolidation, in others the emphasis was on expansion during the period 1965-73. In most of the larger States, the percentage increase in the number of primary schools had been less than twenty percent. Exceptions were Madhya Pradesh, Orissa, Kerala and West Bengal. In Kerala, however, the increase had been compensated by a decrease in the number of middle schools. Prominent among the large States which showed an overall increase in the number of educational institutions were Madhya Pradesh (47.30 percent) and Orissa (33.8 percent). In Delhi also there had been an all-round expansion (38.81 percent). Some small States and Union Territories showed a still larger growth rate (such as Jammu and Kashmir, Nagaland, Manipur, Andaman and Nicobar Islands, Arunachal Pradesh, Dadra and Nagar Haveli), but this was due to their having a small base to start with.

Another point to observe is the considerable increase in the number of secondary schools in almost all the States. The overall increase was 58.23 percent in the number of secondary schools compared to

17.37 percent in the number of primary schools and 17.10 percent in the number of middle schools. Even in some of the bigger States like Gujarat, Uttar Pradesh, Orissa, Rajasthan, West Bengal, Maharashtra, Madhya Pradesh and Karnataka, the increase in the number of secondary schools had been more than fifty percent. The increase had been particularly more in rural areas.

Primary schools/sections were located in 4,22,766 (44.33 percent) rural habitations thereby serving 76.12 percent rural population within the habitation of residence. As many as 90.34 percent of the rural population was served by primary sections located either in the habitation of residence or within a walking distance of one kilometer.

Middle schools/sections were located in 80,837 (8.69 percent) rural habitations thereby serving 28.86 percent rural population within the habitation of residence. As many as 71.97 percent of the rural population was served by the middle sections located either in a habitation of residence or within a walking distance of three kilometers.

The total number of students in India in classes I-V, VI-VIII, IX and onwards was 613 lakhs, 139 lakhs and 77 lakhs respectively, and the corresponding figures for the girls enrolment were 231 lakhs, 43 lakhs and 21 lakhs.

The total number of sanctioned posts of teachers as on 31 December 1973, was 26,90,399 and the number of teachers actually working was 26,25,408.