

विद्यया ऽ मृतमश्नुते



एन सी ई आर टी
NCERT

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Annual Report 1980-81

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ANNUAL REPORT
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राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

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14	17	twenty-first	tenth
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165	12-14	Dr. (Smt.) C. Dhar Dr. J.S. Gaur Dr. (Smt.) A. Bhatnagar	Prof. P.H. Mehta

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THE National Council of Educational Research and Training (NCERT) is indebted to the Union Minister of Education and Culture and the Minister of State for Education for their keen interest in its affairs. The Council is grateful to the experts who spared their valuable time to serve on its committees and extended help in many other ways. Thanks are also due to several organizations and institutions and, in particular, to the State Departments of Education for their cooperation with the Council in carrying out its activities. The Council acknowledges with thanks the assistance rendered to it by the UNESCO, the UNICEF, the UNDP and the British Council.

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The NCERT : Its Role and Structure

Role and Functions

THE National Council of Educational Research and Training (NCERT) was established by the Ministry of Education, Government of India, in September 1961 by merging a number of

specialized institutions like the Bureau of Educational and Vocational Guidance (1954), National Institute of Basic Education (1956), National Institute of Audio-Visual Education (1959), Directorate of Extension Programmes for Secondary Education (1959), etc., which the Ministry had set up to provide academic inputs for improving the quality of school education.

The objective of the NCERT, as indicated in its Memorandum of Association, is to assist and advise the Ministry of Education and Culture in implementing policies and major programmes in the field of education, particularly school education. For the realization of this objective, the Council undertakes the following programmes and activities :

- (a) Conducts, aids, promotes and coordinates *research* in all branches of school education ;
- (b) organizes pre-service and in-service *training*, mainly at an advanced level ;
- (c) organizes *extension services* for institutions, organizations and agencies engaged in educational reconstruction ;
- (d) develops and experiments with improved educational techniques, practices, and innovations ;
- (e) collects, compiles, processes and *disseminates* educational information ;
- (f) assists States and State-level institutions, organizations and agencies in developing and implementing programmes for the *qualitative improvement* of school education ;
- (g) collaborates with international organizations like the UNESCO, UNICEF, etc., and with national-level educational institutions of other countries ;
- (h) extends facilities for training and study to educational personnel from other countries ; and
- (i) serves as the academic secretariat for the National Council of Teacher Education (NCTE).

Research and support for research are important activities of the Council. It supports educational research by providing financial

assistance to outside organizations. It also awards research fellowships so that educational problems are investigated and a band of competent research workers is created. Besides supporting the research effort of others, the Council itself conducts significant research in different areas of education. It conducts educational surveys, which help in educational planning.

The training and extension activities, through which the NCERT assists the States in the adoption of innovative practices, constitute one of its major functions. To ensure the multiplier effect, the Council had adopted the strategy of training key personnel at the State level, whose services can in turn be utilized for training teachers and other local functionaries. With a view to maintaining closer links and liaison with the States and the Union Territories, the Council has established 16 Field Units.

As a part of its activity for dissemination of educational information, the Council publishes four journals covering different content areas and catering to a wide range of readers. *The Primary Teacher* aims at giving meaningful and relevant material to primary school teachers for direct use in the classroom. *The School Science* serves as an open forum for the discussion of various aspects of science education. *The Journal of Indian Education* provides a forum to encourage original and critical thinking in education through discussion of current educational issues. *The Indian Educational Review* provides a forum for exchange of experience in the field of educational research and innovation.

The Council also assists professional educational organizations in the country which undertake innovative programmes for the qualitative improvement of school education.

Developmental activities constitute an important aspect of the Council's work and revision and development of curricula and preparation of textbooks to suit the needs of the new pattern of school education are undertaken as on-going activities. It also develops teachers' guides, students' workbooks, supplementary reading materials and research monographs. It undertakes experimental programmes of non-formal education so that sufficient experience becomes available for adopting non-formal education as an

alternative strategy for universalization of elementary education. It assists the States in conducting surveys and developing curricula and instructional materials for the programme of vocationalization of school education. The NCERT produces quality textbooks, low-cost science-kits for elementary and secondary education/schools, laboratory equipment, educational films, and teaching aids

The NCERT is one of the major implementing agencies for the bilateral cultural exchange programmes entered into by the Government of India with the governments of other countries. It thus maintains a two-way flow of educational ideas with other countries by sending delegations to study specific educational problems relevant to our requirements and by arranging training and study visits of foreign nationals. The Council also deposes its officers to various international seminars/conferences and receives foreign visitors from time to time. The NCERT is one of the Associated Centres for the Asian Programme of Educational Innovations for Development, sponsored by the UNESCO Regional Office of Education in Asia and Oceania, Bangkok.

Structure and Administration

The Council consists of the Union Minister of Education (as the President), the Minister of State for Education, the Chairman of the University Grants Commission, the Secretary to the Ministry of Education, four Vice-Chancellors of universities (one from each region), one representative of each State Government/Union Territory, all members of the Executive Committee (not included above), and such other persons, not exceeding twelve, as the Government of India may, from time to time, nominate (no fewer than four of these have to be school teachers). The Council is the policy-making body.

The *Executive Committee* of the Council has under its control and management all the affairs and funds and has authority to exercise all the powers of the Council. The Executive Committee comprise the President of the Council (as ex-officio President), the Minister of State in the Ministry of Education (as ex-officio Vice-President), the Deputy Minister in the Ministry of Education, the Director of the Council, the Chairman of the University Grants Commission, four educationists with known interest in school education (two of whom

shall be school teachers), the Joint Director of the Council, three members of the faculty of the Council (of whom at least two shall be at the level of Professors and Heads of the Departments), one representative of the Ministry of Education, and one representative of the Ministry of Finance (who shall be the Financial Adviser of the Council). The Executive Committee is assisted in its work by the following Standing Committees :

Programme Advisory Committee.

Finance Committee.

Establishment Committee.

Building and Works Committee.

Managing Committees of the Regional Colleges of Education.

Educational Research and Innovations Committee.

Broadly speaking, the Council consists of three major units. The National Institute of Education at New Delhi has a number of departments/units, concerned with specific areas of research, development, training, evaluation and dissemination. The Regional Colleges of Education at Ajmer, Bhopal, Bhubaneswar and Mysore provide facilities for teacher education at graduate and post-graduate levels, undertake research and function as regional centres and extended arms of the NCERT, projecting in the field for the purpose of follow-up and implementation of the recommendations of the National Council of Teacher Education. The Field Units in 16 States have been established to provide more effective liaison with the State education authorities and State-level institutions set up for providing academic and training inputs to the school system.

The Council Secretariat provides basic service and infra-structural amenities. It is headed by a Secretary who works under the general guidance and direction of the Director and the Joint Director. Two Deputy Secretaries have been appointed to assist the Secretary in his multifarious duties and responsibilities. The Secretariat has also been strengthened by creating some more posts of under-secretaries and supervisory staff.

The Constituents of the NCERT

The various units constituting the NCERT are :

The Council's Headquarters

Council Secretariat
Accounts Branch

The National Institute of Education

Planning, Coordination and Evaluation Unit
Department of Teacher Education
Department of Education in Science and Mathematics
Department of Education in Social Sciences and Humanities
Department of Measurement and Evaluation
Department of Teaching Aids
Extension Unit
National Talent Search Unit
Population Education Unit
Vocationalization of Education Unit
Socially Useful Productive Work Unit
Survey and Data Processing Unit
Educational and Vocational Guidance Unit
Educational Psychology Unit
Child Study Unit
Women's Education Unit
Scheduled Castes and Scheduled Tribes Education Unit
Non-Formal Education Group
Curriculum Group
Primary Curriculum Development Cell
Comprehensive Access to Primary Education Cell
Developmental Activities in Community Education and Participation
Educational Research and Innovations Committee
Journals Cell
Publication Department
Science Workshop Department

Library and Documentation Unit

Central Coordination Unit

The Centre for Educational Technology

The Regional Colleges of Education

Ajmer

Bhubaneswar

Bhopal

Mysore

Field Advisers' Offices

Ahmedabad

Hyderabad

Allahabad

Jaipur

Bangalore

Madras

Bhopal

Patna

Bhubaneswar

Pune

Calcutta

Shillong

Chandigarh

Srinagar

Gauhati

Trivandrum

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The Highlights of the Year

THE year 1980-81 was the first year of the Sixth Five Year Plan. The Council undertook the formulation of its 1980-85 Plan in the light of the priorities that were laid down by the Government for the over-all economic and social development

in general and in educational development in particular. As in the past years, the imperatives of improving the quality of school education, which is the specific responsibility of the Council, determined the programmes that the Council would implement in the five years of the Sixth Five Year Plan. In school education, universalization of elementary education, particularly in the States which have to make a large leeway, and vocationalization of higher secondary education, have been reiterated to be the major priorities.

In the context of the formulation of the Sixth Five Year Plan, an evaluation was made of the past effort in various directions with a view to providing directions for the formulation of new and reorientation of continuing programmes so that the Council could more effectively subserve educational needs. In the case of a number of programmes, the achievement recorded in implementing their pilot stage, has given the confidence to expand their scope, both in terms of initiating them in new States and Union Territories and expanding coverage in those States/Union Territories which had implemented the experimental phase. Included in this category are the UNICEF-aided projects of Primary Education Curriculum Renewal, Developmental Activities in Community Education and Participation, Comprehensive Access to Primary Education, Health and Nutrition Education and Environmental Sanitation and Children's Media Laboratory. The next Master Plan of Operations provides for substantial expansion in the coverage of these projects.

The basic objective of the Council's implementing experimental projects is to provide experiences which assist the Government of India and the State Governments to find feasible solutions for meeting educational challenges. From this point of view periodic evaluation of on-going activities becomes essential. During 1980-81 preliminary steps were initiated for evaluation of the impact of the non-formal education programme being implemented by the Regional Colleges of Education and the Field Advisers' Offices and of the UNICEF-aided projects which have completed four to five years of existence.

A major development during the year was the decision taken by

the Public Accounts Committee to critically review some of the programmes of the NCERT, particularly those which the Accountant General of Central Revenues had commented upon in the review audit report on the NCERT for the period 1974-79. This provided to the constituent units of the Council an opportunity to look at their approaches and programmes more critically.

As for educational tasks in the Five Year Plan (1980-85), universalization of elementary education and vocationalization of education will continue to receive the highest priority in the Council. The Council will develop systematic programmes for population education, nutrition/health education and environmental sanitation, introduction of socially useful productive work, etc. Among other things, the activities will include—

Updating and upgrading the curricula particularly in science and mathematics.

Preparation of quality textbooks.

Evaluation of textbooks.

Reform in the procedures of evaluating student achievement.

Improvement of teacher education.

In-service training of teachers.

Evaluation of textbooks from the point of view of national integration.

Increasing the use of technologies.

Increased emphasis on educational research and innovation.

Against the NCERT's proposal of Rs. 17 crores for the Sixth Five Year Plan which included a provision of Rs. 4.02 crores for educational technology programmes in relation to the INSAT 1982, an outlay of Rs. 12 crores has been approved.

Some of the significant programmes implemented during the year are discussed below.

Under the *Science Education Programme* the main emphasis has been on the introduction of new curriculum materials at the school level and the supply to schools and teacher education

institutions of laboratory equipment, workshop tools, books and audio-visual aids, with a view to improving the teaching of science at school level in the country. So far, 972 centres have been upgraded. In the year 1980-81, 299 centres were equipped.

Science Workshop developed a prototype of the electronic kit for use in secondary schools and finished fabrication of the items for nearly 5000 such kits.

Educational Surveys added another milestone with the completion of the Fourth All-India Education Survey on 31 December 1980 and publication of the preliminary report. This was followed by the secondary analysis of the data on a sample basis, formulation of a design for the sample survey of educational backwardness of girls in eight selected States, and training of State-level personnel in the formulation of district development plans for education based on the data made available by the Fourth Survey.

The NCERT organized the Indo-U.S. Seminar on "Effects on Learning of Deprivation in Early Years". Seven delegates from the United States and ten from India participated. Apart from paper readings and discussions, the delegates visited some experimental projects. The main issues for discussion included different aspects of deprivation, their effect on learning, critical periods of development, the kinds of learning affected, problems of research designs and inter-disciplinary research areas.

The Third All India Conference on Educational Research was organized during the year on the theme "Education of the Disabled". Besides selected research papers, lead papers were presented in specific areas of disabilities. The concluding session was devoted to identifying major problems and issues of research in education of the disabled. Along with the Conference, an exhibition of photographs received from the UNICEF and the British Council was organized.

For the office-bearers of All-India Primary Teachers' Federation, an *Orientation Course* on the transformation of elementary

education was organized with the objective of acquainting their executive members with new trends in the field and thereby to help the dissemination of new ideas and trends which may lead to an improvement of productivity, self-employment and the development of the values of secularism, socialism and national integration.

A *Training Course* in primary teacher education was organized for UNESCO Fellows from Bhutan. The course consisted of discussion of various aspects of teacher education.

The *Regional Colleges of Education* in Ajmer, Bhopal, Bhubaneswar and Mysore carried out a variety of in-service programmes and pre-service courses with a view to bringing about qualitative improvement in school education according to the educational needs and priorities of the States in respective regions.

Under *Measurement and Evaluation*, the NCERT initiated an in-depth study of the Government of India Merit Scholarship-holders placed in Residential Schools. Preliminary work in respect of the project has already been completed. A questionnaire seeking information about the merit scholarship-holders was sent to all the residential schools where they were studying. Some information has been received and is being analysed.

In *Educational Psychology*, a review of tests was conducted by experts covering intelligence, aptitude, interest, attitudes and personality.

The following *films* related to school curriculum have been produced during the period under review :

- (i) Graphic Aids in Teaching, and
- (ii) Elasticity.

Publications include research monographs on physical education curriculum, national survey for population education, innovative educational projects, national science exhibition, environmental studies evaluation, fourth educational survey, effectiveness of micro-teaching, etc.

Regarding *Women's Education*, the Council conducted a high-level consultation meeting on the formulation of programmes for girls in the perspective of universalization of elementary education and vocationalization of higher secondary education.

UNICEF-aided Projects on Science Education, Comprehensive Access to Primary Education, Primary Education Curriculum Renewal, Developmental Activities in Community Education and Participation, and Education for Nutrition, Health and Hygiene and Environmental Sanitation took significant strides towards improvement of school education. Preliminary evaluation of the experience has led to the expansion of the coverage of these projects.

The *National Talent Search* examination was conducted at three different levels, viz. X, XI and XII all over the country at 430 centres. A total number of 80,000 candidates appeared in the examination. Summer Schools and Summer placement programmes were organized for 379 NTS scholars at 27 different places.

In *Programme Evaluation*, the NCERT organized four working groups to obtain the reactions of State-level functionaries working at different levels of administration to the tools of monitoring and evaluation of universalization of elementary education programme. A working group of representatives of the Planning Commission, the Ministry of Education, the National Institute of Educational Planning and Administration, the National Informatics Centre and the NCERT deliberated on the action plan.

The 21st nine-month post-graduate diploma course in *educational and vocational guidance* attracted 25 trainees this year.

In *Teacher Education*, seventh all-India competition of seminar readings was held. A cash prize of Rs. 500 and a merit certificate were awarded to six elementary school teacher educators from Madhya Pradesh, Rajasthan (2), Uttar Pradesh and Maharashtra (2) and four secondary-level teacher educators from Madhya Pradesh, Rajasthan, West Bengal and Maharashtra. The work on the implementation of the NCTE curriculum by different universities continued.

In *Educational Technology* the NCERT's film *Kishan and the Magic Chariot* won the prestigious "Red Ribbon Award" from the American festival of short films organized by the Educational Film Library Association in New York in 1980.

In *Teaching Aids*, films on environment, lamps and solar eclipse were tested/evaluated. The NCERT also produced tape-slides on population education, audio-tapes for the blind children, tape-slides system on educational technology and films on graphics and elasticity.

In *Child Studies* the NCERT conducted State-level toy-making competitions in almost all States/Union Territories giving first, second and a number of consolation prizes to the winning entries. The State-level competitions culminated in the national competition wherein, besides the first three best prizes, another three consolation prizes were also awarded to educational toy-makers using waste materials.

The twenty-first *National Science Exhibition* was organized at the Teen Murti House in November 1980 to coincide, as usual, with Jawaharlal Nehru's birthday anniversary celebrations. About 200 exhibits were displayed and more than 500 students and teachers participated.

In *Curriculum Development*, meetings of a number of expert groups were convened to identify areas where the Council needed to direct its research and development effort.

The *Field Units* of the NCERT contributed their mite in running non-formal education centres for the universalization of elementary education of non-school-joining children of the age-group 6-14 and the drop-outs. In addition, they were instrumental in approving experimental projects in secondary schools for innovation and experimentation.

The *Extension Programmes* of the NCERT included the celebration of the UN Day and the Human Rights Day. A book entitled, *The United Nations : What It Does*, was also released.

Future Directions

While every effort needs to be made to consolidate the gains that have already accrued, it is also important that the Council should be forward-looking and identify educational areas where it must give a lead. A number of areas have, from this point of view, been identified in which innovative activity will have to be initiated in a substantial measure. In this are included—

The decision to undertake with UNICEF assistance experimental programmes of early childhood education, particularly in view of the significant role that such education plays in creating school readiness among children.

Arrangements for training teacher educators for special education, particularly with a view to meeting in the normal school setting the educational needs of children suffering from various disabilities.

Institutional mechanisms required for utilizing, for educational purposes, the communication facilities that the Indian National Satellite (INSAT), which is likely to be placed in orbit in early 1982, will provide.

The decision to undertake a major survey in eight educationally backward States with the purpose of identifying the factors that impede the accelerated growth of education among girls.

Organization of seminars of experts for identifying the effects that early deprivations have on the learning of young children, for indicating the research priority in the area of education of the disabled and the nature, causes and magnitude of learning disabilities.

A critical evaluation of the teacher education courses of the Regional Colleges of Education so that they can be made more effective for the preparation of innovative, competent and dedicated teachers.

3

Early Childhood Education

IN view of the importance that the early years of the child have in his or her development, the Council undertakes a number of activities in the area of early childhood education. The main foci of these efforts are facilitating the under-

standing of the developmental process of the Indian child, the development of indigenous approaches to early childhood education and of instructional materials, the training of personnel for pre-school education and the evaluation of on-going activities, and the development of materials for the young child, such as toys, pictures, books, audio-tapes, etc. The programmes that were organized during the year are discussed in the following paragraphs.

Training

Teachers from Afghanistan, Bhutan and Maldives were given training facilities in Early Childhood Education. The training commenced on 21 January 1981, and comprised a theory course in early childhood education, preparation of low-cost play materials and teaching practice. Besides these, visits to educational institutions in Delhi, Ahmedabad, Baroda, Kosbad, Bombay, Madras and Bangalore were also included as part of the programme.

Three State-level training programmes with emphasis on the development of low-cost material were organized in Bihar, Orissa and Sikkim, for the pre-school and early primary school teachers from tribal and remote school areas. As for Orissa, twenty-one participants (Guides and Supervisors) attended a workshop for pre-school teachers from tribal areas of Koraput; the workshop was organized in September 1980. The participants were oriented in the methods of pre-school education as also the preparation and use of low-cost simple play materials.

During a six-day workshop organized at Gangtok for pre-school and primary school teachers from 18 to 23 September 1980, thirty-one participants, consisting of untrained pre-primary teachers, ICDS staff and creche workers, were oriented in the methods and practices of pre-school education, and preparation and use of low-cost play materials. This was organized in collaboration with the Department of Education and Social Welfare, Government of Sikkim.

A workshop on low-cost simple play materials and games for children was held for Bal Sevikas working in the tribal areas of Bihar, at Holy Shiksha Prashikshan Kendra, Ranchi, from 12 to 17

November 1980. Thirty-five participants from the tribal areas attended the six-day workshop

Two State-level training programmes for teacher educators, one each for Andhra Pradesh and Uttar Pradesh, were organized. In the fifteen-day training programme for the teacher educators of Andhra Pradesh, organized at SCERT, Hyderabad, from 4 to 18 December 1980, twenty-four participants, seventeen from colleges of education and elementary teacher training institutes and seven from SCERT itself, participated. Similarly, a State-level training programme on early childhood education was organized at SIE, Allahabad, for fifteen days. The courses aimed at acquainting the participants with the modern trends in child development and their application in early childhood education. The main foci of the course content were the significance of early childhood education and programme planning and the various aspects of child development.

Among other activities the course included field trips, film shows, panel discussions and special lectures. Practical activities in creative drama, creative arts, music and games, puppet play and development of material for language and cognitive development of children were also an important aspect of the programme.

A three-day orientation programme in school readiness was held at NCERT from 28 to 30 October 1980 to orient the personnel of SCERT's/SIE's to the School Readiness Kit, developed for those children who enter Class I without any pre-school education. Sixteen participants from fifteen States/Union Territories attended the programme and each of them was given a school readiness kit during the concluding session. The kit is a package of learning activities to be organized for children in the first six weeks of school. It includes songs, games, stories, creative activities and specific readiness activities.

A seven-day workshop for Anganwadi workers on child development and low-cost simple play materials and games for children was organized from 6 to 12 August 1980 at Achhabal in collaboration with Directorate of Social Welfare, Jammu and Kashmir State. Fifty-eight participants attended the workshop.

At the request of SIE, Delhi, three-day orientation course was organized for teacher educators of nursery training institutions of Delhi from 28 to 30 August 1980 at the NCERT. The course was organized to orient teacher educators in the methodology of teaching Hindi, English, Mathematics and Environmental Studies (Science and Social Studies) up to the level of Class II.

Two members of the staff of the Children's Education Centre, Karma (Karjat Agricultural and Rural Development Assistance) Mal.arashtra, were trained in early childhood education from 23 to 29 July 1980. During the programme they were exposed to various school activities and play materials. They were given apprenticeship training in IIT Nursery School.

A workshop on language development for the teachers of Aurobindo schools was conducted on 10 October 1980 at the new premises of the Mother School, Delhi. Twenty-seven participants attended the programme. The programme consisted of a brief talk on different activities for language development of the young child, demonstration of different methods, story-telling, games, puppet-play, etc., and preparation of materials like story-telling charts, conversation charts, flannelgraph, story-pictures and puppets, etc.

Research

With a view to establishing a working relationship between the school and the home, a feasibility study of home intervention for the disadvantaged children enrolled in Classes I and II was launched. The study is expected to help teachers to follow the child-centred approach and help parents to understand the importance of facilities for play and language development provided in the home and their impact on school achievement. The results are being analysed, and the study is expected to be completed within a few months.

As in the past, assistance in the form of travel grant was provided to teachers, teacher educators and other workers to make a study of the on-going projects in early childhood education in the country. Six studies have been completed and the project reports submitted. These include—

A study of the Early Childhood Education programmes for the under-privileged children.

Balwadis in the Tribal and Rural Areas of Orissa and Madhya Pradesh.

Curriculum and Innovations in Instructional Materials in different types of pre-primary education systems.

Children's literature in Bengal.

A study of the Missionaries of Charity in Eastern India.

Evaluation of the Educational Potential of Museums in Eastern India for children in the age group of 4-10 years.

Developmental Work

Identification of indigenous toys and their use for the education of pre-school children is an important project of the Council's Child Study Unit. The project aims at encouraging educational toy-making at the local level with locally available waste material for providing learning experiences to children as well as to encourage teachers to try out their ideas in toy-making. The State-level competition—first phase of the project—was carried out by the Field Advisers of the NCERT in the areas under their jurisdiction. Entries for each State/Union Territory were adjudged by a committee of three judges, and the winners were given cash prizes as well as certificates of merit during the prize distribution-*cum*-exhibition function organized for the respective State/Union Territory.

A three-day national competition—the second phase of the project—for the first prize winners of the State-level competition was held at the NCERT during 19-21 February 1981. Thirteen first prize winners from the States/Union Territories participated in the programme. Participants prepared toys on the spot. Following the criteria laid down a panel of three judges adjudged the entries and unanimously awarded first, second and third prizes as well as three consolation prizes. An exhibition of toys prepared at the State and the national level competitions was held at the NCERT on 21 February. A prize distribution function was also organized on the same date.

A three-day national seminar on child development was organized at the NCERT from 11 to 13 March 1981. The seminar was conducted with the objective of compiling and disseminating information about research being done in the area of child development. The seminar discussed about 25 papers on themes such as health and nutrition, cognitive development, socio-emotional development, early childhood education and need of direction for future research. The seminar also discussed the possibility of interdisciplinary research involving areas like nutrition and health, paediatrics, psychology, child development and education. About twenty-five experts in child development, psychology, paediatrics, nutrition and health, and education from various educational and research institutions in India participated in the three-day seminar.

A workshop was organized at the NCERT to discuss the proposed new book on "Symposium on Child Development" from 24 to 25 October 1980. Seven experts, besides the departmental faculty, attended the workshop. As there is dearth of books in child psychology based on Indian data, the experts recognized the need for such a book and deliberated on the outline, structure and content of the book. They also suggested the names of the authors who could contribute to the proposed volume and the procedure to be adopted in writing the chapters.

Materials Development

Realizing the paucity of well sequenced and entertaining materials for young children, a Children's Media Laboratory (CML) was set up in the NCERT with the support of the UNICEF. The specific objective of CML is to develop and discover inexpensive, non-formal and effective media of educational and entertainment value for children from 3 to 8 years of age, for effectively conveying the information, skills and attitudes that will enhance their life opportunities. One of the major achievements of the CML has been the creation of awareness about the importance of using media in making learning more enjoyable and meaningful to young children. A review of the programmes undertaken should give some evidence in this direction.

Development of play materials is one of the major areas in which

work is being done. The aim of this project is to demonstrate how effective learning can take place by using folk toys and other inexpensive locally available material. The project involves systematic survey of the play materials and games available in the State, the exploration of educational potential of these toys and developing manuals for teachers, identification of the lines on which these toys need improvement, and design and development of new toys out of locally available material.

In 1980, the project was in operation in the States of Madhya Pradesh, Jammu and Kashmir, Andhra Pradesh, Manipur, Tripura, Orissa and Kerala. After completing the survey, information was compiled and manuals for teachers were prepared. In Orissa and Kerala, the survey is in progress and will be completed shortly. The manuals developed are being processed for printing. The play materials manual of Madhya Pradesh has been developed in Hindi.

In order to develop children's interest in reading and to help them learn to read better, nine picture books for children have been developed. These are colourfully illustrated and serve as read-aloud books for pre-schools and beginning readers for early primary school children. These books carry instructions for parents and teachers on how to use them and suggest related activities that can be organized to enhance language development in children. Two have been printed so far. The others are in the press. In continuation of the picture book series, ten more books in Hindi on concepts of form have been developed.

The aim is to acquaint the child with these concepts using examples from his environment. All booklets on colour and two on shapes have been printed.

A collection of games of young children has been made. These games are categorized into mother-infant games, games of pre-school children and games of primary school children. Suitably illustrated with photographs, this publication is meant for pre-primary and primary school teachers and parents who have adequate working knowledge of English. This book is in press.

Prototypes of playing-cards showing animals, vegetables, insects,

fruits and birds have been developed. These cards can be used for a variety of games involving classification, number skills, etc. These are being printed so that they can be tried out with children.

Four board games for children have been developed in order to inculcate concepts of hygiene, nutrition, number and language skills. Two of these 'Safai Ki Siri' and 'Ganit Khel' have been printed. Sectioned into squares, Safai Ki Siri has some hygiene principles written on some squares, e.g. Do you clean your teeth every day? Do you pick your nose?, etc. Children move up or down the ladder depending on whether they step on a square with a positive or a negative habit. In Ganit Khel a card matching the colour of the square has to be lifted and simple arithmetic problems written on it have to be solved.

Slide-*cum*-tape programmes on different items of interest have been developed. These include—

Low-cost play materials meant primarily to train teachers to make toys out of low cost and waste materials. This developed as a follow-up programme of the APEID regional conference held in Nepal.

Slide-tape programme on pre-school activities for teachers on different activities in a nursery school.

"Children of the Sea" focuses on daily activities of a fisherman's children in Madras.

Work on the following slide-tape programmes is in progress :
Trees, Water Play, Social Awareness.

The audio-tape programme under Children's Media Laboratory has two objectives, viz. survey of the position as it exists and evaluation of the appropriateness of the broadcasts for young children, and development of prototypes of radio programmes for young children in the age group of 3-8 years.

In 1980, radio monitoring panels were set up in Pune, Rajkot, Bangalore and Jullundur. Programmes for tiny tots (3-8 years) broadcast from these stations of the All India Radio were monitored for a period of three months. Reactions of children to these broad-

casts were recorded on a proforma. It has been observed that, by and large, these programmes are inappropriate for the target listening group.

Thirteen prototypes of radio programmes have been produced this year. These are fifteen-minute capsules that include a story, a song, a game and some conversation for children on themes of interest to them. Programmes on different animals and their sounds, on colours, cooking implements and ingredients and five sense perception tapes have been developed. These have also been evaluated.

4

Curriculum and Textbook Development

CURRICULUM development and preparation of instructional materials are important concerns of the Council. As for curriculum, it develops a broad framework which is helpful to State Governments and Boards of School/Secondary Education to deve-

lop their curricula and syllabi. The NCERT has also developed textbooks for the schools affiliated to the Central Board of Secondary Education and those maintained by the Kendriya Vidyalaya Sangathan.

CURRICULUM DEVELOPMENT

The NCERT undertakes projects related to the planning, development, implementation, review and renewal of the curriculum. Some of the programmes implemented in this area are discussed in the following paragraphs.

Effective Use of School Curriculum

The project aims at developing models of curriculum which is based on the stages of development of a child and a comparative study of the traditional and development-based model of the curriculum. The project has now entered the experimental phase. Following brochures have been published during 1980-81 :

Strategies of Using Environment for Teaching and Learning at the Primary Level (Hindi)

Evaluation of Pupil Development

Pupil Development Evaluation Scale

The Arts and the Primary School Curriculum.

Curriculum analysis in relation to developmental objectives of education, psychology of the child and teaching learning strategies has also been completed. With this, the preparation of resource material for use in the ensuing experimental phase is also ready now.

Meaningful Activities for Effective Curriculum Implementation

In this context work has been done on the identification of potential school activities and the development of their operational strategy so that what passes on as casual school routine of 'co-curricular activities' could become an integral part of the school curriculum and a tool for effective curriculum transaction. Activities like morning

assembly, general meetings, celebrations of special days, etc., have been analysed in relation to their educational potential and social relevance, and have been time-budgeted in the time-table and school calendar so as to create through them a healthy school environment conducive to the education of children. The activities are also being processed for preparing a 'calendar of activities' and a teacher's manual on "Meaningful Activities for Effective Curriculum Implementation".

Comparison of Curriculum Load at the Secondary Level in Different States

The project deals with a problem which has assumed great importance in the recent past and has been of much concern for parents, students and teachers. During 1980-81, identification of components of curriculum load and preparation of appropriate tools for its assessment have been completed. The NCERT is now to initiate the collection of data from the States of Haryana, Maharashtra, Kerala and Orissa, and the Union Territory of Delhi.

Curriculum Development in Physical Education

The project commenced in August 1978, as a sequel to the recommendation of the *Curriculum for Ten-Year School—A Framework*, prepared by the NCERT and the recommendation of Shri Ishwarbhai J. Patel Review Committee on *Curriculum for the Ten Year School*. The major purpose of this project has been to renew the curriculum in physical education with a view to integrate it with the 10+2 pattern of education. The guiding principle for curriculum improvement in physical education has been that the programme should be available for all pupils and not for the selected few.

During the year under report the following work was done :

A document entitled *Physical Education—A Draft Curriculum for Classes I-X* was published and circulated to all the State Departments of Education and various physical education experts for their comments requesting them to take suitable steps for its adoption in the States.

A guide for the teaching of yoga asanas to students in Classes

V to X has been sent to the press and is likely to be published soon.

A Teachers' Handbook on Physical Education for Classes I to V has been brought out in a mimeographed form and circulated among experts.

The draft of a teachers' guide on physical education for Classes VI to X has been developed.

A draft curriculum in physical education for the higher secondary (+2) stage both as an elective subject and as a compulsory activity for all pupils has been developed.

Enhancing the Role of Arts in Formal and Non-formal Education

It is a research-cum-development project which aims at systematically developing a classroom teaching-learning strategy in arts. A special purpose of the project is to integrate arts with other subjects for an effective learning process. The emphasis is on process approach to teaching of arts as compared to the traditional approach. Work done is mainly on four areas, viz.,

Relating creative Arts experiences to primary school curriculum.

Media and material for enhancing the role of arts in school curriculum.

Teacher's orientation programme towards 'process experience approach' to various arts.

Strategy of evaluation in arts.

In order to provide a theoretical framework and guidelines to the project, a brochure entitled *The Arts and the Primary School Curriculum* has been brought out.

Development of Draft Curriculum in Different Areas of Arts at Different Stages of Education

Under this project the draft curriculum in arts for Classes I to X, which was prepared in 1978, has been reviewed and finalized. A well-knit theoretical framework based upon latest trends in education in arts all over the world has been developed. A special feature of the thesis here is the process experience approach to various arts

developed by the NCERT over a period of six years. A composite art programme for Classes I to V is based on the creative experiences of children pertaining to the elements of both visual and performing arts. For Classes VI to X, programmes in visual arts and performing arts have been provided separately along with hints for teachers with regard to teaching-learning and motivational experiences and a strategy of evaluation in arts.

Linking Programme of Culture with Important Areas of Development

With regard to the +2 stage of school education relevant special problems and issues have been identified keeping in view especially the vocational stream, vertical mobility for university education and the advanced technical training which have given rise to new problems and issues for art education. So far the strategy for vocational art courses has been developed and first draft of the visual art courses for academic stream has been prepared. A comprehensive strategy for the implementation of art programmes has also been worked out. Important recommendations with regard to developing art-oriented vocational courses and core aesthetic programmes have been made especially in the context of "linking programmes of culture with important areas of development."

Preparation of Instructional Materials in Arts for Teachers and Students

Under this project the following brochures pertaining to the implementation of "Ten-Year School Curriculum in Arts" have been prepared, reviewed and finalized :

Material/Media and Techniques/Methods for Creative Art Activities.

Creative Drama at the Primary Stage.

Construction of Puppets and Child Drama at the Primary and Middle Stages.

"Chitra Kala Ki Kahani" (The story of Indian painting).

Suggestions have been made with regard to the production and

supervision of suitable illustrative materials and reproductions of art work required to support various brochures.

Preparation of Teachers' Handbook in Arts

With a view to helping teachers in the implementation of art curriculum, preparation of teachers' handbook in arts has been initiated. A format of teacher's handbook in visual arts has been finalized and further work is to be commissioned to suitable authors.

Problems and Issues related to Various Aspects of Curriculum Development Implementation

The problems and issues have been summarized in the monograph entitled "Our Curriculum Concerns" under four heads, viz.,

- (i) Curriculum and Pupil Development.
- (ii) Curriculum and National Development.
- (iii) Curriculum and Universalization of Education.
- (iv) Teacher Participation in Curriculum Development and Implementation.

Discussions on the above aspects have been supported by ten background papers reproduced in the monograph.

Curriculum Resource Centre

The Centre set up by the NCERT has collected important information and materials from various curriculum agencies within the country and abroad. They have been systematically arranged so as to make them readily available for reference. Periodically, special brochures are also brought out. During the year 1980-81 two brochures entitled *Reference Material on School Curriculum* and *A Select Annotated Bibliography on School Curriculum* were brought out by the Centre.

Curriculum Bulletin

Three issues of the *Curriculum Bulletin*—a quarterly publication of the Curriculum Group—have been brought out during 1980-81. Its latest issue is a special number devoted to the "Sixth Five Year Plan and School Curriculum" and refers to the objectives of educational development during the plan period enlisted in the Sixth Five Year Plan document.

Effective Use of School Curriculum

The Curriculum Group has also contributed to the NCERT-State collaboration in the context of curriculum development and implementation. It has represented the NCERT on the curriculum committees of a couple of Boards of School Education. The Curriculum Group has also been in touch with the Directorate of Education, Nagaland, so as to help them in modifying their school curriculum. A couple of States have also expressed interest in initiating work for the effective use of school curriculum on the lines developed by the NCERT.

SOCIAL SCIENCES AND HUMANITIES

In social sciences and humanities, the NCERT deals primarily with the development of curriculum and preparation of textbooks and other instructional materials. It organizes training and orientation programmes for key persons in the States. Research projects that have a direct bearing on the improvement of classroom instruction are also undertaken. Its activities cover the entire school stage from Class I to Class XII.

The main areas of work in social sciences are environmental studies, social studies, history, geography, civics and citizenship education, political science, economics and sociology. In humanities, the NCERT is concerned with Hindi as mother tongue and second language, English and Sanskrit. It also works in the areas of art education, moral education, yoga, population education and adult education.

Curriculum Development

The NCERT finalized curriculum in productivity education for incorporating it in the existing subjects at the school stage. The purpose is to cultivate among school children proper attitudes towards work.

As one of the on-going activities of the department, it has undertaken a revision of the curriculum in Hindi as mother tongue for Classes IX to XII.

A syllabus in methodology of teaching economics was developed for its introduction in colleges of education, preparing teachers at the secondary school level.

Curriculum in Languages

The NCERT has appointed an Advisory Committee for School Curriculum in Languages to review the work done on the development and implementation of curriculum in language courses, to lay down general policy guidelines for developing suitable curricula at school stage, to suggest areas of research and development, to consider ways and means of producing suitable instructional materials and to suggest measures for improving the methodology of language teaching in schools.

A sub-committee has also been constituted. This sub-committee has started functioning through the following three working groups :

Review and Development of Curricula in Primary Languages.

Review and Development of Curriculum in the Second and the Third Languages.

Methods and materials.

Preparation of Textbooks

In the area of Hindi as mother tongue, the NCERT finalized the manuscript of the Class V textbook "Bal Bharati—Bhag V". With the preparation of this book the NCERT has completed the cycle of Bal Bharati series meant for Classes I to V.

In the area of Hindi as second language, the NCERT has been working with the State of Arunachal Pradesh for developing a series of Arun Bharati textbooks for the primary school stage. During this year, it has finalized the manuscript of "Arun Bharati—Bhag II" meant for Class II.

In the area of English, the NCERT continued to work on the series, "Steps to English" and finalized the manuscript of "Step IV" meant for Class IX.

In Sanskrit the NCERT revised the textbook, *Kavya Tarangini*, now meant for Class XI. It was earlier meant for Class XII.

Development of Instructional Materials other than Textbooks

The following instructional and other materials have been developed in various social sciences and humanities.

Hindi workbook for Class V “Bal Bharati Abhyas Pustika-Bhag V”, workbook on “Arun Bharati—Abhyas Pustika-Bhag II (Class II) for use in Arunachal Pradesh.

English supplementary reader and a workbook for Class IX developed in collaboration with CIEFL, Hyderabad.

In the series “Read for Pleasure” Books IV and V for Classes VII and VIII have been developed.

Sanskrit workbooks for Classes V and VI for the schools of the Kendriya Vidyalaya Sangathan and manuscripts of the following five supplementary books :

Hitopadesh (Classes IX and X)

Panchatantra (Classes IX and X)

Bhava Bhooti Aur Unke Nataka (Classes XI and XII)

Bhasa Aur Unke Nataka (Classes XI and XII)

Dandi Aur Unka Dashkumar Chrit (Classes XI and XII)

History, Geography and Civics : The NCERT organized a workshop at Patiala to develop criteria and tools for the evaluation of history textbooks from the standpoint of national integration. The workshop also concerned itself with the tools required for a comprehensive evaluation of textbooks.

Seventy-five panels covering various events/milestones in our national struggle for freedom, covering the entire period from 1857 to the attainment of Independence prepared through a workshop.

Supplementary book “Environmental Protection and Conservation of Resources”.

The United Nations : What It Does was prepared in connection with the UNESCO international seminar-cum-workshop on introduction of the United Nations and its activities in the school

curricula. The book was released by Smt. Shiela Kaul, Minister of State for Education, Government of India.

Manuscript of a handbook on Youth Parliament was also developed for the use of Civics teachers. The project has been launched in collaboration with the Ministry of Parliamentary Affairs, Government of India.

In connection with the birth centenary of Munshi Prem Chand manuscripts of the following three books have been finalized :

Prem Chand : Jeevan Aur Sahitya (Hindi)

Prem Chand : Zindagi Aur Adab (Urdu)

Prem Chand : The Voice of Rural India (English)

A number of projects of developing supplementary reading materials, initiated earlier, continued during the year. Among others, these included :

Teachers' Handbook on Practical Work in Geography for the plus-two stage, i.e. Classes XI and XII.

Picture book in Geography for developing picture reading skills among children.

Geographical charts for classroom teaching.

“Handbook on Designs of Practical Activities in Civics” in collaboration with a few schools of Delhi Administration.

Training and Orientation

One of the important programmes which the NCERT undertook in this area was the training of resource persons in English. The NCERT, in collaboration with the CIEFL, Hyderabad, has prepared textual materials for Course B of Class IX. These books are to be introduced from July 1981 in the high schools of Delhi Administration and those that are affiliated to the Central Board of Secondary Education. Sixty-five post-graduate teachers who would act as resource persons were oriented for a period of six days each (in two batches) from 16 to 28 February 1981. These resource persons are expected to orient 3,000 trained graduate teachers in Delhi.

The programme was organized in collaboration with the British Council, Delhi Administration, the Central Board of Secondary Education and the CIEFL, Hyderabad. Methodology adopted in orienting the teachers consisted of lectures, tutorials, seminars and demonstration lessons. Two British Council experts, one from the U.K. and the other from its Delhi office, acted as consultants for these programmes. The British Council also presented a set of useful reference literature to every participant.

Arunachal Pradesh was assisted in orienting teachers in Hindi and Social Studies. In collaboration with the University of Pune an orientation programme was organized at the Indian Institute of Education, Pune, for 45 teacher educators in Geography from the State of Maharashtra and the Union Territory of Goa, Daman and Diu.

An eight-day orientation course in the use of language laboratory and software programming was organized at Vidya Bhavan Teachers College, Udaipur, for teacher educators. Sixteen tape-scripts were developed.

Research Projects

A survey of methods and techniques of teaching English for Class VI in the non-English medium schools of Delhi was undertaken. The survey is expected to throw light on the methods that are being actually used by the teachers and the reasons thereof. It would also help in finding out the effects of the different methods of teaching on the attainments of the students. A sample survey was undertaken on methods of teaching Sanskrit in 32 randomly selected Delhi schools. Questionnaires and interviews were the main techniques used.

Special Projects

The NCERT has taken up work in the areas of adult education and moral education. In the case of the former, graded curriculum in literacy and other related skills for the illiterate adults working in the urban areas of Haryana has been developed. The instructional materials developed in collaboration with the Haryana Depart-

ment of Education consisted of a primer, a teacher's guide, a workbook and a collection of stories. For Madhya Pradesh also curriculum for neo-literates has been developed in collaboration with the State Department of Education. Materials developed for the State include a textbook, a teacher's guide and a workbook.

A two-week orientation programme for supervisors was organized at Jabalpur (M.P.) in collaboration with the Panchayat Welfare Department of the State. An orientation programme for the instructors of the Adult Education classes was held in the Tihar Jail, Delhi, to teach literacy to the inmates of the prison. All the instructors were selected from amongst the prisoners undergoing long-term sentences.

Moral Education

In the context of growing concern for value orientation of education, the Council has initiated a number of programmes. A status study of the present position of moral education in Indian States and Union Territories has been completed and an overview has been developed. The NCERT financially supported Sri Aurobindo Centre, New Delhi, to organize a seminar on social, moral and spiritual values in education on 28-30 March 1981.

Collaboration with State and Other Agencies

The NCERT assisted the Central Board of Secondary Education in developing courses and curriculum guides for its open school scheme in the areas of languages and social sciences.

It continued to assist the training college of Blind Relief Association, New Delhi, in delivering talks on methods of teaching in various social sciences and languages.

SCIENCE EDUCATION

The NCERT continued to play a key role in accelerating the pace of science and mathematics education at school level in the country. Attention was aroused on the preservation of environment and its use as a resource for science instruction. Health and nutrition education

also received its due share in this effort. The major activities in this area consisted of developing new curricular materials, preparation of teachers' guide, material for practical work, preparation of test items and training of key personnel from the States.

Environmental Studies

In the area of environmental studies the major thrust was towards the training of key personnel to help them understand how local environment can be used for developing basic skills of enquiry. One set of slides, cassette tape sequences developed under the project was made available to each State/Union Territory participating in the project.

Health and Nutrition Education

In health and nutrition education a manual for elementary school teachers, *How to Achieve Better Health*, was published. The manual provides information as well as guidelines to primary school teachers to develop desirable habits and skills in school children, for child-to-child activities, for better habits, better food, better care and better surroundings.

Development of Handbook for E V S Teachers

A handbook for the training of in-service teachers was compiled in which major recommendations of eight regional workshops of environmental education held during the year 1979 have been included.

Development of Text Materials and Teachers' Guides

The following textbooks and teachers' guides were under different stages of development/evaluation as indicated below :

<i>Subject</i>	<i>Title</i>	<i>Classes</i>	<i>Stage of Development</i>
General Science	Science for Secondary Schools—Part I and Part II	IX-X	Corrected for reprint
-do-	Teachers' Guide Part I	IX	Under Print
	Teachers' Guide Part II	X	Being edited

<i>Subject</i>	<i>Title</i>	<i>Classes</i>	<i>Stage of Development</i>
Physics	Textbook of Physics for Higher Secondary Classes : English Version	XI-XII	Corrected for new combined edition
-do-	Teachers' Guide for Textbook of Physics for Higher Secondary Classes : Part I	XI	Published
-do-	Textbook of Physics for Higher Secondary Classes : (Hindi Version Parts I and II)	XI-XII	Corrected for reprint
Chemistry	Textbook of Chemistry Parts I and II (English and Hindi Versions)	XI-XII	Corrected for reprint
	Project-Oriented Practicals in Chemistry	XI-XII	First draft ready
	Concept-centered experiments in Chemistry	XI-XII	Experiments designed and ready for try-out
	Textbook of Chemistry Parts I and II	XI-XII	Evaluated in a Workshop
Biology	Textbook of Biology (English and Hindi Versions)	XI-XII	Reviewed, revised and corrected
	Teachers' Guide for Textbook of Higher Secondary Classes	XI-XII	Being edited
Mathematics	Textbook of Mathematics Part 5 (English and Hindi Versions)	XII	Published
	Textbook of Mathematics	IV	Ready for printing
	Teachers' Guide for Textbook of Mathematics	IX	In preparation
	Textbooks of Mathematics	I-X	Corrected for reprint

Training of Key Personnel from States

A number of orientation programmes were organized in different subject areas to familiarize teachers/teacher educators/key personnel with the new materials prepared for the 10+2 pattern of education. These included :

Orientation programme on integrated science for key personnel from States.

Two enrichment programmes on Biology for key personnel and teacher educators for acquainting them with materials prepared for secondary and higher secondary stages, and orientation of key personnel of States/Union Territories to familiarize them with new course materials for experimental work in Chemistry at the +2 stage in Chemistry.

Coordination with International Agencies

A review workshop was organized in May 1980 with UNESCO assistance to review the work done by the regional centres on nutrition and health education since the inception of the project.

A national workshop for the development of teaching-learning materials for linking science with rural environment was sponsored by the UNESCO and organized by the NCERT in July 1980. The report of the workshop has since been published. Major recommendations emanating from this workshop are : greater emphasis should be placed on the try-out and implementation of a wide variety of science instructional materials presently available; efforts should be made to prepare a new science curricula, complete in all respects, to replace the existing science curricula instead of a patch work with the help of a few isolated units and exemplars for the entire range of science education; and programmes should be so designed as to achieve their greater acceptability by teachers, the community and users and to achieve this, projects should be drawn out to properly motivate, orient and train teachers/supervisors/curriculum developers at the right levels.

A working group meeting on curriculum development in health and nutrition education sponsored by the UNESCO was also organized by the Department in which participants from 12 countries took part. The major objectives of this meeting were :

To analyse curricula for the development of better health and nutrition education.

To examine exemplar materials brought by the participants to the meeting.

To study the improvement of the quality of nutrition and health

education with particular reference to the introduction of nutrition and health education at the primary level.

To suggest guidelines for the development of curricular and instructional materials relating to health and nutrition

To suggest the role of different agencies and persons—administrators, supervisors, teachers, students and community—in developing, implementing and evaluating health and nutrition education programmes.

Projects Undertaken

Research projects approved by the Educational Research and Innovations Committee (ERIC) and other on-going projects undertaken by the staff members are :

Open-ended experiments in Physics.

Plant-based experiments using the environment and local resources.

Developing need-based and community-oriented self-learning materials in Biology.

Personalized system of education in Physics.

Grade placement of concepts in Physics.

Study of implementation of integrated science curriculum.

Identification of the system operating in the environment for meaningful living with daily life situations.

Developing guidelines for evaluating pupils' performance in +2 stage Chemistry experimental course.

The research monographs produced include Open-ended Experiments in Physics and Laboratory Procedures and Maintenance of Lab-equipment in Biology.

Development of Test Items and Materials for Practical Work

Test items for Physics for Higher Secondary Classes Part I were published and those for Part II have been developed. Test items in Biology for Higher Secondary Classes (Parts I and II) have been developed. Part I has been printed and Part II is in the press.

Questions for Class IX in Mathematics have been developed to form a part of question-bank. These are being printed and questions for Class X are under preparation.

National and State-level Exhibitions

The 10th National Science Exhibition for Children was held at Teen Murti House, New Delhi, from 14 to 21 November, 1980. The theme for the exhibition was "Science in Our Environment". About 200 prize-winning exhibits from 25 States/Union Territories and Kendriya Vidyalaya Sangathan were on display. The three publications brought out on the occasion were : *A Decade of National Science Exhibition*, *Structure and Working of Science Models* and *A List of Exhibits*.

Assistance was provided to States in organizing State-level exhibitions. A two-day seminar was organized to discuss problems related to the organization of State and national science exhibitions. Officers-in-charge of State-level exhibitions and RCE's participated.

Dissemination of Information and Materials related to Science

A number of schools and institutions from different States and Union Territories continued to ask for materials. The following publications were supplied on request :

Test Items in Physics for Class XI : Part I.

Test Item in Biology for Class XI : Part I.

Teacher's Guide in Physics for Class XI : Part I.

Open-ended Experiments in Physics.

Structure and Working of Science Models—four issues of 1976, 1978, 1979 and 1980.

A Decade of National Science Exhibition for Children : 1970-1980.

Brochure on National Science Exhibition 1980.

Organizing Science Clubs—a Booklet.

A Curriculum Guide on Health and Nutrition.

List of Equipment for Classes IX and X.

Evaluation of Curriculum Materials

Another major thrust was on making preparatory efforts for evaluating the curriculum materials produced. A comprehensive document on evaluation procedures was developed after extensive deliberations and major work on evaluation on the lines indicated in this document will be undertaken in the coming year.

VOCATIONAL EDUCATION

The programmes/projects/activities in socially useful productive work (SUPW) and vocational education fall into the areas of research, training, development, extension and consultancy. Area-wise details of the vocational education programmes and their impact on qualitative improvement of school education are summarized below.

Resource Book on SUPW

The NCERT has prepared four volumes of a Resource Book on Socially Useful Productive Work covering various aspects. The volumes list out different activities that the schools can undertake and practical guidelines for their execution in average school conditions. These activities can be undertaken by a broad spectrum of schools offering SUPW. These volumes have also been translated into Hindi. When published they are proposed to be distributed among the key persons and SUPW teachers in different States for proper implementation of the SUPW programmes. These volumes will suitably equip the SUPW teachers, by giving them required technical guidance to conduct various activities. Profusely illustrated and written in easy and understandable language, they will be of immense use to schools, where practically all teachers are expected to shoulder the responsibility of successfully implementing the SUPW programmes.

Orientation of SUPW for Key Persons

Although SUPW has been recognized as an integral part of the school curriculum right from the primary stage and many States have already introduced the programme in their schools, a sort of conceptual confusion still continues. In order to clarify its philosophical

and conceptual aspects the NCERT organized orientation programmes on SUPW for key persons at Mysore, Bhubaneswar, Solan and Cochin. The participants were drawn from the State Education Departments and schools. Apart from informing them about the various components of the programmes the participants were encouraged to organize certain SUPW activities so as to develop among them confidence in organizing the SUPW activities in school conditions where a number of constraints prevail.

Consultancy and Collaboration in SUPW

The NCERT actively extended its expertise and cooperation to various institutions/agencies like SIEs, RCEs, NIEPA, different Units of NIE and a large number of schools to further the cause of SUPW by deputing its faculty members to various programmes.

Critical Study of Vocationalization of Education

A critical study of vocationalization of education at higher secondary level as implemented in Maharashtra was conducted during November-December 1980, covering about 20 institutions. The report of the study will provide first-hand and objective feedback to the State, thus enabling it to take necessary remedial measures aiming at further improving the scheme in the State in the light of the lacunae reflected in the report.

A research report has been developed in the form of a paper entitled "A Background Study of Students joining Vocational Courses 1977-79".

Short-term Teacher-Training Programmes in Vocational Education

With a view to updating the knowledge of vocational teachers and enhancing the level of their proficiency the NCERT organized during May-June 1980 five short-term teacher training programmes in Maharashtra and two in Tamil Nadu covering vocational areas of agriculture and technology. The programmes were based at appropriate institutions of high and specialized learning. Services of highly experienced experts in their respective fields were availed of to expose the trainees to practical aspects of their vocational courses. Nearly a

month-long training programmes fortified the teachers with required professional expertise and confidence to impart vocational training to their students in the right perspective.

Revision of Syllabus in Vocational Education

The syllabus of any vocational course must necessarily be relevant to socio-economic conditions of the region and it should have a built-in provision for the development of essential professional skills in students who are required to perform various jobs in the vocations. In this context the periodic revision of syllabi in vocational subjects is an important factor to modify them according to the changing needs of the community. With this end in view the NCERT organized a syllabus revision workshop at Ahmedabad in collaboration with the Department of Education, Gujarat. Syllabi of four commerce-based vocational courses were revised. The revised syllabi are expected to improve the level of vocational training and make it more meaningful.

Vocationalization of Education—Its Implementation

The NCERT has finalized a booklet “Vocationalization of Education and Its Implementation in India”. It indicates the factual position of the scheme in the context of its philosophical and conceptual background. The booklet is in press.

Orientation Programmes in Vocational Education

As principals of institutions and vocational education teachers are the pivotal persons responsible for successful implementation of the scheme, it is necessary to apprise them of the whole concept and objective of vocationalization of education. With this purpose in view, the NCERT organized orientation programmes in the States of Gujarat (January 1981), Andhra Pradesh and Bihar (February 1981). The salutary results of these programmes are expected to be reflected in better organization and implementation of the scheme of vocationalization of education in the above States, particularly in Bihar which is all set to introduce vocational courses at the higher secondary stage from the next academic year.

Consultancy and Collaboration in Vocational Education

The NCERT actively collaborated with various organizations/agencies in the furtherance of the cause of vocationalization of education by extending its expertise and assistance in the conduct of different orientation programmes to such agencies like National Institute of Educational Planning and Administration, RCEs, schools, different Units of NIE, the National Productivity Council, etc.

TEXTBOOK EVALUATION

The various Departments/Units of the NCERT undertake, on a continuous basis, evaluation of textbooks from the point of view of their relevance, comprehensibility, etc. During 1980 another dimension was added to this effort, viz. evaluation of textbooks from the point of view of national integration.

The NCERT is working on various programmes of textbook evaluation. The details of work done under these programmes are briefly discussed. In pursuance of the decision taken by the Executive Committee, the NCERT has undertaken the programme of evaluation of school textbooks from the standpoint of national integration. To begin with, school textbooks in History and Languages will be evaluated. While the actual evaluation will be done by the States, the NCERT will coordinate the whole programme. The NCERT has prepared the provisional tools and guidelines for evaluating the textbooks in History and Languages. These provisional guidelines have been sent to the States and will be vetted by eminent scholars before they are finalized.

Try-out of the NCERT Textbooks

The try-out of the NCERT textbooks in Hindi for Classes I, II and VI was planned in 15 schools (mainly the Central Schools). The data were collected through pre-teaching and post-teaching tools for each lesson prepared for the teachers. The third tool was meant for children after the lesson was taught in the classroom. The reports for Class VI and Class II textbooks have already been prepared and the report for Class I textbooks is being finalized.

A project aiming at studying the role of textbooks in formal education has been initiated. It examines the evaluation of textbooks in the context of social change and educational developments.

The NCERT has also initiated a study on the comprehensibility of language used in textbooks in Science, Social Sciences and Languages. Initially, the effort will be confined to the primary stage. Major objectives include: the evaluation of linguistic content of the textbooks in comparison to spoken and written language of the children of the particular grade; development of tools for measuring comprehensibility of language used in textbooks, and establishment of norms of linguistic competency used in textbooks.

In the first instance, the study has been launched as a pilot project in the State of Rajasthan covering the textbooks and the children of Grade III. The comprehensibility of the language used in the textbooks of social sciences and mother tongue among rural and urban children was found to be significantly different. It was also found that there was no significant difference in the comprehensibility of the language of the textbooks among boys and girls. Before launching the project on a large scale, it is proposed to conduct some case studies covering the cognitive map of the children from the same sample. Three monographs, namely (i) A Model of Textbook Comprehensibility, (ii) An Annotated Bibliography on the Comprehensibility of Textbooks, and (iii) Trends in the Concept of the Measurement of Comprehensibility, have been prepared and finalized.

The XXII National Prize Competition for Children's Literature was organized during 1980-81. In this competition, 800 entries in 15 languages were received. No entry was received in Manipuri and Kashmiri. Authors in 14 languages got awards in the XXII National Prize Competition. A symposium and Prize Distribution Function for the awardees of XXII National Prize Competition was held at the NCERT Campus, New Delhi, from 27 to 31 March 1981. Smt. Sheila Kaul, Minister of State for Education, gave away the prizes.

A workshop for evaluating children's literature in Hindi was conducted. More than 1,200 books were evaluated on the basis of the evaluation tool prepared by the NCERT. Preparation of three bibliographies for primary, secondary and higher secondary grade children respectively is under way.

5

Universalization of Elementary Education

UNIVERSALIZATION of elementary education with a view to an early realization of the constitutional directive is a task of high priority. Consequently, the Council's effort has been directed to developing strategies which help in this task. A

number of experimental projects have been launched with a view to providing experiences which may help the State Governments to adopt relevant approaches.

COMPREHENSIVE ACCESS TO PRIMARY EDUCATION

The UNICEF-aided project "Comprehensive Access to Primary Education" (CAPE) is a part of the effort to meet the minimum educational needs of a large number of children hitherto unreached by the formal system and to provide meaningful education to children in the age group of 6 to 14 who drop out of the system without completing the basic minimum education.

Objectives of the Project

The major objectives are to develop a non-formal education system as an alternative to formal schooling particularly for those belonging to rural areas and to cater to the needs and life situations of diverse groups of children enrolled both in the non-formal and the formal channels of education.

These objectives are proposed to be attained by developing and trying out relevant and problem-centred learning materials (learning episodes) in sufficient quantity and variety to cater to the needs of children in the age group 9 to 14 ; introducing into the curriculum of elementary teacher training institutions or into the in-service education programmes of primary school teachers, a training-*cum*-production mode for providing experience of developing curriculum materials; developing non-formal learning centres which provide accredited education to children of the target group, and developing evaluation centres and accreditation services for the evaluation and certification of learners enrolled in non-formal learning centres.

Major Phases of the Project

The basic activities are being carried out in the following three major phases :

- Phase I : Activities leading to the development and production of learning episodes in sufficient quantity and variety.
- Phase II : Activities related to the establishment and functioning of learning centres.

Phase III : Activities related to the establishment of evaluation centres and accreditation services.

Implementation of the Project

Agreements for the implementation of the project have been executed by all the States and the Union Territories except by the Union Territories of Arunachal Pradesh and Pondicherry. The implementation of the first phase of the project is progressing steadily in 18 States and 5 Union Territories. The States of Jammu and Kashmir, Tripura and West Bengal and the Union Territories of Dadra and Nagar Haveli and Lakshadweep are yet to commence project activities.

Major activities carried out so far by the Central Resource Centres (CAPE Group), NCERT, are :

Designing, development and production/printing of training packages for the use of project teams at the regional decentralized resource centres (SIEs/SCERTs), teacher educators, teacher trainees and primary school teachers; three training packages consisting of eight modules and twenty-two capsules have been published so far.

Training courses for RDRC team members on the methodology of developing learning episodes ; eighty-five RDRC team members belonging to SIEs in twenty States and five Union Territories have been trained so far.

Production/printing of training packages for Education Officers at the district level. One training package consisting of two modules and twenty-five capsules are under print.

Designing, development and production/printing of sample learning episodes ; six capsules have been published so far and twenty-five capsules are under print.

Training course for RDRC team members on the methodology of processing learning episodes ; twenty RDRC team members, belonging to 12 SIEs/SCERTs have been trained through this course.

Major activities carried out by the States and the Union Territories participating in the project up to 31 March 1981, are :

Orientation course for Principals of Elementary Teacher Training Institutes (TTIs): Principals of 755 TTIs have been oriented to the academic and administrative aspects of the project.

Training courses for teacher educators of TTIs on the methodology of using learning episodes : 3,761 teacher educators of TTIs have been trained.

Workshop for developing syllabus frames and instructional materials for the implementation of a new pattern of elementary teacher education : ten workshops have been conducted by RDRCs belonging to eight States and one Union Territory and 301 teacher educators participated in these workshops.

Orientation course for Education Officers at the district level on the planning and management aspects of the project CAPE : 379 Education Officers at the district level belonging to seven States and one Union Territory have been trained.

Orientation course for Education Officers at the block level on the planning and management aspects of the project CAPE : 163 Education Officers at the block level in the States of Andhra Pradesh, Bihar, Orissa and Tamil Nadu have been trained.

Introduction of training-*cum*-production mode into the curriculum of TTIs for the development of learning episodes : 13 States and four Union Territories have introduced the training-*cum*-production mode in TTIs.

Development of draft learning episodes (in the form of modules and capsules) by teacher educators and teacher-trainees in TTIs : 17,000 capsules have been developed by teacher educators and teacher trainees of TTIs.

Orientation courses for Principals of TTIs and Education Officers on the academic and administrative aspects of the project CAPE : 42 Principals of ITTCs and Education Officers belonging to Haryana and Himachal Pradesh have been oriented.

Training courses for teacher educators of ITTCs on the methodology of developing learning episodes : 48 teacher educators of ITTCs in the States of Haryana and Himachal Pradesh have been trained.

Workshop for teachers for developing learning episodes : forty primary school teachers were trained in one workshop conducted at Chandigarh.

Workshop for processing learning episodes : thirty modules were finalized at a workshop organized by the SCERT, Bihar.

NON-FORMAL EDUCATION

Non-formal education is an alternative strategy for universalization of elementary education. With a view to providing relevant experiences to the States, the NCERT undertook the implementation of an experimental project. Apart from establishing NFE Centres under the auspices of its Regional Colleges of Education and the Field Advisers' Offices, it has undertaken the preparation of instructional materials for the children of non-formal education centres and guides for instructors.

The essential elements of the programme are :

An integrated approach to the curriculum which reflects the problems of the rural, urban and tribal children.

Training of children in the analysis and understanding of the problems.

Training for functional literacy and numeracy to children.

Utilization of literacy and numeracy to orient children to their environment.

Utilizing routine and daily activities for instruction.

Organization of orientation programme for workers at Central, State, district, block and village levels.

Production of prototype and other material.

In-built mechanism for evaluation and feedback.

Community participation in the formulation and implementation of the programme.

The NCERT has set up about 238 non-formal education centres. The following table indicates the number of these centres in different States.

<i>State</i>	<i>Being run by</i>	<i>No. of centres</i>
1. Andhra Pradesh	FA, Hyderabad	10
2. Assam	FA, Assam	10
	RCE, Bhubaneswar	10
3. Bihar	RCE, Bhubaneswar	10
	FA, Patna	10
4. Gujarat	FA, Ahmedabad	10
	RCE, Bhopal	10
5. Jammu & Kashmir	FA, Srinagar	7
	RCE, Ajmer	10
6. Karnataka	FA, Bangalore	10
	RCE, Mysore	10
7. Kerala	FA, Trivandrum	10
8. Madhya Pradesh	FA, Bhopal	10
	RCE, Bhopal	12
9. Maharashtra	FA, Pune	10
	RCE, Bhopal	10
10. Orissa	FA, Bhubaneswar	10
	RCE, Bhubaneswar	10
11. Punjab	FA, Chandigarh	8
12. Rajasthan	FA, Jaipur	9
	RCE, Ajmer	9
13. Tamil Nadu	FA, Madras	9
14. Uttar Pradesh	RCE, Ajmer	4
15. West Bengal	RCE, Bhubaneswar	10
	FA, West Bengal	10
Total :		238

As a support to the non-formal education programme a number of research and development activities have been taken up. These include :

(i) *Study of Children's Vocabulary and the Vocabulary of Textbooks*

The project is an off-shoot of the earlier project "Compilation and Linguistic Analysis of Hindi Vocabulary of Children of Primary Schools in the Hindi Area." The project will be started after the results of the earlier project are available.

(ii) Development of Instructional Materials for Non-Formal Education in Urdu for the Second Phase

Instructional material for non-formal education has been developed in Urdu for use by the States.

(iii) Status Study of Non-Formal Education Centres

Questionnaires and four survey tools on different aspects of the programme have been developed to collect information on the non-formal education. The data are being analysed.

(iv) Orientation Programme for Second Level Resource Persons

An orientation-cum-production programme for resource persons was organized at NIE from 5 to 7 March 1981 in which 16 participants, including Assistant Conveners at RCs and Assistant Field Advisers, participated. The objective was to develop materials for the second phase.

(v) NFE Bulletin

To make the people working in the field of non-formal education acquainted with each other's work, it has been decided to bring out a bulletin. Its format has been prepared and sent to the people for collecting their opinion. On the basis of their suggestions guidelines have been prepared for collecting information about the NFE programme to be included in the bulletin.

Material Production

Some instructional material was prepared under the programme. During the year 1980-81, a guide to "Nai-Roshani" (an Urdu primer for rural and urban girls) was brought out. The following instructional materials have been sent for printing :

Hindi

Hindi primer—Gyan Bati (for girls)

Guide to the primer Humbhi Padhenge

A book on Functional Mathematics in Hindi is in the process.

Urdu

Nai Kiran—Primer

Guide to Nai Kiran

Nai Roshani—Primer

Karobari Hisab

Padho aur Badho—Primer

Guide to Padho aur Badho

Nineteen charts have also been prepared on different topics included in the Teacher's Guide. They are under print.

Directory of NFE Centres

A directory of non-formal education centres has been prepared. It contains information about the name of the centre, name of the block, date of establishment, number of boys and girls (SC/ST), and total number of children. Information about teachers—their name and address, age, whether belonging to SC/ST, qualification and experience—has also been included.

PRIMARY EDUCATION CURRICULUM RENEWAL

Objective of the Project

The NCERT is implementing UNICEF-aided project on Primary Education Curriculum Renewal. The main objective of the project is to develop innovative curricula for the age group 6-11 with special reference to the educational needs of children of rural, tribal and urban poverty areas. The basic premise is that expansion of educational facilities should be accompanied by qualitative adjustment of the curriculum to suit the life-style of the child and the socio-economic opportunities likely to be available. The long-term objective is to increase the meaningfulness of primary education through gradual infusion into the elementary school curriculum of innovative ideas tested in experimental educational programmes.

Main Features of the Project

Some outstanding features of the project are :

Decentralization of the process of curriculum development through the involvement of the teachers of the project schools, teacher educators from the IIT's supervising the project schools, members of the State Primary Curriculum Development Cells (SPCDCs) located in the SCERTs/SIEs and other experienced authors/functionaries in the State.

Evolving diversified relevant curriculum through a detailed socio-economic survey of the community leading to the attainment of a common core of competencies.

Using environment for meaningful learning.

The special needs of the children coming from economically and socially disadvantaged sections of the society.

Involvement of the local community in the educational programme.

Use of local resources for organizing socially useful productive work.

Implementation of the Project

The project was initiated through the NCERT in 1975-76. During the first phase, 13 States and 2 Union Territories participated in the project. Each State selected 30 schools for the project. These schools were located in three districts which represented wide variations in terms of social, cultural, geographical patterns and economic pursuit. All of them were located in the economically backward areas. Relevant instructional materials in regional languages as well as teaching-learning strategies were evolved for the children studying in the selected project schools.

Encouraged by the experience of the first phase, the project PEER has now been extended to cover all the States and the Union Territories except the Union Territory of Arunachal Pradesh. In the States and the Union Territories covered under the first phase, the scope of the project has been expanded. One hundred more schools have been selected in them. The new States/Union Territories have each selected 30 schools.

The NCERT took important steps for the implementation of the

project in various States and Union Territories. Agreements were signed with them for the expansion phase. Major socio-economic, cultural and geographical variations were identified in each of them. Schools representing such variations were selected as project schools on the basis of the criteria provided by the NCERT.

Curriculum Development Cells

In each State/Union Territory, the project is monitored through the SCERT/SIE. In each of them a State Primary Curriculum Development Cell (SPCDC) has been formed comprising about 3-4 members of the academic staff providing thus a network of SPCDCs throughout the country. A group of project schools are closely supervised by a Junior Teacher Training Institute located in the neighbourhood. For this purpose, 183 TTI's or other Institutes (where there are no TTI's, have been identified.

Orientation of Project Staff

The NCERT developed schedules as well as analysis and consolidation sheets for processing the survey data. The project staff responsible for monitoring the project work in the SIEs/SCERTs, was oriented to the methodology of conducting the survey through a training programme held from 21 to 26 April 1980. The main purpose of the programme was to enable the States/Union Territories to conduct the survey scientifically and to consolidate and analyse the data effectively. Thirty-five participants from 25 States/Union Territories participated in the programme. Surveys were conducted in almost all the States/Union Territories during 1980-81. Eighteen States/Union Territories have already submitted the survey report to the NCERT.

Diversified Multiple Curricula

An important feature of the curriculum development process under the expansion phase is the development of diversified multiple curricula, including different sets of instructional materials to meet the specific educational requirements of children living in different environments. The NCERT organized three orientation programmes during the months of September, October and December 1980, to

help State curriculum teams to do this. Twenty-two States/Union Territories participated in these programmes. The findings of the survey, the minimum learning continuum, the findings of the evaluation/analysis of existing State curriculum and the evaluation of the curriculum evolved during the first phase of the project, provided important basis for developing the new curriculum under the expansion phase.

Plans of Action

Based on the training and guidance provided by the NCERT, the State teams have developed their plans of action for a phased programme of development and try-out of the new curricula from the academic year 1981-82. Generally, the States are attempting to evolve multiple sets of diversified curricula addressed to the needs of the major socio-economic and geographical variations.

Evaluation of Instructional Material

The NCERT has undertaken the evaluation of instructional materials developed under the Project in the first phase in 13 States and 2 Union Territories. The Primary Curriculum Development Cells (SPCDC) of the concerned State/Union Territory were advised to undertake first level evaluation of instructional materials on the basis of the tools supplied by the NCERT. Three workshops were organized to finalize the evaluation report for each title. The main purposes of evaluation included : evaluation of the instructional materials developed during the first phase; suggestions for improvement in the quality of the instructional materials; identification of the materials which could be used on wider scale in the State. In all, the titles evaluated included 85 in language, 59 in mathematics and 35 in socially useful productive work and health education.

Conceptual Literature in Curriculum

The NCERT developed conceptual literature for providing guidance to the curriculum framers and authors of instructional material. The literature, in the form of brochures on Language, Mathematics, Environmental Studies, Socially Useful Productive Work, Art (Creative Expression), deals with the nature of the subject,

competencies and skills related to the subject, teaching-learning strategies, guidance to the authors of instructional material and scheme of the pupil's evaluation in the related areas. The drafts of these brochures (except that on language) which were discussed in the working group meetings, are being prepared for publication.

An Evaluative Study of Themes included in the Material developed for Non-formal Education

A four-day working group meeting was organized from 17 to 20 December 1980 to study the themes included in the material developed for non-formal education. Ninety-three titles from eight States were studied and analysed with the help of a tool developed by the NCERT. A report of the study is under preparation.

Using the Environment as a Basis for Meaningful Learning in Primary Education

The NCERT published a brochure entitled *Using the Environment as a Basis for Meaningful Learning in Primary Education*. Copies were sent to all concerned in the States and the Union Territories for information and guidance.

COMMUNITY EDUCATION AND PARTICIPATION

Objectives of the Project

The NCERT is also implementing the UNICEF-aided project on Developmental Activities in Community Education and Participation (DACEP). The specific objectives of this project are to develop and test new types of educational activities as feasible means of meeting the minimum educational needs of large groups that are, currently, partially or totally deprived of any form of education. This approach is based on the premise that children's education to be meaningful has to proceed concurrently with gradual changes and modifications of their socio-economic environment. This can be achieved through education and stimulation of the community at large, which implies that the educational needs not only of pre-school and out-of-school children, but also of drop-outs and mothers are effectively and efficiently met.

A related objective is to test whether by removing the dichotomy

between schools and the community the former can extend its assistance to the latter so that the school may become a catalyst for social change in other sectors of the community.

The project, therefore, envisages the organization of programmes of non-formal education to cater to the needs of the age-groups 0-3 and mothers, 3-6, 6-14 and 15-35 and adults. The challenge of this project also lies in the effective utilization of the resources available in each of the selected communities through the programme already offered by the various developmental and welfare agencies.

The project is in line with the Government of India's comprehensive programme of non-formal education. The programme and activities developed under the project meet the broad objectives of improving the "life and living" of people through their willing participation and provides required competencies to satisfy the "packages of minimum learning needs".

One of the important dimensions of the project is to develop required knowledge and skills of the community members to actively participate in various developmental programmes being offered by different agencies. The developmental activities are interwoven with the education programmes of the communities. The project very effectively supports the country's priority programme of universalization of elementary education. The models of non-formal education strategies and materials for different age group specially for 6-14 and 15-35 can be adopted/adapted by the respective States and Union Territories.

The project also ensures the development of possible attitude of the community members for education. The children who have dropped out from the school and also those who have never gone to school are helped through non-formal education to re-enter the mainstream of education. The educational programmes for women include training in pre-natal and ante-natal care, child-care and nutrition, some economic activities, home management, etc. The educational programmes for the pre-school children help them to develop proper attitude and interest for schooling. Care is taken for the all-round development of pre-school children through playway methods and creative activities.

The programmes for non-formal education of the age-group 6-14 aim at providing part-time education to the children who have never gone to any school or who have dropped out from school. Children are expected to acquire the knowledge and skills in academic education and also develop expertise with regard to socially useful productive work and their family occupations. It may also help children to enter the formal stream of education, if they so desire.

The programmes for the adults—both men and women—aim at providing knowledge and skills of reading and writing and developing in them the functional literacy and numeracy. An important dimension of the programme is to impart knowledge about various aspects of healthful living, agricultural and non-agricultural skills and develop in them proper attitudes towards the various welfare and developmental programmes. Thus the project provides an opportunity for the transformation of the society through community action. The planning of programmes and activities for different target groups and development of a variety of instructional materials are taken up on the basis of educational needs and local environment identified through detailed survey of the communities.

Implementation of the Project

The project was initially taken up in 15 States and Union Territories on an experimental basis in two community centres in each of the States. Most of the centres were located in very poor rural, tribal and hilly areas and urban poverty areas. Encouraged by the outcomes of the project more community centres are being opened in the existing 15 States and also being established in the States and Union Territories which did not initially participate in the project. The number of community centres is thus being increased from 30 to 102 to provide for greater socio-economic and cultural variations and to develop suitable models of non-formal education of the community suited to the needs of those variations.

A variety of models of non-formal education for different target groups covered under the project are being developed in the earlier 15 participating States. On the basis of survey findings and keeping in view local situation, the States developed programmes and activities

for different target groups and some suitable materials for non-formal education. These methods and materials have been introduced in the community centres and are being modified on the basis of feed-back. The new States and Union Territories organized detailed surveys of the communities, their needs and local environments to help in the development of programmes and activities, strategies and materials more scientifically.

Development of Programmes

Four orientation courses of curriculum teams of the States/Union Territories were organized, two combined with the Project on Curriculum Renewal and two separately, to orient the teams to various aspects of development of programmes and activities for different target groups. All the States and the Union Territories are busy in the above exercise. In some of the States, programmes are being adapted for State-wide use in non-formal educational programmes.

Monitoring of the Project

The project is monitored by the Community Education Group of the National Council of Educational Research and Training at the national level and executed by a team of workers at the State Institutes of Education/State Councils of Educational Research and Training, teacher training institutions and village levels in the participating States. The grassroot workers, like teachers, community workers and community members, are involved in the planning and execution of the programmes and activities in the community centres.

MONITORING AND EVALUATION OF UNIVERSALIZATION OF ELEMENTARY EDUCATION PROGRAMMES

In view of the great need and urgency for monitoring and evaluation of the high investment and high risk programme of universalization of elementary education, the NCERT, in collaboration with the UNESCO, evolved a detailed, theoretical framework, procedures and tools.

The strategy aimed at—

Economizing on inputs.

Optimizing the outcomes.

Checking resource drain and wastage.

Rendering targets realizable.

Minimizing the risk of failure.

Applying timely remedial measure.

Offering prompt modification in certain decisions, if needed.

The procedures and tools of monitoring and evaluation were subsequently put to a discussional try-out in four States. In these discussions, functionaries at different levels of the educational ladder of the respective States participated. The suggestions received at the State-level meetings were subsequently discussed at a high-level meeting to which representatives of the Planning Commission, the Ministry of Education and Culture, the National Institute of Educational Planning and Administration, the National Informatics Centre were invited.

On the basis of the discussion in the high-level meeting, a plan of action has been prepared, which is under examination.

6

Education of the Disadvantaged

CONSIDERING that most of the non-enrolled children belong to the economically and socially disadvantaged groups comprising women, the Scheduled Castes and Scheduled Tribes and other backward classes, the Council has been engaged

in attempting a variety of approaches for promoting education among these sections. The concern of the Council for making a real dent in this direction is reflected in its decisions to broad-base its activities in this area through formal and non-formal approaches. The Council has, in this area, been primarily concerned with providing research and academic support. Some developmental programmes have, however, been taken up on experimental basis. Funds have also been specially allocated for supporting research in this area.

A study of the factors impeding universalization of elementary education in tribal areas of Rajasthan has been launched. Tools of research have been prepared and field work completed in Barmer district of Rajasthan.

In September 1980, the Tribal Education Unit of the Council was strengthened and redesignated as Scheduled Castes and Scheduled Tribes Education Unit. Since then much thinking has gone into working out programmes for the educational development of Scheduled Castes. Programmes for research, development and training relating to Scheduled Castes are in the process of finalization. It is expected that shortly these programmes would be launched. Some of the programmes which are under consideration are :

- (i) Preparation of supplementary reading materials for Scheduled Caste students.
- (ii) Research project to compare educational achievement of Scheduled Caste and non-Scheduled Caste high school students of Uttar Pradesh.
- (iii) Research project to study the provision and extent of utilization of special facilities in education by the Scheduled Caste students.

Research

A study of the methods, processes and practices of non-formal education programmes for tribal students was initiated. Tools of research of the project were prepared and field-work was

undertaken in the States of Andhra Pradesh, Gujarat, Madhya Pradesh and West Bengal.

For a study of equalization of educational opportunities to tribal students, tools of research of the project are under preparation.

Analysis of needs and development of curriculum for tribal students of Saora tribe of Orissa was taken up. A draft curriculum has been thought out.

In her letter the Prime Minister emphasized on the Central Ministries the necessity to ensure that a special component plan for the Scheduled Castes be expeditiously prepared. Consequently, a meeting was held in the Ministry of Education and Culture to chalk out special programmes for the Scheduled Castes. A meeting was also held in the Council to identify special studies to be undertaken in the area of the education of the Scheduled Castes and the Scheduled Tribes. These included :

- (i) Vocational needs and aspirations of Scheduled Caste and Scheduled Tribe students.
- (ii) Causes of non-enrolment and drop-out of Scheduled Caste and Scheduled Tribe students.
- (iii) Special problems of educational development of Scheduled Caste and Scheduled Tribe girls.
- (iv) Study of how untouchability acts as a deterrent to education of the Scheduled Castes.
- (v) Study of the enrolment and achievement patterns of Scheduled Caste and Scheduled Tribe students (boys and girls) at school level and their parents' level of education and occupation.
- (vi) Case studies of Scheduled Caste and Scheduled Tribe school teachers (male/female) with reference to their socio-economic background, educational and professional qualification and problems faced by them in their profession.
- (vii) Case studies of failures of Scheduled Caste and Scheduled Tribe students in various public examinations at school level.

- (viii) Analysis of school textbooks from the point of view of casteism.

The University Departments of Education and Anthropology and Tribal Research Institutes in the country have been requested to formulate projects on any of the above areas for being supported by the NCERT. During 1980 seven research proposals as listed below have been received in the Council. These projects are at various stages of processing.

- (i) A study of psycho-social factors of Scheduled Caste and Scheduled Tribe students as related to their level of occupational aspiration and vocational choices.
- (ii) Untouchability as a deterrent to education of Harijans in Dharwar.
- (iii) A study of enrolment and achievement patterns of Scheduled Caste and Scheduled Tribe students (boys and girls) at school level and their parents' level of education and occupation.
- (iv) A study of enrolment and achievement patterns of Scheduled Caste and Scheduled Tribe students in Haryana.
- (v) Case studies of Scheduled Tribe students' failures at the middle and matriculation examination levels in Himachal Pradesh.
- (vi) A study of creative thinking of tribal and non-tribal high school students of Himachal Pradesh in relation to certain cognitive and non-cognitive variables.
- (vii) The causes of non-involvement, non-attendance and drop-outs of Scheduled Caste and Scheduled Tribe students.

Syllabus/Materials Production

Preparation of instructional material for non-formal education centres in tribal areas is being taken up with the respective State Governments.

A supplementary reader in Hindi entitled "Folk Songs and Folk Tales of the Santal" was reviewed and finalized and has been sent to press.

A syllabus for an orientation course of the key personnel of non-formal education programme in tribal areas was prepared. It includes themes on tribal social and cultural life, tribal educational problems, problems related to organization of non-formal education centres in tribal areas as well as demonstration lessons on numeracy, literacy and environmental studies. The syllabus was processed through a working group meeting of two days held at RCE, Bhopal, where experts from the field of anthropology, education, curriculum development and experts in the area of non-formal education were invited.

The objectives of this orientation course are to acquaint the key personnel of non-formal education programme operating in tribal areas with tribal life and culture, problems of tribal education, problems arising out of organization of non-formal education programmes in tribal areas as well as problems faced in actual teaching-learning process with reference to the teaching of literacy, numeracy and environmental studies.

Instructional material for non-formal education centres located in the tribal areas of Meghalaya State is under preparation.

The States of West Bengal and Sikkim have also shown keen interest in the programme, and work relating to the preparation of instructional material for Santals in West Bengal and Lepcha in Sikkim has been started.

So far the following supplementary reading materials have been developed in Hindi :

- (i) Biographies of Tribal Heroes—published and distributed.
 - (ii) Glimpses of Santal Life and Culture
 - (iii) Munda Folk Tales and Folk Songs
 - (iv) Oraon Folk Tales and Folk Songs
 - (v) Santal Folk Tales and Folk Songs
- } Under publication

- (vi) Folk Songs and Folk Tales of the Muria and Madia Gonds and Life and Culture of Abujh Maria the Gonds of Bastar—the manuscripts have been reviewed and finalized.

Training

The courses for teachers of non-formal education centres in tribal areas were organized at SIERT, Udaipur, in July 1980 where 26 teachers from non-formal education centres from the State of Rajasthan participated in the course. The objective of this training course was to acquaint these teachers of non-formal education centres located in tribal areas with tribal life and culture, tribal educational problems, organization of non-formal education centres in tribal areas as well as to train them in different approaches to handle teaching of literacy, numeracy and environmental studies. This is needed specially in view of the fact that most of the teachers working in NFE centres in tribal areas are non-tribals and, therefore, are not able to understand and appreciate the tribal cultural and educational problems.

The training programme was organized at Bhubaneswar to train teachers in the collection of vocabulary for writing textbooks in tribal dialects.

An orientation course for the district education officers from tribal areas was organized to acquaint them with tribal life, culture and latest trends in educational development. The orientation course was attended by 15 DEO's from nine States of Gujarat, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Orissa, Rajasthan, and Tripura.

An orientation course was organized in which 24 key persons of non-formal education programmes from the tribal areas of six States participated.

Women's Education

The Women's Education Unit worked on cultural and social values as related to education, student and parental attitudes towards education, and education and working-life.

On the basis of identified values commensurate with the status of women in India, the Unit has worked through the ten-year curriculum in general education and has developed teachers' handbooks. Two volumes of teachers' handbooks for women's education, one for the elementary stage and the other for secondary and higher secondary stage were edited. Supplementary reading materials for teachers of mathematics were also prepared.

The Unit conducted a high-level consultation meeting to advise it on the formulation of programme for girls and women in the perspective of universalization and vocationalization of education.

7

Education of Teachers and Other Personnel

TEACHER EDUCATION

Since the teacher continues to occupy a pivotal place in the education of children, the NCERT makes continuous effort for the improvement of teacher education in the country, both

at the elementary and the secondary levels and also both at the pre-service and the in-service stages. For this purpose it carries out research, training and developmental activities. The NCERT also serves as the academic secretariat of the National Council for Teacher Education (NCTE) which the Ministry of Education and Culture have set up for advising them on all issues relating to teacher education.

Research

During the year a number of studies were undertaken by the NCERT's Department of Teacher Education. Some of the significant one's are discussed below.

Structural Characteristics of Classroom Questions and Pupils' Responses

The study analysed classroom questioning behaviour of 25 teachers of Delhi and Haryana, teaching Social Studies to Class VI. The interrelationships between the structural characteristics of classroom questions and their clarity, the type of pupil responses and the type of response management behaviour of teachers, have been worked out.

Reasons for Non-enforcement of Conditions of Affiliation laid down by the Universities

Data were collected from four States, nine universities and ten colleges of education, by means of questionnaires and structured interviews. University officials concerned with affiliation of colleges of education, heads of the departments of education and principals of colleges of education were interviewed. Some of the significant findings related to—

Lack of comprehensive conditions of affiliation.

Absence of specific machinery for enforcement of conditions of affiliation.

Greater autonomy to certain types of institutions.

Multiplicity in types of management.

Lack of proper procedure for granting permission to start B.Ed. course.

Dichotomy between the university and the State Governments.

Studies on Teacher Education in India (1973-75)

A survey of research on teacher education, undertaken by the M.Ed. students, the Ph.D. scholars of Indian universities, and the teacher educators of colleges of education and university departments of education was undertaken. Three hundred and twenty-four titles have been classified. Significant findings of 162 studies have been presented under the following heads :

Effectiveness of teaching.

Status studies and problems of teacher education.

Methods of teaching and problems involved.

Syllabi and teacher education programme.

Audio-visual aids.

Evaluation.

In-service education and extension programmes.

Administration and organization.

Relative Effectiveness of Different Strategies of Integration of Teaching Skills

A comparison was made of the effectiveness of vicarious, additive, summative and diode integration strategies on the general competence of student teachers. The study revealed that the training in the integration of teaching skills following the summative model is more effective than the vicarious and additive strategies.

Development of Instructional Material

The NCERT is engaged in preparing textbooks for both the elementary and the secondary teacher education. They are at different stages of development. For the secondary-level teacher education the following textbooks are in press :

Teaching of Science.

Textbook of Core Teaching Skills.

Teacher and Education in the Emerging Indian Society.

The manuscripts of the following textbooks are ready for vetting by experts :

Educational Psychology.

Curriculum and Evaluation.

Handbook on Socially Useful Productive Work.

The textbook, Teaching of Mathematics, is under preparation.

For elementary-level teacher education, manuscript of the Handbook of Socially Useful Productive Work is ready for vetting by experts. The following textbooks are under preparation :

Teacher and Education in Emerging India.

Child Psychology.

Working with Community.

Teaching of Mathematics.

Teaching of Social Studies.

Intensive Teacher Education Programme

Under this programme, the NCERT has been working in collaboration with the States and universities for the improvement and enrichment of teacher education at both the elementary and the secondary levels. In the previous year the main emphasis was on the introduction of the curriculum framework recommended by the National Council for Teacher Education. As a follow-up of this effort, States and universities are being helped to implement the curriculum. Conferences have been organized to work out details of the practical work, scheme of evaluation, and preparation of unit plans. The programme has been extended to Tamil Nadu at the secondary level and to Uttar Pradesh at the elementary level.

Training

A number of orientation courses were organized during the year. A six-day course was organized in March 1981 with the purpose of orienting resource persons for organizing short-term courses for primary school teachers. These courses are considered necessary for involving them in the universalization of elementary education and

acquainting them with the latest developments in the field. During the course the changing pattern of the primary school curriculum was discussed and some instructional material prepared. It is proposed to bring out a handbook based on the instructional material.

Two training programmes were organized in micro-teaching, one each for the Northern and Southern Zones, one at Dehradun and the other at Hyderabad. Two workshops on micro-teaching were organized for elementary teacher educators, one at the Regional College of Education, Mysore, for the Southern Region, and the other at the Regional College of Education, Bhopal, for the Western Region.

An orientation-*cum*-training programme was organized for teacher educators of Gujarat. Principals of elementary teacher training institutions of the State participated. The purpose was to acquaint the participants with the curriculum framework prepared by the NCTE. The rationale for the recommendations on pedagogy, working with the community, content-*cum*-methodology, and socially useful productive work, was discussed.

A workshop for the development of evaluation tools for the assessment of student teaching and other practical work was held at Bangalore. Tools covering various aspects of practical work of the B.Ed. course were developed. These will be finalized after a try-out.

An orientation course in the content-*cum*-methodology of teaching biological sciences was organized for teacher educators from all over India. The main objectives of the programme were to try out the (Science Teacher Education Programme) materials in biology written by the staff members of the NCERT, to discuss the one-year B.Ed. syllabi of various State universities and to find out the facilities available for carrying out experiments.

A training course in primary teacher education was organized from 16 February to 13 March 1981 for UNESCO Fellows from Bhutan. The course consisted of discussions of various aspects of teacher education and visits to primary schools and elementary teacher education institutions in Delhi, Jaipur, Bombay and Pune.

Conferences/Seminars

An annual conference of Directors/Principals of SIEs, SCERTs and SISEs was held at the NCERT in January 1981. The main objectives were to review the work done in the past and to plan the programmes for the coming years. The conference made a number of useful and practical recommendations.

In 1980-81 competition, six papers at the elementary level and four at the secondary level were selected for national awards under the seminar readings project. Award-winning teacher educators met to present the papers and to receive the awards.

Publications

The Department of Teacher Education brought out a number of documents during the year. These included—

Differential Effectiveness of Microteaching Components.

Core Teaching Skills : Microteaching Approach.

Classroom Questioning Behaviour—A Review.

Structural Characteristics of Classroom Questions, Pupil Responses and Pupil Response Management Behaviour of Social Studies Teachers.

Microteaching for Improving General Teaching Competence of In-service Teachers.

Teacher Education in India (Statistical Data).

While the first one has been printed, the others are in mimeographed form.

Involvement of Professional Associations of Teachers in Transformation of Elementary Education

The organizations of teachers and teacher educators provide an immense potential for the transformation of elementary education. For the office-bearers of the All-India Primary Teachers' Federation an orientation course on the transformation of elementary education was organized at the NCERT, New Delhi. The orientation course was organized with the objective of acquainting the executive

members of the Federation with the new trends in the field of elementary education and thereby to help dissemination of new ideas and trends which may lead to an improvement in productivity, self-employment and the development of the values of secularism, socialism and national integration.

National Council for Teacher Education

The NCTE guidelines for the revision of teacher education curriculum have been adopted by almost all the States at the elementary level and by about 15 universities at the B.Ed. level. The process of curriculum revision will be accelerated as the Association for Indian Universities has approved the NCTE. The NCERT's Field Advisers conducted more than a dozen orientation seminars for the elementary and the secondary teacher educators to acquaint them with the NCTE curriculum guidelines. The Department of Teacher Education is launching orientation of teacher educators in specific subjects like Teacher and Education in Emerging Indian Society, Socially Useful Productive Work, etc. Textbooks for the elementary as well as the secondary levels in SUPW are ready for the press. The NCTE has organized four orientation programmes for the key persons in SUPW to enable them to act as resource persons in training programmes in SUPW organized for the teacher educators at both the elementary as well as the secondary levels, on the basis of the SUPW curriculum and the handbook developed by the NCTE.

The NCTE also organized seminars on educational theory in classroom problems and ethical and social values in teacher education.

A team of investigators collected case studies of some children which were published under the title *The Indian Child*. A report on the scheme of village placement of teacher educators by the Department of Child Development, M. S. University, Baroda, has also been published so that it may inspire other similar institutions to adopt the technique of working with community. Reports of survey of Regional Centres for Training of Teachers for the Blind, Mentally Retarded and Deaf have been published.

State Boards of Teacher Education have been formed in 16 States. Nine States and Union Territories have agreed to recognize NCTE/SBTE as national accreditation agency for improving the quality of teacher education at all levels in the country.

Regional Colleges of Education

The four Regional Colleges of Education continued to organize innovative pre-service education programmes. They also organized a number of in-service teacher education programmes, workshops and seminars in areas which were of direct relevance to the States. On request they also undertook consultancy and extension service activities. The following paragraphs discuss the work done by the Regional Colleges during the year.

Regional College, Ajmer

The College caters to the teacher training needs of the States of northern region, i.e. Rajasthan, Haryana, Punjab, Himachal Pradesh, Jammu and Kashmir and Uttar Pradesh and the Union Territories of Chandigarh and Delhi.

Pre-Service Courses : In 1980-81, the College enrolled 367 students for its regular B.Ed. and M.Ed. courses in the following streams :

<i>Course</i>	<i>Enrolment</i>
M.Ed.	20
B.Ed. Science	106
B.Ed. Agriculture	37
B.Ed. Commerce	46
B.Ed. English	53
B.Ed. Hindi	66
B.Ed. Urdu	39
	367

In-Service Courses : Out of the 224 teachers in service who enrolled in it, 218 untrained teachers of the northern region appeared at the B.Ed. Summer School-cum-Correspondence Course Examination after completing four months' practical teaching internship

and 10 months' correspondence lessons. The examination was conducted by the University of Rajasthan where six students failed.

Non-Formal Education : The project on non-formal education, which was started in February 1979 by opening non-formal education centres in District Ajmer (Rajasthan) and other centres of Jakhni block, District Varanasi (U.P.) and Dhansal block, District Jammu (J & K) continued during the year. The average attendance per month at these centres in different blocks was 257, 108 and 357 respectively for these blocks. The number of centres remained 9 in Ajmer District, 4 in Varanasi District and 9 in Jammu District. The centres in Varanasi District, which were not functioning on account of various reasons, were re-opened. Children attending these centres were given further instruction in numeracy and language i.e. Hindi. Education in environment, health and hygiene, agriculture and other social and cultural aspects was provided to students in these centres. The use of teaching aids, charts, block-making and indoor games was found to be quite beneficial to the children in comprehending the concepts of language and number work. The National Book Trust publications which were supplied to the centres earlier also gave some idea to the children of their heritage and culture. The orientation programmes organized for the field workers at Jammu and Raġgir (Bihar) were found to be very effective, particularly in organizing games in mathematics.

Extension Programmes : The Extension Services Department of the College conducted the following programmes suggested by the States of the region and proposed by the faculty :

Regional workshop on microteaching held at Ajmer and attended by 27 participants.

Orientation programme on new methods of teaching Science held at Allahabad at the instance of the Department of Education, U.P., for their key persons which was attended by 35 participants.

Seminar on educational technology for officers of the northern region and RCEs organized at Ajmer. This was attended by

one participant each from Rajasthan and Punjab and representatives of RCEs and DTA.

Regional workshop held at Ajmer on mathematical skills essential for physics teaching at the school level. Nine participants from Rajasthan, Haryana and Jammu and Kashmir attended.

Regional conference on orientation of principals/headmasters and teachers of cooperating schools was attended by 27 participants. This was in connection with college internship programme which was to be spread over to several States of the region.

Workshop on orientation of physics, chemistry, botany and zoology teachers was held at Jammu, and was attended by 55 key persons in response to a request from the Government of Jammu and Kashmir.

Meeting of agriculture faculty from all the RCEs was held at Ajmer to finalize the draft syllabus for the proposed M.Ag. (Ed.) course in which all members were present.

On a demand from the Department of Education, U.P., a workshop on institutional planning was held at Allahabad and was attended by 37 officers of the Education Department.

Regional workshop for teacher educators was organized at Jullundur for writing correspondence lessons for our B.Ed. SSCC students and was attended by 15 teacher educators.

Regional workshop on preparation of graphic aids was organized at Jammu and attended by 20 key persons from Punjab, Himachal Pradesh and Jammu and Kashmir.

On demand from Education Department, U.P., a workshop on research methodology in education was held at Allahabad and 60 participants attended it.

Regional workshop for the preparation of teacher's guide for SUPW activities in poultry and vegetable production was organized by the Department of Agriculture at Ajmer.

Besides the above-mentioned programmes, the Extension Services Department also collaborated with the NIE Departments and

Field Advisers' Offices in the organization of a number of programmes.

Continuing Education : A regional conference of Honorary Directors and Coordinators of the Centres for Continuing Education in the northern region was organized at Ajmer. According to the available information, the following Centres were functioning during the year :

Rajasthan	7 centres
Himachal Pradesh	2 centres
Chandigarh	1 centre

The Department of Education, Government of U.P., agreed to start five centres.

CAPE Project : The CAPE Project team of this College continued on its assignment and imparted training to teacher educators of U.P., Punjab and Rajasthan

Learning Packages : The Department of Educational Technology of the College is preparing learning packages on content and method syllabus prescribed in Biology for B.Ed. students. The enrichment learning package for post-graduate teachers of +2 stage on "tools and techniques for biological studies" is under preparation by a team of workers.

Regional College, Bhopal

The Regional College of Education, Bhopal, caters to the educational needs of aspiring teachers-to-be from the States of Gujarat, Maharashtra, Madhya Pradesh and Goa.

Pre-Service Courses : The following courses are being offered at present in this College :

B.Ed. (one year in Languages, Science, Commerce and Agriculture)

B.Ed. (Elementary Education)

M.Ed. (with specialization in Science Education, Teacher Education, Educational Administration and Guidance)

M.Ed. (Elementary Education)

Enrolment in these courses during the year is given in the table below.

<i>Name of the Course</i>	<i>Enrolment</i>
B. Ed. (Languages)	80
B. Ed. (Commerce)	39
B. Ed. (Science)	68
B. Ed. (Agriculture)	Nil
B. Ed. (Ele. Education)	75
M. Ed.	08
M. Ed. (Ele. Education)	07

In the B.Ed. Summer-*cum*-Correspondence course which the College organizes for the untrained teachers in Science the enrolment during the year was 247.

Extension Programmes : Besides these regular courses, the College organized the following in-service extension programmes :

<i>Name of the Programme</i>	<i>No. of Participants</i>
Training Programme in Micro-Teaching for Secondary Teacher Educators	34
Workshop of Commerce Teachers of M.S. for Evolving Procedure for the Try-out of Workbook in Book-keeping for Class XI	12
—do—	5
Radio-script Writers Workshop for Teachers of Gujarat State	15
Radio-script Writers Workshop for Teachers of Maharashtra State	20
Enrichment Programme in English for Teachers of Tribal Areas of M.P.	29
Orientation Programme in Hindi for Teachers of Tribal Areas of M.P.	21
Workshop on Development of Tools for Evaluation of Nationalized Textbooks of M.P.	10
Seminar on Current Research Trends in Creativity and Their Implications for Teacher Educators	24
Graphic Techniques Workshop for the Art Teachers of Central Schools and Sainik Schools	24
Refresher Course in Content- <i>cum</i> -Methods in the Teaching of Geography for Higher Secondary School Teachers of Maharashtra and Goa	19

<i>Name of the Programme</i>	<i>No. of Participants</i>
Workshop in Creative Teaching Methods for Elementary Teacher Educators of Maharashtra and Goa	58
Training of Elementary Teacher Educators in the Use of Environmental Approach in Teaching	24
Workshop of Commerce Teachers of Maharashtra for the Review of Workbook for Class XII	—
Annual Conference of Hony. Directors and Coordinators	—

In addition to the extension programmes mentioned above, a number of programmes organized by different departments of the NIE were also held at the College. The College faculty participated in these programmes.

Non-Formal Education : Apart from 30 non-formal education centres which are being run by the RCE with a strength of 1,176 students, the RCE also organized the following activities in this field :

An orientation course for the field teachers and supervisors of the centres of non-formal Education of Madhya Pradesh in collaboration with the Fields Advisers (NCERT).

An orientation-*cum*-production workshop in non-formal education for the field teachers and supervisors of the centres located in Maharashtra State.

An orientation-*cum*-production workshop for the field teachers and supervisors of the centres located in Gujarat.

A four-day workshop for preparing the test items in Language, Arithmetic and Environmental Studies for assessing the performance of children at Narsinghpur (M.P.).

The CAPE Project : The College is also assisting in the implementation of the CAPE Project and participating in its activities. Two members of the CAPE team attended the workshop on the processing of learning episodes already prepared by various States with a view to printing them so that they could be used by the teacher trainees at their learning centres. The CAPE teams of RCE, Bhopal, are also actively collaborating with the CAPE teams of SIEs of Madhya Pradesh and Maharashtra in the processing of the learning

episodes so that the SIE's could take up the printing work and try out this material at various levels.

Regional College, Bhubaneswar

The Regional College of Education, Bhubaneswar, caters to the educational needs of West Bengal, Bihar, Orissa, Arunachal Pradesh, Assam, Meghalaya, Manipur, Tripura and Andaman and Nicobar Islands.

Pre-Service Training Programmes : To produce an army of quality teachers, who might prove their worth in introducing the desired changes in our school education, the College offered the following regular courses approved by the Utkal University, Orissa :

A one-year course leading to B.Ed. (Secondary) degree for graduates and post-graduates in Arts, Science and Commerce.

A one-year course leading to B.Ed. (Elementary) degree for graduates and post-graduates in Arts and Science.

A one-year course leading to M.Ed. degree for those having a Bachelor's Degree in Education.

A two-year course leading to All India M.Sc. (Life Science) degree for Science graduates.

The table given below shows the total number of students admitted in the year 1980-81 and the results of the University Examination, 1979-80.

Name of the Course	No. of Students Enrolled	Results of University Examination				
		No. of Students Appeared	Ist Div	2nd Div.	Total	%
B.Ed. (Sc.) Secondary	100	87	24	25	69	79.3
B.Ed. (Arts) Secondary	62	54	21	23	44	81.4
B.Ed. (Commerce)	21	19	9	8	17	89.4
B.Ed. (Science) Elementary	8	6	4	1	5	83.3
B.Ed. (Arts) Elementary	10	10	8	—	8	80.0
M.Ed.	31	22	7	10	17	77.0
All India M.Sc. (Life Sc.) Ed.	40	16	16	—	16	100.00

In-Service Training Programmes : Some other programmes aimed at improving the efficiency of teachers included :

Summer School-*cum*-Correspondence Course.

Correspondence-*cum*-Contact Courses.

Extension Programmes.

Summer School-*cum*-Correspondence Course : The course leading to the award of B.Ed. Degree of the Utkal University is meant exclusively for untrained graduate and post-graduate teachers with at least five years' teaching experience in recognized middle/high/higher secondary schools in the eastern region. The total number of teachers enrolled in the summer of 1980 and the University results for the session 1979-80 are given in the following table :

Name of the Course	Session	No. of Teachers Admitted in 1980	University results 1979-80				
			No. of trs.	No. of Trs. Passed			
				1st Div.	2nd Div.	Total	%
B.Ed. (Secondary)	1st summer	338	—	—	—	—	—
	2nd summer	251	298	63	182	245	82.3
B.Ed. (Elementary)	1st summer	100	—	—	—	—	—
	2nd summer	100	102	28	58	86	84.3
Total :		789	400	91	240	331	82.7

Correspondence-*cum*-Contact Courses : The College organized four contact programmes in different school subjects to orient 127 in-service teachers who had successfully completed the correspondence part of the six-month correspondence and 15-day contact programmes.

These courses had been introduced to prepare teachers on a mass scale to handle the new syllabi developed by different State Boards of Secondary Education after the NCERT models. A statement showing the total number of contact programmes completed and the total number of teachers trained in different subject areas is given in the table on the next page.

CONTACT PHASES OF C C. COURSE, 1980-81

<i>Subjects</i>	<i>Dates</i>	<i>No. of Participants</i>
Biological Science	8.9.80 to 22.9.80	34
Hindi	10.11.80 to 24.11.80	34
Hindi	5.12.80 to 19.12.80	26
Physical Science	28.2.81 to 14.3.81	33
Total :	...	127

The College also organized a number of extension programmes during the year as given in the table on pages 86-87.

EXTENSION PROGRAMME ORGANIZED DURING THE YEAR 1980-81

<i>Title of the Programme</i>	<i>States/Region Covered</i>	<i>Clientele</i>	<i>No. of Participants</i>
1	2	3	4
Workshop on production of low-cost teaching aids for key personnel	West Bengal	Teachers, Teacher-Educators of S.T. School	11
Regional conference of personnel connected with continuing education centres	Eastern region	Honr. Directors of C.E.Ss, State Edn. Sec. F.A.s	20
Improving instruction in Book-keeping for key persons	Eastern region	Teachers and Lecturers	1
Content enrichment course for key persons in Mathematics	Orissa	Elementary Teacher Educators	16
Course for key persons in modern usages and E.T.E. Grammar for teachers teaching Hindi as a second language	Orissa	—do—	29
Course for key persons on teaching of Bengali as mother-tongue in Secondary Training Schools	West Bengal	Primary Teacher Educators	4
Course for key persons on Educational Technology	Bihar	Teacher Educators of Training Schools and Colleges	28
Course for key persons on teaching English as a second language at secondary school level	Arunachal Pradesh	Teachers of Secondary and Higher Secondary Schools	11
Course for key persons in life sciences for method masters	Bihar	Secondary Teachers	12

Research methodology for teacher educators	Orissa, Bihar, West Bengal, Assam	Teacher Educators of Training Colleges	13
Seminar for key persons on linguistics in language teaching	Orissa and West Bengal	Lecturers of Training Colleges	14
Improving instructions in General Business for key persons	Eastern region	Secondary School Teachers and Lecturers of Polytechnics	7
Content enrichment course for key persons in Mathematics	Meghalaya	Teachers of Classes IX and X	22
Content enrichment programme in social sciences i.e. History and Civics	A. & N. islands	Elementary School Teachers	35
Content enrichment course in life sciences for key persons	-do-	Teachers of Classes IX & X	23
Content enrichment course for key persons in Physical Sciences	-do-	-do-	7
Content enrichment course for key persons in Mathematics	-do-	E.T.E.	32
Conference of Hony. Directors and Coordinators of E.S.D.s (Secondary/ Primary) Eastern Region	Eastern Region	Hony. Directors/Coordinators of E.S.D.s	15

In addition, 18 workshops, seminars and training programmes of 6-15 days' duration were arranged by the College for the teachers and teacher-educators of the eastern region. The objectives of these programmes were to enrich the content-knowledge of the participants in different subject areas and to impart skills and techniques of making classroom lessons interesting and effective. Three hundred teachers and teacher-educators were oriented through these programmes.

Non-Formal Education : The College continued to try out the model for expansion of elementary education through non-formal system in four States, viz. Assam, Bihar, Orissa, and West Bengal. In each of these States 10 centres of non-formal education have been opened in a cluster of 10 villages. Ten instructors, one for each centre, and one supervisor have been appointed on part-time basis to impart instruction up to the primary standard to out-of-the-school children in the age-group of 6-14 years. About 1,600 children have been enrolled in all the 40 centres.

On the basis of the experience gained in the previous year, locally relevant instructional material was developed in Oriya and Hindi during the year under report.

The performance of the children admitted in all the 40 centres in the 3 R's was evaluated and it was observed that the competency acquired by 70% of those children in the subjects is almost comparable to that of children of Standard IV in formal schools.

Project on Comprehensive Access to Primary Education ; During the year, "Learning Episodes" developed earlier were scrutinized and teacher educators of Bihar and Orissa were trained in collaboration with the SCERT of the respective States to implement this project. Besides, orientation of district-and block-level educational administrators of Orissa was taken up with a view to make them aware of their role in universalization of elementary education through the project.

Vocationalization—SUPW Programmes : Courses in job-oriented skills in machining and automobile servicing trades were offered by the Technology Department of the College.

In addition the following Departments of the College provided training in the organization of socially useful productive work to the B.Ed. students in the areas noted below :

<i>Department</i>	<i>Course</i>	<i>Areas of SUPW Offered</i>
Technology	B.Ed.	1. Radio Mechanism 2. Wood Work 3. Production of low cost consumables
Commerce	B.Ed.	1. Type-writing 2. Office practices
Agriculture	B.Ed.	Vegetable crop production

Preparation of Textbooks/Syllabi : Some of the activities undertaken during the year were :

The staff members of English Department prepared a manuscript of Supplementary Reader for Class VIII for the Central Schools.

The members of staff of different departments of the College have developed innovative syllabi for the 4-year Integrated B.Sc., B.Ed. and B.A., B.Ed. (Pass and Honours Courses).

The Education Department of the College brought out two journals entitled, *Current Issues in Education*, Volume III and *Universalization of Elementary Education*, a Special Issue.

During the year, faculty members of the College undertook 58 individual research papers which have been either published or accepted for publication. The details are given below.

<i>Subject Area</i>	<i>No. of Research Papers Published in 1980-81</i>	<i>No. of Research Papers Accepted for Publication</i>	<i>Total</i>
Physics	15	18	33
Chemistry	—	2	2
Biology	4	4	8
Education	12	3	15
Total :	31	27	58

Research Undertaken, Completed : Some members of the teaching staff guided research scholars including staff members for their Ph.D. degree.

The statement given below shows the total number of research scholars who were awarded Ph.D. Degree, of those who submitted their dissertation and of those who still pursued studies for the Doctoral Degree under the guidance of staff members in the year 1980-81 in different areas.

<i>Area of Research</i>	<i>No. of Research Scholars awarded Ph.D. Degree</i>	<i>No. of Research Scholars who submitted Dissertation</i>	<i>No. of Research Scholars who still pursued Studies for Ph.D.</i>
Physics	—	—	1
Mathematics	—	—	1
Biology	2	—	6
Education	1	1	24
Social Science	—	—	2
Languages	—	—	5
Total :	3	1	39

Working with Other Agencies : The Technology Department of the College rendered continuous help to the Board of Secondary Education, Orissa, in implementing SUPW in the schools of the State. The Department of Educational Technology assisted the SCERT, Orissa, in preparing film scripts suitable for secondary schools in the State. The Department also assisted NIE's Departments of Teaching Aids and Education in Social Sciences and Humanities, in reviewing the visual material prepared on "The Independence Movement in India" for secondary schools and the "Draft Syllabus in Fine Arts, for Classes I to X", respectively. The Technology Department of the College also undertook a survey of the needs of the eastern region with a view to introduce a two and a half years' Teacher Education Programme for preparing teachers for +2 level in Engineering Vocation.

Regional College, Mysore

The Regional College of Education, Mysore, caters to the educa-

tional needs of the southern States of Tamil Nadu, Kerala, Karnataka and Andhra Pradesh. While in other colleges they were discontinued, the Regional College, Mysore, continued to run the four-year B.Sc.Ed. Programme.

The enrolment in various courses during the year is indicated below :

<i>Course</i>	<i>Enrolment</i>
One-year B.Ed.	176
Four-year B.Sc.Ed.	255
Two-year M.Sc.Ed.	107

The Summer School-*cum*-Correspondence Course leading to the B.Ed. degree is very popular and there had been good response from all the four States. During the year under report all the 250 seats have been filled up with duly qualified candidates. The percentage of passes in the university examinations was 90.

Department of Science : The Department of Science has been continuously working for improving the course content of the B.Sc.Ed. and M.Sc.Ed. integrated programmes. They have conducted a number of in-service programmes. The Department has also improved the laboratory facilities by purchasing latest laboratory equipment. Preparation of Laboratory Guides and instructional materials, based on sequential difficulty level concepts, has been organized.

Department of Education : The Department of Education successfully conducted a number of guidance and orientation programmes for the teachers of the cooperating schools. The internship-in-teaching held this year for B.Sc.Ed. students at Nagercoil and Bellary and for B.Ed.s at Shimogo, Vijayawada, Kanchipuram and Palghat has been quite successful. The regular teaching work in the department has been improved by resorting to multimedia approach. The members of the staff were involved in the organization and planning of a programme in the methodology of teaching and training for the personnel of the engineering colleges in India, jointly sponsored by the Jayachamarajendra College of Engineering and the Regional College. The departmental staff also assisted in a number of in-service

programmes conducted at various centres for different colleges of the region. The Education Forum of the College was also very active and current issues in education have been discussed here with fruitful results. The Guidance and Information Centre organized a career conference where a number of career talks were arranged with guest speakers representing various organizations.

Department of Languages and General Education : The Department of Languages and General Education has made good progress in improving methodology of teaching languages at the B.Sc.Ed. and B.Ed. levels. The Department has also conducted programmes for the enrichment of content in Geography and Environmental Education. The faculty have participated in a number of workshops for the editing of textbooks at the P.U.C. level. They also participated in the preparation of instructional materials for non-formal education centres. Some of the staff members have worked effectively in the programmes of Comprehensive Access to Primary Education (CAPE).

The Department of English, besides regular teaching to the B.Sc.Ed. course, took up a short after-hours course in spoken English for non-English students of the College. They prepared some multiple-choice test items for the items bank.

In-service Programmes : The College carried out a variety of in-service programmes with a view to bringing about qualitative improvement in school education according to the educational needs and priorities of the States in the region. It has also given guidance for the Centres of Continuing Education set up in different States and assisted the Field Office in effectively organizing in-service programmes.

The requests of the State Departments for assistance in designing and implementation of in-service programmes in the context of the new curriculum were attended to. The College also helped the NIE Departments in organizing the various in-service programmes in the College.

Some of the in-service programmes arranged by the College

during the year under report were : orientation of teacher-educators for new curricula; content-*cum*-methodology enrichment in school subjects; work experience and vocationalization; guidance and counselling; experimental projects; instructional material development; special education; educational technology; educational research; environmental education; educational administration and institutional planning; educational evaluation, etc.

The table given below indicates the programmes organized and the number of participating teachers and resource persons.

<i>S. No.</i>	<i>Title of the Programme</i>	<i>No. of Participants</i>
1.	Workshop on Environmental Studies for Teachers of Nanjangud Taluk	11
2.	Conference on Correspondence Course for Higher Secondary School Teachers of Tamil Nadu	5
3.	Ten-day Course in Geography for Teachers of Kerala	34
4.	Conference of Cooperating Teachers for the Internship in Teaching for the B.Sc.Ed. Students (Pre-internship conference)	80
5.	Orientation Conference for Cooperating Teachers of Ballary and Nagercoil for B.Sc.Ed. Internship Teaching Programme	30
6.	Workshop- <i>cum</i> -Training Programme for Teachers in charge of School Libraries of Karnataka	19
7.	Conference of the Heads and Teachers of Cooperating Schools for B.Ed. Internship in Teaching Programme	248*
8.	Training Course in Horticulture for Primary Teacher Educators of Karnataka	13
9.	Orientation Course in Commerce for Lecturers of Junior Colleges of Andhra Pradesh	17
10.	Training Course in Work Experience in the Area of Horticulture for SC/ST Teachers of Primary Schools of Karnataka	17
11.	Workshop in Micro-Teaching and Link Practice for Teacher Educators of Colleges of Education affiliated to Mysore University	12
12.	Workshop to produce Resource Material in Chemistry and Biology at +2 level	23

* including students

<i>S. No.</i>	<i>Title of the Programme</i>	<i>No. of Participants</i>
13.	Orientation Course in Physics and Chemistry for Teachers of Tamil Nadu	30
14.	Orientation Programmes on Educational Research and Methodology	30
<i>The NCERT Programmes conducted at RCE, Mysore</i>		
1.	Workshop for the Development of Teacher Training College Libraries in Mysore	26
2.	Conference of Honorary Directors and Coordinators of Continuing Education Centres of the Southern Region	30

Research and Development: The College is engaged in a few research projects under ERIC in order to solve some of the current issues in education on the basis of the findings of research. Some of the members of the staff have also done individual research for their doctoral programme in various universities.

The project on non-formal education, which has taken the shape of integrated education for rural development, has been a great success. The evaluation of the project made by the visitors indicates its usefulness in bringing about a real change in the community. Some of the activities taken up include the training of farmers, teachers and craftsmen in improving skills in their respective areas, the training of some youths in the area of sericulture, the training of teachers in the preparation of teaching aids and improving teaching through environmental approach, the training of village-level workers in the non-formal techniques and functional literacy programmes and the training of teachers in the area of horticulture and ornamental gardening.

A survey has been conducted to assess the knowledge of nutrition in the teachers in order to improve the health conditions of the school children. Kits have been provided with the help of the British Council to the schools and non-formal education centres. Various developmental departments have shown keen interest and

cooperated in improving the life style of the people of the community. The project has shown good promise for future progress.

The impact of the programmes of the Regional College of Education, both pre-service and in-service, has shown appreciable results. Some of the innovative ideas worked out in the College have got projected into the school systems of the States. Some of the ideas worked out through research and experimentation which have been accepted by the State colleges of education, are : internship-in-teaching, training through micro-teaching techniques, incorporation of work experience component, working with the community, use of multi-media approaches, improvised and low-cost equipment, the use of locally available resources and the like.

Focus on Future : With a view to making this institution a real pace-setter and a centre of excellence, a number of innovative practices have been introduced and work on these will continue in future with due focus on the objectives stated. Plans are afoot to develop the Departments of Educational Technology, Defectology, Pre-School Education, Documentation and Information Retrieval.

The College would also like to concentrate on developing prototype models on the basis of experimental and developmental work, the training of key personnel and provision of consultancy services. The attempt is always on the optimum utilization of the available facilities and resources in the College.

Demonstration School : The Demonstration School affiliated to the Central Board of Secondary Education and having English medium, made good progress during the year under report. This year Class IV has been added at the primary level making it a full-fledged composite school with a 12-year school programme under the 10+2 pattern of CBSE. The School has a general education programme up to the end of 10 years and a 2-year elective programme at the +2 level.

Provision has been made for the teaching of Physics, Chemistry, Mathematics, Biology and Engineering Drawing as electives at the +2 level. The examination results, both of the annual examinations and the public examinations, have been encouraging. The School

secured 92% results at the All-India Secondary School Examination and 90% at the All-India Senior School Certificate Examination. Under the co-curricular programme the School provided plenty of opportunities for the students to participate in various competitions at the school level and also at the inter-school level. Some of the significant competitions at the school level and also at the inter-school level held during the year under report are :

- Devaranama Competitions.
- On-the-spot Drawing and Painting.
- Competition of Cultural Programmes.
- Science Seminar.
- General Knowledge Competitions.
- Fancy Dress Competitions.
- Drama Competitions.
- Children's Day Celebrations.

The School also participated in National Integration Camp, NCC Annual Training Camp, Zonal Science Fair, etc. It is a matter of great satisfaction that the School's NCC contingent was adjudged as the best. One of our NCC cadets was selected for the pre-Republic Day programme at Bangalore. The school teacher selected for post-graduate study in Mathematics in the UK under the CBSE programme has completed successfully the programme of nine months' duration. The School has been progressing.

EDUCATIONAL PSYCHOLOGY

The educational psychology programmes had three major foci : the learner, the teaching-learning processes, and the teaching-learning situation. To achieve the goals of improving learning and teaching-learning process, the NCERT planned and organized different kinds of training programmes for teacher educators of (a) elementary teacher education institutions and (b) secondary teacher education institutions. The Educational Psychology Unit of the Council organized a number of training programmes. These are discussed below.

Administration of Psychological Tests and Interpretation of Test Scores

The programme is meant to develop necessary skills in teacher educators in the administration of psychological tests, interpretation of scores of these tests and the manner in which these scores should be communicated to the students. The long-range objective of the course is to develop a core group of teacher educators who in turn could provide practical supervised training during pre-service courses in the use of psychological tests. The need for such a programme arose because while educational psychology forms the central part of the teacher training programme yet very little use is made by them of the objective psychological methods of understanding the child in the absence of practical know-how by tests. There is a gap between theory and practice. To bridge the gap 8-day supervised practicum courses were planned for 15 participants per course. The programme included three psychological tools : (a) Culture Fair Intelligence Test, (b) Interest Inventory, and (c) Personality Questionnaire. The group learnt to interpret the intelligence, interest and personality factors in conjunction with their scholastic achievements. During the year four courses were organized as shown in the table.

<i>Name of the State</i>	<i>Venue</i>	<i>Date</i>	<i>No. of Participants</i>
Madhya Pradesh Rajasthan	Delhi	31 March to 7 April, 1980	14
Haryana, Punjab Himachal Pradesh, Chandigarh	Chandigarh	20 Nov. to 27 Nov. 1980	13
Tamil Nadu	Coimbatore	29 Jan. to	18
Kerala Uttar Pradesh	Allahabad	27 Feb. 1981 28 March to 4 April 1981	19
Total :			64

Sixty-four teacher educators have been trained during the year and it is hoped that the practicum on psychological testing in these institutions may start from the next academic session.

Application of Behaviour Modification Technology in School Setting

Education is a process of modifying behaviour significantly in the desired direction. The learning theory approach offers the teacher a variety of behaviour modification techniques for use in day-to-day classroom problems. Behaviour modification is a tool backed by theory which can be used effectively to guide the students and change the classroom in a desirable direction, to increase their rates of emitting certain behaviour, such as studying, task completion, achievements by student as well as controlling disruptive classroom behaviour which interferes with the teaching-learning process. The NCERT planned 8 to 10 days' practical courses. The following courses were held during the year :

<i>Name of the State</i>	<i>Venue</i>	<i>Date</i>	<i>No. of Participants</i>
Tamil Nadu	Madras	2 to 8 March 1981	10
Jammu and Kashmir Himachal Pradesh	Jammu	23 to 29 March 1981	14
Total :			24

Enrichment Course on Learning and Development for Teacher Educators of Secondary Teacher Education Institutions and SIE/SCERT

Teachers emphasize instruction and usually are oblivious of the learner. No doubt they have some notions about the learning process but they do not seem to recognize that their students come with some minimal readiness, growth and entry behaviours which can be fruitfully exploited by the teacher in teaching-learning situations of the classroom. Also their principles of reward and reinforcement are ignored in the management of the learning situation. A 6-day course on this theme was held for the States of Maharashtra and Gujarat from 24 March to 29 March 1981. There were 24 participants.

**Enrichment Course on Learning and Development for
Teacher Educators of Elementary Teacher Education
Institution/SIE/SCERT Staff Members**

The primary school teacher has a vital role to play in the learning and development process of children. It is, however, generally found that he or she does not possess a sound knowledge of the principles of either the learning or the development processes. Furthermore, he or she does not also have the know-how of the principles of reinforcement which may be required for effective management of the classroom. To enrich knowledge on learning and development processes of young children in the age group of 6 to 11 years a course was organized for the States of Madhya Pradesh and Rajasthan from 22 February to 28 February 1981.

**Diploma Course in Educational and
Vocational Guidance 1980-81**

The Educational and Vocational Guidance Unit of the Council is organizing a nine-month post-graduate Diploma Course in Educational and Vocational Guidance as an on-going programme. The 21st training course was organized during 1980-81. Twenty-five trainees, including four deputed by the Governments of Jammu and Kashmir and Karnataka, were enrolled to the course. The trainees were also taken to Bombay on an educational trip. They visited various places of professional and educational interest. The trainees organized a Conference-*cum*-Career exhibition in two of the practising schools. The alumni of the course have been employed as school counsellors, and as faculty members in training colleges, university departments of psychology and education, and in the NCERT. They also man the State-level agencies for guidance work in other allied fields.

As a part of the extension counselling programmes in this area the UPSC, the Government of Maharashtra, the Ministry of Social Welfare, the Vidya Bharati Group of institutions were provided assistance. This also included orientation of two officials from Egypt.

Guidance Laboratory

Organizing and manning the information service and collection of literature are in progress. The material collected is being classified and coded. The Guidance Laboratory was used as an adjunct to training, and also for rendering service to institutions and individuals.

Publications

The following materials were produced :

- (a) Problems in the Dissemination of Occupational Information among Secondary School Pupils.
- (b) Research on First Generation Learners—report of the study at Grade X level.
- (c) Review of Scientific Researches on Transcendental Meditation.
- (d) Strengthening Guidance Service and Programmes for Career Development.

8

Educational Technology and Aids

EDUCATIONAL TECHNOLOGY

THE work done during the year in educational technology was of a diverse nature and dealt with the programme of production which included educational television and radio, development of multimedia modules, preparation of educational films and video

and audio programmes, etc. The activities undertaken during the year are described below.

Educational Television/Radio

A number of workshops and training courses were organized for the educational television and radio. The table given below gives a summary of these programmes.

<i>Programme</i>	<i>Duration/ Participants</i>	<i>States Covered/ Outcomes</i>
Orientation-cum-Selection Workshops for ETV Script-writers of Doordarshan Kendras	15 days	Delhi, Gujarat, Maharashtra, Orissa
Intensive Training Course in ETV Script-writing	19 Participants	38 ETV scripts developed
Training Course in 1/2" Portable Video	12 Participants	Knowledge and skill in Video Production was imparted.
Orientation Seminar for ETV Children's Programme Producers/ Script-writers	4 days 35 Participants	ETV formats were played back.
Workshop for Developing Curriculum for ETV	7 days	Rajasthan, Bihar, Madhya Pradesh
Workshop for Developing Series of ETV Scripts for Primary Children	10 Participants	Social Sciences and Natural Sciences were covered.
Workshop for Need Assessment of the Teachers and Children with Reference to the Intervention of TV in Various Subjects at Primary Level	19 Participants	A series of topics in each subject where TV can be used fruitfully was identified.
Training Programme for Script-writers for Educational Radio	15 days 20 Participants	Organized at Srinagar

Evaluation in Educational Technology

A two-week training-cum-orientation course on evaluation in

educational technology (November 1980) was organized for the personnel of the Educational Technology Cells.

Adult Education

Four workshops at Ranchi, Deoghar, Udaipur and Lucknow were organized on "Innovative Practices in Teaching Learning Techniques for the Instructors of Adult Education Centres under the NAEP". As a result of these workshops, a handbook entitled "Proudh Shikshan: Nai Vidhi, Nai Vidha" was prepared.

Seminar on Technology

The Centre collaborated in organizing and also participated in a three-day State-level seminar on educational technology organized by the ET Cell, Maharashtra, at Pune and by the ET Cell, Tamil Nadu at Madras.

A three-day workshop for developing/finalizing a comprehensive curriculum for the Diploma Course in Educational Technology proposed to be started by the CET from the next year was organized. About 30 educational technologists from various universities and Departments of the NCERT participated in the workshop.

Research and Evaluation in ET

Evaluation of materials and training programmes of the CET is an in-built activity of the Centre. During the period under report, a number of materials and training programmes organized by the Centre were evaluated and findings reported to programme producers/organizers for further improvement of materials and programmes.

The following research studies have been completed :

Case study of school broadcasts in Delhi; the report has been brought out.

Study of the utilization and comprehensibility of school television programme in Delhi; the report has been published.

Research study on "Correspondence Education at Secondary Level in Delhi" has been completed and report written.

Report entitled "Educational Radio Programme for the Schools

and the Role of State ET Cell'' synthesizing the experiences of a series of studies on school radio has been brought out.

Radio Project for Teaching Hindi as First Language to Primary School Children

The feasibility project on teaching Hindi as first language, using radio along with other support materials in print, aims at better learning of the language by the primary school children. The experiment is being conducted in 483 primary schools of 15 Panchayat Samities in Ajmer and Jaipur Districts of Rajasthan. Starting with Class I in 1979-80, it was extended to cover Classes I and II in the year under report. There were two daily radio broadcasts of 15 minutes' duration for Classes I and II respectively during 1980-81. On the completion of first academic year in April 1980, the achievement of students was evaluated. It was found that the achievement of the children of the experimental schools in reading, writing, listening and language development was better than that of the children of non-project schools. In the ensuing year the project will cover Classes II and III.

Project on Continuing Education of Weavers

The project aims at the development of prototype course materials for continuing education of weavers in a weavers' colony in Delhi called Nandhanageri. During the period under report, a number of workshops were organized in Delhi and Panipat to prepare instructional materials for the training of weavers in the improved practices of designing, weaving, management and marketing. The draft of instructional material is ready as the same will be used for carrying out the training of weavers.

Multi-media for Continuing Education of Instructors of Adult Education Programme

In this connection, the Centre for Educational Technology organized a series of workshops at different places in the country. As a result of these workshops, a primer, a workbook and a handbook for use in adult education centres have been developed so far.

Production of Films, Video and Audio Programmes, etc.

Several films and audio radio programmes were produced as supports to learning process. These were produced as prototype productions for use in the training programme of the Centre :

The films on Soviet Puppets viz. (i) Jadoo ki Kitab, and (ii) "Semurg" or the Bird of Happiness, have been completed. These films are in 16 mm. and in Eastman colour.

One film "Scientific Attitude" on 35 mm. as well as on 16 mm. (black and white) has been completed.

One 16 mm. colour film on "Solar Eclipse" is nearing completion.

Film on "Innovation in Education No. 2" (Mobile Creches) is nearing completion.

Twelve television programmes based on scripts developed during training course were produced for young children.

A series of radio programmes and other support materials were produced for teaching Hindi as a first language to children of Classes I and II. In all, 157 programmes for Class I and 155 programmes for Class II were produced during the year under report.

Several new audio programmes under the project on development of educational programmes using archival materials of Akashvani, bringing the total to 267 programmes.

Films

The following films related to the school curriculum have been produced during the period under review :

Graphic Aids in Teaching.

Elasticity.

The censor certificate and Hindi versions of these films are to be taken up.

The NCERT film "Kishan and the Magic Chariot" has won the prestigious "Red Ribbon Award" from American Short Film Festival

organized by the Educational Film Library Association in New York in 1980. Negotiations with Churchill films of New York for the distribution of this film through the cinema and television network have been made. Already an advance of 1600 and odd American dollars has been earned by the CET. Another deal with Bioscope Films of Federal Republic of Germany by which CET will earn 5000 German Deutschmarks, is under negotiation.

TEACHING AIDS

The NCERT undertakes a variety of activities for designing and developing teaching aids and for their use by teachers for enhancing the teaching-learning process. Among others they include educational charts, models, film strips and films. The training of State-level personnel in the development and use of these aids is also undertaken. The various activities undertaken are given below.

Workshop for Preparation of Low-cost Teaching Aids at Social Work Research Centre, Tilonia (Rajasthan)

The NCERT organized a workshop on the preparation of low-cost teaching aids for 32 rural primary school teachers of Rajasthan at the Social Work Research Centre (SWRC) from 10 to 15 July 1980. Eighteen teachers from the non-formal education centres being run by SWRC and 13 teachers from the rural primary schools participated in the workshop. The major objective of the workshop was to get the draft manual consisting of about 25 models tested by the participants.

During the workshop, the selected aids on science topics in the form of experiments and models prepared by the rural tribal primary school teachers in the series of five workshops on low-cost teaching aids were tested. Identification of aids/concepts on science out of bicycle or its parts and correlating them with the science curriculum was made. Demonstration of low-cost teaching aids was also given by the resource persons from SCERT, Udaipur, USCS, Ahmedabad and Delhi. As a follow-up programme the manual is being prepared for distribution among the rural primary school teachers.

Audio-Visual Learning Resources for the Child in a Non-Formal Way

A four-day seminar-*cum*-workshop on audio-visual learning resources for the child in a non-formal way was conducted in collaboration with the Visvesvaraya Industrial and Technological Museum, Bangalore. The following questions of utmost importance and pertinence to the utilization of AV resources within the community for the education of children were discussed :

- Learning for whom ?
- Learning with what objectives ?
- Learning with what means (AV learning resources) ?
- Administrative, Organizational framework.
- Software.
- Area/subject covered.
- Constraints.

Production of Science Charts for Classes VI-VIII at Pachmarhi

A workshop was organized for the production of science charts for Classes VI-VIII in collaboration with the Directorate of Education, Madhya Pradesh, and Kishore Bharati, Bankheri, at Pachmarhi, Madhya Pradesh. Thirty-one teachers from the secondary schools of Hoshangabad; the Secretary, Education Ministry, Government of Madhya Pradesh, Bhopal, and the faculty members of DTA participated in the workshop. Three science charts along with relevant visuals were produced and the content for another 10 charts was finalized. These charts will now be refined and printed by the MP Government with the help and guidance of Kishore Bharati, Bankheri.

Script-writing for Science Films at the Film and Television Institute, Pune, under the aegis of the Indo-US Sub-Committee on Film and Broadcasting

The NCERT has been concerned in training and organizing workshop in the educational media such as charts, tapeslides, low-cost appropriate material and films, etc. It has also been engaged in

producing audio-visual material which can have the possibility of multiplication and wider utilization.

As an attempt in creating a culture of educational software in the country, the NCERT is making efforts to involve scientists in view of the forth-coming expansion of Indian television system through the Indian National Satellite (INSAT) expected to be operative next year.

A workshop on script-writing for science films, the second in the series, was organized by the NCERT from 5 to 24 January 1981. This was done under the aegis of the Indo-US Sub-Commission on Education and Culture and the Indo-US Sub-Committee on Film and Broadcasting. The course in which two US experts and 32 scientists, teachers and media persons took part, was organized in collaboration with the Film and Television Institute of India, Pune.

The objectives of the workshop were :

To provide training to science teachers in the language of films.

To screen various types of science films.

To analyse the educational media and technology and see the crucial role of science films in the growth of the country.

To develop scripts in groups and make two short-duration films.

To have individual scientists write short scripts of about 5-10 minutes' duration for popular level audience.

During the three weeks two films of about five minutes' duration each, one on *Friction* and the other on the working of *Pressure Cooker*, were produced. In addition, more than 25 scripts were written as an exercise in communication in science at popular level through this medium. About fifty films and ten programmes on videotapes were screened.

Production of Geography Charts

A workshop was organized from 2 to 4 February 1981 for finalizing charts on Physical Geography for secondary and higher secondary classes. Ten participants—subject experts, visualizers from Delhi University, JNU, and the SIE Delhi, and some teachers—attended the workshop. These charts were developed in an earlier work-

shop conducted in collaboration with the SIE, Delhi, during September 1978. The charts on Physical Geography were reviewed by the participants critically from the content and also visual angle and gave a number of suggestions for improvement. The suggestions given by the members are being incorporated in the charts.

Workshop on Production of Charts

A three-day workshop on the production of charts was organized at the request of the Educational Planning Group, Delhi, at Sardar Patel Vidyalaya, New Delhi, from 26 to 28 February 1981. Twenty-one teachers from 11 institutions working with the Educational Planning Group, attended the workshop. The participants received training in the production of various types of charts.

Workshop on the Development of Teaching Aids on the History of Indian Freedom Movement

A second workshop on the development of teaching aids on the history of Indian Freedom Movement was organized from 4 to 7 March 1981. About 50 panels covering various aspects of Indian freedom movement from the post-1922 period to the attainment of Independence (15 August 1947) and the scripts explaining the events were prepared for presentation in the workshop. About 20 participants consisting of content experts, teacher educators, teachers, visualizers and media experts from institutions like the Victoria Memorial Hall, Calcutta, the National Archives, New Delhi, and the Indian Council of Historical Research and other educational institutions and organizations all over the country attended.

The main purpose of the project is to present to teachers the important events of Indian freedom movement through a set of visuals accompanied by relevant scripts which will make the subject fascinating. The Boycott of Simon Commission, the Civil Disobedience Movement, the Workers, Peasants and Socialist movement, the Revolutionaries, Freedom Movement in the World, the 'Quit India' Movement, the INA Movement, the Cabinet Mission, Partition and Migration and Independence (15 August 1947) are some of the major events depicted in these panels.

During the four-day workshop, each panel was reviewed thoroughly and critically examined by the content experts, media experts, etc., who suggested a number of changes for improving these panels. Based upon the comments, suggestions and reactions from the participants and resource persons of the workshop, these panels are being revised so that they could be finalized for mass production during 1981-82 for use in the schools.

With these materials in the form of Folio, the teachers may find it easier to teach the topic to the students of secondary and higher secondary classes more effectively. The visuals comprise reproductions from original photographs and sketches of historical events neatly collected from the contemporary books and journals and the script contains excerpts from the important writings and speeches of noted national leaders and the resolutions passed by various national organizations. By going through these materials students and teachers will have access to some selected places of original sources related to the history of Indian freedom movement which is based on the modern Indian history textbook of the NCERT. A team of specialists in history tapped various sources like the National Archives, the Nehru Memorial Museum, the Gandhi National Museum, the Victoria Memorial Hall, the Netaji Research Bureau, Calcutta, and selected a number of visuals, documents, newspaper cuttings, etc., for the preparation of these panels.

Seminars

A number of seminars/workshops were organized. Some of these are discussed below.

Growth and Development of the State Film Libraries

A workshop was organized from 10 to 12 March 1981. Twelve participants associated with the State Film Libraries attended the seminar. Shri P.K. Nair, Curator, National Film Archives, Pune, was especially invited to act as a resource person for the workshop. In the seminar various aspects pertaining to the present status of the

State film libraries and their utilization and the various problems related to the acquisition of instructional films were discussed.

Evaluation of DTA Products and Prototypes

A workshop on the DTA Products and Prototypes was organized from 23 to 26 March 1981 in which the materials produced by the NCERT were evaluated, tested by the teachers of primary/pre-primary schools and resource persons.

Film on Environment

In this programme 12 primary school teachers representing the primary schools of the Municipal Corporation, Delhi, and the New Delhi Municipal Committee and the public schools of Delhi, participated on 23 and 24 March 1981. The film was screened bit by bit and their reactions on the various aspects covered in the film were obtained.

Visuals/Words Presentation on Lamps

In this programme eight teachers from the secondary schools of Delhi and experts from the NCERT participated. A series of 33 photographs with write-ups on lamps was displayed at the National Science Exhibition held at the Teen Murti House in November 1980. The participants were asked to give their comments on each photograph and on the related write-ups. Their reactions were noted for modification of the script and visuals for a possible tape-slide presentation.

Pre-testing of the script "Solar Eclipse": The script was drafted in collaboration with the Department of Astronomy, Osmania University. It was discussed with the science teachers of schools. The workshop concluded on 26 March 1981.

Meetings of the Working Groups

Three meetings of the working groups in the subject areas of Physics, Chemistry and Biology were organized to finalize the science charts developed at the Mysore workshop which was earlier conducted during February-March 1980. These charts are being refined in accordance with the recommendations of the above-mentioned working groups for Classes IX-X.

Technical Training Course in the Operation, Maintenance and Use of Audio-Visual Equipment

The NCERT conducted a training course in the operation, maintenance and use of audio-visual equipment in collaboration with the State Institute of Education, Srinagar (J & K). Twenty participants from the State Institutes of Education/SCERT's located at Srinagar, Bhopal, Chandigarh and Udaipur attended the training course. The objective of the course was to train the participants in the operation, maintenance and use of audio-visual equipment.

Tape-Slide Programmes Produced

Tape-slide set on Population Education

As a follow-up of the last year's workshop, the Department of Teaching Aids is engaged in the production of multi-media kit on population education in collaboration with the Population Education Unit of the NCERT.

Audio-tapes for Blind Children

Seven composite programmes on audio-tapes of a duration of 15 minutes each on stuffed animals and birds have been produced in collaboration with the Perimal Higher Secondary School for the Blind, New Delhi. These audio-tape programmes are geared towards the classroom situation with a view to enriching the experiences of the blind children up to the age group of 14 years from various institutions. The information on the production of these programmes would be disseminated to other blind institutions through the periodical newsletters being published by the above-mentioned school for the benefit of the blind school children.

Tape-Slide System on Low-cost Teaching Aids

A tape-slide programme on the educational technology of low-cost teaching aids has been produced. The Hindi version of the programme has also been finalized. The tape slide programme on Oxidation and Reduction along with teaching notes has been prepared during the period under review in collaboration with RCE, Mysore.

Catalogue of Films

A supplementary catalogue of the Central Film Library on new films has been completed and printed. The catalogue has been sent to the member institutions of the Central Film Library.

Orientation Programmes

A number of orientation programmes were arranged for the teachers and the students from various educational and technical institutions like the Springdale School, New Delhi; the College of Vocational Training, Jamia Millia, New Delhi; the National Centre for Co-operative Education, New Delhi; the Polytechnic, Jammu; the MIBE Nursing College, Indore; and the Kendriya Vidyalaya Sangathan.

SCIENCE KITS

Design and Development

The designs of the integrated science kits made earlier were reviewed and tried in schools by the Science workshop. The prototype of the electronic kit has been developed. Also a kit for the identification of electronic components is ready. Apart from these two, a low-cost multi-meter and cathodray oscilloscope is being developed and is in the final stage of completion.

A number of science exhibits were designed, developed and displayed in the National Science Exhibition for Children at the Teenmurti House during November 1980.

Production

As on 31 March 1981 the Science Workshop has finished the fabrication of component items for nearly 5,330 kits. Out of these, 104, 465 and 761 science kits have since been despatched to Ladakh, Jammu and Trivandrum respectively. The remaining 4,000 kits are ready for despatch to Jammu and Kerala.

Training Consultancy

Seven ITI apprentices were trained in the trades of Electrician,

Fitter, Sheet-metal and Machinist. One apprentice in the trade of Carpentry is still continuing his training in the Department.

The Science Workshop also provided expertise to the State Institute of Science Education, Jabalpur, on the repair and maintenance of science equipment at the secondary school stage.

Repair and Maintenance

The Workshop undertook the following repair and maintenance work :

Repair and maintenance load in the areas of automobiles, air conditioners, room-coolers and all electrical gadgets and arrangements of the PA system etc.

Fabrication of structure and enclosure to provide classroom facilities.

Repair and maintenance of furniture and fixtures.

Fabrication of the seating arrangement.

9

Population Education

National Population Education Project

DISCUSSION with various organizations working under the Union Ministry of Education and Culture, the Union Ministry of Health and Family Welfare, the University Grants

Commission, the National Institute of Educational Planning and Administration, and the Planning Commission resulted in the formulation of a National Population Education Project.

The basic objectives of this project are—

To help students develop an insight into the interrelationship that exists between population growth and development.

To make children and teachers aware of the population situation in the country.

To institutionalize population education in the formal education system.

To develop desirable attitudes and behaviour in teachers, students and the community towards population issues.

It has now been proposed to make this project co-terminus with the Sixth Five year Plan. During this period it is expected that population education will become part and parcel of the school and the teacher training curricula.

While Bihar, Chandigarh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan and Tamil Nadu joined the project in the first phase, Andhra Pradesh, Assam, Delhi, Himachal Pradesh, Jammu and Kashmir, Kerala, Orissa, Uttar Pradesh and West Bengal are expected to join it from April 1981.

The specific role of the NCERT is to provide academic guidance to the participating States in the development of curriculum, preparation of instructional materials, and orientation and training of key persons. The Council is also expected to monitor and coordinate State Project activities in all these areas.

Workshops

During the year the Council organized two national workshop-cum-training programmes for eight days each at Srinagar and Pune. Bihar, Chandigarh, Haryana, Punjab and Rajasthan were invited to send their representatives to Srinagar and Gujarat, Karnataka, Madhya Pradesh, Maharashtra and Tamil Nadu were invited to send their representatives to Pune. Thirty-nine key persons from nine

States besides those from Jammu and Kashmir participated in the programme.

A comprehensive basic working document was prepared by the Council for discussion. The two workshops led to a clarification of the concept of population education suited to our needs and conditions. As a result of the discussion of tasks and strategies, a synthesized report entitled "Population Education—Tasks and Challenges : Recommendations of the Twin National Workshop-cum-Training Programmes", has been brought out.

A workshop to orient authors of textbook lessons in population education was organized in Sri Avinashilingam College of Home Science and Education for Women at Coimbatore from 7 to 16 March 1981. Twenty-five participants drawn from different parts of the country and with different subject specialization, attended the programme.

A master chart of possible topics in population education, guidelines for writing textbook lessons and evaluation tools were prepared in the workshop.

Training Programmes

In accordance with the project schedule the first intensive national training programme-cum-workshop was organized for a period of 13 days at the Department of Education, Osmania University, Hyderabad, from 17 to 29 November 1980. The programme was specially designed for the full-time personnel identified by the ten States to man their population education cells. Barring Punjab, all the ten States participated in the programme. The host State of Andhra Pradesh and the local branch of Family Planning Association of India were also invited to participate in the programme. In all, 40 persons were oriented and trained in this programme.

The major goal of the programme was to develop skills and competencies in the personnel of the Population Education Cells in the States. The participants worked individually and in small groups to plan and prepare materials in population education for students and teachers.

A second intensive workshop was held in Newzealand Hostel, Goregaon, Bombay, from 19 to 30 January 1981 on the same lines.

Whereas in the first intensive training programme the emphasis was on curriculum development and preparation of instructional materials, the second workshop-cum-training programme was devoted exclusively to the problems of orientation, training, monitoring, evaluation, and research. The workshop was attended by 41 participants from the States. Dr. R.C. Sharma, of UNESCO Regional Office, Bangkok, also participated. The workshop resulted in the finalization of the drafts of the following brochures :

Handout on National Population Education Programme (Tamil Nadu)

School and Population : What School as a Whole can Do (Karnataka)

Secondary Teacher Training College and Population Education (Haryana).

Elementary Teacher Training Institute and Population Education (Madhya Pradesh)

Check List for Organizing a Training Programme (Chandigarh)

Training Package Manual for Primary School Teachers (Bihar)

Training Manual for Social Studies Teachers of Middle Schools (Rajasthan)

Training Manual for Science Teachers of Middle Schools (Punjab)

Check List for Monitoring and Programme Evaluation to be used by the Project Staff of the State Institute of Education (Maharashtra).

Illustrated Check List for Planning Learning Situations conducive to the Development of Values (Gujarat).

Action taken by the Ministry of Education and Culture

The Ministry of Education and Culture, Government of India, which is the sponsoring agency, took a number of steps for ensuring

speedy implementation of the project. Among other things, these included acceptance of the National Population Education Project (formal system) as a Plan Scheme in the Central Sector of the Ministry of Education and Culture, approval of the State Population Education Projects of the ten States, release of funds to the tune of Rs. 29,40,300 to the ten participating States, request to the State Governments to take necessary steps to set up Population Education Cells, and constitution of the National Steering Committee for coordinating and implementing the project.

Action taken by the NCERT for the Second Phase of the Project

The NCERT assisted eight additional States and one Union Territory in developing the State Population Education Projects. The States and the Union Territory which were to join the National Population Education Project from April 1981 are : Andhra Pradesh, Assam, Delhi, Himachal Pradesh, Jammu and Kashmir, Kerala, Orissa, West Bengal and Uttar Pradesh.

In order to assist the State officials to draft their plan proposals, the Population Education Unit organized two workshops of one week each at Lucknow in the North and Tirupathi in the South.

After the State representatives prepared the draft proposals a series of meetings were held in the NCERT, New Delhi, in October 1980 to finalize the project documents. The meetings were attended by the senior-level personnel from the States. The representatives of the Ministry of Education and Culture, the NCERT and the UNESCO participated in the three programmes at Lucknow, Tirupathi and New Delhi.

State Projects

With the assistance of the NCERT the Population Education Cells of different States also conducted some programmes. These included, among others, a workshop for the development of curriculum held in Madras from 31 December 1980 to 5 January 1981; a workshop to develop population education curriculum held in Uttar Pradesh from 5 to 10 February 1981, and a workshop to

develop materials on population education held in Haryana at Gurgaon by the SCERT.

During the year, the NCERT brought out two issues of the *Newsletter* on Population Education. The two issues dealt with various aspects of the programmes such as conceptual framework, progress of the project, preparation of slides, tapes and filmstrips, participation of the States in the programme and so on.

National Steering Committee on Population Education

The Ministry of Education and Culture have constituted National Steering Committee on Population Education (formal system). The main functions of the Committee are :

To advise the Government of India on all matters relating to the population education programme.

To ensure implementation of the programme at the National and State levels.

To coordinate between the Centre and the State Government and between governmental, non-governmental and other implementing agencies.

To review and evaluate from time to time the progress and implementation of the programmes.

The first meeting of the National Steering Committee on Population Education was held on 12 December 1980. The Committee reviewed the progress of the project and expressed satisfaction with the work done by the Population Education Unit of the NCERT. It also noted the programmes that were to be taken up in the remaining part of the year. The Committee decided to invite the State representatives, namely, the Education Secretaries and the Project Directors, to attend the next meeting of the Committee. It also recommended that the project plans be made co-terminus with the Sixth Five Year Plan (i.e. March 1985).

International Activities

The UNESCO Regional Office for Education in Asia and Oceania conducted a three-week Regional Group Training Course in Popula-

tion Education for the representatives of the member States from 18 August to 5 September 1980 at Bangkok. The focus of the training programme was on approaches to the curriculum development. Both the streams, in-school and out-of-school—were covered.

The Indian Ocean Region of the International Planned Parenthood Federation and the Family Planning Association of India organized a Regional Seminar on "Population Education with emphasis on the out-of-school Youth" from 6 to 10 October 1980, at Bombay.

10

Measurement and Evaluation

DURING the year the NCERT undertook research studies, training courses, production of conceptual literature in educational evaluation, development of educational tests and provision of consultancy services in examination reform.

EDUCATIONAL EVALUATION

Programmes Taken up/Completed

(a) *In-depth Study of the Government of India Merit Scholarship-holders placed in Residential Schools*: Preliminary work in respect of the project has already been initiated. A questionnaire seeking information about the merit scholarship-holders was sent to all the residential schools where the scholars were studying. Information from 30 out of 67 institutions has been received and is being analysed. Information from other institutions is still awaited.

(b) *Research and Development in Talent*: The data on the 1977 candidates for the National Talent Search Scholarships have been analysed for creativity study. A report has been written. This is the first part of a study which involved writing two reports on two separate tests. The 1978 creativity test data are being computer analysed. As regards the second part of the study, the data have been analysed and the report is under preparation.

(c) *An Intensive Study of the Accomplishment of National Science Talent Scholars*: Two hundred and thirty persons who have received National Science Talent Scholarships have been traced for a study of their accomplishments in various walks of life. It is proposed to study their achievement on the basis of a questionnaire, the draft of which has been prepared. Personality inventories scales have also been finalized.

(d) *Social and Cultural Change and Changes in Creative Functioning of Children*: An analysis of the data which were collected for answering some of the questions has been completed. Some of the questions to be answered were :

How did the career aspirations or expectations of children of the 1975 batch compare with those of the 1961 batch ?

How did the perception of teachers about ideal pupils in 1977 compare with the perception of teachers in 1961 ?

How did the educational ideas and practices of teachers in 1977 compare with those of 1961 ?

The data relating to verbal and non-verbal creativity have been

tabulated for almost 2,000 subjects and are being computer analysed. An analysis plan has been finalized.

(e) *Evaluation of the Comprehensive Internal Assessment Scheme adopted by the Board of Secondary Education, Rajasthan, Ajmer, for Classes IX, X and XI* : This is an in-depth study of the comprehensive internal assessment scheme which the Board of Secondary Education, Rajasthan, has adopted. The purpose is to find out its strength and weakness. Interviews with headmasters, teachers, pupils and parents were undertaken for collecting information about the problems faced in the implementation of the scheme and approaches attempted for overcoming them. The study has yielded valuable information for improving the content and operation of the scheme.

(f) *Classroom Mastery Learning Approach in Geography for Class VIII* : This investigation was undertaken in order to assess the impact of the unit-based teaching and testing for the improvement of pupils' performance in Class VIII of the KVS (IIT) for 1980-81. The materials were prepared and used for classroom instruction followed by unit testing, to identify pupils' errors. This was followed by giving remedial instruction by self-study exercises and tutorial help. The analysis of the impact of this instructional methodology is now planned to be assessed.

The Department of Measurement and Evaluation has brought out the report entitled "Evaluation Practices of Some Selected Primary/Middle Schools". It has been sent to the States and the Union Territories with the major objective of developing a core programme of improved evaluation practices at the primary stage. A report, entitled "Weightages to be allotted to the Modes of Assessment at the Elementary Stage", has also been circulated among the States and the Union Territories for comments and scrutiny of the data.

(g) *Percentages of First Divisioners in the Examinations of the Boards of Secondary Education and Higher Secondary Education in 1978 and 1979* : The scrutiny of secondary and higher secondary school examination results of the Boards was undertaken. The study has revealed wide variations among the Boards in the percentage of students obtaining first, second and third divisions; this was parti-

cularly true in respect of the high achievers. For instance, the percentage of first divisioners varied between 0.77 per cent and 63.47 per cent.

A pilot study to investigate reasons for this phenomenon on the basis of the 1978 and 1979 examination results has been initiated.

(h) *Specific Steps taken to Combat Malpractices in Examinations* : The NCERT has planned to bring out a write-up on each board on the study entitled "Specific steps taken to combat malpractices in examinations." A brief write-up prepared on the Goa, Daman and Diu Board has been circulated among other Boards. Write-ups on similar pattern for the Boards of Secondary Education in Andhra Pradesh and West Bengal, the Council for Higher Secondary Education, Calcutta, and the Council for Indian School Certificate Examinations have been prepared and sent to the respective Boards for their approval.

Development Programmes

(a) A monograph, entitled "Biology for Middle Classes : Unit Approach to Teaching and Testing", has been brought out. It has been sent to the Central Schools/State Institutes of Education.

(b) A workshop on the development of criterion reference tests in Science and Social Studies and diagnostic tests in Mathematics and Hindi was organized for the Municipal Corporation Schools of Delhi as a part of the evaluation project regarding environmental studies

(c) A planning meet of experts was organized on 30 and 31 July 1980 at the NIE for the development of a Book of Reading on Evaluation at the elementary stage.

(d) Two brochures, entitled "Geography for Class VII—Unit Approach to Teaching and Testing" and "Madhymik Kakshaon Mein Itihas Ikai Yojana Dwara Shikshan Moolyankan", have been brought out. These have been circulated among selected schools and the States and the Union Territories so that further work in these areas is taken up by them.

(e) A brochure, entitled "Unit Tests in History for Class XI-

Vol-I", has been brought out and sent to the Central Schools/SIEs; Field Advisers, etc.

Training/Extension Programmes

Training and extension constitute important functions of the Department of Measurement and Evaluation. The programmes organized during the year are described in the paragraphs that follow.

An eight-day workshop for training paper-setters and developing sample question papers was organized at Netarhat in collaboration with the Bihar School Examination Committee, Patna, in May 1980. The subjects covered were English, Sanskrit, Geography, History, Economics, Civics, Biology, Chemistry, Physics and Mathematics. Sample question papers were prepared and these were circulated amongst the schools by the Bihar Board.

The Board of Secondary Education, Patna, organized a workshop from 9 to 16 June 1980 for training paper-setters and developing question papers. Four officers and the Head of the Department participated and helped the Board Officers in the preparation of question papers in Urdu, Hindi, Commerce, Home Science and Bengali.

A ten-day workshop for training paper-setters and developing sample question papers was held at Solan in collaboration with the Himachal Pradesh Board of Secondary Education. The subjects covered were Mathematics, Biology, Geography, Civics, History, Hindi, etc. Sample question papers will be circulated by the Board amongst paper-setters for guidance.

The Department finalized the instructional material in Biology which was developed in the Ooty workshop organized by the CBSE, New Delhi. The materials were sent to the CBSE.

The Maharashtra State Board of Secondary Education organized a workshop in collaboration with the Department of Measurement and Evaluation for training paper-setters at Pune from 26 August to 4 September 1980.

The Department organized a workshop for paper-setters in collaboration with the Board of Secondary and Higher Secondary

Education, Gujarat, from 17 to 24 September 1980 at Baroda. About 55 teachers who will act as paper-setters and resource persons, have been provided training in the preparation of balanced question papers in Hindi and Gujarati and Social Studies, Mathematics, Sanskrit, English, Science and Geography.

The Department, in collaboration with the Board of Secondary Education, Bihar, organized a 10-day workshop at Rajgir (Bihar) to train resource persons in educational evaluation. The workshop was attended by 59 teachers of Bihar. The participants were given training, both theoretical and practical, in different aspects of evaluation. Fifty-nine unit tests in the subjects of English, Mathematics, Physics, Chemistry, History, Geography and Civics were prepared by the participants in the workshop. These unit tests, after some further refinement, would be printed by the Board of Secondary Education, Bihar, and distributed among the schools in the State.

A four-day workshop was held in Panjim in the office of the Goa, Daman and Diu Board in which four teachers each in Geography and Political Science were trained in the techniques of paper-setting for the Class XII examination. These sample question papers will be circulated among schools.

A workshop was organized by the Maharashtra Board of Secondary and Higher Secondary Education from 7 to 16 January 1981 at Aurangabad. Forty-five participants and five resource persons attended the programme. Objective-based items of different types in the subjects of English, Mathematics, Physics, Chemistry, Biology and History were prepared by the participants.

The Department of Measurement and Evaluation organized a number of workshops, working group meetings for the finalization of unit tests in History for Class XII and Economics. It also organized workshops for finalizing teaching units in History for Class VIII and test items for the question banks in Mathematics and Biology.

A workshop for training resource persons was held at the Central Pedagogical Institute, Allahabad (U.P.) in collaboration

with the U.P. Board of Secondary and Intermediate Education. The workshop was attended by 50 teachers, teacher educators and subject experts in Social Sciences and Languages. The main outcomes of the workshop were the training of resource persons in the techniques of framing objective-based questions and preparation of the curriculum framework for an eight-day district-level and three-day tehsil-level training course in papers setting.

Two six-day workshops on the question bank in Mathematics and Biology were held at the NIE Campus, New Delhi. There were fifteen participants in the Mathematics Group and twelve participants in the Biology Group representing six States. Test items finalized in the workshops will be brought out in the form of brochures.

A ten-day training course in educational evaluation in Economics, Geography and Political Science was organized at the Department of Education, Osmania University, Hyderabad. Besides imparting training in developing objective-based questions and unit test, the work on developing materials on the evaluation of assignments and projects in Social Sciences was taken up. A detailed scheme of evaluation is being worked out in Social Science. A booklet is proposed to be developed.

In response to a request a special 12-week training course in examination reform was organized to cater to the specific needs of the Directorate of Military Training for four Brigadiers and 21 Lieutenant-Colonels. Trained officers will look after a special examination research and reform cell set up by the Government of India in the Military Training Directorate in order to evolve an objective system for promotion and competitive examinations.

Coordination and Clearing House

A news bulletin entitled "Emerging Evaluation Practices in Selected Universities" has been brought out by the Department. It has been circulated among the universities and training colleges to

make them aware of innovations introduced by selected universities in the field of evaluation.

PROGRAMME EVALUATION

Working Groups on Monitoring and Evaluation

The NCERT organized four working group meetings at Trivandrum, Hyderabad, Dwarka and Mussoorie during May-June 1980 in order to obtain the reactions of different levels of functionaries to the tools of monitoring and evaluation prepared by the Council's Planning, Coordination and Evaluation Unit in collaboration with the International Institute of Educational Planning, Paris, and the UNESCO Institute of Education, Hamburg. Nearly 100 functionaries participated in the programme.

The aim was to find out the feasibility of the proposed tools being applied at the grassroot level, through a try-out of the proforma for monitoring and evaluation of universalization of elementary education programme at the levels of the instructors, block education officers, district education officers, regional officers, and the State officers.

The participants were introduced to the material on programme evaluation and were asked to conduct exercise in designing programme evaluation relating to their own State.

High-Level Meeting on Monitoring

A high-level meeting on Monitoring and Evaluation of Universalization of Elementary Education Programmes was held on the NIE Campus on 15 and 16 December 1980. The meeting was attended by senior-level representatives of the Planning Commission, the Ministry of Education and Culture, the National Informatics Centre and the National Institute of Educational Planning and Administration and four selected States, besides the faculty members of the NCERT. The deliberations were helpful in getting an insight into the operational applicability of the procedures and tools with a view to improving them. A minimum essential programme for monitoring and evaluating the Universalization of Elementary Education Programme was evolved and forwarded to the Planning Commission and the Ministry of Education.

11

Survey, Data Processing and Documentation

EDUCATIONAL SURVEYS

**Fourth All-India
Educational Survey**

THE Fourth All-India Educational Survey, initiated in 1978, was completed on 31 December 1980. A brochure, entitled *Fourth All-India Educational Survey—Some*

Statistics on School Education, was published. The survey covered all the schools and villages as on 30 September 1978. Among other things, it provided data on such items as rural habitations with and without educational facilities for the primary, middle and secondary stages of education, educational facilities available in the habitations predominantly populated by the Scheduled Castes and the Scheduled Tribes, estimated children population in the school-going age group, number of schools of different types, classwise enrolment by sex, distance that children have to walk in order to reach school, teachers and their professional and academic qualifications, school buildings according to type and ownership, adequacy and space for expansion and physical facilities such as furniture, blackboards, library, drinking-water facilities, etc. The findings of the survey have been utilized in the formulation of the Sixth Five Year Plan for education.

Monitoring of School Attendance

The programme of monitoring average daily attendance in primary and middle schools on a quarterly basis, which was taken up with the Fourth All-India Educational Survey, continued during this year. For each quarter, the data were processed on the computer by the National Informatics Centre. The rate of response from several States has tended to decline.

Publication of the Third All-India Educational Survey Reports

While the main report of the survey and most of other reports were already published by 1979-80, the following reports were brought out during 1980-81 :

- Library, Laboratory and Science Equipment Facilities in Schools.
- Sanskrit Pathshalas and Madrasas.
- Languages and Media of Instruction in Schools.

Data Processing Service

The Data Processing Unit of the Council was mainly engaged in data preparation, development of computer programmes and processing of data on the computer. With the installation of computer

terminal at the NCERT, the work has been further facilitated to a great extent. During the year 1980-81, the statistical analysis of several research projects was undertaken. One of the major jobs was processing the results of the National Talent Search Examination of 1980 for Classes XI and XII. Besides this, the data pertaining to the Ph.D. projects of NCERT academic staff were punched/verified and further processed on the computer.

Secondary Analysis of the Fourth Educational Survey

The data of the Fourth Survey were analysed keeping in view the immediate objectives of the Survey. Since there was scope for further analysis of the data to establish relationship among different variables on which data were collected, the survey schedules for a sample of schools from all the States and the Union Territories are being collected for further analysis on the computer. While some districts have supplied these survey schedules, others are still to supply the same. The work on this project is in progress.

Sample Survey of Educational Backwardness of Girls in Eight Selected States

Among the non-enrolled children, girls constitute a substantial proportion. This is particularly true in the case of seven out of the nine educationally backward States, as well as Haryana, where more than 50% girls of the school-going age (6 to 10) are out of schools. Hence a sample study has been taken up in some districts of these eight States to assess the real position about girls' enrolment, to study the causes of poor enrolment and to suggest remedial measures to improve the situation. For this project a National Advisory Committee comprising eminent educationists and sociologists, representatives from the eight States selected for the study as well as from the Ministry of Education and Culture, the National Sample Survey, the Planning Commission and the UNICEF, was set up. The Committee met on 15 January 1981 and laid down broad guidelines for conducting the study. Various schedules for the collection of data are in the process of being finalized for a try-out. The concerned States have nominated officers at the State level, who will implement the programme in their respective States.

Seminar on the Role of Sample Surveys in Education

A three-day seminar was organized to discuss the role of sample surveys in the field of education, to identify the areas in which they are needed and to recommend measures leading to greater use of sampling methods in the collection of educational data. The participants of the seminar included eminent sampling experts drawn from universities and research institutions, and representatives of government agencies like the Central Statistical Organization, the National Sample Survey Organization, the Planning Commission, the Institute of Applied Manpower Research, the Ministry of Education and Culture as well as the Education Departments of some States. The seminar identified the areas in education where there is need for sample surveys to be conducted.

Training Course in Sample Survey Methods

A two-week training programme was organized for the officers and other staff members working in the State Institutes of Education/ State Councils of Educational Research and Training and the Statistical Units or the Educational Survey Units of different States. The course was organized at the Regional College of Education, Bhopal, from 22 October to 4 November 1980. It was attended by 27 participants from 15 States and two Union Territories, including one from the Ministry of Education and Culture.

District Development Plans for Education based on the Fourth Survey Data

In the Fourth All-India Educational Survey, rural habitations with and without educational facilities have been identified and block maps developed indicating them. From the point of view of strengthening the programme of universalization of elementary education it was felt necessary that schools are planned and located at proper places to attract maximum number of children and that the existing primary schools are upgraded to middle schools according to specific criteria such as availability of feeder schools, economic viability, distance which the children have to cover in order to reach the school, and the population. Forms were developed and discussed with the State

representatives on 3-4 February 1981. It is proposed to organize workshops in all the States in 1981-82 using the guidelines so developed in order that all the States and the Union Territories are able to have educational plans prepared at the block level for all the blocks using the Fourth All-India Educational Survey data.

Compilation of Selected Information on Education Systems in the States

The NCERT has taken up a programme of compiling information on certain significant aspects of school education. Among others, these include the pattern of education prevailing in the States, legislation regarding free and compulsory education, school curriculum including working days, vacations, teaching hours provided per week for various school subjects, languages taught at various school stages, media of instruction, enrolment, teacher's workload, pay structure and teacher training at pre-primary, elementary and secondary stages. Since States have different patterns, it will be useful to provide this information in a consolidated form at the national level. Information has so far been received from twelve States and five Union Territories.

Pilot Project on Collection of Educational Statistics on Sample Basis

A pilot project has been taken up in collaboration with the Ministry of Education and Culture for collecting educational data on certain items from only a sample of institutions. It will help in providing with least possible delay educational statistics needed for planning and administrative purposes. At present the States covered in the pilot project are Bihar, Tamil Nadu, Maharashtra and Haryana.

Consultancy and Training

The NCERT provided help and consultancy to research workers from other educational institutions for the preparation of research design and plans of statistical service, and provided resource persons for certain training programmes of the National Institute of Educational Planning and Administration. The NCERT also provided assistance to the Education Department of the U.P. Government in

preparing the design of a survey for the assessment of educational facilities for the linguistic minorities of the State.

LIBRARY AND DOCUMENTATION

During the year the library added 1,524 books, bringing the stock of its books and journals to about 1.15 lakh. The total membership of the library was 1,723. About 170 research scholars availed themselves of the consultancy services of the library. The library also continued to provide documentation services.

Some Significant Statistics for 1980-81 in regard to Library Facilities

(a) Total number of books added	1524
(b) Books purchased	1330
(c) Books received gratis	194
(d) Number of members	1723
(e) Number of research scholars who availed themselves of consultation facilities of the Library	166
(f) Total number of books	1.15 lakh

Documentation Publications

- (a) News and Views : Volume I, No. 3
- (b) Accession List : March 1981
- (c) Current Contents : Volume I, Nos. 1-4

Reprographic Services

The NCERT continued to provide extensive reprographic services and the number of photo-copies made till 31 March 1981 was 7,492.

Journals

The NCERT has been getting journals on subscription, exchange and gratis basis as under :

(a) Journals subscribed	335
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(b) Journals on exchange	15
(c) Journals received gratis	About 50

Training Course for Untrained Librarians

The NCERT organized a six-week short-term training course for untrained librarians of Andaman and Nicobar Islands during May/June 1980. It also organized an orientation course for librarians of Andaman and Nicobar Islands at Port Blair from 5 to 11 December 1980.

Workshop on Development of Libraries

The NCERT organized a workshop on the development of teacher training college libraries at RCE, Mysore, in October 1980. About 30 librarians of teacher training colleges from the southern region attended the workshop.

Staff Development

Shri R. B. Rai and Shri R.K. Gaur, Professional Assistants, were deputed to a four-week training course in information storage and retrieval system. Shri Radha Krishan, Shri R.B. Rai, Shri G.K. Mishra and Smt. Polly Alag were deputed to attend the conferences of the Indian Library Association.

12

Research and Innovations

EDUCATIONAL RESEARCH

RESearch and support for research are important activities of the Council. Apart from the Departments/Units and the Colleges of the Council undertaking research, the NCERT supports educational research by providing financial assistance to outside

organizations. It also provides junior and senior research fellowships so that educational problems are investigated and a band of competent research workers is created in different parts of the country. Most of the research undertaken or supported by the NCERT is in identified areas of priority.

The Educational Research and Innovations Committee, which was set up in 1974, is the principal mechanism for supporting research. The Committee has ten outside members drawn from universities/research institutes and the State Institutes of Education/ the State Councils of Educational Research and Training. In addition, all the Heads of the Departments of the NIE, the Principals of the RCEs, the Dean (Academic) and the Professors of the NIE and the RCEs are permanent invitees. The main functions of the ERIC are :

To support research and innovative projects on education and allied sciences.

To give publication grants for Ph.D. theses, monographs, etc.

To disseminate research findings from time to time.

To organize research conferences.

Conferences/Seminars

Apart from providing financial support for research, the NCERT organized during the year a number of significant conferences and seminars. These included the Indo-US Seminar on the Effect of Deprivation on Learning and the All-India Conference on Educational Research.

In pursuance of the 1976 meeting of the Indo-US Sub-Commission on Education and Culture, the NCERT organized the Indo-US seminar on "Effects on Learning of Deprivation in Early Years" from 12 to 23 May 1980. The seminar was inaugurated by Shri K.R. Narayanan, the then Vice-Chancellor, Jawaharlal Nehru University and Co-Chairman of the Indo-US Sub-Commission on Education and Culture. Seven delegates from the United States and 10 from India participated. Apart from paper-readings and discussions in Delhi, the delegates of both the sides visited some venues of experimental projects in Delhi. The American delegates visited experimental pro-

jects in Pondicherry and Hyderabad. In New Delhi local visits to Mobile Crech Centres were organized between 17 and 22 May. The US participants visited Sri Aurobindo Ashram, the International School, Pondicherry, and the Indo-Dutch Project for Child Welfare, Hyderabad. The main issues for discussion included different aspects of deprivation, their effect on learning, critical periods of development, the kinds of learning affected, problems of research designs and inter-disciplinary research areas.

Third All-India Conference on Educational Research

The Conference was organized on the NIE Campus on the theme, "Education of the Disabled" on 22 and 23 April 1981. It was inaugurated by Dr. (Smt.) Madhuri R. Shah, Chairman, University Grants Commission. Research papers were invited through newspaper advertisement. A Screening Committee of experts in the field of disability—including blindness, deafness, spasticity and mental retardation—scrutinized the papers. Thirteen research papers were selected for presentation at the Conference and eight papers were selected for circulation. All the authors who presented their papers were given a token honorarium of Rs. 250. Besides the selected research papers, lead papers were presented in specific areas of disabilities. The concluding session was devoted to identifying major problems and issues of research in the education of the disabled. Along with the conference an exhibition of photographs from the UNICEF and the British Council was organized.

Completed Projects

During the year a number of research projects were completed. The details are given below :

<i>Title of the Project</i>	<i>Name of the Principal Investigator</i>
(a) Problems and Functioning of Single-Teacher Schools in Rajasthan	Dr. P.L. Verma Directorate of Primary and Secondary Education (Rajasthan) Bikaner, Rajasthan

<i>Title of the Project</i>	<i>Name of the Principal Investigator</i>
(b) Development of Science Education for Upper Primary Classes based on the Environmental Approach	Dr. B.P. Joshi Director State Institute of Science Education Udaipur (Rajasthan)
(c) Problems of Teachability of New Hindi Poetry at the Secondary and College Stages	Dr. (Smt.) N. Jain Department of Hindi Delhi University Delhi
(d) Effect of Micro-teaching on Teaching Self-concept and Teaching Competence of Student-Teachers	Dr. Methew George North-Eastern Hill University Shillong-3
(e) Diagnosis of Language Errors and a Programme of Remedial Teaching in Hindi	Shri L.K. Oad Principal Banasthali Vidyapeeth College of Education Banasthali (Rajasthan)
(f) Effectiveness of Pre-service Teacher Training Programme at the Elementary Level in Rajasthan	Shri B.L. Vyas Director State Institute of Educational Research and Training Udaipur (Rajasthan)
(g) Introduction of Work Education in Primary Schools—A Pilot Study	Prof. S.C. Dash Director State Council of Educational Research and Training Orissa, Bhubaneswar-1
(h) Psychological Development and Learning in Young Children in Rural Poverty and Effects of Interventions : Phase I	Dr. (Smt.) Sushila Singhal School of Social Science JNU, New Delhi-67
(i) The School Complex	Prof. J.B.P. Sinha A.N.S. Institute of Social Studies Patna-800001
(j) Mass-copying in Secondary School Final Examinations	Shri Jagadindra Mandal Deptt. of Applied Psychology University College of Science and Technology Calcutta

<i>Title of the Project</i>	<i>Name of the Principal Investigator</i>
(k) A Study of the Problems and Needs of Secondary Students living in the Slums of Varanasi	Dr. S.N. Singh Faculty of Education Banaras Hindu University Varanasi (UP)

The main findings of these projects are summarized in the paragraphs that follow.

(a) *Problems and Functioning of Single-Teacher Schools in Rajasthan*

The aims of this study were to identify the problems of locations, personnel, functioning and of parents in respect of planning school programmes and organization of teaching-learning processes and also the inspection and physical facilities of single-teacher schools. It has suggested a framework for their effective functioning.

Twenty-five schools were selected from six districts of Rajasthan on the basis of habitation, size and location and whether schools were for boys or girls or co-educational. School data sheets, observations, interviews, analysis of timetables etc. were used. One hundred and fifty teachers, 300 parents and 18 inspecting officers were also contacted and various documents were analysed.

The main findings were :

- (i) Enrolment in each school ranged from 11 to 130 with an average of 47.
- (ii) There was substantial incidence of wastage, the attendance dropping from 70 in Class I to 7 in Class V. Poverty and apathy of parents were the main causes of wastage.
- (iii) Physical facilities were inadequate—4.6% of the schools had no satisfactory building facilities. Only 34% of the schools had satisfactory building facilities, and about 13% did not even have one blackboard and 44% had only one blackboard for the entire school.

- (iv) The teachers mostly choose to live elsewhere rather than in the place where school was located. Frequently the school remained closed without prior notice or permission. Substitutes from neighbouring schools or educated persons from nearby places were employed when the teacher was on leave.
- (v) The teachers had several non-educational assignments affecting the school work adversely.
- (vi) Thirty per cent of the single-teacher schools had no operational plan for the functioning of the schools. Where timetables existed for one class there was no mention of the other classes.
- (vii) Usually no separate space was available for separate classes.
- (viii) The inspection of schools was erratic and was often conducted by persons who were not in a position to suggest improvement.

(b) Development of Science Education for Upper Primary Classes based on the Environmental Approach

The study represented an attempt to evolve a new pattern of education seeking an ever-increasing relevance to the needs of the community that would throw light on the interrelationships between man and his environment. Though the State Institute of Science Education, Rajasthan, has played a positive role in restructuring science syllabi at the upper primary stage, efforts are still needed to adopt a relevant and local specific curriculum for various parts of Rajasthan such as the arid zone, the tribal belt of Dungarpur, the Banewara area and the dense forest areas of eastern Rajasthan. The study aimed at investigating this issue. These areas were further categorized on the basis of economic and geographical criteria and schools were selected from each of the 18 representative blocks selected on the basis of the subdivisions. Five per cent of the upper primary schools in each block i.e. 50 per cent formed the control group. From each of the schools, one section each of Classes VI, VII, and VIII was selected and in those schools where there was more than one section, one section comprised the control group. As such

a classroom formed the unit of study, a composite classroom index was to be calculated.

The environmental characteristics of each region and also of each block were identified from secondary sources. The identification of environmental indices (being taught to children in each region and in each block) was done through existing general science textbooks, teachers' interviews, questionnaire, discussions, seminars and meetings. On the basis of this information a list of environmental indices was drawn up and then a questionnaire to ascertain the degree of awareness of students and teachers was developed. The environmental indices and effects were categorized, the difficulty level of the environmental constructs in the questionnaire determined, inter-correlations between scientific and environmental concepts were worked out as also the regional variations of environmental indices. The outcomes of this analysis were used for developing the workbook for children. The draft syllabus was drawn up on the basis of the inferences drawn after an analysis of the workbooks and a try-out of the material for over one year. At the end, an achievement test was administered to 5% of the sample of both the experimental and the control groups, the control group having used existing material.

The study highlighted the need for science curriculum at the elementary level to be made relevant to—

- (i) real life and work experiences of the learner, particularly the changes taking place,
- (ii) the fulfilment of the needs of the learners as individuals or as members of a family and community,
- (iii) the maturity of the young ones and availability of resources required,
- (iv) new knowledge,
- (v) national developmental efforts, functional at the elementary level so as to improve the quality of life by promoting health and nutrition, conservation of energy, effective use of resources, protection from pollution, etc.,

- (vi) development of creativity, scientific thinking and attitude, problem-solving skills,
- (vii) development of scientific concepts, principles and processes,
- (viii) the environment of the learners particularly changes in the immediate surroundings,
- (ix) preparing students to continue learning, and
- (x) other areas and subject content of the curriculum.

(c) *Problems of Teachability of New Hindi Poetry at the Secondary and College Stages*

The main purpose of this project was to ascertain teachers' and students' attitude towards new poetry and the type of teaching techniques being used for teaching new Hindi poetry. The investigators selected some schools and colleges in three important towns, namely, Delhi, Allahabad and Chandigarh for this project.

A survey was conducted to find out the position of new poetry in curriculum. The investigators have arrived at the conclusion that new poetry has not been given a respectable place in the school curriculum while it is almost non-existent at the college stage. While selecting material importance was given to the poets rather than their poetry.

It was also found that while teaching new Hindi poetry a teacher has to face a number of difficulties—that of form or comprehension, etc. The survey has also revealed that 90% of the students like prose rather than poetry. Similarly, teachers had a negative attitude towards poetry.

The survey has revealed that the techniques adopted by the teacher for teaching new poetry were unsatisfactory. Most of the teachers tended to explain the meanings of difficult words first and then explain the theme of the poem.

The survey revealed that 50% of the students liked medieval poetry, 15% Chhayavadi poetry, 25% students liked poems relating to cultural renaissance and only 10% students liked new poetry. In the case of teachers, the study indicated that 40% liked medieval

and chhayavadi poetry alike, 40% poetry of national and cultural renaissance and only 20% teachers liked new poetry.

(d) *Effect of Micro-teaching on Teaching Self-concept and Teaching Competence of Student-Teachers*

Research has revealed that in teacher education the existing emphasis is more on telling rather than doing, with haphazard and indiscriminate supervision of practice teaching, vague feedback and so on. Even the attitude toward student teaching leaves much to be desired. Micro-teaching offers a possibility of bridging this gap.

The study analysed the effect of micro-teaching on teaching self-concept to student-teachers in the control and experimental groups separately and the effect of micro-teaching as well as integration of skills on their teaching competence.

Twenty willing student-teachers were selected from a training college in Shillong. These comprised the control and experimental groups matched by IQ, sex, age, qualifications and teaching experience. The culture fair intelligence test (Scale 2) was used for matching. The Indore Teaching Competence Scale (ITCS) for teaching competence in terms of integration of teaching skills, observation schedules, of four skills under integration, viz. probing questions, stimulus variation, reinforcement, explaining and illustrating and the Teaching Self-Concept Scale (TSCS) (developed for the purpose) were used.

After matching, student-teachers were oriented to micro-teaching. Each of the skills was discussed and observation and rating of the skill, discussion of the model lesson, presentation of micro lesson, peer and supervisor feedback and reteach session followed by feedback were conducted. The second micro-lesson was on a different unit in the same or different content. This procedure was followed for each of the five skills. The number of peers ranged from 8 to 10 in each session for both the control and the experimental group. The control group student-teachers had four lessons with peers as pupils for 30 minutes followed by five minutes

of traditional feedback. The experimental group was oriented to the integration of teaching skills for 20 minutes and provided instructional material on it followed by demonstration by the supervisor on integrating skills for 25 minutes under the simulated conditions followed by discussion on the ITCS and lesson. Each student delivered four lessons to peers (4-9) for 25 minutes each, followed by the feedback; there was no re-teach session. Post-test administered on both groups comprised two regular lessons in the methods in real classroom for 30 minutes, observation ITCS, followed by TCSS.

An analysis of teaching self-concept scores for both the control and the experimental groups revealed that micro-teaching facilitates enhanced self-concept learning by student-teachers implying that this technique enables student-teachers to perceive the position change in teaching performance. The post-test scores, in both groups, indicated a significant increase in teaching competence; the teaching competence of the experimental group was significantly greater than that of the control group. The conclusion of this study, though on a limited sample, was that teaching competence can be improved through micro-teaching. With the integration of skills, thus developed, the competence can be increased even more.

(e) *Diagnosis of Language Errors and a Programme of Remedial Teaching in Hindi* ("Hindi men Bhasagat Ashuddhi Ke Naidan Tatha Upcharatmak Shikshan Ki Yojna" Hindi title)

The main objective of the investigation was to explore and linguistically classify errors in written Hindi, to analyse the influence of local dialects on such errors, and to investigate the effect of remedial instruction on the improvement of proficiency.

The study covered about 2,500 answer books of students enrolled in Classes 6 to 10 in Rajasthan. Apart from its main objectives, the study entailed development of necessary tools for pre-testing and grading the errors and writing custom-built remedial materials. Five independent random samples for each of the five dialectic regions of Rajasthan were selected for the study. Nine main categories of errors have been covered in the study, viz. *matras*.

diacritical marks, vowels and consonants, punctuation, sentence construction, syntax and grammar, etc. Each dialectic group showed its own characteristic errors. The errors decreased till Class 8 but again increased by the time the children reached Classes 9 & 10. Remedial material in each category was tried out with a practice period of 15 days. The pre- and post-test scores were compared separately for errors related to vowels, consonants and sentence construction.

(f) Effectiveness of Pre-service Teacher Training Programme at the Elementary Level in Rajasthan

The study was undertaken to assess the relative effectiveness of the two-year teacher training programme at the elementary level in Rajasthan, to identify and analyse some of the prospective classroom behaviour patterns, various perspectives and perceptions, and intellectual and emotional qualities of teachers.

This was done on the basis of the opinion of teacher educators, an analysis of classroom behaviour, patterns of trained and untrained male and female teachers working in elementary school, and the supervisors' opinion through information collected with the help of classroom profiles according to Flendars Interaction Analysis Category System.

A comparison of classroom interaction patterns of such trained and untrained teachers was undertaken.

Four tools were developed to find out, from teacher educators, the role performance of teachers in relation to what the teacher has taught, to assess the preparedness of teachers and the application aspects of the training imparted to the teachers, to observe the classroom teaching of trained and untrained male and female teachers, and to interview supervisors about teachers working in schools.

Fifty teachers in 25 teacher training institutions of Rajasthan were administered the questionnaire-cum-achievement test; 363 trained and 187 untrained teachers in primary, upper primary, secondary and higher secondary schools were assessed. There were 230 male and 270 female teachers.

The trained male and female teachers were found to be better than the untrained male and female teachers respectively in all the subjects except Híndí where there was no difference. There was no difference in teaching aptitude of trained and untrained teachers. Taken sex-wise, the trained female teachers were more cooperative and showed better moral character than their untrained counterparts.

The study revealed that trained teachers talked slightly more in the class, that there was more silence or confusion in the trained teachers' classes implying that they were more authoritarian, that pupils talked more with untrained teachers, and that untrained teachers were more prone to purely content-oriented interaction.

The traditional assessment of trained male and also of female teachers as against their untrained counterparts, revealed that the trained female teachers were better at introducing a lesson, developing a lesson and using teaching aids while the trained male teachers were superior to their untrained counterparts in questioning, classroom climate and interaction and mastery over the subject, that the trained female teachers were superior to their untrained counterparts in evaluating the lesson taught and that the supervisors perceived the male rather than female trained teachers as being better in all aspects of classroom teaching, organization of co-curricular activities and personal qualities.

The study confirms the assumption that pre-service teacher training programmes stand the teachers in better stead than their untrained counterparts.

(g) Introduction of Work Education in Primary Schools

This study aimed at developing models of curriculum in work education for primary classes. The objectives were to identify the work situation and related knowledge and experience, to develop necessary instructional material and evaluation tools for student activities.

A questionnaire was developed to collect information regarding village, school enrolment and the like and an interview schedule was

prepared to collect information regarding the working situation, habits, etc., of students.

Ten schools, five in each group, took up work with cane and palm leaves. Facilities which are conducive to work education in-school and out-of-school time were surveyed. On the basis of the survey and experience, curricula were divided into three parts, viz.,

for Classes I and II,

for Classes III to V and

for Classes VI to VII.

The survey revealed that it was very difficult to clarify the skills and processes to be acquired by the students of each class or the clubbed groups of classes.

A curriculum containing both in-school and out-of-school experiences was developed. Some instructional material used in the study was identified. A time schedule was also chalked out.

An evaluation tool was developed to evaluate student work on five aspects. Curriculum, incorporating all the aspects, was suggested along with organizational strategies.

The study may help in developing coordination between the in-school and the out-of-school activities of children. This may be helpful in using the local resources to increase productivity. Keeping in view the geographical differences, work education may be planned using the local resources and work activities.

(h) *Psychological Development and Learning in Young Children in Rural Poverty and Effects of Interventions—Phase I*

The objectives of this feasibility study were to compare several villages of a district on physical, social and economic characteristics, compare the school-going and the non-school-going poor children and develop indigenous tools for measuring the levels of psychological development of the children.

Bharatpur (Rajasthan) was selected as a representative district on the basis of the Census data for 1971 on literacy, employment, etc. Gureera-Sonukhar, Pai and Bodoli villages in Kaman Tehsil were

included. In U.P. Shankargarh block of Karchbana Tehsil of Allahabad district was also selected because of the Integrated Child Development Scheme of the Central Government operating there.

A family schedule was administered covering the background information, housing and living conditions, income and possessions, family composition, food-storage and habits, health, child-rearing practices, and parental attitudes towards child education. Households with less than 10-year-old children were identified for the study. Observation records focussed on the need for intervention as growth and development is retarded and learning is slow, and on developmental measures covering cognitive, language and emotional aspects.

In Gureera-Sonukhar, 90% adult males reported regular habits of personal hygiene but the figure was lower in Bodoli and Pai, while among women and children it was less. Housing was poor and in 50% houses there was no separate cattle shed. Availability of work was irregular. More than 60% were illiterate. The eating habits were widely different. In Sonukhar-Gureera and Pai, 70% families ate together but in Bodoli the women ate later and often insufficiently. The interaction of children with mothers was none for physical needs, that with father and other adults only for queries and for telling personal experiences. None of the children seemed to be suffering from epilepsy, only one child was identified as mentally retarded.

Eight per cent children were active but had average or below average physical build. Wide differences in consumption patterns were noted. Twenty per cent parents encouraged school work, ninety per cent felt children should avail themselves of maximum education in the village while 80% wanted maximum education even outside the village.

(i) *The School Complex*

The study examined the programme of establishing school complexes in the Sitamarhi, Nalanda and Palamau districts of Bihar. The scheme was, in fact, vigorously implemented only in Nalanda. On an average four primary schools were tagged to a middle school

and an average of three middle schools to the complex, on the basis of physical proximity and communicational convenience.

The study revealed that for the first two years the frequency of inspections rose but as soon as news of the withdrawal of the scheme spread, the frequency began to decline. Teachers were of the view that the inspection would provide guidance for improving their performance. There was however no communication between inspecting authority and the community. The greatest impact of inspection was on the punctuality and regularity of teachers. Improvement in teaching did not take place according to the Area Education Officers. Students, however, felt otherwise.

Teachers, particularly of primary schools, complained of greater work-load. The community noted improvement in teaching and teachers' morals. There was no increase or improvement in material resources of schools. The measures envisaged in the scheme, namely a calendar differentiated into weekly teaching schedules, free distribution of books to poor students, supply of blackboards and other physical facilities, centralized examinations and standardized district-wise evaluation of answer books, were effected but only in the initial phase. The attendance of students improved, being significantly higher than the control group. A majority of the headmasters of secondary and middle schools observed that students took greater interest in studies and also in homework, particularly those enrolled in primary schools. Students were never taken to the nucleus school to see science laboratories. Although the scheme emphasized emotional integration through sports, magazines and other cultural activities, no significant effort was made in those directions.

Less than 50% heads received some help from the community for repair of building and for land. Teachers felt that they could provide mass literacy, education in health and hygiene and thus help the poor students. Teachers did want community help in repairing and constructing school buildings, improving students' attendance and academic standards. Only 25% teachers made an effort to bring the school-going children to school and only a third had any success. The community wanted the inspecting officers to discuss various matters with them.

(j) *Mass-copying in Secondary School Final Examinations*

The pilot study compared a group of students having a record of copying in the schools of Calcutta with another group which did not copy. The schools were categorized as mass-copying and non-mass-copying ones out of which samples of (N = 92) students were taken. The school environment was divided into three sub-systems, namely, the faculty, the students and the administrative components. The first was concerned with the physical space, co-curricular activities, library and teacher facilities. The administrative sub-system comprised the admission criteria, examinations and teachers' work-load. Three attitude scales were developed for the study.

An analysis of the responses of students selected from the mass-copying and the non-mass-copying schools indicates that as far as the faculty and administrative sub-systems were concerned, there was significant difference in terms of physical space, co-curricular programmes, library facilities, training and experience of teachers, the evaluation system pursued and the admission procedures adopted. The non-mass-copying schools were better off in all these aspects. There was no difference as regards the teacher-pupil ratio and their work-load.

There was significant difference between both the categories of schools as regards the student sub-system, the parents' qualifications, the size of family sub-system, and room available for study.

As regards personality, the non-mass-copying students were significantly higher on their proneness to accept suggestions and acceptance of leadership by others. The non-mass-copying students were more prone to help others in need, which is indicative of a natured personality with an altruistic outlook. There was no difference as regards the other variables in the Edward Personal Preference Schedule. On the whole, the students from the non-mass-copying schools were significantly better.

(k) *A Study of the Problems and Needs of Secondary Students Living in the Slums of Varanasi*

The objectives of the investigation were to look into the

residential, physical, economic, dietary, environmental, academic, recreational, social and psychological problems of students of Classes IX, X, XI and XII, living in the slums of Varanasi and drawn from schools situated in rural and urban areas. The students were selected on the basis of the location of their residences.

A questionnaire for studying the problem and needs of secondary school students was developed in Hindi, on the basis of a standard checklist. A majority of students living in slums face a number of residential problems because of which they were not able to benefit from the academic programme of the school; 60 per cent did not have ordinary physical facilities like a study space and light, 70 per cent of students felt that their economic conditions hampered their academic performance, 40 per cent did not get suitable nourishment, more than 50 per cent had poor environmental conditions, 50 per cent lived in an area known for anti-social activities, more than 40 per cent did not have any healthy recreation and about 30 per cent suffered from psychological problems like inferiority complex, inhibitions and depression.

Most students wanted free and well-equipped hostel accommodation throughout their student career rather than monetary help which is likely to be used by their parents. They wanted better educational materials. They were of the view that once the hostel facilities were provided, covering games and sports, then all other problems would be automatically solved and social, recreational, environmental and psychological problems would cease to exist.

Publications

The following publications have been brought out during 1980-81 under the scheme of Ph.D. publication grants.

<i>Title</i>	<i>Name & Address</i>
1. The Teaching of Reading	Dr. Rajendra Prasad Srivastava Jamia Millia Islamia New Delhi

<i>Title</i>	<i>Name & Address</i>
2. Academic Performance—Some Personality and Perception Variables	Dr. S.K. Narang Principal Central School Port Blair
3. Distance Teaching—Prospects and Problems	Dr. G.S. Saini Punjab Agricultural University Ludhiana
4. Instructional Strategies for Teaching Hindi as a Second Language	Dr. Jaipal Singh Tarang Jamia Millia Islamia New Delhi
5. Scientific Creativity and Personality	Dr. Didar Singh Govt. College of Education Bhopal
6. Geetawali Ka Bhasha Shashtriyā Adhyan Aur Vaigyanik Path	Dr. (Smt.) Saroj Sharma Banasthali Vidyapeeth Banasthali (Rajasthan)
7. Psychology of Vocational Development	Dr. Biswanath Roy Reader NCERT New Delhi

**RESEARCH PROJECTS AND PUBLICATION GRANTS
FOR DOCTORAL THESES/MONOGRAPHS DURING 1980-81**

Research Projects

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| (a) Effect of Micro-teaching on Teaching Self-concept and Teaching Competence of Student Teachers | Dr. Mathew George
North-Eastern Hill University
Shillong-3 |
| (b) Effect of Mastery Learning Strategy of Pupil Achievement (MLS) | Dr. Ram Chander
C.R. College of Education
Rohtak |
| (c) A Comprehensive Research Project on Identification of Specific Teaching Skills and Development of Instructional Material related to Hindi Teaching and to Study the Effectiveness of These Specific Skills on Teaching Competency of Prospective Hindi Teachers | Dr. Damodar Lal Sharma
Lecturer
Basic Teacher Training Institute
Sardarshahr (Rajasthan) |

<i>Title</i>	<i>Name & Address</i>
(d) A Study of the Learning Disabilities of Rural Children	Dr. Y. Ramoji Rao Director Institute of Educational Research Madras
(e) Impact of Non-graded School System upon Elementary School Drop-outs	Dr. G. Subramania Pillay Deptt. of Education, Madurai Kamaraj University Madurai
(f) Profile of Registrants — An Enquiry into Variables relating to Students of Correspondence Institutions at the Secondary Level in India	Dr. O.S. Dewal Director Open School, CBSE New Delhi
(g) Development of Competence, Related Personality Characteristics and Copying Strategies of School Boys and Girls	Dr. Smt. T.S. Saraswathi M.S. University of Baroda Baroda
(h) Developing and Testing Models of Environmental Education in Botany relevant for the Specially Disadvantaged Children in the Schools of Kerala	Prof. N.V. Manual Prof. and Head Deptt. of Education University of Kerala Thycaud, Trivandrum-14
(i) Need Assessment of Adult Learners of Disadvantaged Groups in Non-Formal Education with particular reference to the Artisan Group of Potters	Smt. Shantha Krishan R.K. Puram New Delhi
(j) A Linguistic Study of Hindi Phonemic Changes	Dr. B.N. Tiwari Delhi University Delhi
(k) Developing an Orientation Course in Sexism for Urban Middle/Higher Secondary School Teachers of Delhi and Bombay	Smt. K. Nischal The Gujarat Research Society San Shodhan Sadan South Avenue Khar, Bombay-52
(l) A Study of the Effects of Teacher Expectations on the Sociometric Status of Primary School Children	Shri N.C. Dhoundiyal Lecturer Faculty of Education University of Kumaon Almora Campus, Almora

<i>Title</i>	<i>Name & Address</i>
(m) Achievement Norm Study of Elementary Children of Tamil Nadu with special reference to Certain School Factors and Student Compositions	Shri M. Duraiswamy S.I.T.U. Council of Educational Research 169, R.K. Mutt Road R.K. Puram Madras-600028
(n) A Study of the Influence of Educational Deprivation on Development of Creativity in Rural/Urban Children	Shri L.P. Pandey General Secretary and Project Director Indian Academy of Social Science, Head Office Ishwar Saran Degree College Campus, Allahabad-211004
<i>Doctoral Theses/Monographs</i>	
(o) The Effects of Family Anxieties on Educational Achievement of Adolescent Girl Students (13-18) of the District of Basti	Dr. (Smt.) Kiran Kumari Srivastava Sohratgarh Basti
(p) A Critical Assessment of the Teaching of Punjabi in the Punjab State at the School Stage	Dr. Inderpal Singh Director Punjab School Education Board S.A.S. Nagar, Chandigarh
(q) Consolidated Basic Hindi Vocabulary with Known Percentage in Classes I-VIII	Prof. Uday Shankar Retd. Prof. of Education University Campus Kurukshetra (Haryana)
(r) Evolution of the Concept and Practice of Inspection and Supervision of Secondary Schools in Maharashtra	Dr. A.V. Gadgil Indian Institute of Education Pune
(s) Proficiency in Teaching as a Function of Creativity, Intelligence and Interests	Dr. (Smt.) Rashmi Jain 84-B, Tagore Nagar Ludhiana
(t) Some Non-intellectual Characteristics of Over-and Under-achieving Engineering Students	Dr. R.N. Nagpal L-16, Green Park New Delhi
(u) A Study of Creativity in School Teachers as measured by Mehdi's Test in relation to Their Self-concept, Attitude towards Teaching and Classroom Verbal Instruction	Dr. Ajit Singh Lecturer Deptt. of Teacher Education NCERT New Delhi

The details of some of the department research projects completed in 1980-81 are given below.

DEVELOPMENT OF TOOLS FOR SUPERVISION AND EVALUATION OF
STUDENT TEACHING AND OTHER POTENTIAL WORK IN COLLEGES OF
EDUCATION

Principal Investigators : *Prof. C.S. Subba Rao*
Shri T.N.S. Bhatnagar

Seventeen evaluation tools have been developed for the assessment of practical work organized in the colleges of education at the B.Ed. level where the practical work includes school visits for observation, lesson planning, student teaching, production of audio-visual aids, book reviews, co-curricular activities, community services, student self-government, investigational reports, term papers, socially useful productive work, citizenship camps, development of achievement tests, case studies, etc. The performance index may be shown on the scale 1 to 7 or from "Merit" to "Failure" or in percentages. The tools developed at Hyderabad have been modified at the elementary teacher training and at B.Ed. level for use in Karnataka.

SERUM URATE CONCENTRATIONS, INTELLECTUAL STYLE AND
PERSONALITY

Principal Investigators : *Dr. M.K. Raina*

The study was undertaken to find out the relationship between serum urate concentrations, intellectual style and personality. Using 150 subjects (Group A and Group B separately) selected carefully on the basis of various biochemical considerations, this study indicated significant relationship between intelligence, creativity, and extroversion with uric acid in one group. Uric acid concentrations have also shown significant association with some biographical factors.

INTEGRATING TEACHING AND EVALUATION TO IMPROVE
PUPILS' PERFORMANCE IN GEOGRAPHY AT CLASS VIII

Principal Investigator : *Smt. Kamala Seshan*

The project was undertaken in order to verify and develop a model for effective integration of teaching with evaluation so as to

make it a means for improving pupils' achievement. The project highlights the fact that group remedial instruction is most suited to average and high achievers and tuition is the best method of remedial instruction for low achievers.

STUDIES IN SCIENCE TALENT

Principal Investigator :

Dr. M.K. Raina

Four studies were undertaken under the project. The main findings of the studies are :

(i) An analysis of background variables of candidates who appeared for the NSTS Examination in 1976

Most of the candidates who appeared in the examination were from U.P. followed by those from Delhi, Rajasthan, Andhra Pradesh, Madhya Pradesh, Tamil Nadu and West Bengal. The largest number of selected candidates came from Delhi, followed by those from the urban areas. Students educated in public schools did relatively much better in selection tests while those educated in government schools fared the worst. Although written test seemed to favour the English medium candidates and the interview the reverse, the final analysis indicates that 65% more of the former were selected. On the whole, students having hobbies and higher academic achievement had greater chance of succeeding but these were not an indicator of success. The educational, occupational and income level of the parents seemed to be better indicators of success ; in fact this was even more obvious when the parents were involved in professional occupations.

(ii) Attrition in science talent search scheme

An attempt was made to work out the rate of attrition in the science talent search scheme for each year and for each level of education. Data from 1967 were analysed. The initial drop-out rate varied from 29% to 49%. The rate was higher at terminal levels such as at the beginning of B.Sc., M.Sc., Ph.D. A small percentage of those selected (6%) or those who joined (9%) completed the Ph.D.

(iii) Causes of drop-out among national science talent search awardees

The third study aimed at finding out the causes of drop-out that had taken place each year, drop-out at the initial stage and drop-out during B.Sc., M.Sc. and Ph.D. The major reason for initial or subsequent drop-out was that the candidates were not willing to offer a basic science course. After the B.Sc. level, the drop-out of 22 per cent was due to the poor performance of the selected students or the decision to switch over from the basic science course. At the M.Sc. level the reasons for attrition were the decision to take up jobs and poor performance, while at the Ph.D. level the reasons, besides taking up a job, were the decision to go abroad for further studies and/or to discontinue studies.

(iv) A longitudinal study of the academic performance of talented science students

The objective of the fourth study was to find out (a) whether the selected candidates were consistently superior in their performance; (b) whether there was any association between average gain in performance at the M.Sc. level; and (c) whether there was any relationship between ranking at the time of selection and later academic performance. The findings indicated that (i) the selected candidates performed consistently better; (ii) whether the performance at M.Sc. was better than at B.Sc. could not be stated with any degree of certainty; and (iii) selection procedures did not predict subsequent academic performance.

PREPARATION OF GRADED MATERIAL IN URDU FOR
STANDARDS V, VI AND VII

Principal Investigator : *Smt. Jamela Begam*

Model lessons were developed on the basis of the vocabulary and structures drawn up. Using the selected structures and vocabulary, suitable reading material was prepared on diversified themes based on the child's environment. The values reflected in

the reading materials are patriotism, national integration, tolerance for all religions, leadership, self-confidence, consideration for others, dutifulness, honesty, sense of sacrifice, universal brotherhood, modesty, non-violence, love for human beings, sympathy, perseverance, kindness, forgiveness, respect for elders, charity, helping each other, quick and clear decision, objective judgement and alertness. A variety of resource materials in Urdu was collected for screening, selecting and grading.

STANDARDIZATION AND SIMPLIFICATION OF PROTOPLAST
TECHNIQUES FOR CELL BIOLOGICAL DEMONSTRATION IN HIGH
SCHOOL BIOLOGY COURSES

Principal Investigator : *Dr. A.K Mishra*

Three research papers published were :

- (i) Simplified protoplast isolation techniques for secondary school biology courses : *The Journal of Indian Education*.
- (ii) Studies in plant protoplast isolation and differentiation through simplified techniques : *The Journal of Cytology and Genetics*.
- (iii) Study of plasmolysis and cell wall regeneration in isolated plant protoplasts.

DEVELOPMENT OF LABORATORY COURSE IN PHYSICS BASED ON
OPEN-ENDED EXPERIMENTS FOR THE HIGHER SECONDARY STAGE

Principal Investigator : *Dr. S.G Gangoli*

Six school teachers were involved. The philosophy of open-ended experiments has been discussed. A format for the open-ended experiments suitable for Indian schools has been proposed. Ten experiments covering contact hours in the laboratory have been developed. The report is published as a booklet and some of the experiments will be actively tried out in the coming year.

STUDIES AND LITERATURE ON STUDENT TEACHING AND OTHER
PRACTICAL WORK IN THE B.ED. PROGRAMME IN INDIA—A REVIEW

Principal Investigator : *Shri T.N.S. Bhatnagar*

This review deals with various studies and different types of literature on this topic such as reports of commissions, seminars,

and workshops and the studies conducted and the literature brought out in the country during the period 1950 to 1978. The study covers literature on (a) student teaching, (b) evaluation of student teaching and other practical work, and (c) studies and experimentation.

Departmental Research Projects

The continuing research projects being supported during the year are listed below.

<i>S. No.</i>	<i>Title of the Project</i>	<i>Principal Investigator (Likely date of completion)</i>
1	2	3

Child Study Unit

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| 1. Cognitive Development of Indian Children of Ages 2 to 3—A Longitudinal Study | Dr. (Smt.) U. Bevli
(March 1983) |
| 2. A Feasibility Study of the Home Intervention Programme for the Disadvantaged Children of Classes I and II | Ms. I. Malani
(August 1981) |

Comprehensive Access to Primary Education Group

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| 3. Development of Learning Materials for the Non-formal Education of Girls in the Age-group 11-14 Years in Rural Areas | Dr. S.P. Mullick
(December 1981) |
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Curriculum Group

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| 4. Effective Use of School Curriculum (A Comparative Study of Pupil Development-oriented Model of Curriculum Use versus Its Traditional Use) | Dr. B.P. Gupta
(March 1983) |
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5. Comparison of Curriculum Load at Secondary Stage in Different States	Dr. G.L. Arora (March 1982)
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6. Exploring the Life Styles of the Non-attending Children (Age group 9-14 Years)	Dr. B.R. Goel
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Department of Education in Science and Mathematics

7. Experimental Project to Develop Need-based and Community-oriented Self-learning Instructional Materials in Biology	Dr. J. Mitra (March 1982)
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8. Development of Plant-based Experiments for Secondary and Higher Secondary Levels Using the Environment and Local Resources	Dr. (Smt.) S. Bhattacharya (July 1981)
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9. Implementation of Personalized Instructions—Physics at Class XI or 1st Year Level	Dr. R.N. Mathur (March 1982)
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10. A Comparative Study of the Effectiveness of Open-ended Approach Performing Physics Experiments vs. Traditional Approach at Higher Secondary Stage	Dr. S.G. Gangoli (March 1984)
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Department of Measurement and Evaluation

11. In-depth Study of Government of India Merit Scholarship-holders placed in Residential Schools	Shri K.V. Rao (November 1981)
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1	2	3
12.	Social and Cultural Change and Changes in Creative Functioning in Children	Dr. M.K. Raina (September 1981)
13.	Assessment of School Environment	Dr. P.M. Patel
14.	Measurement of Affective Outcomes of Primary School Education	Dr. P.M. Patel
15.	Research and Development in Talent	Dr. M.K. Raina (September 1981)
16.	Intensive Study of the Accomplishments of the National Science Talent Scholars	Dr. M.K. Raina (December 1982)
17.	An Evaluation of the Comprehensive Internal Assessment Scheme adopted by the Board of Secondary Education, Rajasthan, Ajmer, for Classes IX, X, XI	Shri J.P. Agarwal (February 1982)
18.	Classroom Learning Improvement Mastery Learning Approach in Geography for Class VIII	Smt. Kamala Seshan (January 1982)
<i>Department of Teacher Education</i>		
19.	Developing Tools for Admission to Secondary Teacher Training Institutions	Dr. J. C. Goyal (March 1982)
20.	Development of Measuring Tools (Observation Schedule and Rating Scale) for Evaluating Working with the Community	Dr. C.S. Subbarao (March 1982)
21.	Social Cohesion in Elementary Teacher Training Institutions and Its Relationship with Their Performance	Dr. N.K. Jangira (March 1981)

1	2	3
22.	Know the Plants Around You	Prof. G.R. Ghosh (June 1982)
23.	A Study of the Role Expectations of the Primary and Secondary Teachers in working with Community with a view to Develop Correspondence Courses for Teacher Education both at the Primary and the Secondary Level	Prof. C.S. Subbarao Shri T.N.S. Bhatnagar (March 1982)
24.	Development of Norms for Secondary Teacher Education Colleges	Prof. C.S. Subbarao Shri T.N.S. Bhatnagar (March 1982)

Educational Psychology Unit

25.	Development of National Test Library	Prof. A.N. Sharma (Continuing)
26.	A Study of the Nature and Function of Group Process to Motivate Children	Dr. B.N. Roy (January 1981)
27.	Development of Criteria for Electing a Stream and Courses within a Stream at the Higher Secondary Stage	Prof. A.N. Sharma (March 1981)
28.	Motivation of B.Ed. Correspondence Course Students	Dr. K. Kumar (March 1981)
29.	To Investigate the Effectiveness of Vocational Exploration Programme at Secondary School Level for Vocationalization	Prof. A.N. Sharma (March 1985)
30.	A Longitudinal Investigation into the Drop-out Process and Characteristics of the Drop-out	Prof. A.N. Sharma (March 1983)

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31. Improving Cognitive Functions and Classroom Behaviour of Elementary Students by Contingency Management		Dr. V.K. Singh Shri R.K. Sharma (November 1981)
32. Explorations in Optimizing Learning Science in Schools		Dr. (Smt.) S. Rao (August 1980)
<i>Educational and Vocational Guidance Unit</i>		
33. Research on First Generation Learners		Prof. (Smt.) P.H. Mehta Dr. (Smt.) C. Dhar (July 1981)
34. The Self-concept of Boys with Superior Academic Ability		Prof. P.H. Mehta
35. The Educational and Vocational Planning of Boys with Superior Academic Ability		Dr. (Smt.) C. Dhar Dr. J.S. Gaur Dr. (Smt.) A. Bhatnagar
<i>Non-Formal Education Unit</i>		
36. Compilation and Linguistic Analysis of Hindi Vocabulary		Dr. K.G. Rastogi (March 1982)
<i>Primary Curriculum Development Cell</i>		
37. A Study of Evolution of Textbook and Its Role in Formal Education in the Context of Changing Society (from Ancient to Modern Period with special emphasis on Modern Period)		Dr. B.S. Goel (March 1981)
38. A Study in the Comprehensibility of Language used in Science, Social Science and Language Textbooks at Primary Level		Shri I.S. Sharma

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39.	Guidance in the Use of Field Studies in Geography	Shri Iqbal Mohiuddin
<i>Scheduled Castes and Scheduled Tribes Education Unit</i>		
40.	A Study of Factors impeding Universalization of Elementary Education in Tribal Areas of Rajasthan	Shri B.P. Awasthi (July 1981)
41.	A Study of Methods, Processes and Practices of Non-Formal Education Programmes for Tribal Students	Dr. L.R.N. Srivastava Dr. B.S. Gupta (March 1982)
42.	A Study of Equalization of Educational Opportunities to Tribal Students	Dr. L.R.N. Srivastava Dr. B.S. Gupta (March 1982)
<i>Survey and Data Processing Unit</i>		
43.	Secondary Analysis of the Fourth Educational Survey Data on a Sample Basis	Prof. A.B.L. Srivastava (March 1982)
44.	Sample Survey of Educational Backwardness of Girls in Eight Selected States	Prof. A.B.L. Srivastava (October 1982)
45.	Pilot Project on Collection of Educational Data on Sample Basis in Selected States	Prof. A.B.L. Srivastava (March 1982)
<i>Vocationalization of Education Unit</i>		
46.	A Critical Study of the Implementation of the Vocationalization of Education Programme in Maharashtra	Dr. P. Raizada (March 1981)
<i>Women's Education Unit</i>		
47.	Undifferentiated Curricula in States and Union Territories	Smt. J. Duggal (September 1981)

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48.	A Status Study of Co-education in India—States and Union Territories	Km. P. Puri (August 1981)
<i>Regional College of Education, Ajmer</i>		
49.	The Determination and Development of Schemes of Thought in Science during Adolescence	Prof. N. Vaidya (June 1982)
<i>Regional College of Education, Bhubaneswar</i>		
50.	Survey and Cultivation of Edible Mushrooms as a Work Experience/Vocational Programme for the High/Higher Secondary Schools	Dr. M.P. Sinha (March 1983)
51.	Know the Life between Tide Marks	Dr. A.L.N. Sarma
<i>Regional College of Education, Mysore</i>		
52.	Relationship between Lesson Kinetic Structure and Learning Outcomes in School Science	Dr. G.R. Raju
53.	Identification of the Areas of Deficiencies in Secondary School Physics Teachers and Finding Ways and Means to Help Them	Dr. Somnath Datta (February 1983)
54.	Study of Innovative Practices Prevalent in Schools in the Southern Region	Dr. P.C. Eapen
55.	Devising and Implementing a Strategy for the Development of Accelerated Reading with Comprehension in English	Smt. Lakshmi Aradya
56.	Programme Instructional Material for Biology in Schools	Shri R.K. Bharatiya (March 1982)

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Field Unit, Bhopal

57. The Effect of Teacher-led and Three Other Classroom Approaches of Teaching Population Education in Classes IX and X on Knowledge, Belief and Attitudes about Population Explosion in India

Dr. R.P. Kathuria
(October 1983)

13

Extension and Working with States

RESearch, development, training and extension are the important facets of the NCERT's activities. Extension involves closely working with the States, the State-level institutions and other professional organizations of teachers and teacher-edu-

cators. With a view to establishing liaison with the States, the Council has set up 16 field offices in the State capitals. The field offices undertake on their own programmes which meet some of the needs of the States and communicate to the National Institute of Education and the Regional Colleges the type of programmes which the States feel would meet some of their requirements. The Council's headquarters organized a number of extension activities during the year. Some of the important ones are discussed below.

Centres of Continuing Education Scheme

The programme was launched in the year 1978-79 with a view to continuing the process of updating the professional competence of the secondary school teachers and the primary-level teacher-educators working in different parts of the country. To start with, it was decided to set up 100 Centres with the active collaboration of the State Governments/the Union Territories and their commitment to share fifty per cent of the annual recurring expenditure of all the Centres established in the respective State/Union Territory. Till now, 97 Centres have been established in the States/the Union Territories : Andhra Pradesh, Assam, Arunachal Pradesh, Andaman and Nicobar Islands, Bihar, Chandigarh, Delhi, Gujarat, Haryana, Karnataka, Kerala, Himachal Pradesh, Maharashtra, Meghalaya, Manipur, Mizoram, Sikkim, Nagaland, Pondicherry, Tamil Nadu and Tripura.

Out of the 97 Centres about 70 Centres had started functioning by the end of 1980-81. Each Centre is expected to orient about 600 teachers and teacher-educators in a year. About twelve to fifteen thousand teachers and teacher-educators are estimated to have participated in the various courses offered at these Centres during the year 1980-81.

Four regional seminars were held during 1980-81 at the SIE, Pune, RCE, Ajmer, RCE, Bhubaneswar and RCE Mysore. The Hony. Directors/Coordinators of the CCEs, the State Education Department Officials (including the Educational Secretaries and the Directors of Education) and NCERT's Field Advisers of the region participated in the seminars to identify problems.

National Integration Project

Six inter-State camps for students and four camps for teachers were organized during the year 1980-81. In these camps about 450 students and 400 teachers drawn from all the States and the Union Territories, participated. A book on puppet plays entitled *Chetna* under the scheme "Production of Supplementary Reading Materials for School Children and Teachers" has also been brought out.

Seminar Readings—Innovations in Schools

Under this programme the description of innovative ideas and practices developed and adopted by the primary and secondary school teachers was received. The final evaluation was done by the outside experts and 30 primary school teachers and 20 secondary school teachers were selected for the purpose of cash award of Rs. 500 each and a certificate of merit.

Celebration of the UN Day and the Human Rights Day

The NCERT celebrated the UN Day and the Human Rights Day. The Principals of Delhi schools and eminent educationists and UNICEF, UNESCO and UN representatives participated in these functions.

On 10 December 1980 the Human Rights Day was celebrated by the NCERT. On this occasion the Director, UN Information Centre, New Delhi, delivered a talk on "What the UN has done and/or is doing with regard to the Human Rights". A few principals of Delhi schools, some educational experts from other institutions as well as the representatives from UNICEF, UNESCO and UN attended this function.

Work of the Field Advisers

A number of programmes were organized by the Field Advisers' offices, the major one being the experimental programme of the non-formal education. The Field Offices have set up non-formal education centres in different localities, primarily in rural and slum areas and in localities where the disadvantaged form the most significant segment of the population.

The field offices also supported a number of experimental projects undertaken by schools and other educational institutions. They also provided on request information to students, school teachers, teacher educators and educational institutions about the programmes of the NCERT and the Regional Colleges of Education. These offices provided an important mechanism for the Departments/ Units of the Council for organizing various programmes, particularly those aiming at the training of the State-level key personnel and the development of instructional materials.

The *Ahmedabad* Field Unit has coordinated the activities of 10 non-formal education centres, seven in the rural/slum areas and three in urban areas all of which are manned by M.Ed. students of the M.S. University, Baroda.

The work done to encourage innovations in schools and colleges by the *Allahabad* Field Adviser was appreciated by the State Education Department. Hence, a proposal was mooted to the State Education Department in which academic guidance would be rendered by the Field Unit but the administrative and financial burden would be borne by the State Education Department. Consequently, the State Government set apart a sum of Rs. 1.5 lakh as grant-in-aid to schools for innovative projects. The Field Unit organized an orientation workshop to train regional officers and selected Heads/ Principals of Secondary Schools in the procedures of designing and in implementing such projects.

A publication on "Innovative Projects" was got prepared out of the material developed at the Orientation Workshop on Experimental Projects organized by the Field Office in October 1980. This was handed over to the State Education Department, which got it printed nicely in Hindi for State-level circulation.

The *Bangalore* Field Adviser's Office continued the experimental programme of non-formal education in a cluster of ten villages in Kanakapura Taluk of Bangalore District, during the year. Another cluster has now been taken up in which the programme commenced from 2 October 1980. Cooperation of the local community was received. The community offered free of cost accommodation for

locating the centres and also provided light facilities to enable the centres to function during the evenings/nights. In each centre, the enrolment, which exceeds 40, and the attendance are quite encouraging.

Fifty-six students from non-formal education centres run by the *Bhopal* Field Office took up Class V Board Examination, 1981—40 students passed and four students were placed in the supplementary list. Some of the students who passed Class V are preparing to take admission to Class VI as regular students. Monthly orientation of Field Workers and Field Supervisors was undertaken for preparing instructional materials particularly for the students who were preparing for the Class V Board Examination. Training-cum-production workshop of six days' duration was organized at Multai block for preparing questions and programmed learning instructional material. A seven-day orientation programme of Field Workers and Field Supervisors was organized at BLI, Kundeshwar from 9 to 15 July 1981.

The Chairman, Municipal Corporation, Multai, DEO, SDO, Tehsildar, ADIS, Sarpanch etc, are extending fullest cooperation in the effective functioning of the NFE Centre and extend timely help as and when required.

The Department of Education has recognized the students of the non-formal education as regular students for examination purposes. Thus certificates awarded by non-formal education centres run by the Field Office will be equivalent to those issued by schools.

The *Bhubaneswar* field office has set up 10 centres in a cluster of 10 villages which have a large proportion of Scheduled Caste and Scheduled Tribe population and are situated in the hilly area of the Danagadi Block in Cuttack district. Children in the age group 6-14 years, who have neither attended nor would attend any formal school and who have dropped out from the formal system before completing their elementary education, are benefiting by this programme. Children enrolled in these centres have made satisfactory progress in literacy, numeracy, health education and in SUPW. Several children from these centres have joined the formal system

on acquiring the minimum standard of knowledge required for admission in different classes.

Three local-level meetings have been organized with the parents and the local community, the local Medical Officer, the Veterinary Surgeon, BDO, and all other block level officers, the District Inspector of Schools, etc. It is proposed to hold these meetings more frequently and develop the awareness and change the attitude of the people. Besides reading, writing and arithmetic, emphasis has been given to socially useful productive activities such as tree plantation, kitchen gardening, poultry, goat and sheep rearing, community cleaning, preparation of broom sticks and bags from jute as well as waste paper and leaves.

Non-formal education centres established by the Field Office at *Calcutta* have been functioning in a remote part of West Bengal, where about 90 per cent of the population belongs to the Fishermen community. The monthly average attendance at these centres has been around 94.5 per cent and there is further demand for such centres. About 15-20 per cent of the students of these centres have learnt simple arithmetical operations and some of them have started reading a little difficult book in Bengali i.e. *Milancho*.

A two-day Regional Consultation Meeting on "The Role of Teachers' Associations in promoting the Professional Growth of Their Members" was organized by the *Chandigarh* Field Unit at the Government College of Education, Chandigarh, on 25 and 26 March 1981, to discuss the possible methods and techniques which the teachers' associations may adopt to promote the academic cause of their members. Apart from the association leaders, various senior educationists and educational administrators from the States of Punjab, Haryana, Himachal Pradesh and the Union Territory of Chandigarh participated in this meeting. The valedictory address at the meeting was delivered by the Education Minister, Punjab.

The *Gauhati* Field Office organized a seven-day training programme for the supervisors and field workers of the non-formal education centres. The main emphasis of this training programme was to help these personnel to acquire proficiencies in the skills and methods of conducting effectively non-formal education programme.

A primer *Siku Aha* developed by the NCERT for its NFE programme in Assam has been adopted by the government of Assam for its centres of non-formal education.

About ten per cent of the enrolled children in the age group 9-14 of the ten centres have achieved the competence of entering the mainstream of education, i. e. in Class V of the formal schools.

The Hyderabad Field Unit participated in organizing a refresher course for the Field Workers of the non-formal education centre, Tipparthy, in collaboration with the Field Supervisor, the State Education Department, the Agriculture College and some Field Workers.

These centres are working satisfactorily. But due to drought conditions prevailing in the areas, some children are leaving the place along with their parents; but immediately other pupils are joining the centre.

In Rajasthan eight non-formal education centres are being run in the Basai block under the auspices of the NCERT's *Jaipur* Field Office. On an average about 30 to 40 students are enrolled in each centre. In 1980-81 some of the prominent programmes implemented were a conference for evaluating these centres and a workshop on the training of field workers in arts and crafts.

The teaching of Hindi by means of radio in more than 450 schools of Rajasthan, popularly known as the Radio Pilot Project of the NCERT also engaged the Field Unit actively during 1980-81.

The Field Adviser's Office at *Madras* is running ten non-formal education centres in the following nine villages of Chitlapakkam, Madambakkam, Ottiyambakkam, Paduvancheri, Ramakrishnapuram, Sammancheri, Sithalapakkam No. 1, Sithalapakkam, Tiruvancheri and Vengapakkam. Opportunities were offered to the field workers and field supervisors to prepare charts and models from waste material, to prepare learning package in different subjects and use puppetry as a means of education.

Field workers prepared instructional materials on about 50 topics

keeping in view the village situations and needs. They also prepared a number of charts and models.

The main objective of the teaching-learning process in the non-formal education centres is to know the environment and adjust oneself to environmental conditions.

Nine non-formal education centres have been set up at Samastipur by the *Patna* Field Office, Bihar. Stationery articles, books, slates, registers, etc. have been supplied to the field workers of these centres. Three hundred and forty-seven students have been enrolled in these centres. Only six students gave up studies during the year. The Field Unit also provided necessary help in the organization of an orientation-*cum*-production camp, by the Regional College of Education, Bhubaneswar, at Rajgir from 25 September to 1 October 1980 for the field workers and field supervisors of the non-formal education centres of Bihar and U. P.

The competitions in toymaking for teachers of pre-primary and primary schools in Maharashtra and Goa were organized by the *Pune* Field Unit. There were 125 entries in Maharashtra. The first prize winner in the competition in this State has also been awarded first prize in the National Competition.

The Field Unit also extended cooperation in the programmes of other institutions/agencies such as Bombay Municipal Corporation, the Indian Institute of Education, etc.

During the period under report a State-level educational toymaking competition was organized by the *Shillong* Field Adviser at the instance of the Child Study Unit, NCERT, New Delhi, for the teachers of Pre-Schools and Primary Schools in the States of Meghalaya and Tripura and in the Union Territory of Mizoram.

An orientation camp in Community Leadership and in SUPW for primary school teachers of Meghalaya was organized by the Field Adviser during the period under report. This programme was attended by 30 primary school teachers of Meghalaya. The objectives of this programme were : (i) to help the teachers develop attitude towards work, (ii) to help establish integration of work with educa-

tion, (iii) to help teachers develop certain skills for the achievement of curricular objectives and self-sufficiency and (iv) to help teachers offer leadership to the community. The impact of this programme was very much positive on the participants as well as on local administration.

The *Srinagar* Field Office at Jammu and Kashmir is running seven non-formal part-time education centres in Asham, Nowgam, Rake-Shilwat, Shadiporma, Shilwat, Sumbal (Inderkot) and Wangipora. The two centres at Rake-Shilwat and Shilwat are weak centres, whereas in other centres the enrolment is around 40. The impact of the project is yet to be evaluated. However, this project has made the community aware of the benefits of education.

The Field Officer organized a three-day training course for the field workers with the main objective of orienting the teachers to the concept, methods and approaches of non-formal education. Preparation of instructional and evaluation material constituted an important part of this training. Another training-cum-production workshop was organized in the Field Office from 6 to 15 April 1981.

The *Trivandrum* Field Unit offered administrative support to the conduct of the following programmes :

Experimental Projects.

Toy-making Competitions.

Screening of Educational Films.

14

Search for Talent

DURING the financial year 1980-81 the NCERT conducted the National Talent Search (NTS) examination at three different stages, i.e. Classes X, XI and XII all over India at 430 centres. About 80,000 candidates appeared in the test for all the three

classes. Details regarding the number and the value of scholarships are given below.

<i>Sl. No.</i>	<i>Class</i>	<i>No. of Scholarships</i>	<i>No. of Candidates Appeared</i>	<i>Rate of Scholarship</i>
1.	X	250	42,000	(a) Rs. 150 per month for two years plus Rs. 200 per annum as book grant (b) Rs. 200 per month up to the second degree in Basic Science and first degree in Engg. and Medicine + Rs. 300 per annum as book grant
2.	XI	100	7,000	(a) Rs. 150 per month for one year + Rs. 300 per annum as book grant (b) Rs. 200 per month up to the second degree in Basic and Social Sciences and first degree in Engg. and Medicine + Rs. 300 per annum as book grant
3.	XII	150	31,000	Rs. 200 per month up to the second degree in Basic and Social Science and first degree in Engg. and Medicine + Rs. 300 per annum as book grant

The Summer Schools and Summer Placement Programmes were organized by the Council for the under-graduate and post-graduate NTS scholars at 27 different places in the country during May and June 1980. Three hundred and seventy-nine scholars participated in these programmes.

The Council has also decided to institute additional 50 scholarships exclusively for the SC/ST candidates from the 1981 examinations.

Studies on National Talent Search

Quite a number of studies of the programme have been undertaken in the Council. Illustrative of these are the test score and item

analysis of the 1977 examination and analysis of Class XI- and XII-level examination of 1978. The main work done as part of these studies is described below.

Test Score and Item Analysis of National Talent Search Examination, 1977

The main purpose was to present the results of item and test score analysis of the NTS examination held in 1977 for the selection of candidates for the award of national talent scholarships for Class X. The examination consisted of three parts : Part I—General Mental Ability Test (100 marks); Part II—Scholastic Aptitude Test (100 marks); and Part III—Interview (50 marks). Part I consisted of 90 multiple-choice items of non-verbal symbolic and numerical reasoning, analysis, application, etc. Part II contained 100 multiple-choice items on Economics, Civics, Geography, History, Physics, Chemistry, Biology and Mathematics. Both the parts were administered as a composite test of three hours' duration. A total number of 28,955 candidates took the test in 15 languages at 340 centres spread all over the country in June 1977. On the basis of scores obtained in the composite written test, a merit list of 1,458 candidates was prepared for interview and each candidate had to appear before one of the eleven selection boards set up at seven different places in the country.

Out of the total number of candidates who took the composite written test in June 1977, a 10% systematic random sample was drawn by taking every tenth candidate. Since the candidates' test scores were on the magnetic tape arranged centre-wise, the sample represented candidates from all the centres proportionately. The size of the sample thus drawn was 2,896.

After item analysis, ninety items of the GMA test were grouped into 15 categories according to the nature of the items. Items in three groups, viz., number analogy, finding the rule, and codes, proved to be very difficult, while those in only one group viz. logical problems turned out to be very easy. Next in easiness were three groups : Letter series (B) and Letter series (C) and Venn diagrams. The rest of the eight groups fall between the mean difficulty indices, 36.50 to 56.20.

As regards the discrimination values of different groups of items in the GMA, it is found that the 15 item-groups vary from 25.50 to 63.40 in mean discrimination indices. The four groups which were at the bottom in terms of mean difficulty values are also at the bottom in terms of mean discrimination values. Letter series (C) and Venn diagrams have the highest mean discrimination indices. The remaining nine item groups fall between the mean discrimination indices, 42.14 to 54.60.

The discrimination and difficulty indices of 100 items of the SA test have been computed. The difficulty index for items on the SA test varies from 4 to 87 with a range of 83. The mean difficulty index of items on the SA test is 39.21. The mean discrimination index on SA test is 29.85. The discrimination index of items in the SA test varies from 6 to 58 giving a range of 52. The lower values of the discrimination index on the SA test may perhaps be due to the composite nature of the SA test which was reflected in the total SA score used as a criterion for forming the three groups for the purpose of determining the discriminating power of the questions. These hundred items of the SA test were classified into eight subject groups mentioned above. The mean difficulty index varied from 26.1 in Mathematics to 52.6 in Biology. The next highest difficulty index was 52.3 for Civics. The remaining five subjects were placed between a narrow range of 32.8 for Economics to 42.7 for Chemistry. The single trial reliability estimates of the GMA and SA tests were .945 and .896, respectively. Detailed findings are given in the monograph on *Studies on National Talent Search* published by the NCERT. The monograph also carries some theoretical and research studies on talent.

*Analysis of National Talent Search Examination, 1978
(Classes X, XI and XII): Background Studies*

Three background studies were done on the candidates of Classes X, XI and XII respectively belonging to three groups who appeared for the National Talent Search Examination in 1978. Following conclusions were arrived at in respect of each study.

(a) *State-wise Distribution* : Most of the candidates who appeared for Class X in 1978 for the NTS award were from U. P., Delhi, Tamil Nadu, Maharashtra, Andhra Pradesh and Karnataka. In Class XI most of the candidates belonged to Uttar Pradesh, Andhra Pradesh, Maharashtra, Karnataka, West Bengal and Gujarat. Considering the total number of candidates who appeared from each State, the highest number of awards in Class X has gone to West Bengal followed by Orissa, Delhi and Chandigarh; in Class XI, to Chandigarh followed by Punjab, Rajasthan and Haryana, and in Class XII, to Maharashtra followed by Bihar, West Bengal, Orissa and Gujarat. However, in the selected group in Class X most of the candidates came from Delhi followed by West Bengal, Maharashtra, Bihar, Uttar Pradesh, Tamil Nadu and Kerala and in Class XI most of the candidates belonged to Rajasthan followed by Tamil Nadu, Madhya Pradesh, Chandigarh and Punjab; in Class XII most of the selected candidates belonged to Maharashtra followed by Uttar Pradesh, West Bengal, Andhra Pradesh and Karnataka.

(b) *Urban-Rural Background* : In all the three classes most of them who had applied belonged to urban areas. The rate of rejection was highest in the case of candidates belonging to rural areas. In the interview, in all the three classes, urban candidates fared better. In the selected group more than 91% were from the urban areas in the three classes respectively.

(c) *Sex Distribution* : Most of the candidates (more than three-fourths) in all the three classes who had applied were males. The rate of rejection was relatively higher in the case of males in Classes XI and XII but in Class X it was higher for females. In the interview males performed better in Classes X and XII, but girls performed better in Class XI. However, the majority of the candidates who finally got selected in all the three classes were males.

(d) *Caste Background* : The majority of the candidates who applied in the three classes respectively belonged to Caste Groups other than Scheduled Castes, Scheduled Tribes and Backward Classes. The rejection rate was maximum in the case of Scheduled Caste and Scheduled Tribe groups. In the interview as well 'Other Castes' group performed definitely better than the rest. In the selected group

also, a major portion of the awards has gone to the 'Other Castes' group.

(e) *Types of Institutions Attended* : It is only in Class XI that most of the candidates who appeared for NTS examination belonged to Government Schools, otherwise in Classes X and XII a large number of candidates who appeared for this examination belonged to Private Schools and Private Colleges respectively. In all the three examinations, the rate of rejection was highest in the case of candidates from the Government Schools/Colleges. In the group selected in all the three classes the bulk of the awards has gone to candidates belonging to private institutions.

(f) *Medium of Instruction and Medium of Answering* : Those whose medium of instruction and medium of answering was English were at an advantage in comparison to those who had languages other than English as media, at all the three levels. The State-wise analysis also revealed the same trend.

(g) *Educational Level of Family* : The educational level of the family of those who were rejected was lower than the educational level of the family of those who were called for interview but rejected. The educational level of the family of the selected in all the three classes respectively, by and large, was higher than that of the other two groups.

(h) *Average Income* : The average income of the father/guardian of those who were selected was appreciably higher than the average income of the father/guardian of those who were called for interview but rejected and also that of the totally rejected group. However, the average income of the father/guardian of the candidates in Group B was higher than the average income of the father/guardian of those in Group C.

(i) *Occupational Status* : In all the three examinations mostly those candidates appeared who had their father/guardian engaged in clerical-type occupations. In all the three examinations, the rejection rate was highest in the case of those who had father/guardian engaged in agriculture and related types of jobs. Most of the candidates called for interview in all the three examinations had father/guardian doing professional, administrative and technical type of jobs.

In the selected group, the majority of the candidates had father/guardian engaged in professional, technical and administrative types of jobs.

Most of these findings, by and large, seem to be in tune with the earlier findings obtained from similar studies conducted on the basis of the data for the years 1976 and 1977.

Evaluation of the Rural Talent Search Scheme

The NCERT has undertaken the evaluation of the Rural Talent Search Scheme, initiated by the Ministry of Education a few years ago. The purpose of the scheme is to identify talent (at Class V level) pretty early in life. The scheme provides for the selection of two students from each Community Development Block through a formal test. The selected students are given a scholarship of Rs. 500 per annum if they choose to study while staying at their own places and Rs. 1,000 per annum if they have to stay in a hostel for pursuing their further studies.

As this scheme had been in vogue for quite some time, the Ministry of Education has decided to have its various aspects, including its impact, evaluated. This task has been assigned to the NCERT. The responsibility to evaluate the scheme has been given to the four Regional Colleges of Education so that the evaluation data are obtained in respect of as many States as possible. In this regard the questionnaire has already been finalized and in the case of some States the process of data collection has also been initiated.

15

International Assistance and International Relations

AS an institution of national importance the NCERT maintains contacts with UNESCO and other international organizations working in the field of education. In its efforts at the improvement in the quality of education at the school stage, the Council has

received assistance from international agencies like UNICEF and the UNFPA. In school education, the Council is a major agency for cultural exchange programmes which the Government of India sponsors on a bilateral basis. A brief detail of these and other similar programmes is given below.

UNESCO/APEID

The Council's participation in UNESCO's activities are (i) through direct participation in UNESCO programme, and (ii) by participating in UNESCO activities through APEID (Asian Programmes for Educational Innovation for Development). The direct participation includes sponsoring the Council's Officers for participating in international Seminars, Workshops, Conferences, etc., as well as receiving foreign nationals for training in various fields of education. The details of such participations are presented below.

Dr. T. N. Dhar, Joint Director, NCERT, attended a meeting of experts held at Korea, Seoul, from 12 to 15 May 1980 on the problems concerning elaboration and use of indicators of the role and changing conditions of children in development processes.

Dr. T. N. Dhar, Joint Director, NCERT, attended the Planning and Programme Study Group Meeting on the Asian Programme of Educational Innovation for Development held at Bangkok from 5 to 8 April 1980. The study group indicated the areas of priority for UNESCO's effort in the third cycle.

Dr. T. N. Dhar, Joint Director, NCERT, attended the Eighth Commonwealth Education Conference held at Colombo in Sri Lanka from 5 to 13 August 1980 as one of the members of the Indian delegation headed by the Education Minister. The Conference considered various areas of education priority like universal elementary education, non-formal education and relationship of higher education to development.

Dr. (Km.) S. Bisaria, Head, Women Education Unit, was deputed to attend a meeting for the Establishment of Regional Network of Information on Women held in Bangkok from 5 to 9 May 1980. The meeting was conducted by the United Nations

Asian and Pacific Centre for Women and Development, with the objective of establishing a regional network of information on women and development, and developing a set of guidelines to implement the network.

Shri A. A. C. Lal, Asstt. Coordinator, and Dr. J.N. Bajpai, Reader, Regional College of Education, Bhubaneswar, along with Dr. K. D. Sharma of the Directorate of Adult Education attended a meeting of the UNESCO Joint Innovative Project on "Meeting the Educational Needs of the Young People without Schooling or with Incomplete Schooling" held in Bangkok from 31 July to 9 August 1980.

Dr. Arun K. Mishra, Reader in the Department of Education in Science and Mathematics, was deputed by the Council to attend the UNESCO Regional Workshop to review Biology Education in Asia held in Manila, Philippines, from 18 to 23 August 1980.

Prof. R.P. Singh, Principal, Regional College of Education, Ajmer, was deputed for a study tour to US for a period of six weeks from mid-March 1980, as a member of a group of Principals of Inter-Colleges to study the College and Its interaction with the Community; Faculty Improvement Programmes including Evaluation and Teacher Evaluation; and Student Services. The study tour was arranged by the United States Educational Foundations in India, New Delhi.

Prof. C.H.K. Misra, Member-Secretary, ERIC, attended the General Assembly meeting of the International Association for the Evaluation of Educational Achievement (IEA) held in Finland and also participated in the IEA Classroom Environment project meeting held in Netherlands from 18 to 24 August 1980.

Shri A.B. Mankapure, Lecturer, Department of Teaching Aids, was deputed to Australia under the Colombo Plan for training in Educational Resources, Their Development and Production conducted by the International Training Institute, Sydney from 10 September to 3 December 1980.

Shri K.S. Chacko, Junior Project Associate in the Population Education Unit, was deputed to attend the sub-regional Group Training Courses in Population Education held in Bangkok from 18 August to 5 September 1980.

Shri Mujtaba Hussain, Editor (Urdu), Publication Department, was deputed to attend the 13th Training Course on Book Production in Asia held in Tokyo from 30 September to 31 October 1980. The course was conducted by the Asian Cultural Centre for the UNESCO with the assistance from UNESCO and in cooperation with the Japanese National Commission for Cooperation with UNESCO and the Japan Book Publishers Association.

Dr. B.D. Atreya, Reader, Department of Education in Science and Mathematics, was deputed to attend the UNESCO Regional Workshop on Environmental Education in Asia and Oceania held from 22 to 29 September 1980.

Shri Tilak Raj, Reader in the Department of Teaching Aids of the Council, was deputed to attend the Second Asian Seminar on Educational Technology, organized by the Japanese National Commission for Cooperation with UNESCO in Tokyo from 16 to 25 October 1980.

Shri S.N. Datta, Reader in Physics, Regional College of Education, Mysore, was deputed to attend the third Regional Workshop on the Development of Appropriate Aids for Science Teaching at First Level of Education organized by the National Institute for Educational Research in cooperation with the Asian Centre for Educational Innovations for Development (ACEID) in Tokyo from 14 October to 8 November 1980.

Prof. R.C. Das attended the Seminar of the twentieth annual fellowship programme of educators organized by the United Nations Department of Public Information in New Delhi from 3 to 21 November 1980 for English-speaking specialists and policy-makers in primary and intermediate education. The aim of the seminar was to increase the effectiveness of education about the goals and activities of the United Nations in schools and teacher-training institutions in member-States.

Dr. L.R.N. Srivastava, Head, Tribal Education Unit, attended the APEID Study Group Meeting on Evaluation and Development of Innovative Methods of Teaching with reference to the Problems of Multiple Classes and Disadvantaged Groups, held in Indonesia from 17 to 26 November 1980.

Prof. A.N. Bose of the Department of Education in Science and Mathematics, attended the Regional Experts Meeting on Primary School Science Education held in Seoul, Korea, from 4 to 10 November 1980.

Dr. V.G. Gupte, Lecturer, RCE, Ajmer, Dr. (Smt.) L.G. Sumitra, Reader, CET, and Shri R.R. Sharma, Reader, CET, attended the APEID National Workshop on Educational Broadcasting, held in New Delhi from 1 to 6 December 1980.

Dr. G.L. Adhya, Reader, Department of Education in Social Sciences and Humanities, was deputed to attend the UNESCO Regional Meeting of Experts on the Role of Social Studies in Education for Peace and Respect for Human Rights in Asia and Oceania, held at Bangkok from 16 to 22 December 1980.

Prof. A.K. Misra, Professor-in-charge, Vocationalization of Education Unit, attended the high-level meeting to institute the South Asia Cooperative Environmental Programme, held at Colombo in Sri Lanka.

Shri D.N. Abrol, Lecturer, Department of Measurement and Evaluation, was deputed to Philippines to attend initial planning meeting on In-service Primary Teacher Education from 18 to 27 August 1980. He also participated in the Interim Review Meeting on Joint Innovative Project on In-service Primary Teacher Education, held at Bangkok from 22 to 29 January 1981.

Prof. (Smt.) Adarsh Khanna, Head, P.C.D.C., participated in the Joint Innovative Project on Integrating Subject Areas in Primary Education Curriculum held at Seoul from 30 October to 8 November 1980.

Apart from the UNESCO-sponsored programmes, the officers of the Council participated in seminars and workshops organized under the auspices of other agencies. The details are given below.

The NCERT as an associated centre of the APEID, also hosted the following programmes.

Two national Workshop-cum-Training programmes in Population Education were organized at Srinagar from 7 to 14 July 1980

and at Pune from 16 to 23 July 1980. Participants from various educational institutions attended the workshop which was organized as a follow-up of the Regional Inter-Country Mobile Training Workshop in Population Education held in July-August 1979.

A national workshop was organized in New Delhi as a follow-up of the Mobile Field Operation Seminar in Science and Technology from 16 to 29 July 1980 for developing exemplar science teaching-learning material with focus on linking science to the real life situation and the rural environment and on low-cost science equipment for providing science experience.

A Technical Working Group Meeting on Curriculum Development in Health and Nutrition Education was organized in New Delhi from 15 to 24 September 1980. Participants from Afghanistan, Bangladesh, Indonesia, Nepal, Malaysia, Philippines, Sri Lanka, Thailand and India attended.

The Council also participated in the UNESCO Regional/International programmes which are given below.

Joint Innovative Project on Meeting the Educational Needs of Young People without Schooling or with Incomplete Schooling, held at Bangkok from 31 July to 9 August 1980.

Regional Workshop to Review Biology Education in Asia, held in Manila, Philippines, from 18 to 23 August 1980.

Sub-Regional Training Course in Population Education, held at Bangkok from 18 August to 5 September 1980.

Regional Workshop on Environmental Education, held at Bangkok from 22 to 29 September 1980.

Third Regional Workshop on the Development of Appropriate Aids for Science Teaching at First Level of Education, held at Tokyo from 14 October to 8 November 1980.

Study Group Meeting on Evaluation and Development of Innovative Methods of Teaching with reference to Problems of Multiple Classes and Disadvantaged Groups, held at Indonesia from 17 to 26 November 1980.

Second Asia Seminar on Educational Technology, held at Tokyo from 16 to 25 October 1980.

Regional Experts Meeting on Primary School Science Education, held at Seoul, Korea, from 4 to 10 November 1980.

Regional Meeting of Experts on the Role of Social Studies in Education for Peace and Respect for Human Rights held at Bangkok from 16 to 22 December 1980.

The Council signed contracts with UNESCO for undertaking the following case studies.

Case Study on Low-cost/Appropriate Educational Material and Equipment in India.

Environmental Education Pilot Project in India—Experimental Implementation of Modules.

National Activities in Educational Innovations in India.

Review of the Problems of Adapting Science and Technology Education to a Changing Society and to the Diversity of Needs of Member-States.

Joint Innovative Project on Integrating Subject Areas in Primary Education Curriculum.

Joint Innovative Project on In-service Primary Teacher Education (Second Phase).

Bilateral Cultural Exchange Programmes

The Council is one of the implementing agencies of the bilateral cultural exchange programmes that are signed by the Government of India with different foreign countries. Acting as an implementing agency, the NCERT participates in a two-way flow of ideas with foreign countries by sending its delegations to study specific areas of educational problems and also by arranging training programmes for the personnel of developing countries. In addition, the Council has been exchanging educational material including textbooks, supplementary reading materials, research monographs as well as films and film-strips.

The details of the Council's officers who were deputed abroad

and the foreign visitors who visited India under this programme are given below.

Prof. S. Harnandez, Head of the Department of Educational Activities of the National Institute of Indigenous People, Mexico, visited India for studying the programmes of Language Development and Tribal Education from 16 to 31 August 1980 under the Indo-Mexican Cultural Exchange Programme. His programme for Tribal Education was arranged by the NCERT on behalf of the CIIL, Mysore.

Mr. Waldim Kamal Al Kera, a Syrian Educationist, visited India from 5 May to 1 June 1980 to study the programmes of production and utilization of teaching materials for teaching History and Geography.

A Soviet delegation consisting of Mr. V.N. Shutev, Chief Orlov Department of Public Education, Mr. C.P. Riabov, Dean, Department of Interpreters, Gorky Pedagogical Institute of Foreign Languages, USSR, and Mr. Ala Tamrin (Candidate of Science) Pedagogical Institute of Moscow, visited India with a view to study the organization and content of Primary School, system of training of Pedagogical Institute and some other areas of school education.

Dr. Mohammed Abdel Fattah Yasin Hindi, Head of the International Organization, General Administration for Foreign Cultural Relations, Ministry of Education, Egypt, Cairo, visited India from 20 January to 3 February 1981 to study education system of India.

Shri Prem R. Hurrynag, Rector, Secondary School, Mahatma Gandhi Institute, Moke, Mauritius, visited the Council from 16 March 1981 for a period of about six weeks to study educational set-up of India at the Pre-primary, Primary and Secondary levels of education. He also visited a number of educational institutions in Delhi/outside Delhi.

The Council deputed Dr. A.C. Banerji, Reader, Regional College of Education, Mysore, and Shri C.K. Misra, Reader, Vocational Education Unit, NCERT, on 2 November 1980, to visit DPRK for

a period of two weeks to study programmes of science and mathematics education and vocational education.

National Development Group

The Council also functions as the Secretariat of the National Development Group for the Asian Centre for Educational Innovations for Development (APEID). The functions of the Secretariat include, among other things, establishing a line of communication with the Directors of Education, SCERT's/SIE's and other associated centres of APEID; providing information documentation service; developing an evaluation programme and instituting Indian programmes of innovations.

A meeting of the National Development Group was convened at New Delhi on 19 March 1981 to finalize the report on the evaluation of the Second Cycle of APEID and on the proposals for the Third Cycle (1982-85). Major innovative practices adopted by the Associated Centres during 1978-80 and suggestions about the effective ways and means for promoting innovative practices at the grassroot level were discussed. The nine problem areas identified earlier were also considered and suggestions were accepted. The criteria for identification and selection of other institutions involved in APEID activities were laid down in the meeting.

Other Programmes

The Council received a number of visitors from various academic institutions abroad for the study of educational programmes and activities of the Council. The detail of these visitors is given below.

Miss Malicca Ratnes, Planner, the Asian and Pacific Programme for Development Training and Communication Planning, visited the NCERT on 16 and 17 June 1980.

Mr. Sangay Wangdi, a UNESCO fellow from Bhutan, had a training programme at the NCERT from 9 July to 8 August 1980 in the field of Audio-Visual Equipment.

Dr. Pruang Kumut, Director, Department of Educational Technology, Srinakharinwirot University, Bangkok, visited the NCERT on 7 August 1980.

A group of twelve school principals and officials from the Ministry of Education, Thailand, visited the NCERT from 23 August to 5 September 1980.

Hon'ble J.J. Kamotho, Minister for Higher Education, Government of Kenya, visited the NCERT on 16 August 1980.

Dr. Hans Meinel, Secretary-General of the German National Commission for UNESCO, and Madame Meinel, visited the NCERT on 14 August 1980.

A group of sixteen American educators from Pembroke State University, USA, visited the NCERT on 14 August 1980.

Hon'ble Dr. Kwanena Ocran, Minister of Education, Sports and Culture, Ghana, visited the NCERT on 19 August 1980.

Mr. W. Webb, Education Specialist of the Asian Development Bank, visited the NCERT on 29 August 1980 to get himself acquainted with the working of the Council.

Mr. Chandrakala Gurung, Principal, Teacher Training Institute, Samchi, Bhutan, had a training programme at the NCERT, from 18 August to 3 September 1980, in the organization and administration of teacher education.

Mr. Trinh Van Xuan, Technician, Ministry of Education, Hanoi, Vietnam, underwent a six-month training at the NCERT in the field of Educational Equipment Design from 21 August 1980 under the UNESCO fellowship.

A group of five adult education experts from Philippines visited the NCERT on 6 September 1980.

Mr. Abdul Wadood Wafamal, President of Secondary Education Department, Ministry of Education, Afghanistan, visited the NCERT from 1 to 8 October 1980 with a view to exploring possibilities of collaboration between the NCERT and the Ministry of Education, Kabul.

A four-member team from the Institute for the Promotion of Teaching Science and Technology (IPST), Bangkok, visited the Council from 1 to 8 October 1980 for a study in the field of Vocational Science and Mathematics under the UNESCO programmes.

Mr. Kazuhiko Hironeka, a Japanese Scholar, visited the NCERT for conducting a comparative study of Educational Reforms in India and Japan from 22 October to 17 November 1980.

A group of sixteen senior educators from nine Asian countries as well as from Australia, Caroline Islands, Denmark, the German Democratic Republic, New Zealand and Soviet Union, who were the participants in the United Nations fellowship programme, visited the NCERT on 11 November 1980. The group had discussions with the Joint Director, NCERT, and Heads of the Departments. The group was presented teaching and instructional material in social sciences. Educational films produced by the NCERT were also screened for the group.

Mr. A.K. Mozammel Haq, Specialist, Academy for Fundamental Education, Bangladesh, visited the NCERT for a four-week training from 1 December 1980, in evaluation of textbooks at the Primary Stage as well as evaluation of literacy teaching. The training was arranged under the APEID Special Technical Cooperation Programme of UNESCO.

Mr. Mikhail Kabatchanko, Programme Specialist responsible for social studies curricula and textbooks in the Section of Education for International Cooperation and Peace, UNESCO, visited the NCERT on 11 December 1980 and had discussions with the concerned Heads of Departments of the Council.

Mr. Bhageeruthy Gopual of the Mahatma Gandhi Institute, Moka, Mauritius, visited the NCERT on 29 December 1980 to discuss the implementation of various items of the bilateral cultural exchange programme.

Mrs. Florance Osio Frimpong, Ministry of Education, Ghana, visited the NCERT on 9 January 1981.

Mr. Jorge M. Fernandez, Vice Minister, Mr. Raul F. Fernandez, Director of Cuban Committee on Statistics, and Mr. Giro H. Fernandez visited the NCERT on 23 January 1981 and had discussion with the officials of the NCERT.

Mr. Chimi Dorji, Technician, Teacher Training Institute, Samchi,

Bhutan, was at the NCERT on a study visit under a UNESCO fellowship from 5 January to 19 February 1981. Mr. Dorji had training in the Procedures of Maintenance and Use of Audio-visual Equipment with emphasis on electronics.

Mr. S. Muralidhar, Lecturer in Science, Education University of the South Pacific, Suva, Fiji, visited the NCERT on 19 February 1981.

Mr. W.C. Karunaratna, Asstt. Lecturer, Department of Science and Technical Education in the University of Colombo, visited the NCERT for a period of two weeks from 26 February 1981.

A five-member team led by Shri Parsai, Education Secretary, Government of Nepal, visited the NCERT on 5 March 1981. The team had come to acquaint themselves with education policy formulation/implementation in India.

Mrs. I.A. Wontumi, Principal Secretary, Ministry of Education, Government of Ghana, visited India under a Government of India award for a Short-term Visit of Senior Educationist on 13 March 1981. She had discussions with the Director and the Joint Director and some of the Heads of Departments of the NCERT.

International Technical Cooperation Programme

At the instance of the Ministry of External Affairs, Government of India, the Council organized one-month study-*cum*-observation course on "Innovations and Approaches in Primary Education" for a group of forty Afghan primary school teachers from 7 March to 4 April 1981.

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Publications

AN important function of the NCERT is to publish school textbooks, instructional materials, students' workbooks, teachers' guides/manuals, research studies/monographs, etc. The Council produces, distributes and supplies a wide range of publications in the

field of education, including supplementary readers, reports of educational surveys, investigation reports, handbooks, brochures, journals, etc.

Current Publications

During the year, the following publications were brought out :

	<i>Number of Titles</i>
New first edition books 32+5 (Urdu)	37
Reprint textbooks 109+11 (Urdu)	120
Textbooks/Workbooks for other Government Agencies	14
Books on Non-Formal Education	2
Books under the Radio Pilot Project	6
Research monographs/reports and other publications	24
Periodicals (counting each issue)	17
Total :	220

Distribution

The NCERT publications were distributed and sold through the Publication Division of the Ministry of Information and Broadcasting, New Delhi, as the national distributors in the Northern, Eastern and Western Zones through their sale emporia at New Delhi, Calcutta and Bombay. The Southern Zone was served by the NCERT Publication Department directly. All the Council's journals were also distributed and sold by the Council itself.

The textbooks were sold to schools and other educational institutions against direct orders.

During the year, 430 direct orders were received—from the Kendriya Vidyalaya Sangathan (102), other schools (310), Sainik Schools (13), and Central Schools (5). Thirteen orders for Tibetans' requirement of textbooks of various districts in Arunachal Pradesh were also met by the NCERT directly.

Participation in Book Fairs, Exhibitions

During the year, the Council participated in the following fairs and organized exhibitions of its publications.

- (i) The 10th National Book Fair, Jaipur.
- (ii) The National Children's Science Exhibition, New Delhi.
- (iii) The All-India Seminar on Teacher Education, Jammu.
- (iv) Distribution of Awards to Teachers, New Delhi.
- (v) The XXII National Prize Competition for Children Literature, New Delhi.

The Council also participated in the following international book fairs/exhibitions by sending selected NCERT publications through the National Book Trust of India :

- (i) Children's Book Exhibition, Bologna (Italy).
- (ii) Indian Industries Fair, Rotterdam (Netherlands).
- (iii) International Book Fair, Mexico.
- (iv) Indian Book Fair, Nigeria.
- (v) 12th Singapore Festival of Books.
- (vi) 32nd Frankfurt Book Fair (1980).
- (vii) Exhibition of Indian Books, Malaysia.
- (viii) Exhibition of Indian Books, Mauritius.
- (ix) International Trade Book Fair, Melbourne (Australia).
- (x) 13th International Book Fair, Cairo.
- (xi) 10th National Book Fair, Bangkok.

Sale

During the year, the sale of the NCERT publications amounted to Rs. 1,15,41,034.79 + US \$ 2.20. (This amount does not include the sale of the NCERT publications made by the Sales Emporia of the Publication Division, Ministry of Information and Broadcasting for the period 1 October 1980 to 31 March 1981.)

Publications

('S.S.' indicates 'special series' and 'R.P.' indicates 'reprints'.)

<i>S. No.</i>	<i>Title</i>	<i>Month of Publication</i>	<i>Year of Publication</i>
1	2	3	4
A. TEXTBOOKS AND WORKBOOKS, CLASS-WISE			
CLASS I			
Textbooks			
1.	Bal Bharati, Bhag I (R.P.)	March	1981

1	2	3	4
2.	Let's Learn English, Book I (S.S.) (R.P.)	April	1980
3.	Let's Learn English, Book I (S.S.) (R.P.)	February	1981
4.	Mathematics for Primary Schools, Book I (R.P.)	May	1980
5.	Mathematics for Primary Schools, Book I (R.P.)	March	1981
CLASS II			
<i>Textbooks</i>			
6.	Bal Bharati, Bhag II (R.P.)	May	1980
7.	Let's Learn English, Book I (S.S.) (R.P.)	July	1980
8.	Mathematics for Primary Schools—II (First Edition)	May	1980
<i>Workbooks</i>			
9.	Workbook to Let's Learn English, Book II (R.P.)	May	1980
CLASS III			
<i>Textbooks</i>			
10.	Bal Bharati, Bhag-III (R.P.)	May	1980
11.	Let's Learn English, Book III (R.P.)	May	1980
12.	Let's Learn English, Book III (R.P.)	February	1981
13.	Mathematics for Primary Schools, Book III (First Edition)	May	1980
<i>Workbooks</i>			
14.	Abhyas Pustika Bal Bharati (R.P.)	May	1980
15.	Workbook to Let's Learn English, Book III (R.P.)	June	1980
16.	Environmental Studies, Part I (R.P.)	May	1980

1	2	3	4
17.	Paryavaran Adhyayan, Bhag I (R.P.)	June	1980
18.	Environmental Studies, Part II (R.P.)	April	1980
19.	Environmental Studies, Part II (R.P.)	January	1981
20.	Paryavaran Adhyayan, Bhag II (R.P.)	June	1980
<i>Workbooks</i>			
21.	Abhyas Pustika for Bal Bharati, Bhag III (R.P.)	May	1980
22.	Workbook to Let's Learn English, Book III (R.P.)	June	1980
CLASS IV			
<i>Textbooks</i>			
23.	Bal Bharati, Bhag IV (First Edition)	July	1980
24.	English Reader, Book I (S.S.) (R.P.)	March	1981
25.	Read for Pleasure, Book I (First Edition)	June	1980
26.	Read for Pleasure, Book I (R.P.)	January	1981
27.	Environmental Studies, Part I (First Edition)	July	1980
28.	Paryavaran Adhyayan, Bhag I (First Edition)	June	1980
29.	Environmental Studies, Part II (R.P.)	February	1981
<i>Workbooks</i>			
30.	Abhyas Pustika for Bal Bharati, Bhag IV (First Edition)	August	1980

1	2	3	4
31.	Abhyas Pustika for Bal Bharati, Bhag IV (R.P.)	January	1981
32.	Workbook to English Reader, Book I (S.S.) (R.P.)	February	1981

CLASS V

Textbooks

33.	Swasti, Bhag I (First Edition)	August	1980
34.	Read for Pleasure—II (First Edition)	June	1980
35.	Insight into Mathematics, Book V (R.P.)	April	1980
36.	India and the World (R.P.)	June	1980
37.	Bharat aur Sansar (R.P.)	June	1980
38.	Learning Science Through Environment, Part III (R.P.)	August	1980

Workbooks

39.	Workbook to English Reader, Book II (S.S.) (R.P.)	December	1980
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CLASS VI

Textbooks

40.	Bharati, Bhag I (R.P.)	April	1980
41.	Sankshipt Ramayan (R.P.)	May	1980
42.	Swasti, Bhag II (First Edition)	July	1980
43.	English Reader, Book II (S.S.) (R.P.)	February	1981
44.	Read for Pleasure, Book III (First Edition)	July	1980
45.	Read for Pleasure, Book III (R.P.)	January	1981
46.	Mathematics Book (R.P.)	May	1980
47.	Ganit Pustak—I (R.P.)	April	1980
48.	Lands and People, Part I (R.P.)	April	1980
49.	Desh Aur Unke Niwasí, Bhag I (R.P.)	May	1980

1	2	3	4
50.	History and Civics, Part I (R.P.)	May	1980
51.	Itihas aur Nagrik Shastra, Bhag I (R.P.)	July	1980
52.	Learning Science, Part I (R.P.)	March	1981
53.	Aao Vigyan Seekhen, Bhag I (R.P.)	June	1980

Workbooks

54.	Workbook to English Reader, Book III (S.S.) (R.P.)	February	1981
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CLASS VII

Textbooks

55.	Bharati, Bhag II (R.P.)	April	1980
56.	Naya Jeevan (First Edition)	August	1980
57.	Sankshipt Mahabharat (First Edition)	August	1980
58.	Swasti, Bhag III (First Edition)	July	1980
59.	English Reader, Book IV (S.S.) (R.P.)	March	1981
60.	Ganit Pustak—II, (Bhag I) (R.P.)	April	1980
61.	Mathematics, Book II, Part II (R.P.)	March	1981
62.	Ganit Pustak II, Part II (R.P.)	April	1980
63.	Ganit Pustak II, Part II (R.P.)	March	1981
64.	History and Civics, Part II (R.P.)	April	1980
65.	Itihas Aur Nagrik Shastra, Bhag II (R.P.)	June	1980
66.	Itihas Aur Nagrik Shastra, Bhag II (R.P.)	January	1981
67.	Lands and People, Part II (R.P.)	April	1980
68.	Lands and People, Part II (R.P.)	February	1981
69.	Desh Aur Unke Niwasi, Bhag II (R.P.)	May	1980
70.	Desh Aur Unke Niwasi, Bhag II (R.P.)	March	1981
71.	Learning Science, Part II (R.P.)	May	1980
72.	Aao Vigyan Seekhen, Bhag II (R.P.)	June	1980

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CLASS VIII

Textbooks

73.	Bharati, Bhag III (First Edition)	June	1980
74.	Trividha (First Edition)	August	1980
75.	Swasti, Bhag III (First Edition)	July	1980
76.	English Reader, Book V (S.S.) (R.P.)	March	1981
77.	Ganit Pustak III, Bhag I (R.P.)	February	1981
78.	Mathematics, Book III, Part II (R.P.)	April	1980
79.	Ganit Pustak III, Bhag II (First Edition)	June	1980
80.	History and Civics, Part III (First Edition)	July	1980
81.	Itihas Aur Nagrik Shastra, Part III (First Edition)	July	1980
82.	Lands and People, Part III (First Edition)	June	1980
83.	Desh Aur Unke Niwasi, Bhag III (First Edition)	June	1980
84.	Learning Science, Part III (R.P.)	May	1980
85.	Aao Vigyan Seekhen, Bhag III (First Edition)	September	1980

CLASS IX

Textbooks

86.	Mathematics, Part I (R.P.)	July	1980
87.	The Story of Civilization, Vol. I (R.P.)	July	1980
88.	Man and Environment (R.P.)	May	1980
89.	Manushya Aur Vatavaran (R.P.)	May	1980
90.	Vigyan, Part I (R.P.)	April	1980

CLASS X

Textbooks

91.	General Geography of the World, Part II (R.P.)	April	1980
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1	2	3	4
92.	Vishwa Ka Samanya Bhugol, Bhag II (R.P.)	May	1980
93.	The Story of Civilization, Vol. II (R.P.)	July	1980
94.	Sabhyata Ki Kahani, Bhag II (Vols. I & II) (R.P.)	July	1980
95.	Science, Part I (First Edition)	July	1980
96.	Vigyan, Part II (First Edition)	July	1980
97.	We and Our Government (R.P.)	July	1980
98.	Ham Aur Hamara Shasan (R.P.)	July	1980

CLASS XI

Textbooks

99.	Hindi Pratinidhi Kahaniyan (R.P.)	May	1980
100.	Hindi Pratinidhi Ekanki (R.P.)	May	1980
101.	Ganit, Bhag II (First Edition)	July	1980
102.	Bhautik Vigyan, Bhag I (First Edition)	July	1980
103.	Chemistry, Part I (R.P.)	May	1980
104.	Rasayan Vigyan, Bhag I (First Edition)	August	1980
105.	Biology, Part I (R.P.)	September	1980
106.	Physics for Classes XI-XII (First Edition)	July	1980
107.	Foundations of Political Science (R.P.)	June	1980
108.	Political System (R.P.)	July	1980
109.	Rajnitik Vyavastha (R.P.)	June	1980
110.	Rajnitik Vyavastha (R.P.)	July	1980
111.	Physical Basis of Geography (R.P.)	April	1980
112.	Bhautik Bhugol ke Adhar (R.P.)	June	1980
113.	Geography Workbook (R.P.)	May	1980
114.	General Geography of India, Part I (R.P.)	May	1980

1	2	3	4
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CLASSES XI-XII

Textbooks

115.	Chayanika (R.P.)	April	1980
116.	Jeev Vigyan (First Edition)	February	1981
117.	Hindi Sahitya ka Parichyatmak Itihas (R.P.)	April	1980
118.	Sahitya Shastra Parichay (R.P.)	May	1980
119.	A Course in Written English (R.P.)	April	1980
120.	English Supplementary Reader, Part II (Core) (R.P.)	April	1980
121.	Dear to All the Muses (R.P.)	April	1980
122.	Mathematics, Book III (R.P.)	July	1980
123.	Ganit, Bhag III (R.P.)	April	1980
124.	Bhautik Vigyan, Bhag II, Khand I (R.P.)	July	1980
125.	Chemistry, Part II (R.P.)	May	1980
126.	Biology, Part II, Vol. I (R.P.)	April	1980
127.	Biology, Part II, Vol. II (R.P.)	June	1980
128.	Jeev Vigyan, Bhag II, Khand I (R.P.)	June	1980
129.	Medieval India, Part II (R.P.)	May	1980
130.	Modern India (R.P.)	August	1980
131.	Indian Constitution and the Government (R.P.)	June	1980
132.	Bharat Samvidhan aur Shasan (R.P.)	July	1980
133.	Indian Democracy at Work (R.P.)	July	1980
134.	Bharat Me Loktantra (R.P.)	July	1980
135.	National Accounting (R.P.)	July	1980
136.	Introduction to Economic Theory (R.P.)	July	1980
137.	Arthik Siddhant Ka Parichaya (R.P.)	April	1980
138.	Human and Economic Geography (R.P.)	July	1980
139.	Geography of India, Part II (R.P.)	July	1980

1	2	3	4
140.	Mathematics, Book V (First Edition)	December	1980
141.	Ganit, Bhag V (First Edition)	January	1981
URDU TEXTBOOKS			
<i>CLASS III</i>			
142.	Hum Aur Hamara Desh (R.P.)	October	1980
143.	Hum Aur Hamara Desh (R.P.)	February	1981
<i>CLASS IV</i>			
144.	Environmental Studies, Part I (First Edition)	May	1980
<i>CLASS VI</i>			
145.	Hisab (R.P.)	July	1980
146.	Science Seekhna (R.P.)	August	1980
147.	Tareekh Aur Ilm-e- Shahriat (R.P.)	July	1980
<i>CLASS VII</i>			
148.	Hisab, Book II, Part I (R.P.)	May	1980
149.	Hisab, Book II, Part I (R.P.)	January	1981
150.	Science Seekhna (R.P.)	May	1980
151.	Mumalik Aur UnKe Bashinde (First Edition)	September	1980
<i>CLASS VIII</i>			
152.	Hisab, Book III, Part I (First Edition)	June	1980
<i>CLASSES IX-X</i>			
153.	Tahzeeb Ki Kahani, Vol. II (First Edition)	September	1980
154.	Ham Aur Hamari Hukumat (R.P.)	August	1980
<i>CLASSES XI-XII</i>			
155.	Hindustan Ka Aam Jughraphia (R.P.)	August	1980
156.	Hayatityat, Part II, Vol. I (R.P.)	February	1981
157.	Hisab, Book IV (First Edition)	June	1980

1	2	3	4
TEXTBOOKS FOR OTHER GOVERNMENTS/ AGENCIES/ J & K BOARD			
158.	Hisab, Book I for Class VI (Urdu)	November	1980
159.	Hisab, Book II, Part II for Class VII (Urdu)	November	1980
160.	Science Seekhna, Part I for Class VI (Urdu)	December	1980
161.	Science Seekhna, Part II for Class VII (Urdu)	December	1980
162.	Mahol Ke Zariye Taleem, Part I for Class III (Urdu)	February	1981
163.	Mahol Ke Zariye Taleem, Part II for Class IV (Urdu)	February	1981
164.	Ganit, Pustak III, Bhag I for Class VIII (Hindi)	February	1981
<i>Arunachal Government.</i>			
165.	Arun Bharati	November	1980
166.	Abhyas Pustika to Arun Bharati, Bhag 1 for Class I	December	1980
<i>Fiji Government</i>			
167.	Sopan—I	June	1980
168.	Meri Doosari Pustak	September	1980
<i>M.P. Government</i>			
169.	Naya Jeevan	September	1980
<i>West Bengal</i>			
170.	Kavya Bharati	September	1980
171.	Gadya Bharati	September	1980
BOOKS ON NON-FORMAL EDUCATION			
172.	Nai Roshni Primer Guide (Urdu)	June	1980
173.	Amar Uma (Hindi)	April	1980
BOOKS UNDER THE RADIO PILOT PROJECT			
174.	Pahli Kiran	June	1980

1	2	3	4
175.	Sachitra	July	1980
176.	Teesari Kiran	August	1980
177.	Suwarna	January	1981
178.	Chauthi Kiran	January	1981
179.	Doosari Kiran	February	1981

B. RESEARCH MONOGRAPHS AND OTHER PUBLICATIONS

180.	NIE Guest House : Information for Guests	April	1980
181.	Physical Education—a Draft Curriculum for Classes I-X	May	1980
182.	Using the Environment as a Basis for Meaningful Learning in Primary Education	May	1980
183.	National Survey for Population Education in India	July	1980
184.	Differential Effectiveness of Micro-Teaching Components	August	1980
185.	Akash Darshan Atlas	October	1980
186.	Study Visits to Innovation Education Projects	October	1980
187.	National Science Exhibition for Children 1980	November	1980
188.	Structure and Working of Science Models—1980	November	1980
189.	A Decade of National Science Exhibition for Children, 1970-80	November	1980
190.	The United Nations—What It Does	November	1980
191.	Fourth All-India Educational Survey	December	1980
192.	Population Education for Teachers	December	1980
193.	An Approach to Evaluation in Environmental Studies at Primary Stage	January	1981
194.	Directory of Educational Innovations	January	1981
195.	Regulations of NCERT	January	1981

1	2	3	4
196.	Memorandum of Association and Rules	January	1981
197.	Catalogue of Films	January	1981
198.	Teacher's Guide for Environmental Studies, Part II for Class IV	January	1981
199.	Varshik Report, 1979-80	January	1981
200.	Teacher's Guide for English Reader—V	February	1981
201.	Third All-India Educational Survey (Library, Laboratory and Science Equipment Facilities in Schools)	February	1981
202.	Third All-India Educational Survey (Sanskrit Pathshalas and Madrasas)	March	1981
203.	Study on National Talent Search	March	1981

C. JOURNALS

The journals occupy a pride of place in the NCERT's publishing activities. They cater to a wide range of readers from primary school teachers to research workers. *The Primary Teacher* (English) and *Primary Shikshak* (Hindi) transmit to practising teachers and administrators authentic information about the educational policies being decided and pursued at the Central level. They also inform them about the innovation ideas and practices in the area of elementary school education. They aim at giving meaningful and relevant materials for direct use in the classroom. The *Indian Educational Review* provides a medium for dissemination of educational research and exchange of experience among research workers, scholars, teachers and others working in the field of educational research. *The Journal of Indian Education* provides a forum for teachers, teacher-educators and research workers to encourage original and critical thinking in education through discussion of current educational views. It is a bi-monthly publication. The *School Science* is a quarterly journal of science education which serves as an open forum for the discussion of various aspects of science education, its problems, prospects and the individual experiences of teachers and students.

During the year the following editions of the journals were brought out :

- | | |
|---------------------------------------|-----------------------------------------------------------------------|
| 1. <i>School Science</i> | December 1979, March 1980, May 1980, September 1980 and December 1980 |
| 2. <i>Indian Educational Review</i> | October 1979 and January 1980 |
| 3. <i>Journal of Indian Education</i> | November 1979, January 1980, March 1980, May 1980 and January 1981 |
| 4. <i>The Primary Teacher</i> | January 1980, April 1980, and July 1980 |
| 5. <i>Primary Shikshak</i> | January 1980 and April 1980 |

A number of State-level agencies have shown interest in the textbooks brought out by the NCERT. The table given below shows the agencies which have sought the copyright.

Bihar

Education Commissioner, Education Department, Bihar, Patna	Copyright permission to bring out their editions for the following books (Non-formal education programme) :
------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------

1. Pathyacharya
2. Preveshikshan Nirdeshika
3. Shikshak Sandarshika
4. Hum Bhi Padhengay
5. Utho Jago Praveshika
6. Utho Jago Sandarshika

Bihar Textbook Publishing Corporation, Patna	Copyright permission to print the following lessons of <i>Bal Bharati—Bhag III</i> and <i>Bhag IV</i>
----------------------------------------------	-------------------------------------------------------------------------------------------------------

Bal Bharati—Bhag III

1. Swachata
2. Raksha Bandhan
3. Lalach Ka Phal
4. Ek Kiran
5. Neem
6. Id
7. Badhen Chala
8. Kisan

Bal Bharati—Bhag IV

1. Himalaya
2. Pahlī Udān
3. Jab Mai Padhta Tha
4. Ashavmedh Ka Ghora
5. Inder Dhanush
6. Jādu Ka Deepak
7. Kabir

Haryana

Director
Haryana Education Department
Chandigarh

Permission to bring out condensed editions of the Science textbooks for Classes III-V and Social Studies textbooks for Classes III-V

Punjab

Punjab Board of School
Education, Sahibzada Ajitsingh
Nagar, Distt. Ropar

Copyright permission to include one article "Dhan Ki Khoj" in their textbook

West Bengal

Government of West Bengal
Education Department
Writers' Building, Calcutta

Copyright permission for adoption of *Bal Bharati*, Part I and Part II

Japan

M/s Teikoku-Shoin Co. Ltd.
29, Kanda Jimbocho 3 Chome
Chiyada-kum Tokyo
101 Japan

Copyright permission for bringing out the third Japanese edition of the book *India on the Move*

17

The Use of Hindi

THE Council published and distributed a glossary of administrative terms (English-Hindi) based on the terminology of Commission for Scientific and Technical Terminology, Central Hindi Directorate, Ministry of Education and Culture,

Government of India. The glossary comprises 298 pages and includes English-Hindi equivalents and phrases commonly used in administration. It is hoped that the maximum use of Hindi will be feasible in noting and drafting in the NCERT with the help of this compilation.

The Council has instituted the award of a running shield to the department of the NCERT which makes the maximum use of Hindi during the year. The shield costs Rs. 250 and in the reporting year, it has been given to the CET which had used Hindi the most amongst all the departments of the Council.

At a meeting of the Official Language Implementation Committee of the Council, the Deputy Director of the Official Language Department of Ministry of Home Affairs, participated. He gave important suggestions for making maximum use of Hindi in the NCERT.

The "Consolidated Receipt and Payment Accounts for the year 1979-80" of the Council was rendered into Hindi. All the general orders and specially all those pertaining to Class IV officials of the Council were issued in Hindi.

The NCERT progressively increased, during 1980-81, the use of Hindi in official as well as academic work. During the year, a number of steps were taken to popularize the use of Hindi. Among others they included the following :

Wherever necessary, correspondence was being done in Hindi. Letters were replied to in Hindi while corresponding with Hindi-speaking States.

The use of Hindi greatly increased in day-to-day administrative matters during the year under report.

All the members of the staff are free to submit their applications for leave and other applications in Hindi for which proformas have been prepared and are readily available.

Letters in Hindi are accepted and dealt with in Hindi as far as possible.

On Hindi letters and files, notings are given in Hindi.

The erstwhile lack of basic facilities, mainly type-writers and stenographers, is being gradually overcome. Members of the faculties have no difficulty in using Hindi in the day-to-day work. Nevertheless, the Council is striving hard to use Hindi in its various activities.

In teaching also the Regional Colleges of Education have separate sections with Hindi medium for instruction in regular courses as well as for summer courses.

The language of communication in meetings and workshops has been Hindi wherever necessary.

Hindi versions of a large number of reports and brochures have been brought out/prepared during 1980-81.

Name plates of officers have been prepared in Hindi and some rubber stamps have also been made in Hindi.

The Council encouraged the employees of the NCERT to take part in the 15th All India Competition of Hindi Use and All India Competition of Hindi Typing and Stenography. All information pertaining to the use of Hindi in the NCERT, called for, from time to time, by the Ministry of Education (Department of Education) and the Official Language Department, Ministry of Home Affairs, New Delhi, was compiled, analysed and forwarded to the respective authorities.

The Council's orders, circulars, etc., issued from time to time by the Ministry of Education and Culture and the Department of Official Language (Ministry of Home Affairs) were in Hindi. The Hindi version of the Surety Bonds was made available to concerned sections for use in the Council.

18

Receipts and Payments

DURING the year 1980-81 the Council received a grant of Rs. 6,18,23,654.00 from the Government of India. In addition, the Council realized an amount of Rs. 1,34,59,855.00 from the sale of publications and an amount of Rs. 61,18,011.00

as other miscellaneous receipts including the rent of residential quarters. Besides, the Council was also permitted by the Government to utilize the balance of Rs. 40,00,346.00 left out of the grants given by the Government during 1979-80.

As against the above-mentioned funds the Council incurred an expenditure of Rs. 6,93,98,272.00 under the Non-Plan and Rs. 1,07,56,146.00 under the Plan.

PROVISIONAL STATEMENT OF RECEIPTS AND PAYMENTS
ACCOUNT OF THE NCERT FOR THE YEAR 1980-81

<i>Receipts</i>	<i>Amount</i>	<i>Payments</i>	<i>Amount</i>
Opening Balance	Rs. 53,72,143.00	<i>Non-Plan</i>	
Grant from the Ministry of Education	Rs. 6,18,23,654.00	Pay and Allowances	Rs. 6,93,98,272.00
Non-Plan Rs. 4,78,23,654.00		Programmes and	
Plan Rs. 1,40,00,000.00		Contingent and Other	
		Expenditure	
Grants from Various	Rs. 55,43,230.00	<i>Plan</i>	
Ministries/Bodies for		Pay and Allowances and	Rs. 1,07,56,146.00
Specific Schemes		Other Expenditure	
		including Programmes	
Receipts from the Sale of	Rs. 1,34,59,855.00	Expenditure on Schemes	Rs. 45,55,182.00
Publications		sponsored by Other	
		Ministries/Bodies	
Miscellaneous Receipts including	Rs. 61,18,011.00	GPF/CPF/CDS etc.	Rs. 79,97,285.00
Rent of Residential Quarters		Loans Remittances	Rs. 3,14,18,767.00
		Deposits Suspense and	
GPF/CPF/CDS etc.	Rs. 85,36,696.00	Advances	
Loans Remittances Deposits	Rs. 3,17,99,655.00	Closing Balance	Rs. 85,27,592.00
Suspense and Advances			
Total Receipts :	Rs. 13,26,53,244.00	Total Payments :	Rs. 13,26,53,244.00

APPENDICES

**The Scheme of Assistance to Professional
Educational Organizations**

THE National Council of Educational Research and Training has always recognized the importance of voluntary effort both in the field of education and educational innovations. The contact of professional educational organizations like the NCERT with institutions and teacher educators is likely to act as a good catalyst for the educational transformation in the country. Keeping this in view, the NCERT has been operating a scheme of financial assistance to professional educational organizations. The scheme's objectives and conditions for eligibility for financial assistance are described below.

Objectives

The major objectives of the Scheme are :

To sustain and promote voluntary effort for the improvement of school education.

To encourage quality journals of a professional nature which could help in disseminating information about educational innovations.

To promote extension work in education through voluntary organizations.

Conditions of Eligibility

The conditions of eligibility governing financial assistance are :

Organizations

- (i) A professional educational organization (PEO) is eligible to get the NCERT grant under this scheme if it is—

- (a) a society registered under the Societies' Registration Act (ACT XXI of 1860);
 - (b) a public trust registered under the law for the time being in force;
 - (c) an official organization of repute engaged in the conduct and promotion of educational activities. An organization set up by a State Government or a local body or established under an Act of a State legislature or a resolution of State Government is not entitled to assistance under this scheme.
- (ii) It should normally be operating at the national/regional level for the improvement of school education. Only in exceptional cases, subject to funds permitting, applications from PEOs working at only the State level are entertained.
 - (iii) It is open to all citizens of India without distinction of region, race, caste, creed, or language.
 - (iv) It should have been recognized where such recognition is required for securing grant from the State Government.
 - (v) It should have a properly constituted managing body with its power, duties and responsibilities clearly defined and laid down in a written constitution.
 - (vi) It should ordinarily have been engaged for a minimum period of one year prior to the date of request for a grant-in-aid under the scheme.
 - (vii) It should have at least 50 members on the roll on the date of application.
 - (viii) It should not be run for profit to any individual or a body of individuals.

Activities

- (i) Under this scheme the following activities are normally supported by the NCERT.
Annual conferences provided they have a definite theme related to some national educational issue about which the

NCERT may be concerned and/or support its work and may be useful in the furtherance of the NCERT's objectives.

Production of educational literature including professional journals but excluding textual materials.

Educational exhibitions if they have a bearing on educational innovations or on other educational developments of topical nature.

(ii) No grant is ordinarily given for the following :

Seminars, workshops especially of the type that can be organized or are being organized by the NCERT.

Magnitude of Grant

In order to avoid over-dependence of the organizations on the NCERT, financial assistance under this scheme is given only on a sharing basis as follows :

Grant-in-aid from the NCERT does not normally exceed 60% of the expenditure on an activity during that year.

The remaining 40% of the expenditure is to be managed by the organization from other sources, like grants received from other organizations or income from sale, subscription or advertisements in the case of journals. If, however, the income from these sources exceeds 40% of the expenditure, the Council's share is proportionately reduced.

If, by chance, the Council's grant during a year exceeds the admissible amount of 60% of actual expenditure or the shortfall of the same from other sources, whichever is less, the excess would become recoverable or adjustable in the next year's grant.

Procedure for Applying

- (i) The PEOs have to submit their applications in the prescribed application forms complete in all respects and in duplicate.
- (ii) Separate applications are to be submitted for each programme or activity.

(iii) Each application is to be accompanied by the following documents :

Prospectus of the institution/organization or a brief description of its objects and activities.

The constitution of the organization.

A copy of latest available annual report.

Where requests are made for grants for the publication of a journal/other materials, the previous publications.

Audited statement of accounts of the organization for the previous year along with a utilization certificate in the form duly signed by the President/Secretary of the Association and the Auditors (Chartered Accountants etc.)

General

Where grant is requested for publication of journals, it is obligatory on a PEO to carry one advertisement of the NCERT without charges.

In the case of grants for annual conferences, the organization has to associate some representatives of the NCERT with the conference.

The institution/organization has to maintain a record of all assets acquired wholly or substantially out of the grant; such assets cannot be disposed of, encumbered with or utilized for purposes other than those for which the grant was given, without prior sanction of the NCERT. Should the institution/organization cease to exist at any time the above properties shall revert to the National Council of Educational Research and Training.

Accounts and supporting documents have to be open to a test-check by the Comptroller and Auditor-General of India at his discretion.

Where the NCERT have reasons to believe that sanctioned money is not being utilized for approved purposes, the grants can be recovered and the payment of further grants stopped.

An organization must exercise utmost economy in the working of the programmes approved and assisted by the NCERT.

Applications for grant should be submitted to the Secretary NCERT.

The NCERT released grants to a number of organizations during 1980-81. The Annexure indicates the organizations to which grants were released and the purpose for which the sanctions and the amount were given.

ANNEXURE

**Grants given by the NCERT to Various
Professional Educational Organizations
during 1980-81 for Publication of Journals**

<i>Sl. No.</i>	<i>Name of the Association</i>	<i>Title of the Journal</i>	<i>Amount Sanctioned</i>
1		2	3
			Rs.
1.	All India Science Teachers Association Sardar Patel Vidyalaya New Delhi	“Vigyan Shikshak”	5,000
2.	Association for Improvement of Mathematics Teaching 25-Fern Road Calcutta-19	“Indian Journal of Mathematics Teaching”	3,500
3.	National Parents Teachers Association of India S-47, Panchshila Park New Delhi	“P.T.A. Quarterly Journal”	1,750
4.	S.I.T.U. Council of Educational Research 169, R.K. Mutt Road Madras	“Experiments in Education”	3,000
5.	English Language Teachers Association of India 169-R, Mutt Road Madras	“English Language Teaching”	5,000
6.	Child Guidance School Society B-66, Moti Nagar New Delhi-15	“Growing Minds”	5,000

1	2	3
7.	Indian Physics Association C/o Tata Institute of Fundamental Research Homi Bhabha Road Bombay-5	"Physics News " 5,000
8.	Association for the Promotion of Science Education 169, R. K. Mutt Road Raja Annamalaipuram Madras	"Junior Scientist" 4,600
9.	All India Federation of Education Association 16-A/10, Western Extn. Area New Delhi-5	"Indian Education" 5,000
10.	Bangiya Bijnan Parishad Calcutta-6	"Jnan-e-Bijnan" 3,500
11.	Allahabad Geographical Society 7-Beli Avenue, Prasad Mudranalaya Allahabad-2	"National Geographer" 2,000

Grants given by the NCERT to Various Professional Educational Organizations during 1980-81 for Organizing Conferences etc.

<i>Sl. No.</i>	<i>Name of the Association</i>	<i>Purpose</i>	<i>Amount Sanctioned</i>
1		2	3
1.	National Parents Teachers Association of India S-47, Panchshila Park New Delhi-17	Annual Conference	Rs. 3,000

1	2	3
		Rs
2. Indian Academy of Social Sciences C/o Ishwar Saran Degree College Campus Allahabad-4	Vth I.S.C. Congress/ Conference	5,000
3. Indian Association for Pre-School Education 64-Punmurangam Road Coimbatore-2	Annual Conference	4,000
4. Indian Association of Teacher Educators 8-B-Bund Road Allenganj Allahabad-1	XXII Annual Conference	5,000
5. National Association for the Blind Jahangir Wadia Building 51-M.G. Road Bombay-23	Organizing Programme on the use of Abacus (for the training component)	15,000

Appendix B

Location of Field Advisers in the States

	<i>Addresses</i>	<i>State Union Territory Covered</i>
1.	Field Adviser (NCERT) Zoo Road Gauhati - 781024	Assam Arunachal Pradesh
2.	Field Adviser (NCERT) Geetanjali T.C. No. 15/1019 Jagathy Trivandrum - 14	Kerala LMA Islands
3.	Field Adviser (NCERT) 3-6/147-2 Himayat Nagar Hyderabad - 500029	Andhra Pradesh
4.	Field Adviser (NCERT) B-47, Prabhu Marg Tilak Nagar, Jaipur - 302004	Rajasthan
5.	Field Adviser (NCERT) MIG - 161, Block No. 6 Saraswati Nagar Jawahar Chowk Bhopal - 462017	Madhya Pradesh
6.	Field Adviser (NCERT) 555/E, Mumfordganj Allahabad (U.P.) - 211002	Uttar Pradesh
7.	Field Adviser (NCERT) Homi Bhabha Hostel RCE Campus Bhubaneswar - 751007	Orissa
8.	Field Adviser (NCERT) 714, 9th Cross West of Chord Road Rajaji Nagar Bangalore - 560010	Karnataka
9.	Field Adviser (NCERT) 1-B, Chandra Colony Ahmedabad - 380006	Gujarat Dadra and Nagar Haveli

- | | | |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| 10. | Field Adviser (NCERT)
No. 32, Hindi Prachara - Sabha
Street, T. Nagar
Madras - 600017 | Tamil Nadu
Pondicherry |
| 11. | Field Adviser (NCERT)
128/2 Kothrud, Karve Road
(near Maruti Mandir Bus Stop)
Pune - 411029 | Maharashtra
Goa |
| 12. | Field Adviser (NCERT)
P. 23, C.I.T. Road
(L. V. Scheme)
Calcutta - 700014 | West Bengal
A & N Islands
Sikkim |
| 13. | Field Adviser (NCERT)
Road No. 2, Rajendra Nagar
Patna - 800016 | Bihar |
| 14. | Field Adviser (NCERT)
House No. 23, Sector 8 (A)
Chandigarh - 160018 | Punjab
Himachal Pradesh
Chandigarh |
| 15. | Field Adviser (NCERT)
Nizam Manzil
Sher - i - Kashmir Colony
Sector - 2, Rampura
Chattabal P.O. Karan Nagar
Srinagar (J & K) 190010 | Jammu and Kashmir |
| 16. | Field Adviser (NCERT)
Donbosco College Road
Litumkhra
Shillong - 793003 | Tripura
Mizoram
Meghalaya |

Appendix C

Composition of Committees

THE COUNCIL

**Members of the National Council of Educational Research
and Training**

GENERAL BODY

(Under Rule 3 of the Council)

From 1 April 1980 to 31 March 1981

- | | |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (i) The Minister for Education
President—ex-officio | 1. Shri B. Shankaranand
Union Minister for Education,
Shastri Bhavan
New Delhi
(1 April 1980 to
18 October 1980)
Shri S.B. Chavan
Union Minister for Education
Shastri Bhavan
New Delhi
(19 October 1980 to
31 March 1981) |
| (ii) Chairman of the University

Grants Commission, ex-officio | 2. Prof. Satish Chandra
Chairman
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi
(1 April 1980 to
14 January 1981)
Smt. Madhuri R. Shah
Chairman
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi-1
(12 February 1981 to
31 March 1981) |

- (iii) Secretary to the Ministry of Education, ex-officio
3. Shri P. Sabanayaga n
Secretary
Ministry of Education
Shastri Bhavan
New Delhi
(1 April 1980 to 31 August 1980)
- Shri T.N. Chaturvedi
Secretary
Ministry of Education
Shastri Bhavan
New Delhi-1
(31 January 1981 to 31 March 1981)
- (iv) Four Vice-Chancellors of Universities, one from each Region, nominated by the Government of India
4. Dr. R.K. Poddar
Vice-Chancellor
Calcutta University
Calcutta (West Bengal)
(1 April 1980 to 30 September 1980)
- Prof. S. Hamid
Vice-Chancellor
Aligarh Muslim University
Aligarh
(21 February 1981 to 31 March 1981)
5. Shri S.S. Wodeyer
Vice-Chancellor
Karnataka University
Dharwar
(1 April 1980 to 30 September 1980)
- Shri R.K. Kanbarkar
Vice-Chancellor
Shivaji University
Kolhapur-416004
(21 February 1981 to 31 March 1981)
6. Shri Ishwarbhai J. Patel
Vice-Chancellor
Gujarat Agricultural University
Sardarkrishinagar
Danitwada (Gujarat)
(1 April 1980 to 30 September 1980)

- Prof. B.S. Ramakrishna
Vice-Chancellor
Hyderabad University
(21 February 1981 to
31 March 1981)
7. Dr. A.M. Khusro
Vice-Chancellor
Aligarh Muslim University
Aligarh (U.P.)
(1 April 1980 to
30 September 1980)
- Dr. V.K. Sukumaran Nair
Vice-Chancellor
Kerala University
Trivandrum-695001
(21 February 1981 to
31 March 1981)
- (v) One representative of each State Government and Union Territory with legislature, who shall be the Education Minister of the State/ Union Territory (or his representative) and in the case of Delhi the Chief Executive Councillor, Delhi (or his representative)
8. Education Minister
Andhra Pradesh
Hyderabad
9. Education Minister
Assam
Shillong
10. Education Minister
Bihar
Patna
11. Education Minister
Gujarat
Ahmedabad
12. Education Minister
Haryana
Chandigarh
13. Education Minister
Himachal Pradesh
Simla
14. Education Minister
Jammu and Kashmir
Srinagar
15. Education Minister
Kerala
Trivandrum

16. Education Minister
Madhya Pradesh
Bhopal
17. Education Minister
Maharashtra
Bombay
18. Education Minister
Manipur
Imphal
19. Education Minister
Meghalaya
Shillong
20. Education Minister
Karnataka
Bangalore
21. Education Minister
Nagaland
Kohima
22. Education Minister
Orissa
Bhubaneswar
23. Education Minister
Punjab
Chandigarh
24. Education Minister
Rajasthan
Jaipur
25. Education Minister
Tamil Nadu
Madras
26. Education Minister
Government of Tripura
Agartala
27. Education Minister
Sikkim
Gangtok
28. Education Minister
Uttar Pradesh
Lucknow

(vi) All Members of the Executive
Committee not included above

29. Education Minister
West Bengal
Calcutta
30. The Chief Executive Councillor
Delhi Administration
Delhi
31. Education Minister
Government of Goa, Daman and
Diu
Panaji (Goa)
32. Education Minister
Mizoram
Aizal
33. Education Minister
Government of Pondicherry
Pondicherry-1
34. Smt. Shiela Kaul
Minister of State
Ministry of Education
Shastri Bhavan
New Delhi
(19 October 1980 to
31 March 1981)
35.

36. Dr. Shib K. Mitra
Director
National Council of Educational
Research and Training
Sri Aurobindo Marg
New Delhi-16
37. Prof. P.K. Bose
Centenary Professor and Head
Department of Statistics
University College of Science
35, Ballygunge Circular Road,
Calcutte-700019

38. Prof. V.G. Kulkarni
Tata Institute of Fundamental
Research
Homi Bhabha Centre for Science
Education
Homi Bhabha Road
Bombay-400005
39. Smt. Abala Gohain
Principal
Balya Bhavan
Jorhat-1 (Assam)
40. Smt. K.V. Ponnamma
Headmistress
St. Joseph's U.P.S.
Keezhumed, P.O. Erumathala
Alwaye (Kerala)
(1 April 1980 to
19 August 1980)
Shri H.D. Gaokar
KMS Dr. Shirodkar High School
142/49 Dr. Boyjes Road
Parel
Bombay-400012
(25 February 1981 to
31 March 1981)
41. Dr. T.N. Dhar
Joint Director
National Council of Educational
Research and Training
New Delhi-16
42. Shri S.H. Khan
Reader
Primary Curriculum Development
Cell, NCERT
New Delhi-16
43. Dr. G.B. Kanungo
Principal
Regional College of Education
Bhubaneswar-751007
44. Dr. A.K. Sharma
Professor in Science (Chemistry)
Regional College of Education
Mysore-570006

45. Shri. Anil Bordia
Joint Secretary (AE&YS)
Ministry of Education
Shastri Bhavan
New Delhi - 1
(1 April 1980 to
7 May 1980)
- Shri S. Sathyam
Joint Secretary (SE)
Ministry of Education
Shastri Bhavan
New Delhi - 1
(8 May 1980 to
31 March 1981)
46. Shri J. A. Kalyanakrishnan
Financial Adviser
NCERT and Ministry of Education
Room No. 109, 'C'
Shastri Bhavan
New Delhi - 1
- (vii) (a) Chairman, Central
Board of Secondary
Education, New Delhi
ex-officio
- (b) Commissioner
Kendriya Vidyalaya
Sangathan
New Delhi
ex-officio
- (c) Director
Central Health Education

Bureau (D.G.H.S.)
New Delhi
ex-officio
- (d) Deputy Director
General, In charge of
Agricultural Education
I.C.A.R.
Ministry of Agriculture
New Delhi; ex-officio
47. Chairman
Central Board of Secondary
Education, 17 - B
Indra Prastha Estate
New Delhi - 110002
48. Commissioner
Kendriya Vidyalaya
Sangathan, Nehru House
A - Bahadur Shah Zafar Marg
New Delhi - 110002
49. Director
Central Health Education
(D.G.H.S.)
Nirman Bhavan
New Delhi - 110001
50. Deputy Director-General
In charge of Agricultural
Education, I.C.A.R.
Ministry of Agriculture
Dr. Rajendra Prasad Road
New Delhi - 110001

- (e) Director of Training
Directorate General of
Training and Employment
Ministry of Labour
New Delhi
ex-officio
- (f) Representative of
Education Division
Planning Commission
New Delhi
ex-officio
- (viii) Such other persons not
exceeding six as the
Government of India
may, from time to time,
nominate. No fewer than
four of these shall be
school teachers.
51. Director of Training
Directorate General of
Training and Employment
Ministry of Labour
Shram Shakti Bhavan
Rafi Marg
New Delhi - 110001
52. Chief (Education)
Planning Commission
Yojna Bhavan
Parliament Street
New Delhi - 110001
53. Shri Gopal Krishan Saini
Headmaster
Govt. Primary School
Mukhliana
District Hoshiarpur
(Punjab)
(1 April 1980 to
30 September 1980)
- Shri S. Ramaswamy
Headmaster and Corres-
pondent, T. V. S. Iyengar
Higher Secondary School
Madurai (Tamil Nadu)
(21 February 1981 to
31 March 1981)
54. Smt. Kamala Dubey
Headmistress
Girls' Primary School
Mohan Nagar, Sagar (M.P.)
(1 April 1980 to
30 September 1980)
- Shri Kedar Nath Singh
Science Teacher
K.K. Vidya Mandir
P. O. Dharawarh
Distt. Vaishali, Bihar
(21 February 1981 to
31 March 1981)

55. **Shri Nanimadhab Barua**
Principal
Govt. Boys Hr. Sec. School
Tezpur, Distt. Darrang
Assam (1 April 1980 to
30 September 1980)
- Smt. Salma Firdous
Principal
Higher Secondary School
Kotabi Bagh
Srinagar (21 February 1981 to
31 March 1981)
56. **Sister Rachel**
Headmistress
Mount Carmel High School
for Girls, Kanjikuzhy
Kottayam (Kerala)
(1 April 1980 to
30 September 1980)
- Shri Bir Singh
Assistant Professor
Govt. College of Education
Distt. Dewas
Madhya Pradesh
(21 February 1981 to
31 March 1981)
57. **Shri T. K. Vidyanathan**
Principal
Technical Teachers'
Training Institute
Sector 26, Chandigarh - 16
(1 April 1980 to
30 September 1980)
- Dr. N. K. Upasani
Hony. Professor
Education Department
S. N. D. T. University
Bombay - 400020
(21 February 1981 to
31 March 1981)

- (ix) Special invitees
58. Dr. A.K. De
Director
Indian Institute of Technology
Powal, Bombay - 400076
(1 April 1980 to
31 March 1981)
- Dr. (Km.) M. Dollie Shenoy
1-2-212/6/1, Gagan Mahal
Road, Dumalguda
Hyderabad
(21 February 1981 to
31 March 1981)
59. Secretary
Council of Indian School
Certificate Examination
Pragati House, 3rd Floor
47 - Nehru Place
New Delhi - 24
60. Shri V. K. Pandit
Secretary
National Council of
Educational Research and
Training, Sri Aurobindo Marg
New Delhi - 110016

EXECUTIVE COMMITTEE
(1 April 1980 to 31 March 1981)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (i) President of the Council who shall be the ex-officio President of the Executive Committee | 1. Shri B. Shankaranand
Union Minister of Education
Shastri Bhavan
New Delhi-1
(1 April 1980 to
18 October 1980)
Shri S.B. Chavan
Union Minister for Education
Shastri Bhavan
New Delhi - 1
(19 October 1980 to
31 March 1981) |
| (ii) (a) The Minister of State in the Ministry of Education who shall be the ex-officio Vice - President of the Executive Committee | 2. Smt. Sheila Kaul
Minister of State
Ministry of Education
Shastri Bhavan
New Delhi - 1
(19 October 1980 to
31 March 1981) |
| (b) A Deputy Minister in the Ministry of Education, nominated by the NCERT | 3. ----- |
| (c) Director of the Council | 4. Prof. S. K. Mitra
Director
National Council of
Educational Research and
Training
New Delhi - 110016 |
| (iii) Chairman of the University Grants Commission
Member, ex-officio | 5. Prof. Satish Chandra
Chairman
University Grants
Commission
Bahadur Shah Zafar Marg
New Delhi - 1
(1 April 1980 to
14 January 1981) |

Smt. Madhuri R. Shah
Chairman
University Grants
Commission
Bahadur Shah Zafar Marg
New Delhi - 1
(12 February 1981 to
31 March 1981)

(iv) Four Educationists with known interest in school education (two of whom shall be school teachers) nominated by the President

6. Prof. P.K. Bose
Centenary Professor and Head
Department of Statistics
University College of Science
35, Ballygunge Circular Road
Calcutta-700019

7. Prof. V.G. Kulkarni
Project Director
Tata Institute of Fundamental
Research, Homi Bhabha Centre
for Science Education
Homi Bhabha Road
Bombay-400005

8. Smt. Abha Gohain
Principal
Balya Bhavan
Jorhat (Assam)

9. Smt. K.V. Ponnamma
Headmistress
St. Joseph's U.P.S.
Keezhumed, P.O. Erumathala
Alwaye (Kerala)
(1 April 1980 to
19 August 1980)

Shri H.D. Gaokar
KMS Dr. Shirodkar High School
142/49 Dr. Banerjee Road
Parel
Bombay-400012
(25 February 1981 to
31 March 1981)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (v) Joint Director of the Council | 10. Dr. T.N. Dhar
Joint Director
National Council of Educational
Research and Training
New Delhi-16 |
| (vi) Three Members of the Faculty
of the Council of whom at least
two shall be at the level of
Professors and Heads of
Departments, nominated by the
President of the Council | 11. Shri S.H. Khan
Reader
Primary Curriculum Development
Cell
NCERT
New Delhi-16
12. Dr. G.B. Kanungo
Principal
Regional College of Education
Bhubaneswar-751007
13. Dr. A.K. Sharma
Professor in Science (Chemistry)
Regional College of Education
Mysore-570006 |
| (vii) One representative of the
Ministry of Education | 14. Shri Anil Bordia
Joint Secretary (AE & YS)
Ministry of Education
Shastri Bhavan
New Delhi-1
(1 April 1980 to
7 May 1980)
Shri S. Sathyam
Joint Secretary (SE)
Ministry of Education
Shastri Bhavan
New Delhi-1
(8 May 1980 to 31 March 1981) |
| (viii) One representative of the
Ministry of Finance, who shall
be the Financial Adviser of the
Council | 15. Shri J.A. Kalyanakrishnan
Financial Adviser, NCERT
Room No. 109
Shastri Bhavan
New Delhi-1
16. Shri V.K. Pandit
Secretary
National Council of Educational
Research and Training
New Delhi-110016 |

ESTABLISHMENT COMMITTEE
(1 April 1980 to 31 March 1981)

- | | |
|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (i) The Director, NCERT
Chairman | 1. Dr. Shib K. Mitra
Director, NCERT
Chairman |
| (ii) The Joint Director
NCERT | 2. Dr. T. N. Dhar
Joint Director
NCERT |
| (iii) A nominee of the Ministry of
Education to be nominated by
the President | 3. Shri Anil Bordia
Joint Secretary
Ministry of Education
Shastri Bhavan
New Delhi - 1
(1 April 1980 to
7 May 1980)

Shri S. Sathyam
Joint Secretary (SE)
Ministry of Education
Shastri Bhavan
New Delhi - 1
(8 May 1980 to
31 March 1981) |
| (iv) Four Educationists to be nomi-
nated by the President of whom
at least one is a scientist | 4. Prof. M. S. Sodha
Department of Physics
Indian Institute of
Technology
Hauz Khas
New Delhi - 110029
(1 April 1980 to
9 June 1980)

Prof. M. L. Savadatti
Department of Physics
Karnataka University
Dharwad - 580003
(27 February 1981 to
31 March 1981) |

5. Prof. (Km.) Malathi Bolar
Director
Institute of Applied
Manpower Research
Indraprastha Estate
Ring Road
New Delhi - 110002
(1 April 1980 to
9 June 1980)
- Prof. P. L. Malhotra
Dean of Colleges
Delhi University, Delhi
(27 February 1981
31 March 1981)
6. Dr. Amrik Singh
Vice-Chancellor
Panjabi University
Patiala (Punjab)
(1 April 1980 to
9 June 1980)
- Dr. Francis Ekka
Prof. and Deputy Director
Central Institute of Indian
Languages, Manasgangotri
Mysore - 570006
(27 February 1981 to
31 March 1981)
7. Prof. S. Manzoor Alam
Department of Geography
Osmania University
Hyderabad - 500007 (A. P.)
(1 April 1980 to
9 June 1980)
- Prof. (Km.) A. S. Dastoor
Head
Department of Civics and
Political Science
University of Bombay
Bombay
(27 February 1981 to
31 March 1981)

- (v) One representative from the Regional Colleges of Education, to be nominated by the President
- (vi) One representative of the National Institute of Education, Delhi, to be nominated by the President
- (vii) Two representatives, one each from the regular academic and non-academic staff of the Council elected from amongst their category in the manner prescribed in Appendix to this Regulation
- (viii) Financial Adviser
NCERT
- (ix) Secretary, NCERT
(Member-Convener)
8. Prof. J. S. Rajput
Principal
Regional College of Education
Bhopal
(1 April 1980 to
9 June 1980)
Shri P. C. Joseph
Store-Keeper
Regional College of Education
Mysore-6
(27 February 1981 to
31 March 1981)
9. Dr. R. C. Das, Dean (A) and
Head of the Department of
Teacher Education
NCERT
New Delhi
(1 April 1980 to
9 June 1980)
Km. S. K. Ram
Reader in English
DESSH, NCERT
New Delhi
(27 February 1981 to
31 March 1981)
10. Shri Balagopala Verma
Lecturer
Regional College of Education
Mysore - 6
11. Shri Prabodh Kumar
U. D. C.
DESSH, NCERT
12. Shri J. A. Kalyanakrishnan
Financial Adviser, NCERT
Room No. 109 'C'
Shastri Bhavan
New Delhi
13. Shri V. K. Pandit
Secretary
Member-Convener

FINANCE COMMITTEE
(5 April 1980 to 31 March 1981)

- | | | |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1. | Prof. S. K. Mitra
Director
National Council of Educational
Research and Training
New Delhi
ex-officio | Chairman |
| 2. | Shri S. Sathyam
Joint Secretary (SE)
Ministry of Education
Shastri Bhavan
New Delhi | |
| 3. | Prof. B. Ramachandra Rao
Vice-Chairman
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi
(27 September 1980 to 31 March 1981) | |
| 4. | Prof. Rasheeduddin Khan
Head, Centre for Political Studies
Jawahar Lal Nehru University
New Delhi
(27 September 1980 to 26 October 1980)
Prof. V. G. Kulkarni
Project Director
Tata Institute of Fundamental Research
Homi Bhabha Centre for Science Education
Homi Bhabha Road
Bombay - 400005
(27 October 1980 to 31 March 1981) | |
| 5. | Shri J.A. Kalyanakrishnan
Financial Adviser
Ministry of Education and NCERT
Room No. 109 'C'
Shastri Bhavan
New Delhi
ex-officio | |
| 6. | Shri V. K. Pandit
Secretary
NCERT | Convener |

BUILDING AND WORKS COMMITTEE

(9 December 1980 to 31 March 1981)

1.	Director, NCERT ex-officio	Chairman	1. Dr. Shib K. Mitra Director NCERT
2.	Joint Director NCERT ex-officio	Vice-Chairman	2. Dr. T. N. Dhar Joint Director NCERT
3.	Chief Engineer, CPWD or his nominee	Member	3. Shri M. L. Kalra Superintending Surveyor of Works (Food), CPWD I. P. Bhavan New Delhi
4.	A representative of the Ministry of Finance (Works)	Member	4. Shri A. K. Saxena A. F. A. (Works) Ministry of Works and Housing Room No. 340, 'C' Wing (3rd Floor) Nirman Bhavan New Delhi
5.	The Consulting Architect of the Council	Member	5. Shri K. M. Saxena Senior Architect HPT - 2, CPWD Room No. 318, 'A' Wing (3rd Floor) Nirman Bhavan New Delhi
6.	Financial Adviser of the Council or his nominee	Member	6. Shri J.A. Kalyanakrishnan Financial Adviser Room No. 109 'C' Shastri Bhavan New Delhi

7.	A nominee of the Ministry of Education	Member	7. Shri S. Sathyam Joint Secretary (SE) Ministry of Education Shastri Bhavan New Delhi
8.	A Civil Engineer of standing (nominated by the President)	Member	8. Shri R.A. Khemani Chief Engineer Delhi Development Authority (DDA) Vikas Bhavan Annexe Indra Prastha Estate New Delhi
9.	An Electrical Engineer of standing (nominated by the President)	Member	9. Shri T. Krishnamurthy Superintending Engineer Delhi Central Electric Circle-1 (5th Floor) CPWD I. P. Bhavan Indraprastha Estate New Delhi
10.	A member of the Executive Committee nominated by the Committee	Member	10. Shri S. H. Khan Reader Primary Curriculum Development Cell (PCDC), NCERT New Delhi - 16 (23 December 1980 to 31 March 1981)
11.	Secretary, NCERT	Member- Secretary	11. Shri V. K. Pandit Secretary NCERT

PROGRAMME ADVISORY COMMITTEE

1. Dr. Shib K. Mitra, Director, NCERT Chairman
2. Dr. T.N. Dhar, Joint Director, NCERT Vice-Chairman
3. Prof. Srinivas Bhattacharya
Professor of Education, Vidya Bharati
Shantiniketan (W.B.)
4. Prof. B.K. Passi
Head of the Education Department
Indore University, Indore (M.P.)
5. Prof. K. Kumaraswamy Pillai
Professor of Education
Annamalai University
Annamalai Nagar
Tamil Nadu
6. Prof. K. Padma Umapati
Professor of Home Science
University of Mysore
Mysore
7. Prof. B.R. Kamle
Head of the History Department
Shivaji University
Kolhapur (Maharashtra)
8. The Director
State Institute of Education
Sector 20-D, Chandigarh
9. Principal
State Institute of Education
Trivandrum (Kerala)
10. The Principal
State Institute of Education
Jorhat-785001 (Assam)
11. The Director
State Institute of Education
M.S. Sadeshiv Peth
Kumethkar Road
Pune

12. The Director
Deptt. of State Educational Research and Training
Shri B.P. Wadia Road
Basavandgudi
Bangalore (Karnataka)
13. Head, Deptt. of Measurement and Evaluation
NCERT
14. Head, Deptt. of Education in Science and
Mathematics, NCERT
15. Head, Deptt. of Teacher Education; NCERT
16. Head, Deptt. of Education in Social Sciences and
Humanities, NCERT
17. Head, Deptt. of Teaching Aids, NCERT
18. Head, Publication Department, NCERT
19. Head, Workshop Department, NCERT
20. Principal, Regional College of Education
Bhubaneswar (Orissa)
21. Principal, Regional College of Education, Ajmer
(Rajasthan)
22. Principal, Regional College of Education,
Bhopal (M.P.)
23. Principal, Regional College of Education,
Mysore (Karnataka)
24. Principal, Centre for Educational Technology,
NCERT
25. Dr. Pritam Singh, Reader
Deptt. of Measurement and Evaluation, NCERT
26. Dr. B.D. Atreya, Reader, Deptt. of Education in
Science and Mathematics, NCERT
27. Dr. C.S. Subba Rao, Professor, Deptt. of Teacher
Education, NCERT
28. Km. S.K. Ram, Reader, Deptt. of Education in
Social Sciences and Humanities, NCERT
29. Shri Tilak Raj, Reader
Deptt. of Teaching Aids, NCERT
30. Shri C.N. Rao, Chief Production Officer,
Publication Department, NCERT
31. Dr. M.V. Ramji, Reader
Regional College of Education
Bhubaneswar (Orissa)

32. Dr. J.S. Grewal, Reader
Regional College of Education
Bhopal (M.P.)
33. Dr. (Smt.) Amrit Kaur, Reader
Regional College of Education, Ajmer
34. Dr. M.S. Murari Rao, Reader
Regional College of Education, Mysore
35. Dr. Jagdish Singh, Reader
Centre for Educational Technology, NCERT

ADVISORY COMMITTEE FOR SCHOOL CURRICULUM

1. Dr. Shib K. Mitra
Director
NCERT
Chairman
2. Dr. T. N. Dhar
Joint Director, NCERT
Member
3. Prof. B. Ramachandra Rao
Vice-Chairman, U. G. C.
Bahadur Shah Zafar Marg
New Delhi
Member
4. Prof R. C. Paul
Vice - Chancellor
Panjab University
Chandigarh
Member
5. Prof. G. R. Damodaran
Vice-Chancellor
University of Madras
Madras
Member
6. Prof. Rasheeduddin Khan
Chairman, Centre for Political
Studies, School of Social Sciences
Jawaharlal Nehru University
New Delhi
Member
7. Dr. Suma Chitnis
Professor, Tata Institute of
Social Sciences
Sion, Trombay Road
Deonar Bombay
Member
8. Dr. Amrik Singh
Secretary, Association of Indian
Universities
Dindyal Upadhyaya Marg
New Delhi
Member
9. Dr. Rajammal P. Devadas
Principal, Sri Avinashilingam
Home Science College for Women
Coimbatore
Member

- | | | |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 10. | Prof. S. M. Chatterji
98/39, Gopal Lal Tagore Road
Calcutta | Member |
| 11. | Dr. Gopal Singh
Chairman, World Sikh University Press
7, Poorvi Marg, Vasant Vihar
New Delhi | Member |
| 12. | Shri V.G. Kulkarni
Project Leader, Tata Institute of Fundamental
Research
Homi Bhabha Centre for Science Education
Homi Bhabha Road
Bombay-400005 | Member |
| 13. | Dr. Mohammad Ahmad
Reader in Medicine, Jawaharlal Nehru
Medical College
Aligarh Muslim University
Aligarh | Member |
| 14. | Shri M.N. Kapur
Director
Guru Shikhar School
Mount Abu
Rajasthan | Member |
| 15. | Dr. S.N. Mehrotra
Vice-Chancellor
Agra University
Agra | Member |
| 16. | Prof. B.K. Roy Burman
Department of Rural Studies
Visva-Bharati
District Birbhum
Sriniketan—731236
West Bengal | Member |
| 17. | Smt. Ashima Chaudhuri
Principal
South Delhi Polytechnic for Women
N-9, Ring Road, South Extension, Part I
New Delhi-110049 | Member |
| 18. | Dr. Prem Kirpal
63-F Block, Sujan Singh Park
New Delhi-110003 | Member |

- | | | |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 19. | Dr. P.L. Malhotra
Principal
College of Vocational Studies
University of Delhi
Delhi-110007 | Member |
| 20. | Prof. L.P. Agarwal
Director
All India Institute of Medical Sciences
Ansari Nagar
New Delhi-110016 | Member |
| 21. | Dr. Nagendra
Professor of Hindi
University of Delhi
16, Cavalry Lines
Delhi-110007 | Member |
| 22. | Dr. (Smt.) Usha K. Luthra
(Sr.) Deputy Director General
Indian Council of Medical Research
Ansari Nagar
New Delhi-110016 | Member |
| 23. | Shri A.K. Dhan
Vice-Chancellor
North-Eastern Hill University
Shillong | Member |
| 24. | Dr. H.S.S. Lawrence
5 Arulagam, Bragadambal Road
Nungambakkam
Madras | Member |
| 25. | Prof. J.J. Nanavati
Central Bombay Service-I (R)
11 Napier Road
Pune-411001 | Member |
| 26. | Prof. L.K. Mahapatra
Head, Department of Anthropology
Utkal University
Vani Vihar
Bhubaneswar (Orissa) | Member |
| 27. | Dr. K.R. Srinivasan Iyengar
152-Kutchery Road
Mylapore
Madras-600004 | Member |

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| 28. | The Principal
Netarhat School
P.O. Netarhat (Via Ranchi)
Bihar | ex-officio Member |
| 29. | Commissioner
Kendriya Vidyalaya Sangathan
(Central Schools Organization)
Nehru House, Bahadur Shah Zafar Marg
New Delhi | ex-officio Member |
| 30. | Assistant Director General (Education)
Indian Council of Agricultural Research
Krishi Bhavan, Dr. Rajendra Prasad Road
New Delhi | ex-officio Member |
| 31. | Director of Primary Education
Primary Education Directorate
Govt. of West Bengal
New Secretariat Building
Calcutta (West Bengal) | ex-officio Member |
| 32. | Chairman
Central Board of Secondary Education
17 - B, Indraprastha Estate
New Delhi | ex-officio Member |
| 33. | President
Council of Boards of Secondary
Education in India
17 - B, Indraprastha Estate
New Delhi | ex-officio Member |
| 34. | Director
State Institute of Education
Govt. of Maharashtra
Kumthekar Marg
Pune (Maharashtra) | ex-officio Member |
| 35. | Secretary
Council for the Indian School
Certificate Examinations
Pragati House, 47-48, Nehru Place
New Delhi | ex-officio Member |
| 36. | Member-Secretary
Indian Council of Social Science Research
Indraprastha Estate
New Delhi-110002 | ex-officio Member |

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| <p>37. Director
Netaji Subhas National Institute of
Sports
Moti Bagh
Patiala - 147001</p> | <p>ex-officio Member</p> |
| <p>38. The Director of Public Instruction
Government of Kerala
Trivandrum</p> | <p>ex-officio Member</p> |
| <p>39. All the Heads of Departments/Units
etc. and Professors of NIE</p> | <p>Permanent Invitees</p> |
| <p>40. Principal and Professor(s) CET</p> | <p>Permanent Invitees</p> |
| <p>41. Reader (Programmes)</p> | <p>Permanent Invitee</p> |
| <p>42. Prof. Baqer Mehdi
Head, Curriculum Group
NCERT
New Delhi - 110016</p> | <p>Convener</p> |

**ADVISORY COMMITTEE ON ELEMENTARY AND
SECONDARY EDUCATION**

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| 1. Director, NCERT | Chairman |
| 2. Joint Secretary (Schools)
Government of India
Ministry of Education and Culture
(Department of Education)
Shastri Bhavan
New Delhi | ex-officio Member |
| 3. Joint Secretary to the Government of India
(Nutrition and Child Development)
Shastri Bhavan
New Delhi | -do- |
| 4. Joint Adviser (Education)
Planning Commission
Government of India
Yojna Bhavan
Parliament Street
New Delhi | -do- |
| 5. Joint Director, NCERT | Member |
| 6. Education Commissioner
Government of Bihar
New Secretariat
Patna—800015 | ex-officio Member |
| 7. Education Secretary
Government of Madhya Pradesh
Education Department
Vallabh Bhavan
Bhopal—462004 | -do- |
| 8. Commissioner
Education Department
Government of Rajasthan
Secretariat
Jaipur | -do- |
| 9. Education Secretary
Education Department
Government of Andhra Pradesh
Hyderabad—500022 | -do- |

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| 10. | Education Commissioner
Government of Jammu and Kashmir
Srinagar | ex-officio Member |
| 11. | Education Secretary
Education Department
Government of West Bengal
Writer Building
Calcutta—700001 | -do- |
| 12. | Secretary
Education and Youth Services
Department
Government of Orissa
Bhubaneswar | -do- |
| 13. | Director
Directorate of Primary and Adult Education
O-4 New Mental Hospital Building
Ahmedabad—380016 | -do- |
| 14. | Director of Education
Himachal Pradesh Government
Glen Hegan
Simla—171001 | -do- |
| 15. | Director of Public Instruction
(Primary Education)
New Public Offices
Bangalore—560001 | -do- |
| 16. | Director of Education
(Primary Education/Secondary Education)
Government of Maharashtra
Pune | -do- |
| 17. | Education Secretary
Government of Assam
Sachivalaya, Dispur
Gauhati | -do- |
| 18. | Director of Public Instructions
(School)
Office of the Director of Public
Instruction, Punjab
Sector 17-E, S.C.O., 95-97
Chandigarh—160017 | -do- |

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| 19. | Director of School Education
Government of Tamil Nadu
College Road, D.P.I. Compound
Madras—600006 | ex-officio Member |
| 20. | Principal
State Institute of Education
Roop Nagar
Delhi—110007 | -do- |
| 21. | Director
State Institute of Education
Punjabura
Trivandrum—12 (Kerala) | -do- |
| 22. | Chairman
Maharashtra State Board of Secondary
and Higher Secondary Education
Shivaji Nagar
Pune—401010 (Maharashtra) | -do- |
| 23. | Chairman
Board of Secondary Education
Rajasthan
Jaipur Road
Ajmer—305001 | -do- |
| 24. | Chairman/Administrator
West Bengal Board of Secondary Education
77/2, Park Street
Calcutta—700016 | -do- |
| 25. | Chairman
Karnataka Secondary Education
Examination Board
Malleswaram
Bangalore—560003 (Karnataka) | -do- |
| 26. | Chairman
Board of High School and Intermediate
Education Examination, Uttar Pradesh
Allahabad (U.P.) | -do- |
| 27. | Secretary to the Government of
Uttar Pradesh, Education (5) Section
Lucknow (U.P.) | -do- |

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| 28. Chairman
Central Board of Secondary Education
17-B, Indraprastha Estate
Ring Road
New Delhi—110002 | ex-officio Member |
| 29. Commissioner
Kendriya Vidyalaya Sangathan
Nehru House, Bahadur Shah Zafar Marg
New Delhi—110002 | -do- |
| 30. The Director
Directorate of Adult Education
34, Community Centre, Basant Lok
Vasant Vihar
New Delhi—110057 | -do- |
| 31. The Director
Central Buildings Research Institute
Roorkee (U.P.) | -do- |
| 32. Dr. S.B. Adaval
Head of the Department of Education
University of Allahabad
Allahabad—211002 (U.P.) | Member |
| 33. Prof. H.B. Majumdar
Vinaya Bhavan, Visva Bharati
Shantiniketan—731235
West Bengal | -do- |
| 34. Dr. Salamatullah
123-Zahir Nagar
New Delhi—110020 | -do- |
| 35. Dr. (Smt.) Chitra Naik
Director
State Resource Centre for Non-Formal
Education, Indian Institute of Education
128/2, Karve Road, Kothrud
Pune—411029 (Maharashtra) | -do- |
| 36. Shri Manubhai Pancholi
Director
Lok Bharati, Sansora—364230
Distt. Bhav Nagar (Gujarat) | -do- |

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| 37. Shri Vajubhai Patel
Secretary, Nai Talim Samiti
Gandhi Shikshan Bhavan
Juhu
Bombay—400049 | Member |
| 38. Shri K.L. Bordia
President
Vidya Bhavan Society
Udaipur (Rajasthan) | -do- |
| 39. Shri C.V. Sitaramayya
Headmaster
P.H. School (B)
Tonuku
West Godavari (A.P.) | -do- |
| 40. Smt. Vidya Stokes
Vice-Chairman
Bharat Krishak Samaj Ekantvan
P.O. Dhalli
Simla (H.P.) | ex-officio Member |
| 41. Dr. H.S.S. Lawrence
5, Arurogam, Bragadamba Road
Nungambakkam
Madras—600034 | Member |
| 42. Dr. C. Prasad
Assistant Director-General (Cdn.)
Indian Council of Agricultural Research
Krishi Bhavan
New Delhi-1 | -do- |
| 43. Dr. B.C. Ghoshal
Director
Central Health Education Bureau
Directorate General Health Services
Ministry of Health and Family Welfare
Nirman Bhavan
New Delhi | -do- |
| 44. The Principal
Regional College of Education
Mysore | ex-officio Member |
| 45. The Principal
Regional College of Education
Bhubaneswar | -do- |

46. The Principal Regional College of Education Bhopal (M.P.)	ex-officio Member
47. The Principal Regional College of Education Ajmer (Rajasthan)	-do-
48. Field Adviser (NCERT) Zoo Road Gauhati—781024	-do-
49. Field Adviser (NCERT) No. 32, Hindi Prachar Sabha Street . T. Nagar Madras—600017	-do-
50. Field Adviser (NCERT) 555-E, Mumfordganj Allahabad—211002	-do-
51. Field Adviser (NCERT) 128/2, Kethrud, Karve Road (near Mruti Mandir Bus Stop) Pune—411029 (Maharashtra)	-do-
52. Head Primary Curriculum and Development Cell NCERT	-do-
53. Head Comprehensive Access to Primary Education NCERT	-do-
54. Head Non-Formal Education NCERT	-do-
55. Head Department of Teacher Education NCERT	-do-
56. Head Child Study Unit NCERT	-do-
57. Head Women's Education Unit NCERT	Member

58.	Head Extension Unit NCERT	Member
59.	Principal Centre for Educational Technology NCERT	-do-
60.	Head Curriculum Group NCERT	-do-
61.	Head Tribal Education Unit NCERT	-do-
62.	Head Vocationalization of Education Unit NCERT	-do-
63.	Reader (Programme) NCERT	-do-
64.	Dean (Academic) NCERT	Convener

COORDINATION COMMITTEES

1. Coordination Committee for Curriculum Development

- (a) Head, Department of Education in Social Sciences and Humanities
- (b) Head, Department of Education in Science and Mathematics
- (c) Head, Women's Education Unit
- (d) Head, Department of Teacher Education
- (e) Head, Comprehensive Access to Primary Education Group
- (f) Head, Tribal Education Unit
- (g) Head, Primary Curriculum Development Cell
- (h) Head, Vocationalization of Education Unit
- (i) Prof. Anil Vidyalankar
- (j) A representative of the Planning, Coordination and Evaluation Unit
- (k) Head, Curriculum Group (Convener)

2. Coordination Committee for Educational Technology

- (a) Head, Department of Teaching Aids
- (b) Head, Department of Education in Social Sciences and Humanities
- (c) Head, Department of Education in Science and Mathematics
- (d) Head, Department of Teacher Education
- (e) Head, Extension Unit ; FAs concerned with Educational Technology progress in States
- (f) A representative of the Planning, Coordination and Evaluation Unit
- (g) Principal, Centre for Educational Technology (Convener)

3. *Coordination Committee for Non-Formal Education*

- (a) **Head, Comprehensive Access to Primary Education Group**
- (b) **Head, Primary Curriculum Development Cell**
- (c) **Head, Tribal Education Unit**
- (d) **Head, Women's Education Unit**
- (e) **Head, Extension Unit**
- (f) **Head, Curriculum Group**
- (g) **Head, Department of Measurement and Evaluation**
- (h) **A representative of the Planning, Coordination and Evaluation Unit**
- (i) **Shri A.A.C. Lal**
- (j) **Prof. K.G. Rastogi** (Convener)

4. *Coordination Committee for Measurement and Evaluation*

- (a) **Head, Department of Education in Social Sciences and Humanities**
- (b) **Head, Department of Education in Science and Mathematics**
- (c) **Head, Department of Teacher Education**
- (d) **Head, Educational and Vocational Guidance Unit**
- (e) **Head, Educational Psychology Unit**
- (f) **Head, Curriculum Group**
- (g) **Head, Primary Curriculum Development Cell**
- (h) **Head, Comprehensive Access to Primary Education Group**
- (i) **Head, Child Study Unit**
- (j) **Prof. (Smt.) S. Shukla**
Centre for Educational Technology
- (k) **A representative of Planning, Coordination and Evaluation Unit**
- (l) **Head, Department of Measurement and Evaluation** (Convener)

5. *Coordination Committee for Teacher Education and Other Programmes*

- (a) **Head, Department of Education in Social Sciences and Humanities, NCERT**

- (b) Head, Department of Teaching Aids, NCERT
- (c) Head, Educational and Vocational Guidance Unit, NCERT
- (d) Head, Comprehensive Access to Primary Education Group, NCERT
- (e) Head, Child Study Unit, NCERT
- (f) Principal, Centre for Educational Technology, NCERT
- (g) Head, Department of Measurement and Evaluation, NCERT
- (h) Head, Educational Psychology Unit, NCERT
- (i) Head, Planning, Coordination and Evaluation Unit, NCERT
- (j) Head, Vocationalization of Education Unit, NCERT
- (k) Reader (Programmes), NCERT
- (l) Head, Department of Education in Science and Mathematics, NCERT
- (m) Head, Primary Curriculum Development Cell, NCERT
- (n) Head, Department of Teacher Education, NCERT (Convener)

Appendix D

**Major Decisions taken by the Committees
during 1980-81**

THE FINANCE COMMITTEE

(27 September 1980/10 October 1980 and
10 March 1981/24 March 1981)

On the clear understanding that the rules are not at variance with the provisions of the rules framed by the Government of India in this behalf, the Finance Committee accorded its approval to the rules of GPF/CPF and Pension.

Developing an Audio-Tape Library, making it a continuing activity of the Centre for Educational Technology, was approved.

Creation of ministerial posts for Population Education Programme (Formal Education System) in NCERT for the duration of the project i.e. up to 28 February 1983, was approved.

Continuation of ministerial posts created for the work relating to Centres for Continuing Education for School Teachers and Primary Teacher Educators in the States, up to 31 March 1985 on a regular basis, was approved.

Continuation of ministerial posts created for the Fourth All-India Educational Survey, was approved.

Creation of the following posts or Internal Study Unit up to 28 February 1982:

- (a) Two Junior Analysts in the scale of Rs. 650-1200
- (b) Two Assistant Analysts in the scale of Rs. 550-900
- (c) One Lower Division Clerk.

Continuation of the post of Assistant Stores Officer for six months with effect from 24 July 1980 was approved.

Approved of the seven posts created under the Director's powers which were filled up to 31 August 1980 to meet the urgent requirements of the Publication Department.

Retention of the assets amounting to Rs. 2,686.58 given by CET to the Social Work and Research Centre (SWRC), Tilonia, Rajasthan, by them, was approved.

Donation of the materials/equipments to Vidya Bhavan, Udaipur, in respect of the ERIC Project "An Experiment in Open Classroom" (Free Learning Environment), was approved.

Transfer of exhibits of "Methods of Science Exhibition" to the Government of Andhra Pradesh, Hyderabad, was approved.

Approved of the price of Primary Science Kits fixed at Rs. 230 per kit. This price would be applicable to the kits to be supplied to the States with effect from 1 April 1980 and would hold good for all such kits to be manufactured and supplied up to 31 March 1984.

The following rates of scholarships were recommended :

(i) Diploma in Educational and Vocational Guidance	Rs. 250 P.M.
(ii) One-Year B.Ed. Course	Rs. 125 P.M.
(iii) M.Ed.	Rs. 250 P.M.
(iv) M.Sc. Ed.	Rs. 250 P.M.
(v) Four-Year B.Sc. Ed. First and Second Year	Rs. 75 P.M.
Third Year	Rs. 100 P.M.
Fourth Year	Rs. 125 P.M.

Revision of rules of TA/DA/Honorarium payable to the non-official participants/experts/Resource Personnel attending Council's Programmes/Meetings/Committees, etc. was recommended as follows :

	<i>Category of city</i>	
(1) D. A. to participants of Workshops/Seminars Training Courses, etc.	A	Rs. 30
	B	Rs. 25
	C	Rs. 20
(2) D. A. to Members of High-level Committees	A	Rs. 50
	B	Rs. 40
	C	Rs. 35
(3) D. A. to Guest Educators for SSCC programmes of Regional Colleges of Education	As for the non-officials at the rates indicated at S. No. (1) above	

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| (4) Contingency expenses at tea, coffee, cold drinks in the Council's programmes, delegations | (i) Rs. 2 per head per day in the case of two sessions
(ii) Re 1 per head per day in the case of one session
(iii) Rs. 2 per head per day in the case of visits of foreign dignitaries/ delegations |
| | |
| (5) National Integration Camps (student camps) | |
| (i) Board and lodging charges | Rs. 10 per head per day for 15 days |
| (ii) Field trips | Rs. 2000
(subject to actuals) |
| (iii) Contingency including stationery, Class III assistance, medical care, printing of reports, photographs, etc. | Rs. 2500 |

The proposal for the continuation of three posts of Professor and one post of Lecturer in Statistics on a permanent basis, was approved.

The proposal for the creation of two posts of post-graduate teachers in the pay scale of Rs. 550-900, one in Bengali and another in Geography, was approved. These posts will be under the Plan.

Continuation/creation of temporary posts for the UNICEF-aided Projects in NCERT, was approved.

The Finance Committee recommended enhancement in the rate of fellowships on the lines notified by the University Grants Commission with effect from 1 October 1980 as indicated below :

Junior Fellowship	Rs. 600 P.M. for the first two years with an annual contingent grant of Rs. 3,000
Senior Fellowships redesignated as post-Doctoral Fellows	Rs. 800 P.M. in respect of those Fellows who had submitted Ph.D. which would be effective from the date of submission of the thesis with an annual contingent grant of Rs. 3,000

The Finance Committee agreed to the payment of contingent grant to the staff of the Council other than the academic for doing Ph.D. work on the lines proposed.

The Finance Committee approved that all teaching and non-teaching staff of the Demonstration School and the staff of the Regional Colleges of Education and the NCERT drawing basic pay up to Rs. 600 P.M. may be exempted from the payment of school fees when their children are admitted to the Demonstration Schools attached to the Regional Colleges of Education. This will take effect from the academic session 1981-82.

THE EXECUTIVE COMMITTEE

(26 July 1980 and 23 December 1980)

Approval of the provision of additional 50 scholarships for the candidates belonging to SC/ST sections of the population, over and above the existing 500 scholarships under the National Talent Search Scheme of the NCERT.

Approval of funds being released by the NCERT to the Vikram A. Sarabhai Community Science Centre for the year 1980-81 on the basis of 70 per cent of the expenditure incurred on the programmes, subject to the ceiling recommended by the Review Committee.

Agreement in principle to the grant of academic leave with full pay and allowances for a period not exceeding one month in a calendar year to the academic staff of the NCERT for enabling them to participate in seminars and conferences and undertaking special assignment offered by other recognized organizations such as universities, institutions of higher learning, etc., provided that such participation would be of benefit to the Council.

Authorization of the investment of the Council's funds received as grant-in-aid from the Government of India in short-term deposits with the State Bank of India, to be made by a Committee consisting of Secretary, Deputy Secretary, and Chief Accounts Officer/Senior Accounts Officer.

Agreement to the reintroduction of the four-year integrated courses of teacher preparation in the Regional Colleges of Education.

Approval of the Sixth Five-Year Plan proposals.

Agreement to the nomination of Shri S.H. Khan, member of the Executive Committee, on the Building and Works Committee of the Council.

Ratification of the action taken by the President, NCERT, nominating Prof. V. G. Kulkarni as a member of the Finance Committee.