

# ANNUAL REPORT

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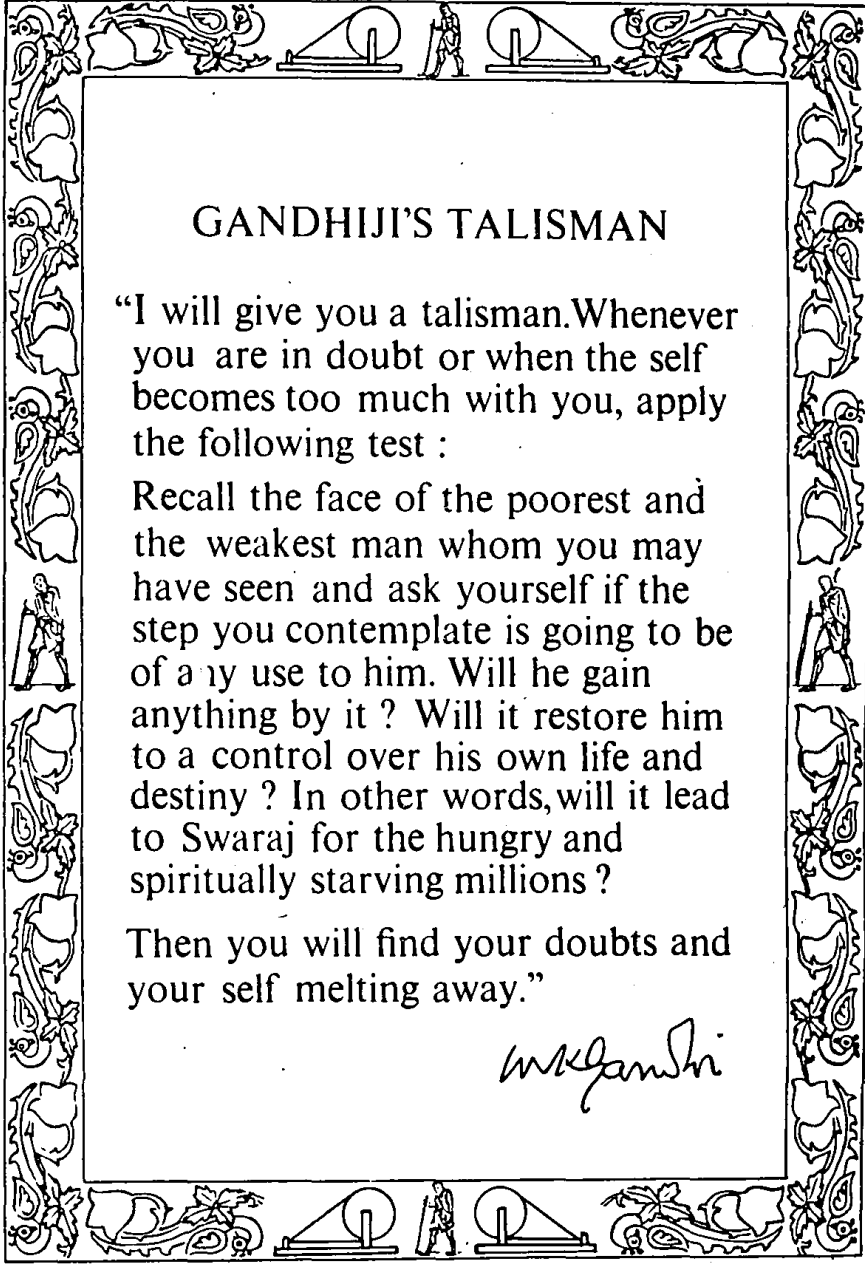


राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्  
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

## **ACKNOWLEDGEMENTS**

The National Council of Educational Research and Training (NCERT) is indebted to its President, the Union Minister of Human Resource Development, Government of India, for his guidance. The Council is grateful to other distinguished members of its Governing Body for their keen interest and help in the affairs of the Council. The Council is thankful to the experts who spared their valuable time to serve on its various committees and extended help in many other ways. Thanks are also due to all organisations and institutions, including the State Departments of Education, the State Councils/Institutes of Educational Research and Training and the State Institutes of Education, who collaborated with the NCERT and extended all cooperation in carrying out its activities. The Council would like to express its profound appreciation of the cooperation received by it from UNDP, UNESCO, UNICEF, UNFPA, GTZ and the British Council for the implementation of programmes sponsored by them. The Council also records with appreciation the work done by the members of its staff, at all levels, without whose participation and dedication its programmes could not have been successfully implemented. The Council thanks the thousands of teachers, students, parents and members of the public who sent letters to the various constituents of the Council giving their views on its publications and its programmes during the year 1988-89, which proved to be a constant source of inspiration for better performance.





## GANDHIJI'S TALISMAN

“I will give you a talisman. Whenever you are in doubt or when the self becomes too much with you, apply the following test :

Recall the face of the poorest and the weakest man whom you may have seen and ask yourself if the step you contemplate is going to be of any use to him. Will he gain anything by it ? Will it restore him to a control over his own life and destiny ? In other words, will it lead to Swaraj for the hungry and spiritually starving millions ?

Then you will find your doubts and your self melting away.”

*M.K. Gandhi*

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The National Council of Educational Research and Training (NCERT), established on 1 September 1961, is an autonomous organisation registered under the Societies Registration Act (1860).

### Role and Functions

The NCERT functions as an academic adviser to the Ministry of Human Resource Development, Government of India. The main objectives of the NCERT are to assist and advise the Ministry of Human Resource Development in implementing policies and major programmes in the field of education, particularly school education. In the formulation and implementation of policies and programmes in the field of school education and teacher education, the Ministry draws upon the expertise of the NCERT to a considerable extent. The Council is fully financed by the Government of India.

Qualitative improvement of school education and teacher education is one of the major concerns of the NCERT. As part of its effort to improve the quality of education, the Council:

- conducts, aids, promotes and coordinates research in all branches of school education;
- organises pre-service and in-service training of teachers, mainly at the advanced level;
- organises extension services for institutions,

organisations and agencies engaged in educational reconstruction;

- develops and experiments with improved educational techniques, practices and innovations;
- collects, compiles, processes and disseminates educational information;
- assists the States and State-level institutions, organisations and agencies in developing and implementing programmes for qualitative improvement of school education;
- collaborates with international organisations like UNESCO, UNICEF, etc., and with national-level educational institutions of other countries;
- extends facilities for training and study to educational personnel from other countries; and
- serves as the academic secretariat of the National Council for Teacher Education (NCTE), the National Development Group (NDG) for the Asia and the Pacific Programme of Educational Innovations for Development (APEID), UNESCO, Bangkok.

### Programmes and Activities

For the realisation of its objectives, the Council



undertakes the following programmes and activities.

### *Research*

Being the apex national body for research in school education, the NCERT performs many important functions to organise and support research and to train personnel in educational research.

The different departments of the National Institute of Education (NIE), the Regional Colleges of Education (RCEs), and the Central Institute of Educational Technology (CIET) undertake programmes of research related to curriculum planning and development, development of instructional materials, child development, educational psychology and guidance, educational technology, teaching aids, teacher education, educational evaluation, etc.

Besides conducting research itself, the NCERT supports other research programmes by providing financial assistance and academic interaction to individuals and organisations. Assistance is given to scholars for the publication of their Ph.D. theses. The Council also awards Junior and Senior Research Fellowships so that educational problems are investigated and a pool of competent research workers is created. It also conducts educational surveys from time to time for collecting data on various aspects of education in the country. It has a computer terminal for the storing, processing and retrieval of data. It also collaborates with international agencies in inter-country research projects.

### *Development*

Developmental activities in school education constitute an important function of the Council. This function has been further enhanced by the Council's added responsibility for implementing the National Policy on Education (NPE)—1986. The Council's major developmental activities include the development and renewal of curricula and instructional materials for various levels of school education and making them relevant to the changing needs of children and society. The Council's innovative developmental activities also include development of curricula and instructional materials in the areas of non-formal education, vocationalisation of education and teacher education.

Developmental activities are also undertaken in the domains of educational technology, population education, and education of the disabled and other special groups.

### *Training*

An important dimension of the Council's activities is the pre-service and in-service training of teachers at various levels—pre-primary, elementary, secondary and higher secondary—and also in such areas as vocational education, guidance and counselling, and special education. The pre-service teacher education programmes at the Regional Colleges of Education incorporate some innovative features such as integration of content and methodology of teaching, long-term internship of teacher trainees in the actual classroom setting, and participation of the students in community work. It also undertakes the training of the key personnel of the States and of State-level institutions, and training of teacher educators and in-service teachers.

### *Extension*

The NCERT has comprehensive programmes of extension in education, in which various departments of the National Institute of Education, the Regional Colleges of Education, the Central Institute of Educational Technology and the Officers of the Field Advisers in the States are engaged in various ways. The Council works in close collaboration with various agencies and institutions in the States and also works extensively with the extension services departments and centres in teacher training colleges and schools with the purpose of providing assistance to various categories of personnel, including teachers, educational administrators, question-paper setters, and textbook writers, etc. Conferences, seminars, workshops and competitions are organised as regular on-going programmes as part of the extension activities. Several programmes are organised in rural and backward areas in order to reach the functionaries in these areas where special problems exist and where special efforts are needed. The Council has separate programmes for the education of the

disabled and for the education of the disadvantaged sections of society. The extension programmes of the Council cover all the States and Union Territories of the Country.

### *Publications and Dissemination*

The NCERT publishes textbooks for different school subjects for Classes I to XII. It also brings out workbooks, teacher's guides, supplementary readers, research reports, etc. In addition to these, the Council publishes instructional materials for the use of teacher educators, teacher trainees and in-service teachers. These instructional materials, produced after research and development work, serve as models to various agencies in the States and Union Territories. These are made available to State-level agencies for adoption and/or adaptation. The textbooks are published in English, Hindi and Urdu.

For dissemination of educational information, the NCERT publishes five journals: (i) *The Primary Teacher*, which is published both in English and Hindi and aims at giving meaningful and relevant materials to primary school teachers for direct use in the classroom; (ii) *School Science*, which serves as an open forum for discussion of various aspects of science education; (iii) *Journal of Indian Education*, which provides a forum for encouraging original and critical thinking in education through discussion on current educational issues; (iv) *Indian Educational Review*, which contains research articles and provides a forum for researchers in education; and (v) *Bhartiya Adhunik Shiksha*, which is published in Hindi and which provides a forum for encouraging critical thinking in education on contemporary issues and for dissemination of ideas on educational problems and practices. Besides these, a house journal called *NCERT Newsletter* is also published every month. In addition to these, each Regional College of Education publishes its own journal.

### *Evaluation of Instructional Materials*

School textbooks and other instructional materials are evaluated on a continuous basis, especially from the point of view of national integration. For this pur-

pose, criteria, tools and techniques have been developed. Guidelines and procedures for evaluation have also been laid down for evaluating the academic and physical aspects of school textbooks. Feedback received from the user-schools helps in the revision of textbooks.

### *Exchange Programmes*

The NCERT interacts with international organisations such as UNESCO, UNICEF, UNDP and UNFPA to study specific educational problems and to arrange training programmes for personnel from developing nations. It is one of the Associate Centres under APEID, sponsored by the UNESCO Regional Office in Bangkok. It also acts as the Secretariat of the National Development Group (NDG) for the Asian Centre for Educational Innovations and Development (ACEID). NCERT has been offering training facilities, usually through attachment and participation in workshops, to educational workers of other developing countries.

The NCERT also acts as a major agency for implementing the bilateral cultural exchange programmes entered into by the Government of India with the governments of other countries in the field of school education and teacher education by sending delegations to study specific educational problems relevant to Indian requirements, and by arranging training and study visits for scholars from other countries. The Council also exchanges educational materials with other countries. On request, the Council nominates its faculty members to participate in international conferences, seminars, workshops, meetings, symposia, etc.

### **Structure and Administration**

The Union Minister of Human Resource Development is the President of the General Body of the NCERT. The members of the General Body include the Education Ministers of all the States and Union Territories. Other members of the General Body include the Chairman of the University Grants Commission (UGC), the Secretary to the Department of Education, Ministry of Human Resource Development, Government of India, four Vice-Chancellors of Universities (one from each

region), the Chairman of the Central Board of Secondary Education, the Commissioner of the Kendriya Vidyalaya Sangathan, all members of the Executive Committee (not included above) of the Council, and such other persons, not exceeding twelve, as the President of the Council may, from time to time, nominate (no fewer than four of these have to be school teachers).

The main governing body of the NCERT is the Executive Committee. The Union Minister of Human Resource Development is its President (ex-officio) and the Minister of State for Education and Culture, in the Ministry of Human Resource Development, is the ex-officio Vice-President. The other members of the Executive Committee are the Secretary to the Department of Education of the Ministry of Human Resource Development, the Director of the Council, the Chairman of the University Grants Commission, four educationists with 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 Professor and Head of the Department), one representative of the Ministry of Human Resource Development, 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:

1. Finance Committee
2. Establishment Committee
3. Building and Works Committee
4. Managing Committee of Regional Colleges of Education
5. Programme Advisory Committee
6. Educational Research and Innovations Committee

The Council's Headquarters consist of:

1. The Council's Secretariat
2. Accounts Branch

The four senior functionaries of the NCERT, appointed by the Government, are the Director, the Joint Direc-

tor, the Joint Director, CIET, and the Secretary. During the year under report the following officers occupied these positions:

Dr P.L.Malhotra, Director  
Dr A.K. Jalaluddin, Joint Director  
Dr M.M. Chaudhri, Joint Director, CIET  
Shri O.P. Kelkar, IAS, Secretary

The Director is also assisted in the academic functions by three Deans:

Dean (Academic) : Prof. H.S. Srivastava  
Dean (Research) : Prof. Baquer Mehdi  
Dean (Coordination) : Prof. A.K.Sharma

The Dean (Academic) coordinates the academic work of the Departments of the NIE. The Dean (Research) coordinates the research programmes and looks after the work of the Educational Research and Innovations Committee (ERIC). The Dean (Coordination) coordinates the activities of the Service/Production Departments, Field Offices and the Regional Colleges of Education. During 1988-89, the constituents of the Council were:

National Institute of Education (NIE)  
Central Institute of Educational Technology (CIET)  
Four Regional Colleges of Education (RCEs)  
17 Field Units

*National Institute of Education (NIE)*

During 1988-89, the National Institute of Education (NIE), New Delhi, had the following Departments/Units involved in research, development, training, extension, evaluation, and dissemination activities in their specific areas:

1. Department of Education in Social Sciences and Humanities (DESSH)
2. Department of Education in Science and Mathematics (DESM)
3. Department of Pre-School and Elementary

## Education (DPSEE)

4. Department of Vocationalisation of Education (DVE)
5. Department of Teacher Education, Special Education and Extension Services (DTESE&ES)
6. Department of Measurement, Evaluation, Survey and Data Processing (DMES&DP)
7. Department of Educational Psychology, Counselling and Guidance (DEPC&G)
8. Department of Field Services and Coordination (DFS&C)
9. Department of Policy Research, Planning and Programming (DPRPP)
10. Department of Library, Documentation and Information (DLDI)
11. Department of Non-Formal Education and Education of the Scheduled Castes and Scheduled Tribes (DNFE&E SC/ST)
12. Publication Department (PD)
13. Workshop Department (WD)
14. Navodaya Vidyalaya Cell (NVC)
15. Journal Cell (JC)
16. International Relations Unit (IRU)
17. Women's Studies Unit (WSU)

## *Central Institute of Educational Technology (CIET)*

The Central Institute of Educational Technology (CIET), headed by a Joint Director, functions as one of the constituent units of the NCERT with a good mea-

sure of autonomy. An Advisory Council guides the institute in its programmes and activities. The CIET has the following major divisions:

1. The Educational Television Script, Training and SIET Coordination Division
2. The Educational Television Production and Films Division
3. The Distance Education Planning, Coordination and Research and Evaluation Division
4. The Educational Radio Division
5. The Graphics, Exhibition and Printing Division
6. The Information Documentation and Central Film Library Division
7. The Technical Planning, Operations and Maintenance Division
8. The Administration and Accounts Division.

## *Regional Colleges of Education (RCEs)*

The Regional Colleges of Education are located at Ajmer, Bhopal, Bhubaneswar and Mysore. A Management Committee is responsible for the general supervision of the affairs of each college within the overall framework of the Rules and Regulations of the NCERT. The Management Committee of the College is chaired by the Vice-Chancellor of the University to which the College is affiliated. The Principal of the Regional College acts as the Vice-Chairman of the Management Committee. The Management Committee of the College meets at least twice a year, and special meetings can be (and are) called at any time by the Chairman of the Committee as required. The Principal of the College is assisted in the academic functions by the Dean of Instruction.

The Regional Colleges are residential institutions with adequate laboratory, library and other facilities. Each college has a Demonstration Multipurpose School

attached to it where developed methodologies are tested in the actual classroom situation.

## **Field Offices**

Seventeen Field Offices have been established at the following places to provide effective liaison with the State education authorities as well as with the State-level institutions set up for providing academic and training inputs to the school education system:

1. Ahmedabad
2. Allahabad
3. Bangalore
4. Bhopal
5. Bhubaneswar
6. Calcutta
7. Chandigarh
8. Guwahati
9. Hyderabad
10. Jaipur
11. Madras
12. Patna
13. Pune
14. Shillong
15. Shimla
16. Srinagar
17. Trivandrum

# 1988-89

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## AN OVERVIEW OF THE ACTIVITIES DURING 1988-89

The period under report was marked by the key role played by the Council in tasks directed towards the implementation of the National Policy on Education—1986 and by the sustained and concerted efforts made by it for improving the quality of school education and teacher education in the country. Some of the important aspects of the Council's work during the year 1988-89 were the formulation and implementation of programmes and projects related to early childhood care and education; universalisation of elementary education; education of the special groups (such as girls and women, Scheduled Castes and Scheduled Tribes, educationally backward minorities and disabled children); reorientation of the content and processes of education at the school stage; improvement of science education; Computer Literacy and Studies in Schools; vocationalisation of education at the higher secondary stage; reorganisation and restructuring of teacher education; education of the special groups such as the girls and women, Scheduled Castes and Scheduled Tribes, educationally backward minorities and the disabled children; promotion of educational technology for the improvement and spread of education and for the development of alternative systems of education; selection of students for admission to Navodaya Vidyalayas; educational and vocational guidance; educational survey and national talent search; promotion of educational research and innovations; and publication and dissemination. The Coun-

cil continued to coordinate and monitor all activities related to the UNICEF-assisted projects in the education sector, the National Population Education Project, the Computer Literacy and Studies in Schools (CLASS) Project and the Indo-FRG Project entitled 'Improved Science Education in Primary and Upper Primary Schools in Madhya Pradesh and Uttar Pradesh'. The Council maintained a close liaison with all the State/UT governments through its wide network of Field Offices and the Regional Colleges of Education by actively collaborating in the different programmes organised by the Departments/Directorates of Education, SIEs/SCERTs and similar agencies in the States and Union Territories.

### **Early Childhood Care and Education (ECCE)**

The Council undertook several activities directed towards strengthening the Early Childhood Care and Education (ECCE) programmes.

Activities related to the development of materials of educational and entertainment value for children in the age group 3 to 8 continued under the Project 'Children's Media Laboratory (CML)'. Under the 'Early Childhood Education (ECCE)' Project, 10 States were assisted in strengthening the early childhood education units, in training pre-school teachers and teacher educators and in developing learning and play materials for early childhood education. The major thrust of the activities

under the ECE Project has been on establishing links between ECE and the programmes under the Integrated Child Development Services (ICDS). Several programmes were conducted for ICDS functionaries. A State-level seminar on ECE, with special reference to the convergence of ECE and ICDS, was organised in Karnataka. Some non-print materials for ICDS Centres were developed by Rajasthan. In Orissa about 8,000 Anganwadis were supplied with picture books and other play materials developed under the ECE Project.

Under the ECE Project, an orientation course for resource persons and two meetings of ECE Project Coordinators from the States participating in the project were organised. Three titles were brought out under the 'Instructional Materials Series' for teachers, teacher-educators and parents. In addition to these, a study on enrolment in primary schools in relation to pre-school experiences was launched in August 1988, in 10 States participating in the ECE Project. The collection of data was completed and the work on the tabulation and analysis of data was also initiated.

As part of the effort to evolve an alternative approach to early childhood stimulation, a home-based programme in child development was tried out in tribal and urban slum areas in Orissa. The study has been completed and the preparation of the report of the study is in progress. Under the 'Child-to-Child Programme' which involves equipping older children with appropriate knowledge related to healthy living and making them play the role of educators by their imparting messages related to healthy living to younger children in the family and the community, activities related to the training of teachers and the organisation of Bal Melas in schools, alongwith regular activities related to health and nutrition, education for children in Classes IV and V were carried out. Under the 'Early Childhood Education Project' being implemented in schools of the Municipal Corporation of Delhi, an orientation course on playway and activity-based approaches to teaching was organised. The other programmes organised under the project include three refresher courses on creative movement and drama for nursery teachers and teachers of Classes I and II.

A radio feasibility study was launched by the NCERT

in collaboration with the All India Radio Station at Kota in October 1988. The objective of the project is to use radio as a medium of providing enriching learning experiences to children of Anganwadis and of Classes I and II in primary schools. The Project envisages a daily broadcast of 15 minutes for children for a duration of 52 weeks. The other programmes organised under the Project include a training programme for ICDS Supervisors and CDPOs for training Anganwadi workers in the use of audio programmes for young children and three training programmes for Anganwadi workers on the different aspects in the organisation of pre- and post-broadcast activities with children.

In order to develop an awareness among teachers of the importance of toys and educational games and of the play-way method of instruction at the pre-school and early primary stages, the NCERT organised toy-making competitions in 31 States and UTs through its Field Offices. The first prize winners of the State-level toy-making competition participated in a national workshop-cum-competition on toy making organised by the NCERT from 19 to 23 December 1988. In addition to these, a workshop was organised to identify educational toys for pre-school blind children. The other activities carried out include organisation of a four-week training course on early childhood education for key persons from Arunachal Pradesh and another 12-day training course for key functionaries of the 'Jigyasu Tribal Research Centre' in Madhya Pradesh.

### **Universallisation of Elementary Education**

At the instance of the Ministry of Human Resource Development, Government of India, the NCERT had undertaken the task of developing norms and specifications of the essential items being supplied to primary schools under the 'Operation Blackboard Scheme'. Norms and specifications related to various items were finalised by the NCERT in collaboration with the Bureau of Indian Standards. A document entitled *Operation Blackboard: Essential Facilities at the Primary Stage—Norms and Specifications* was finalised and published for wider distribution to help the States/UTs to formulate project proposals for obtain-



ing funds under the 'Operation Blackboard' scheme.

As part of the work on the 'Study of Enrolment: Retention, Stagnation and Pupil's Achievement', undertaken under the project 'Primary Education Curriculum Renewal (PECR)', the data collected from the States were analysed and a report entitled *Pupil Achievement at the Primary Stage* was brought out. The collection and consolidation of data were completed for the two studies, 'Study of Pupil Achievement' and 'Impact of Community Contact Programme' under the project 'Nutrition, Health Education and Environmental Sanitation (NHEES)'. Under the 'Area Intensive Education Project for Human Resource Development (AIEP)', the NCERT organised an orientation course for the key personnel at the state level on the concept and strategies of the project. During the year under report, the project was implemented in six States and one Union Territory—Maharashtra, Mizoram, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh and Dadra and Nagar Haveli. The project aims at promoting the integration of pre-school, primary, non-formal and adult learning activities in the community to achieve universalisation of elementary education. The key components of the project implementation include area-intensive approach, convergence of activities and resource inputs, community participation in decentralised planning and management, flexibility in all aspects of its implementation and priority to educationally backward areas and population sectors.

Research and development activities related to non-formal education programmes and training/orientation of personnel involved in the implementation of the Non-Formal Education (NFE) Programmes, constituted an important area of work of the Council. Under the project 'Comprehensive Access to Primary Education (CAPE)', activities related to the development of learning materials (learning episodes) and the establishment and management of learning centres for the education of out-of-school children continued. During the year 1988-89, the project was implemented in 15 States. Seven modules, including a set of charts on environmental studies, were printed and sent to 302 learning centres established under the project in the Hindi speaking States of Bihar, Madhya Pradesh, Rajasthan

and Uttar Pradesh. Learning materials developed under the project were also sent to seven prominent voluntary organisations for use in NFE Centres run by these organisations. The Council provided technical support to the States participating in the project for the development of learning materials, the training of facilitators of learning centres and the development of question banks.

The NCERT undertook several activities to support the centrally sponsored scheme of Non-Formal Education. The main thrust of the activities has been towards the development of instructional materials and appropriate teaching-learning-evaluation strategies suited to the non-formal education programmes. The research activities undertaken include development of tools and techniques for the evaluation of children's achievement at the entry point and at levels I and II; a study of the selected NFE Centres at the primary level to highlight success stories of the Centres; and an analysis of curriculum and instructional materials developed for NFE Programmes in different States/Union Territories. The new instructional materials developed include Mathematics Books II and III for use in middle-level NFE Centres, eight comic books for use in primary level NFE Centres and Teacher's Guides and Workbooks for Mathematics for use by instructors working in the middle-level NFE Centres. The Council also developed a Training Manual for NFE instructors and NFE supervisors of the NFE Centres adopted by the NCERT. The other activities undertaken include development of training materials for NFE supervisors, development of a film on teaching-learning and training methods related to NFE, orientation programmes for resource persons involved in implementation of NFE Programmes, orientation programmes for NFE functionaries from voluntary organisations and NFE units in States/UTs and organisation of the Annual Conference on Non-formal Education to review the progress of implementation of the non-formal education programmes.

### **Reorientation of the Content and Process of Education at the School Stage**

The NCERT undertook a series of coordinated mea-

asures for reorientation of the content and processes of education at the school stage as envisaged in the National Policy on Education—1986. The major thrust of these measures was directed towards the introduction of the norms of minimum levels of learning for the different stages of school education, development of instructional packages based on the revised syllabi, development of child-centred learning strategies and activity-based teaching methods, training of teachers and other educational personnel to improve their professional competence, examination reform and the introduction of continuous and comprehensive evaluation to improve the teaching-learning processes. The major steps taken by the NCERT for reorientation of the content and processes of education at the school stage include the following:

- (i) The 'National Curriculum for Primary and Secondary Education—A Framework', which was developed by the Council in 1986, was revised in the light of the NPE—1986. The revised document entitled 'National Curriculum for Elementary and Secondary Education—A Framework' was published by the NCERT in April 1988.
- (ii) The draft guidelines for the development of curricula at the primary stage prepared by the Council in 1986-87 were revised in the light of the suggestions received from the various agencies in the country. The revised document was brought out under the title *Minimum levels of Learning at the Primary Stage—Syllabi Including Common Core Components* and was widely disseminated to the agencies involved in the development of curricula and textual materials in the States/UTs.
- (iii) The revised instructional packages, including textbooks, for Classes I, III and VI developed by the NCERT were published in the year 1987 and introduced in the Kendriya Vidyalayas and some of the other schools

affiliated to the Central Board of Secondary Education (CBSE) during the academic session 1987-88. The new textbooks developed by the NCERT for Classes II, IV and VII were published in 1988 and introduced in the Kendriya Vidyalayas and some of the other schools affiliated to the CBSE during the academic session 1988-89. The new textbooks in science and mathematics for Classes IX and XI published by the Council in 1988 were also introduced in the Kendriya Vidyalayas during the academic session 1988-89.

- (iv) During 1988-89, the Council undertook several activities related to the task of developing new textbooks for Classes V and VIII. During this period, the Council also developed new textbooks in languages and social sciences for Classes IX and XI and textbooks in science and mathematics for Classes X and XII. The new textbooks for Classes V and VIII, the new textbooks in languages and social sciences for Classes IX and XI and the new textbooks in science and mathematics for Classes X and XII are expected to be introduced in the Kendriya Vidyalayas during the academic session 1989-90. The new textbooks in languages, social sciences, science and mathematics developed by the NCERT for Classes IX and XI are expected to be introduced in all schools affiliated to CBSE during the academic session 1989-90. The layout, design, illustrations and binding of the new text books were improved considerably so as to make them attractive enough to catch the attention of young children. The textbooks in science and mathematics for the upper-primary, secondary and higher-secondary stages were prepared by a team comprising eminent scientists and mathematicians and experts from universities, from the NCERT and from other national and state-level institutions. The manuscripts of

all the new textbooks were reviewed meticulously by groups comprising eminent scholars, practising teachers, teacher-educators and curriculum specialists before they were sent for publication.

- (v) As part of the programmes to promote national integration and the study of India's Freedom Movement, the Council organised two workshops to evaluate the new textbooks in history from the standpoint of national integration and adequacy and appropriateness of the content related to the study of India's freedom struggle. During 1988-89, new textbooks in history developed in the States of Andhra Pradesh, Bihar, Gujarat, Maharashtra, Rajasthan and Uttar Pradesh were evaluated from the standpoint of national integration. The Council also initiated work on the preparation of a *Dictionary of National Biography*. A general framework of the Dictionary was developed and the personalities to be included in the Dictionary were identified.
- (vi) To facilitate effective implementation of the revised work experience programme in schools, the Council continued its activities directed towards development of instructional materials on work experience activities related to Agriculture, Commerce, Home Science and Technology and the orientation/training of key persons and teachers. During 1988-89, the Council organised three orientation programmes on work experience for key persons from Andhra Pradesh, Karnataka and Madhya Pradesh and two orientation courses on work experience for teachers from Navodaya Vidyalayas. 119 key persons from the States and 90 teachers from Navodaya Vidyalayas were oriented to the different aspects of implementation of the revised work experience programme. In addition to these, a training programme on work

experience for 48 teachers working in schools run by voluntary organisations and an orientation programme on development of instructional materials on work experience activities were conducted.

- (vii) Under the Programme of Mass Orientation of School Teachers (PMOST), orientation programmes for about five lakh school teachers are being conducted since 1986, through the NCERT and the State governments, in order to increase the motivation and professional competence of teachers and to better equip them to play the key role in the process of reorientation of the content and processes of education at the school stage. During 1988, 9,113 camps were organised to train primary and secondary teachers and 4,39,261 teachers, comprising 2,97,977 primary teachers and 1,41,284 upper-primary and secondary teachers were trained through these camps. 10,300 resource persons were involved in the organisation of the camps for training teachers. The content of the orientation programme was reviewed keeping in view the experience gained during the years 1986 and 1987. A National Review meeting was held from 26 to 28 October 1988 to review the implementation of PMOST. On the basis of the feedback received, the content of the orientation programmes conducted during the year 1988 was redesigned to include components directed at enhancing the professional competencies related to the teaching of different curricular areas in addition to components for creating an awareness about the major thrusts envisaged in the NPE. For this purpose a revised training package, comprising separate volumes for primary school teachers and secondary school teachers, was prepared. Guidelines for the faculty/resource persons of the orientation/training camps were also prepared. The television support to the programme was also

strengthened by including certain new programmes related to the emerging curricular concerns. The orientation programmes conducted during 1988 were evaluated by three universities, Kurukshetra University, Patna University and Pondicherry University, and based on the suggestions made in the evaluation reports, the content of the orientation programmes proposed to be conducted during 1989 was further modified to make it relevant to the requirements of the teachers.

- (viii) As part of the effort to reorient the content and processes of education at the school stage, steps were taken to improve evaluation practices in schools. A scheme of comprehensive continuous evaluation was evolved and circulated among the SCERTs/ Departments of Education and Boards of Secondary Education in States/UTs. It was discussed in a two-week 'All India Training Course for Resource Persons' organised from 22 June to 5 July 1988. A sample cumulative card along with procedures for maintaining records of a pupil's achievements in scholastic and non-scholastic areas was also prepared. The NCERT also prepared guidelines for introduction of grading and scaling in examinations conducted by different Boards of Secondary and Higher Secondary Education and organised four regional meetings of the Chairman/Secretaries of the Boards of Secondary Education. During these meetings, the different aspects related to the introduction of scaling and grading in the examinations conducted by the Boards of Secondary and Higher Secondary Education were discussed. The NCERT also organised an eight-day workshop for training key persons in alternative evaluation procedures, such as oral examinations, open-book examinations and project work. In addition to these, the Council continued its task of developing conceptual materials related to

educational evaluation, preparing criterion reference-tests and the training of test-items writers in different subject areas. The Council organised an 8-day training course on 'Evaluation in History', and five training courses for improving external examinations conducted by different Boards of Secondary /Higher Secondary Education. 302 persons attended these training courses.

- (ix) In order to facilitate implementation of the tasks related to the reorientation of the content and processes of education at the school stage, the NCERT formulated a scheme under which financial assistance was provided to State/UTs for undertaking activities related to renewal of curricula and development of instructional materials, including textbooks, in different curricular areas. Under the scheme, financial assistance was provided to the States of Andhra Pradesh, Bihar, Goa, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Orissa, Punjab, Tamil Nadu, Uttar Pradesh and West Bengal and the Union Territory of Delhi and to the Central Board of Secondary Education (CBSE). A meeting of the nodal officers incharge of the scheme was held on 21 and 22 November 1988 to review the progress in the implementation of the scheme. In addition to this, the Council also organised a national meet of the representatives of the Directorates of Education, SCERTs and Boards of Secondary Education from 2 to 4 June 1988 to review the progress of implementation of the tasks related to the reorientation of the content and processes of education at the school stage. Representatives from 19 States/UTs participated in the meet. During the meeting, the difficulties and problems with regard to the implementation of tasks related to the reorientation of the content and processes of education at the school stage, and strategies required to overcome the difficulties were discussed. During

1988-89, financial assistance was provided to the Board of Intermediate Education, Andhra Pradesh; SCERT, Nagaland; the Board of Secondary Education, J&K; Gujarat Board of School Textbooks, Gujarat; and the Board of Secondary Education, Meghalaya, for the renewal of curricula and the development of instructional material based on the national curricular framework.

## **Improvement of Science Education in Schools**

As part of the work related to the implementation of the centrally sponsored scheme for the 'Improvement of Science Education in Schools', NCERT organised training courses for training science teachers of senior/higher secondary schools in some States. During these training courses, the participants developed certain training materials which could be utilised in the subsequent training programmes to be conducted under the scheme. The other activities carried out by NCERT in connection with the implementation of the scheme include development of the manual for organising different training programmes under the scheme; organisation of a one-week workshop to develop instructional materials for use in training programmes for higher secondary teachers in Uttar Pradesh; a three-day orientation programme for higher secondary teachers in Uttar Pradesh; an orientation programme for key persons and resource persons who would train science teachers in upper primary schools in Uttar Pradesh; a 3-day orientation programme for key persons in Bihar; another 3-day orientation programme for key persons and resource persons in Bihar; a 3-day orientation programme for resource persons involved in training of senior/higher secondary teachers in Jammu and Kashmir; and a 3-day orientation programme for key/resource persons in Mizoram. The other activities include organisation of out-of-school activities in science and mathematics to nurture interest and talent in science and mathematics and a study of the utilisation of science laboratories in schools so as to take steps for their better functioning. The Council also organised a meeting of the representatives of

the nodal agencies engaged in implementing the scheme at the State/UT level on 31 October and 1 November 1988, and provided technical assistance to the States/UTs to carry out the different tasks envisaged under the scheme.

The Council continued its activities related to the development of science kits for primary and upper primary schools. The kit manuals for the *Primary Science Kit* and the *Integrated Science Kit* for upper primary schools have been printed. The other activities undertaken include a 'Survey of Teachers Teaching Science in Schools in Madhya Pradesh and Uttar Pradesh' and a 'Survey of the Status of Science Kits and Equipment in Primary Schools and Elementary Teacher Training Institutes in Madhya Pradesh and Uttar Pradesh' conducted under the Indo-FRG project 'Improved Science Education in Primary and Upper Primary Schools in Madhya Pradesh and Uttar Pradesh', the preparation of a detailed write-up of the construction, specification and drawings of the items in the science kits, and the preparation of a teacher's handbook.

As part of the effort to strengthen the teaching of science in schools, the NCERT developed teacher's guides, laboratory manuals, supplementary reading materials and popular science materials. The Seventeenth National Science Exhibition for Children was organised at Jammu by the NCERT in collaboration with the Government of Jammu & Kashmir.

## **Computer Literacy and Studies in Schools**

Several advanced level training programmes for school teachers were organised by the NCERT and other Resource Centres under the project 'Computer Literacy and Studies in Schools (CLASS)'. In 1988, the total number of schools covered under the CLASS project rose to 2322. During 1988-89 the project was extended to 380 more schools. Training programmes were organised by the Resource Centres to train teachers from the new schools participating in the project. About 1325 teachers were trained under the project during 1988. The Council also organised a 3-day training programme for Chief Executives of Cooperatives to familiarise them with computers, two introductory

courses in software design and a workshop for the development of criteria for software evaluation. The 53 Resource Centres established under the CLASS project provided technical support to the schools participating in the project. Necessary steps were taken to procure software packages for the new schools and to select indigenous software packages for the new schools participating in the project. In all about 22 indigenous software packages were approved for supply to the new schools.

### **Vocationalisation of Education**

The NCERT undertook several activities for providing necessary technical support to the States in the planning and implementation of various programmes related to vocationalisation of education at the higher secondary stage. Eight orientation programmes on vocationalisation of education were organised for key persons from the States already offering vocational education at the +2 stage as well as for key personnel from States which are planning to launch programmes for vocationalisation of education at the higher secondary stage. Through these orientation programmes, about 440 key persons from the Union Territory of Delhi and the States of Himachal Pradesh, Kerala, Madhya Pradesh, Uttar Pradesh and the States in the north-eastern region were exposed to the different aspects of implementation of vocationalisation of education at the higher secondary stage. The Council also organised two orientation programmes on the development of instructional materials in different vocational areas, two programmes on 'District Vocational Survey' and one orientation programme for coordinators and resource persons involved in training vocational teachers. About 160 participants attended these programmes. The Council continued its activities for the development of Minimum Vocational Competencies-Based Curricula for different vocational courses and the development of comprehensive guidelines for implementation of the different aspects of the programmes for vocationalisation of education. The Council developed a model curriculum in entrepreneurship, minimum competencies-based curriculum

in printing technology and book-binding, instructional materials in different vocational areas, folders for popularising vocational courses and scripts for ten video programmes on themes related to vocational courses.

### **Teacher Education**

In the field of teacher education, the NCERT completed three research projects during the year under report. These include the 'Study of the Status of Teachers in India', the 'Study of the Relative Effectiveness of Different Training Strategies' and the 'Study of the Relationship of Self-concept, Attitude and Adjustment of SC/ST and non SC/ST Student Teachers with their Achievement'. As part of the effort to promote research on different aspects of teacher education, the Council conducted a workshop on planning and designing research projects from 29 August to 3 September 1988. 34 teacher-educators participated in this workshop. The Council organised an extension programme from 21 to 26 November 1988 in order to disseminate the effective teaching strategies identified through the research study it had conducted to determine the relative effectiveness of different strategies of training. The programme was attended by 31 teacher-educators.

The NCERT continued to act as the Secretariat of the National Council for Teacher Education (NCTE) and coordinated different activities of the NCTE. A significant activity undertaken was the revision of the document *Teacher Education Curriculum—A Framework*. A Committee was constituted to prepare the draft of the revised curricular framework for teacher education. The draft framework prepared by this Committee was discussed in a National Conference on Teacher Education Curriculum held on 14 and 15 November 1988. Based on the suggestions made at this conference, the framework was modified and finalised.

Actions were also initiated for evolving a design for the Four-Year Teacher Education Programme and a design for the training programme for teachers at the +2 stage. A meeting of the Committee on the Four-Year Teacher Education Programme was held from 11 to 13 May 1988. The design of the Four-Year Teacher Education Programme developed by the Committee was

sent to the Regional Colleges of Education and to the Deans of the Faculties of Education in Universities for their comments. The other activities carried out include organisation of a meeting (18 to 20 July 1988) for developing the curricular framework for the training programme for higher secondary teachers, and two meetings of the Committee on Admission to Teacher Training Institutions held from 1 to 4 November 1988 and on 17 December 1988. The selection criteria and the admission procedures in respect of teacher training institutions have been finalised.

The Council provided technical assistance to States/UTs for the establishment of the District Institutes of Education (DIETs). It also undertook the task of revising the project document on DIETs and CTEs/IASEs and prepared an approach paper for the strengthening of the SCERTs.

The four Regional Colleges of Education, run by the NCERT, continued to offer the 'Four-Year Integrated Teacher Education Programme' leading to B.A. Ed. or B.A. B.Ed. degrees and B.Sc.Ed. or B.Sc. (Hons./Pass) B.Ed. degrees, the one-year B.Ed course and the one-year M.Ed. course. The RCEs at Bhubaneswar and Mysore also offered two-year M.Sc Ed. courses. The RCEs organised several extension programmes/workshops/meetings/seminars on different aspects of school education and teacher education. In addition to these, each RCE also undertook research studies related to school education and teacher education. A number of scholars were provided guidance by the RCEs for research work for Ph.D. degrees.

## **Education for Women's Equality**

The NCERT undertook several programmes and projects to promote education for women's equality. An action research project was initiated for developing the methodology for women's education and development. Another action research project for evolving a school-based programme for promoting equality of the sexes was also undertaken. As part of the work related to development of a data-bank on women's education and development, a situational analysis of the education of the girl child was prepared, providing comprehensive

data on the socio-economic and educational status of girls.

Several activities were carried out to develop instructional training materials to promote education for women's equality. The instructional/training materials developed include exemplar resource materials in English and awareness generation materials in regional languages (Assamese, Bengali, Gujarati, Hindi, Oriya and Telugu). Besides these, the Council initiated activities to incorporate ideas related to education for women's equality into the teacher education curriculum, to develop a format for monitoring and evaluating the programmes designed to promote education for women's equality and to develop guidelines for removal of sexist bias from textbooks.

During 1988-89, the Council conducted three regional workshops and one national workshop on education for women's equality to work out effective implementation modalities and action-plans for empowerment of women through education; a regional workshop for generating awareness on women's equality for Principals of schools/colleges in Uttar Pradesh; two workshops on women's equality for district level educational administrators; and workshops on women's equality for key persons in Manipur and in Daman. The participants of these workshops included Principals of colleges and schools, educational administrators and experts in the field of women's studies.

During the year 1988-89 the Council conducted a total of 21 workshops/orientation programmes to develop instructional/training materials and to orient key personnel from States/UTs to different aspects of education for women's equality. In all, 794 key personnel, teacher-educators and principals attended these programmes. The Council also provided technical assistance to the States/UTs to establish centres/units for women's studies.

## **Education of the Scheduled Castes/ Scheduled Tribes**

The NCERT continued its research and developmental activities directed to promote education of the Scheduled Castes and Scheduled Tribes. A comparative



study of educational achievements of Scheduled Castes and non-Scheduled Caste students of Class X in Uttar Pradesh was completed during the year under report. Activities under the evaluative study of the pre-matric scholarship scheme for Scheduled Castes and Scheduled Tribe students continued. The report in respect of 11 States (Scheduled Tribes, cluster-I) was completed during the year. The draft report on cluster-I (Scheduled Castes) has also been prepared. The collection of data in respect of cluster-II (SC/ST States) is in progress.

The Council continued with its tasks related to preparation of primers/textbooks in tribal dialects. Two Working Group meetings and two workshops were organised to develop primers in seven tribal dialects using the regional language scripts. The primers developed include a primer for Class I prepared in Irula tribal dialect using the Tamil script for use by Irula tribal children in Tamil Nadu, a primer for Class II prepared in Gondi dialect using the Telugu script for use of Gond tribal children in Andhra Pradesh and primers for Classes I and II in five tribal dialects using the Devanagari script for the use of children belonging to five tribes of Bihar—the Santal, Ito, Mundari, Kharia and Kurukh tribes. The primers for Santal, Ito, Mundari, Kharia and Kurukh tribal children in Bihar were developed in collaboration with the Central Institute of Indian Languages (CIIL), Mysore.

The Council has undertaken a project for the preparation of a *Bibliography on Educational Development of Scheduled Castes*. The work on the compilation of reference titles was completed during the period under report.

#### **Education of the Educationally Backward Minorities**

The Council continued to provide technical as well as financial support to conduct training programmes for teachers and principals in schools managed by the educationally backward minority communities, particularly the Muslims, in order to improve educational standards in these schools. During the year under report, the Council organised three 3-day seminar-

cum-workshops on guidance services for managers and principals of schools managed by the educationally backward minorities. 58 managers and principals of schools participated in these seminar-cum-workshops. Besides these, the Council organised a 25-day training course for career teachers from schools managed by educationally backward minorities, a refresher course for the career-guidance teachers and two attachment programmes of 10 days duration for science and mathematics teachers in these schools. The Council continued to provide technical and financial support to the Regional Resource Centres set up for training teachers from educational institutions managed by educationally backward minorities.

#### **Education of the Disabled**

The NCERT undertook several programmes directed to promote education of disabled children. Several activities directed at developing context-specific strategies for the education of disabled children were carried out under the UNICEF-assisted 'Project Integrated Education for the Disabled (PIED)'. During 1988, the PIED was implemented in the States of Haryana, Madhya Pradesh, Maharashtra, Mizoram, Nagaland, Orissa, Rajasthan, and Tamil Nadu. The major activities carried out under PIED include identification and assessment of disabled children, curriculum adjustment and adaptation of instructional methods and materials, development of instructional materials for disabled children, development of guidelines for the education of low-vision children and training of educational administrators and teachers.

A workshop was organised on 12 and 13 May 1988 for preparing briefs for video programmes for the education of disabled children. Briefs for video programmes on themes related to learning disability, learning impairment, visual impairment and mental retardation were developed during the workshop. The Council developed a framework for the development of computer programmes for computer-assisted teaching of Devanagari script to children with poor locomotor control. Other activities undertaken include the development of tools for identifying learning disabilities and the

development of a special-education curriculum for general teachers. In addition to these, three research studies/surveys related to education of the disabled were completed. The survey/research studies include a study to assess the progress of the implementation of the scheme of 'Integrated Education of the Disabled Children', a survey of instructional materials developed by different agencies, and a study to explore linguistic competence of hearing impaired children studying in IED and special schools. For the exchange and dissemination of information related to the education of the disabled, four issues of the quarterly newsletter *Communication : Equal Educational Opportunity* were brought out and sent to agencies/schools involved in programmes for promoting education of disabled children.

The Council organised four orientation programmes on PIED for project team members and educational administrators. 61 persons attended these programmes. In addition to these, eight first-level and two second-level training programmes were organised for teachers in blocks covered by the PIED. Through these training programmes, 1545 teachers were trained on the methodology for identification of disabled children and management of their education.

### **Utilisation of Educational Technology**

Several activities directed towards the utilisation of educational technology, including the use of radio and television, for bringing about qualitative improvement in education and for widening access to education were undertaken by the Central Institute of Educational Technology (CIET) of NCERT in collaboration with the State Institutes of Educational Technology (SIETs). The CIET and the SIETs have been contributing programmes of 3 hours and 45 minutes duration for television transmission (using INSATI-B facilities) on about 210 working-days in a year covering five regional languages—Hindi, Gujarati, Marathi, Oriya and Telugu—on a time sharing basis (45 minutes for each language). The CIET produced about 90 ETV Programmes in Hindi and prepared Oriya versions of 65 of these programmes. These included 36 programmes

for children in the age group 5 to 8 years, 34 programmes for children in the age group 9 to 11 years, 16 programmes for teachers and 4 general programmes. Selected ETV programmes produced by the CIET for children are telecast twice a week by the Door-darshan Kendra at Delhi in its general programme for children during the evening hours. These are relayed by a network of more than 150 transmitters all over the country. As during the years 1986-87 and 1987-88, the CIET prepared the ETV component of the Programme of Mass Orientation of School Teachers (PMOST) during 1988 as well.

The CIET organised seven training programmes with a view to creating competencies within the country in the production of ETV programmes. The programmes organised during the year under report included training courses on Video Editing, ETV Production and Technical Operation, Camera and Sound Recording, Studio Production and BCN 51 Maintenance. The CIET finalised a detailed case-study on the 'INSAT for Education Project' as a part of a project sponsored by UNESCO, Paris, undertaken to analyse developments in distance education using large-scale communication systems in Asian countries.

The CIET also produced 76 new audio programmes. These included 34 programmes on India's common cultural heritage, 4 programmes on the Freedom Movement, 3 programmes based on the letters sent by Pt. Jawaharlal Nehru to his daughter, 21 nursery rhymes, 9 curriculum-based programmes and 5 programmes on national identity. A few audio programmes were also developed by the Regional College of Education, Mysore. The CIET continued to support the extension of the project on teaching Hindi as the first language at the primary level using audio tapes in 450 schools in Hoshangabad district in Madhya Pradesh.

Other activities carried out by the CIET include the production of three 16 mm films on the west coast of India as part of a Geography series on Land and People; the production of a film on non-formal education; the organisation of an educational film festival at Aizawl (Mizoram) from 21 to 24 September 1988; and the preparation of 18 biology charts under series-II relevant to the curriculum of Classes IX and X. The 22 biology

charts developed under series-I were printed and sent to the States/UTs for adoption/adaptation. The CIET also brought out a report on the First Educational Video Festival held in January 1988 at ISRO, Ahmedabad.

In addition to these, the CIET undertook seven research/evaluation studies. These include a study to obtain feedback from the children about the ETV programmes; content analysis of viewers' mail with a view to determine the attitude and opinion of different categories of viewers; a sample survey to study utilisation of ETV service in the INSAT districts of Uttar Pradesh; a case-study of ETV utilisation in the selected INSAT districts in Gujarat and Maharashtra; a study of utilisation of the ETV component of the PMOST camps; an indepth case-study of the Open School in Tamil Nadu; and field testing of audio programmes.

#### **Technical Support to Navodaya Vidyalayas**

The NCERT conducted the selection tests for admission to the Navodaya Vidyalayas for the academic session 1988-89. The total number of Navodaya Vidyalayas in 1988-89 was 256. Selection tests were administered in 18 languages and conducted at 3,241 centres located in 2,980 Community Development Blocks spread over 256 districts in the country. The test booklets in 18 languages were printed centrally and distributed to various centres through the offices of the Field Advisers of NCERT. The total number of candidates registered for the selection test was 4,63,960 out of which 3,70,379 candidates appeared in the test. In all 14,769 candidates were selected for admission to the Navodaya Vidyalayas. Of these, 11,059 (75 per cent) candidates were from rural areas while 3,710 (25 per cent) were from urban areas. The selected candidates included 10,001 (68 per cent) boys and 4,768 (32 per cent) girls. Of the 14,769 candidates selected for admission to the Navodaya Vidyalayas 1,775 (19 per cent) belonged to the Scheduled Castes while 1,638 (11 per cent) belonged to the Scheduled Tribes. 655 candidates belonging to the Scheduled Castes and 551 candidates belonging to the Scheduled Tribes were selected in Open Merit. In addition to the

selection tests, the Council also conducted a study of the socio-economic status of the students and physical facilities in Navodaya Vidyalayas established up to 1986.

#### **Educational Survey**

The Council brought out the preliminary report of the Fifth All-India Educational Survey. The reference date of the Fifth All-India Educational Survey was 30 September 1986. In the Survey, three questionnaires, namely the Village Information Form, the Urban Information Form and the School Information Form were used. Through the first two questionnaires, the data was collected from all villages and all urban areas on the availability of schools as well as facilities for pre-primary education, non-formal education and adult education. Through the School Information Form, data was collected from all the schools on students, teachers, buildings, facilities, equipment, etc. available in them. The data was first compiled at block/tehsil-level, after which the district-level tables were prepared from the block tables. The state-level tables were prepared from the district-level tables and finally at the NCERT, the national tables were prepared from the state tables received from different States/UTs.

The Survey data is expected to be used for educational planning, particularly for the formulation of the Eighth Five-Year Plan as regards educational development. The data is expected to be used for micro planning exercises at the block level as well as for district level educational planning. The data of Fifth All-India Educational Survey is also expected to help in the effective implementation of various schemes initiated for the implementation of the National Policy on Education-1986.

#### **National Talent Search**

The NCERT conducted the second-level test for the award of the National Talent Search Scholarship on 8 May 1988. The first-level test was conducted by the States/UTs. The second-level test was conducted at 31 centres spread over the country. 3,104 students

appeared at the second-level test conducted by the Council. Of these 750 students, including 70 SC/ST students, were selected for the award of the scholarship.

## **Educational Psychology, Counselling and Guidance**

The NCERT undertook several activities in the field of educational and vocational guidance. A study of the 'Educational-Vocational Planning, Academic and Selected Psychological and Home-Background Variables of Tribal High School Students in and around Shilong (Meghalaya)' was completed. The work under the research project on 'Vocational Behaviour and Adjustment of Students in Academic and Vocational Streams at the + 2 Stage' and under the research project for the 'Development of Guidance Programme to Promote Self-Employment in Vocationalised Senior Secondary Schools in Delhi' continued during the year under report. The Council continued its Diploma Course in Educational and Vocational Guidance. 37 trainees were admitted to the course which commenced in August 1988. In addition to the Diploma Course in Educational and Vocational Guidance, a few short-term enrichment/training courses were conducted. These include two enrichment courses on learning and development for teacher educators, one training course for teacher educators on identifying and encouraging creative potential in children in elementary schools, two training courses on application of behaviour-modification techniques in the classroom setting and two enrichment courses for psychology teachers in intermediate colleges in Uttar Pradesh.

The NCERT organised a 'National Symposium on Child-Centred Education' from 10 to 12 December 1988. 160 eminent educationists, psychologists, educational administrators, etc. participated in the Symposium. The Council also organised an All-India Conference of the Heads of State Bureaus of Guidance at Bangalore from 6 to 8 February 1989. The other activities undertaken include the development of a manual of instruction for primary teachers and teacher-educators on behaviour-modification techniques in classroom settings; development of a manual

on learning and development for primary teacher-educators; and development of a handbook on nurturing creative potential in elementary school children.

## **Promotion of Educational Research**

The Educational Research and Innovations Committee (ERIC) of the NCERT continued to sponsor research projects on different aspects of school education and teacher education. 49 research projects supported by ERIC were completed during 1988-89. These included 31 projects undertaken by the various constituent units of NCERT and 18 projects undertaken by outside research institutions. Work on six research projects undertaken by the constituent units of the NCERT and four research projects undertaken by outside research institutions continued during 1988-89.

The manuscript of the Fourth Survey of Educational Research was finalised and sent for publication.

As part of the effort to improve the quality of educational research, the Council organised two regional seminars. The first regional seminar was for the northern region and was held at the University of Kashmir, Srinagar, from 11 to 15 July 1988. 22 researchers participated in this seminar and identified several problems and criteria for taking up research work in universities, SCERTs and other research institutions. The second regional seminar was for the southern region and was held at Coimbatore from 27 September to 3 October 1988. 25 participants attended this seminar. In addition to these, a workshop was held from 8 to 12 December 1988 to develop revised courses in research methodology. 17 experts participated in the workshop and developed course outlines for research methodology courses for three different levels.

During 1988-89, 17 Ph.D. theses were published with the financial assistance provided by the ERIC. Approval for financial assistance was provided for the publication of nine Ph. D. theses.

## **Population Education**

The NCERT initiated several measures to accelerate the implementation of the National Population Educa-

tion Project. Various developmental and training activities under the population education project were undertaken during 1988-89. A workshop was organised for the development of a compendium of lessons on population education from 26 September to 1 October, 1988. 29 participants attended this workshop. A national workshop on population education (Quiz Competition) was organised from 10 to 14 October 1988 at Bangalore. 40 participants attended this workshop and during the workshop the state-level Quiz was developed. In addition to these, the PPR meeting under the Population Education Project was held from 2 to 6 November 1988 at Mysore. Project personnel from 9 States attended the meeting. The progress of the project in different States was reviewed and a plan of action for the year 1989 was prepared during the meeting.

#### **Publication of Instructional Materials and Journals**

A very important activity of the NCERT has been the publication of textbooks, supplementary readers, workbooks, teachers' guides, research monographs, journals, etc. During 1988-89, 236 publications under different categories were brought out. These included 61 new textbooks/workbooks/prescribed supplementary readers, 108 reprints of textbooks/workbooks/prescribed supplementary readers, 16 textbooks/workbooks for other government agencies, 37 research monographs/reports and other publications and 14 issues of Educational Journals/Periodicals. The Council continued its activities related to certain new series of books in English and Hindi for the use of students at different stages of school education. These include the *Reading to Learn Series*, the *Lotus Series* and the *Padhen Aur Seekhein Yojna*. The Council continued to publish 6 journals, the *Indian Education Review* (a quarterly), *Primary Teacher* (a quarterly), *Journal of Indian Education* (a bi-monthly), *School Science* (a quarterly), *Primary Shikshak* (a quarterly in Hindi) and *Bhartiya Adhunik Shiksha* (a quarterly in Hindi). The Journal Cell of the NCERT organised three workshops for developing a source book on Educational Journalism. In addition to these, a workshop was organised for developing the manuscript of the

special issue of *Bharatiya Adhunik Shiksha* on children's literature for developing a Source Book on Educational Journalism.

#### **Documentation and Information Services**

The Department of Library, Documentation and Information of the NCERT continued to support research and development activities of various departments and units of the NCERT. The Department not only catered to the information needs of faculty members of the NCERT but also those of research scholars and educationists from all over the country. It has a very good collection of books and periodicals in the field of education and psychology and curricular and reference material relating to all the school subjects. The department also continued to organise in-service training programmes for school librarians, teachers in-charge of school libraries and librarians of teacher-training colleges. A workshop on development of libraries of teacher training institutions at the elementary level was organised at Trivandrum from 12 to 16 December 1988. 38 participants attended this workshop. Another workshop on development of teacher training institutions at the elementary level was organised at Edappalli (Kerala) from 6 to 16 March 1989. 27 participants attended this workshop. The Council also provided academic support to the Board of Secondary Education, Orissa, in organising an in-service training programme for school librarians/teachers in-charge of school libraries from 9 to 18 December 1988.

#### **Programmes to Promote National Integration**

The NCERT continued to organise community singing camps to train teachers in the art and techniques of community singing. During 1988-89, 22 state/regional/national level community singing camps were organised to train school teachers. Besides these, regional committees were constituted to promote the community singing programme.

A pilot study was conducted to examine the possibility of organising a students exchange programme to promote the understanding of diverse cultures. The

study was organised in collaboration with the SCERT, Mizoram, and the Faculty of Education and Psychology of M.S. University of Baroda. 20 Mizo students and 20 Gujarati students drawn from schools located at Alzawl and Baroda, in the age group 12 to 14 years, participated in the study. The Mizo students stayed for ten days with families of the Gujarati students during the Deepavali festival and, in turn, the Gujarati students stayed for ten days with families of the Mizo students during the Christmas festival.

## **International Relations**

The NCERT continued to play its role as a major agency for implementing the provisions of bilateral cultural exchange programmes in the field of school education and teacher education. Delegates and experts from 13 countries visited the NCERT during the year under report. The Council organised two six-week training programmes for the faculty members of the National Institute of Education, Maharagama, Sri Lanka. It also organised a six-month training programme for four women education officers from Somalia, covering different aspects of non-formal education under the ITEC programme. The Council organised a 10-day fellowship training programme for 12 fellows from Bangladesh, who visited India to study the process of renewal of the primary education curriculum based on the minimum levels of learning. The Council also undertook five UNESCO-sponsored projects/studies/programmes and played a key role as an Associate Centre of the Asia and the Pacific Programme of Educational Innovations for Development (APEID) and as the Secretariat of the National Development Group (NDG) for educational innovations. The UNESCO-sponsored projects/studies/programmes undertaken by the Council during the year under report include the project on Biotechnology Teaching in Developing Countries; a National Workshop on Multi-grade Teaching in Primary Schools, a National Training Workshop on

Improvement of Methods, Forms and Structures of Technical and Vocational Education; a National Training Workshop on Multi-grade Teaching in Primary Schools; a study of the Environmental Education Dimension of the Curriculum for Secondary Schools (Grades VII-XII); and a study of the Environmental Education Dimension of the Curriculum for Pre-service Training of Secondary School Teachers. The Council organised the General Body Meeting of the National Development Group (NDG) on 29 June 1988. The other activities undertaken include organisation of the meeting of the State Development Groups (SDGs) for educational innovations, publication of the *NDG Newsletter* and development of a brochure titled *India and APEID*. During the year under report, 15 faculty members of the NCERT participated in different programmes organised by UNESCO and other international agencies like the National Institute for Educational Research (NIER), Japan.

## **Field Services**

The 17 Field Offices of the NCERT continued liaison work in the States/UTs under their jurisdiction. The Field Offices of the NCERT played a key role in the establishment of Navodaya Vidyalayas and the conduct of the selection test for admission to the Navodaya Vidyalayas. They played a crucial role in the organisation of the Orientation Camps under the Programme of Mass Orientation of School Teachers (PMOST). Each of the Field Offices also organised certain orientation/training programmes for teachers and teacher-educators on different aspects of school education and teacher education and organised the State Level Toy-Making Competition.

The details of the activities/programmes carried out during 1988-89 by the different Departments/Units/Cells of the National Institute of Education (NIE) and other Constituent Units of the NCERT are reported in the subsequent chapters.

Early childhood care and education has been widely recognised for its significance and importance for child development, for developing school-readiness and as a strategy for promoting equalisation of educational opportunity. The NCERT, therefore, has been engaged in several activities and programmes/projects directed towards strengthening the 'Early Childhood Care and Education (ECCE)' programmes in States/UTs. Development of instructional materials for early childhood education for the use of pre-school teachers and teacher-educators, training of pre-school teachers and teacher-educators as well as training supervisory personnel involved in the implementation of early childhood care and education programmes and research activities in the field of early childhood care and education constitute some of the important activities carried out by the Department of Pre-school and Elementary Education (DPSEE) of the NIE during 1988-89. The major projects/programmes undertaken and activities carried out by the Council to strengthen early childhood care and education programmes include the following.

#### **Children's Media Laboratory (CML)**

Activities related to the development of materials and media of educational and entertainment value for children in the age group 3 to 8 and development of a national-level resource centre for disseminating ideas, training and learning materials, research findings and

training methodology on early childhood education were continued under the UNICEF-assisted project 'Children's Media Laboratory (CML)'. The materials developed under the CML were fed into the existing projects/programmes such as the 'Integrated Child Development Services (ICDS)' which cater to the needs of preschool and early primary school children.

As part of the activities of the Children's Media Laboratory, a workshop was organised at Madras from 18 to 27 April 1988 for preparing scripts for audio programmes in Tamil. This workshop was attended by 10 participants. Another workshop was organised at New Delhi from 15 to 17 July 1988 for reviewing and editing 30 scripts for audio programmes in Hindi for children.

#### **Early Childhood Education (ECE) Project**

Under the UNICEF-assisted project Early Childhood Education (ECE) 10 States (Bihar, Orissa, Goa, Karnataka, Madhya Pradesh, Maharashtra, Nagaland, Rajasthan, Tamil Nadu and Uttar Pradesh) were assisted in strengthening the early childhood education units, in training pre-school teachers and teacher educators and in developing learning and play materials for early childhood education. The major thrust of the activities under the ECE project was on establishing linkages between ECE and the programme under the Integrated Child Development Service (ICDS). Several programmes were conducted for ICDS function-



aries. A State Level Seminar on ECE with special reference to the convergence of ECE and ICDS was organised in Karnataka. Some non-print materials for ICDS centres were developed by Rajasthan. In Orissa, about 8000 Anganwadis were supplied with picture books and other play materials developed by NCERT. Under the ECE project, an Orientation course for resource persons from States participating in the project was organised at New Delhi from 4 to 8 April 1988. 30 resource persons from States participating in the ECE project attended the course. Two meetings of ECE project coordinators from the States participating in the project were organised to review the different aspects of implementation of the project and three publications titled *Children's Garden*, *Id* and *Bhari Kaun* were brought out under the instructional materials and series for teachers, teacher educators and parents.

In addition to these, a study on enrolment and retention in relation to pre-school experiences was launched in August 1988 in 9 States participating in the ECE project. As part of the study, a two-day meeting of the headmasters of the primary schools associated with ECE Centres was organised by each State participating in the ECE project. The data collection was completed and the work related to the analysis of data and preparation of report was initiated.

### **Home-based Programme in Child Development**

As part of the effort to evolve an alternative approach to early childhood stimulation, a home-based programme in child development was tried out in tribal and urban slum areas in Orissa. The programme involves developing the required confidence in the older family members like the mother, father, grandmother, etc. to take up the role of an educator to enhance the child's learning. The study covered 65 homes of the Bhagawatipur tribal area and 100 homes in the urban slums of Bhubaneswar in Orissa. A home-based instructional package was developed to promote awareness among parents about their role as potential educators and to develop the necessary skills in them. The package covers the areas of health, nutrition and education of children. The activities carried out under the programme during 1988-89 include

intervention programmes/activities with parents and evaluation of the programme.

### **Child-to-Child Programme**

Under the 'Child-to-Child Programme' being implemented in primary schools run by the Municipal Corporation of Delhi, activities related to health and nutrition education for children in Classes IV and V continued. The 'Child-to-Child Programme' is an action research study dealing with health and nutrition education involving teachers and children of Classes IV and V, who in turn, work with the children of Classes I and II. The major activities carried out under the programme during 1988-89 include training of teachers and organisation of Bal Melas in schools to involve the community in implementation of the programme.

### **Early Childhood Education Project in Nursery Schools of the Municipal Corporation of Delhi**

The NCERT has been engaged in the implementation of the Early Childhood Education programme in some of the schools with nursery sections run by the Municipal Corporation of Delhi. Under this project, an orientation course on play-way methods and the activity-based approach to teaching was organised from 19 to 30 September 1988. This course was attended by 20 teachers of Class III. The other programmes organised under the project included a refresher course on creative movements and drama for nursery teachers held on 16 January 1989, a refresher course on creative movement and drama for Class I teachers held on 19 January 1989 and a refresher course on creative movement and drama for Class II teachers held on 20 January 1989. The refresher course for nursery teachers was attended by 19 nursery teachers while the course for Class I teachers was attended by 23 teachers and the course for Class II teachers by 27 teachers. In addition to these, class-wise meetings of teachers of Classes I, II and III were held on 28 February, 1 March and 6 March 1989 to discuss the weightages to be assigned to various activities while

evaluating children. The meeting for Class I teachers was attended by 19 teachers, the meeting for Class II teachers was attended by 20 teachers and the meeting for Class III by 22 teachers.

### **Radio Feasibility Study**

A radio-feasibility study was launched by the NCERT in collaboration with the All-India Radio Station at Kota with the objective of using radio as a medium for providing and enriching learning experiences to children of the Anganwadis and of Classes I and II in primary schools. The broadcast of the children's programme from All-India Radio Station, Kota, began on 2 October 1988. The programme is of 15 minutes duration and is broadcast 6 days a week. The major activities undertaken during 1988-89 include the development of audio programmes for broadcast, development of guide books for teachers and Anganwadi workers and the training of teachers and Anganwadi workers. Under the radio-feasibility study, 60 audio tapes of children's programmes and 6 guidelines for teachers and Anganwadi workers were developed. The training programmes organised under the project include an orientation programme for ICDS supervisors and CDPOs involved in training of Anganwadi workers (held at Kota from 18 to 20 August 1988); a training programme for Anganwadi workers and teachers of Classes I and II on the organisation of pre-broadcast and post-broadcast activities held at Kota from 29 August to 10 September 1988; and five refresher training courses, each of two days duration, for Anganwadi workers, teachers of Classes I and II, headmasters of primary schools and supervisors and CDPOs (held at Kota from 5 to 17 March 1989). The orientation course for ICDS supervisors and CDPOs was attended by 15 participants, the training course for Anganwadi workers and teachers was attended by 50 participants and the refresher courses by 185 participants. In addition to these activities, a meeting with producers of AIR stations at Delhi, Nagpur and Pune was held on 25 and 26 November 1988. Another meeting with the producers of the children's programme of some of the AIR stations was held on 11 and 12 March 1989 to discuss different aspects of production and broadcast of children's programmes.

### **National-level Workshop on Toy-making**

In order to develop awareness amongst teachers about the importance of toys and educational games and the play-way method of instruction at the pre-school and early primary stages, the NCERT has been organising a toy-making competition organised during the year 1988 in the States/UTs through its Field Offices. The first-prize winners of the state-level toy-making competition organised during the year 1988 participated in a national workshop-cum-competition on toy making organised by the Council at New Delhi from 19 to 23 December. The workshop was attended by 10 state-level prize winners. In addition to these, the Council had also organised the State-level toy-making competition for Delhi on 24 November 1988. 25 teachers participated in the competition. A workshop was also organised for identifying educational toys for pre-school blind children at New Delhi from 28 to 30 November 1988. 5 participants attended this workshop.

### **Review of Nursery Teacher Training Courses**

The Council organised a five-day workshop for reviewing the two-year nursery teacher training course. The workshop, held at New Delhi from 31 October to 4 November 1988, was attended by eight participants. During the workshop the existing two-year nursery teacher training course was reviewed and a framework and the course outlines for a revised course were evolved.

### **Training of Key Persons in Early Childhood Education**

A training course on ECE for key persons from Arunachal Pradesh was organised by the Council at New Delhi from 1 January to 5 February 1989. 31 key persons from Arunachal Pradesh attended the training course. Another training course was organised by the Council from 13 to 24 February 1989 for key functionaries of the Jigyansu Tribal Research Centre in Madhya Pradesh. This course was attended by 10 functionaries of the Jigyansu Tribal Research Centre, which is a voluntary organisation working in the area of Early Childhood Care and Education.

The Provision of free and compulsory education to all children until they complete the age of 14 years being a Directive Principle of the Indian Constitution, universalisation of elementary education continues to be one of the most important goals of educational development in India. The NCERT, therefore, has accorded high priority to programmes/projects and activities directed to promote universal elementary education. During the year 1988-89, the Department of Pre-school and Elementary Education (DPSEE) of the NIE was engaged in several activities related to the renewal of curricula, the development of revised instructional materials at the primary stage, the development of area-intensive educational programmes, and the implementation of the Operation Blackboard Scheme. The DPSEE continued to act as the central, technical and coordinating agency for the UNICEF-assisted projects being implemented in the context of the programme of universalisation of elementary education in different States and Union Territories. The NCERT also undertook several activities related to non-formal education programmes for out-of-school children. Research, development and training activities to support the centrally-sponsored scheme of non-formal education formed an important area of work of the Department of Non-Formal Education and Education of the Scheduled Castes and Scheduled Tribes (DNFE & E SC/ST) of the NIE.

### **Renewal of Curricula and Development of Instructional Materials**

The development of instructional packages, including textbooks for Class V, in the context of the efforts for reorienting the content and processes of education, as envisaged in the National Policy on Education—1986, constituted an important activity of the Council. Activities related to the renewal of primary education curricula and the revision of instructional materials for improving the relevance and quality of primary education were continued under the UNICEF-assisted project 'Primary Education Curricula Renewal (PECR)'. In addition to these, support activities related to nutrition and health education were also continued under the UNICEF-assisted project 'Nutrition, Health-Education and Environmental Sanitation (NHEES)'.

#### *Development of Instructional Materials for Class V*

As part of the effort to re-orient the content and processes of education at the school stage, the Council undertook several activities directed towards development of instructional materials (including textbooks) for Class V, based on the revised syllabi for the primary stage. A number of meetings/workshops were organised for developing and reviewing the manuscripts of textbooks and teachers' manuals for Class V. The details of these activities are reported in Chapter 6.

During 1986-87, the Council had developed draft guidelines for development of the curriculum at the primary stage. These guidelines were revised in the light of the suggestions received from various agencies and institutions in the country. A revised document entitled, *Minimum Levels of Learning at the Primary Stage—Syllabi including Common Core Components*, was brought out and circulated to different agencies/institutions engaged in renewal of school education curricula in States/Union Territories.

### *Primary Education Curriculum Renewal (PECR)*

Activities related to the renewal of curricula, development of instructional materials to relate them to the needs and environmental contexts of different groups of children and orientation of educational administrators and teachers continued under the UNICEF-assisted project 'Primary Education Curriculum Renewal (PECR)'. During 1988-89, the project was implemented in 10 States and one Union Territory (Andhra Pradesh, Assam, Jammu & Kashmir, Karnataka, Manipur, Meghalaya, Nagaland, Orissa, Rajasthan, Sikkim and Pondicherry). The other States and Union Territories which participated in the implementation of the project had completed the cycle of renewal of the curriculum and its implementation at the entire primary school stage by 1987-88. The NCERT provided technical support to the States participating in the project for the renewal of curricula, development of instructional materials and training of educational administrators and teachers involved in implementing the project at the State/UT level.

As part of the work on the 'Study of Enrolment, Retention, Stagnation and Pupil's Achievement' undertaken under the project PECR, the data collected from the states were analysed and an interim report entitled, *Pupil Achievement at the Primary Stage* was brought out. Four meetings of the Working Group on the 'Study of Vocabulary in Hindi Textbooks Developed under the Project PECR' were held during the period under report. In addition to these, a meeting of the coordinators of the project PECR in States/UTs was held on 13 and 14 December 1988 to review the progress of implementation of the project and to develop

plans of action for the year 1989.

### *Nutrition, Health Education and Environmental Sanitation (NHEES)*

Under the UNICEF-assisted Project 'Nutrition, Health Education and Environmental Sanitation (NHEES)', activities related to two research studies entitled, 'Study of Pupil Achievement' and 'Study of Impact of Community Contact Programme' continued during the year 1988-89. The collection and consolidation of data in respect of these studies were completed. All the states participating in the studies conducted orientation programmes for the tabulators and the tabulated data was sent to the NCERT for further analysis. The States participating in Project NHEES also conducted meetings to review strategies adopted for the community contact programme for its further diffusion into the State education system. In six States, instructional packages (developed under Project NHEES) on nutrition, health education and environmental sanitation for primary school children were integrated into the curriculum at the primary stage.

### **Area Intensive Education Project for Human Resource Development**

Under the UNICEF-assisted project entitled 'Area Intensive Education Project for Human Resource Development (AIEP)', efforts were made to integrate and coordinate the various educational projects implemented by different departments/agencies in the States/UTs. The Project envisages a comprehensive educational approach to cater to the socio-economic and developmental needs of the total population in an area. The AIEP aims at promoting the integration of pre-school, primary, non-formal and adult learning activities in the community and the achievement of universalisation of elementary education. It also lays emphasis on the convergence of all socio-economic and developmental inputs of the Central and State Governments, the development and testing of methods of mobilising community participation and incorporating the experiences of the projects into the long-term global educational strategies. The project lays emphasis on

the education of girls in the age group 9 to 14 through formal and non-formal channels of education and on meeting their educational needs.

The AIEP was initiated in 1987. During 1988-89, the Project was implemented in the States of Maharashtra, Mizoram, Orissa, Tamil Nadu and Uttar Pradesh and in the Union Territory of Dadra and Nagar Haveli. All the States/UTs participating in the project conducted the bench mark survey, constituted coordination committees at various levels and set up the necessary infrastructure for implementing the project. Under the project, the Council organised an orientation course for key personnel at the state level on different aspects of the implementation of the project. The Council provided technical support to the States for training personnel for conducting the survey and for orientation of the project teams working at different levels in the States/UTs.

### **Technical Support for the Implementation of the Operation Blackboard Scheme**

At the instance of the Ministry of Human Resource Development, Government of India, the NCERT had undertaken the responsibility of developing norms and specifications of the essential items to be provided to primary schools under the centrally sponsored 'Operation Blackboard Scheme'. Norms and specifications related to various items to be provided to primary schools were finalised by the NCERT in collaboration with the Bureau of Indian Standards. A document entitled *Operation Blackboard: Essential Facilities at the Primary Stage—Norms and Specifications* was finalised and published for dissemination in the States and Union Territories.

The faculty members of the Council participated in the meetings of the State-level Empowered Committees constituted in connection with the implementation of the Operation Blackboard Scheme. The Council also developed synopsis for the development of seven video programmes for use in programmes for training teachers on the effective use of essential items supplied to primary schools under the Operation Blackboard Scheme.

### **Non-Formal Education**

Research and developmental activities related to non-formal education and training/orientation of personnel involved in implementation of non-formal education programmes constitute an important area of work for the NCERT. The Council undertook several activities to support the Centrally Sponsored Non-Formal Education Scheme being implemented in the States. The main thrust of these activities has been towards the development of instructional materials and teaching-learning-evaluation strategies suited to non-formal education programmes. The major programmes/projects/activities related to non-formal education undertaken by the NCERT during 1988-89 include the following.

#### *Research*

A study of non-formal education curricula and instructional materials and their implications for instructional programmes was initiated in August 1988. The main objectives of the study are to analyse and evaluate existing curricula and instructional materials used for non-formal education programmes and to evolve approaches and strategies for making the curricula and instructional materials more relevant to non-formal education centres. In order to finalise the tools for the study, a workshop was organised at New Delhi from 17 to 20 January 1989. Another workshop was organised at Lucknow from 20 to 27 February 1989 for rational analysis of curricula and instructional materials developed for non-formal education programmes in different States/Union Territories.

The analysis of the curricula and instructional materials for non-formal education programmes indicated that the instructional materials could be grouped into four categories—Learner's Reading Materials, Learner's Supplementary Reading Materials, Teacher's Materials (such as general guide-books and guide-books related to primers/readers) and Resource Person's Materials. The analysis also indicated that the States broadly followed four types of curricula—condensed formal school curricula, separate NFE curricula, partially integrated curriculum and formal-

school curriculum.

Under the on-going project on development of tools and techniques for evaluation of children enrolled in non-formal education centres, two workshops were organised to finalise tools and techniques for evaluating the achievement of children at entry points and at levels I and II. The first workshop was organised at New Delhi from 22 to 26 August 1988 and the second at New Delhi from 31 March to 4 April 1989.

A study of selected non-formal education centres was initiated in April 1988 to identify some successful NFE Centres in the country and to identify the strategies, materials and organisational factors responsible for the success of these centres.

#### *Development of Instructional/Training Materials*

The NCERT has been engaged in developing suitable instructional materials for the use of children enrolled in non-formal education centres established under the Centrally Sponsored Non-Formal Education Scheme in different States. The new instructional materials developed for use in primary level NFE centres include 22 self-learning charts and 8 comic books on themes covered in different subject areas at Class III level. The instructional materials developed for use in middle-level NFE centres include *Mathematics Book II* and *Mathematics Book III*. Three workshops were organised at New Delhi for the development of these books. The first workshop was organised from 29 August to 2 September 1988, the second from 14 to 20 February 1989 and the third from 27 to 31 March 1989. During the first workshop the mathematics curriculum for middle-level NFE centres was revised and finalised. During the second workshop, the manuscript of *Mathematics Book II* was edited and finalised for publication and during the third workshop, the manuscript of *Mathematics Book II* was finalised.

The Council also undertook the task of developing a curriculum for the middle-level non-formal education programme. A Working Group Meeting was organised at New Delhi from 21 to 25 November 1988 to scrutinise the curriculum followed in different States and to develop a curriculum framework for the middle-level NFE programme. In addition to these, the Council

developed a film entitled *Non-Formal Education in Action* which deals with various organisational aspects of a non-formal education centre. The shooting of the film was completed and the work related to the editing of the film was initiated. The Council also developed a training manual for instructors and supervisors of the NFE centres. An Expert Group Meeting was organised from 15 to 18 December 1988 for finalising the training manuals for instructors and supervisors of NFE centres.

The Council initiated a programme for the adoption of selected non-formal centres to develop them as model centres. Two NFE Centres at the primary level and one NFE centre at the middle level in Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh were adopted and these centres were supplied with instructional materials developed by the NCERT. The instructors and supervisors, and project officers of these centres were trained by the Council.

#### *Training of NFE Personnel*

An orientation programme for the officers engaged in the implementation of the Centrally Sponsored NFE Scheme was organised by the Council at Agra from 13 to 17 March 1989. The main objectives of this programme were to share experiences related to the running of NFE centres, to identify difficulties experienced and to work out the solutions to the problems faced. This orientation programme was attended by 28 participants. Another orientation programme for NFE resource persons working in voluntary organisations was organised at Bodh Gaya, Bihar, from 28 to 30 March 1989. This programme was attended by 25 participants. Besides these, a training programme was organised at New Delhi from 19 to 23 December 1988 for instructors, supervisors and project officers of the NFE centres adopted by the NCERT. This training programme was attended by 23 participants.

#### *Annual Conference on Non-Formal Education*

An Annual Conference on Non-Formal Education was held on 2 and 3 March 1989 at New Delhi to review the different aspects of the implementation of the Centrally Sponsored Non-Formal Education Scheme and

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to evolve measures to overcome the difficulties faced by the implementing agencies. The two-day conference was attended by 20 representatives from the States implementing the Centrally Sponsored Non-Formal Education Scheme.

As part of the Council's effort to disseminate ideas and information related to the formulation and implementation of non-formal education programmes in the country, the Council brought out four issues of a *Non-Formal Education Newsletter* during the year under report.

### *Comprehensive Access to Primary Education (CAPE)*

Under the UNICEF-Assisted Project 'Comprehensive Access to Primary Education (CAPE)', activities related to the development of learning materials (learning episodes) and the establishment and management of learning centres for the education of out-of-school children continued. During the year 1988-89, the project was implemented in the States of Andhra Pradesh, Bihar, Haryana, Jammu and Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Meghalaya, Mizoram, Orissa, Punjab, Rajasthan, Sikkim, Tamilnadu and Uttar Pradesh. Seven modules for teaching Hindi, Environmental Studies and Mathematics were brought out during the year under report. The modules for teaching Urdu, developed by the NCERT and the State Institutes of Education at Jammu and Srinagar were finalised for publication. For finalising the modules in Hindi for level II, a Working Group meeting was held from 9 to 16 May 1988. Three Expert Group Meetings were held for developing and finalising learning modules in Environmental Studies for level II. Two Working Group meetings were held to review and finalise modules in Urdu developed by the State Institutes of Education at Jammu and Srinagar. The first Working Group Meeting was held from 13 to 17 June 1988 and the second from 14 to 20 September 1988. A meeting for preparing the calligraphy for the modules in Urdu was organised from 27 June to 1 July 1988. A working group meeting for finalisation of the modules in mathematics for level II was organised from 3 to 7 October 1988. Other activities carried out include a meeting of the project team members in States/UTs

held from 12 to 15 July 1988 to review the functioning of learning centres and the final meeting of project coordinators held from 8 to 10 December 1988 for finalisation of the plan of action and budget estimates for the year 1989.

The instructional materials developed under project CAPE were sent to 302 learning centres established under the project in the Hindi-speaking States of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh. Learning materials developed under project CAPE were also sent to seven prominent voluntary organisations for use in NFE centres run by them. The modules in Hindi were supplied to 117 Navodaya Vidyalayas in non-Hindi speaking States. In addition to these, the Council provided technical support to the States participating in project CAPE for the development of learning materials, training of facilitators of learning centres and development of question-banks for evaluation of the learning achievement of children enrolled in the learning centres established under project CAPE.

During 1988-89, seven publications developed under project CAPE were brought out. These included one *Abhyas Pustika* and six learning modules entitled *Aao Seekhen—100 tak ki Sankhyaen*, *Ganita Kriyaen Aur Sankhyaon Ke Gun*; *Dashmala men Ganitiya Sankriyaen Aur Mapan Seekhen*; *Aao Parivesh Ko Samajhen Jeevan Ko Khushal Banayen*; *Prithvi Kee Kahani Apni Zabani*; and *Detection and Prevention of Mental Handicap*.

### *Developmental Activities in Community Education and Participation (DACEP)*

Under the UNICEF-assisted Project Developmental Activities in Community Education and Participation (DACEP), the NCERT has been carrying out several activities related to the development of educational programmes to meet the educational needs of groups that are deprived, partially or totally, of access to education. During the year 1988-89, the Council provided guidance to the Community Education Centres established under the project and run by the State governments. Some advocacy programmes to promote community education programmes were undertaken in some of the States.



The removal of disparities and equalisation of educational opportunity by attending to the specific needs of those groups which have been denied equality of education opportunity so far, constitute an important area of concern in the field of school education. As part of the effort to equalise educational opportunity among all sections of society, the NCERT has been engaged in implementing several projects/programmes to promote the education of certain special groups, particularly girls and women, Scheduled Castes and Scheduled Tribes, educationally backward minorities and disabled children. The major thrusts of these programmes have been towards research activities to evolve appropriate strategies for equalisation of educational opportunity; to develop instructional/training materials and train personnel to promote education for women's equality; to promote education of the Scheduled Castes and Scheduled Tribes; to improve the quality of education in schools managed by educationally backward minorities; and to strengthen programmes for the education of the disabled.

#### **Education for Women's Equality**

The NCERT initiated several programmes and projects for promoting education of the girls and women. Research, development, training and extension activities directed to promote education for women's equality constituted some of the important tasks of the Women's Studies Unit (WSU) of the NIE during the year

under report.

#### *Action Research Projects*

As part of the effort to evolve appropriate strategies for promoting education of the girls and women, the Council initiated an action research project for developing the methodology of women's education and development. The main objectives of the project are to develop an integrated approach to education and development of girls and women by establishing linkages with other concerned departments and agencies, to develop appropriate methodologies of research and training to promote the education and development of girls and women, and to work out details of a six-week training programme on the methodology of women's education and development. A workshop on the 'Methodology of Women's Education and Development' was organised at New Delhi on 1 and 2 November 1988 to evolve appropriate strategies for women's education and development and to work out a course-outline for a six-week training programme on the methodology of women's education and development. The workshop was attended by 10 experts in the field of women's education. The Council also initiated activities related to another action research project for evolving a 'School-Based Programme for Promoting Equality of Sexes'. Under the project, a workshop was organised on 27 and 28 October 1988 to develop a framework for school-based action programmes for promoting education for women's equality. This workshop was attended by 40 participants.

The development of a 'Data Bank on Women's Education Development' is another important project of the Council. As a part of this project, a situational analysis of the education of the girl-child was prepared, including comprehensive data on the socio-economic and educational status of girls. Work is under progress on the analysis of the Fifth All India Educational Survey for preparing the National Level situational analysis.

### *Development of Instructional/Training Materials*

The Council undertook several activities related to the development of instructional/training materials to promote education for women's equality and to develop the format and guidelines for monitoring and evaluating programmes/projects directed at promoting the education and development of girls and women. A Workshop was organised to finalise exemplar resource materials in English to promote education for women's equality. This workshop was attended by 12 participants. A National Workshop for the development of awareness-generating materials in regional languages (Assamese, Bengali, Gujarati, Hindi, Oriya and Telugu) was held at New Delhi from 30 January to 3 February 1989. 40 participants attended this workshop.

The Council also initiated activities directed at incorporating ideas related to education for women's equality into the elementary and secondary teacher education curriculum as well as into the curriculum for M.Ed. For this purpose, a workshop was organised at New Delhi. This Workshop was attended by 30 teacher-educators from teacher training colleges and faculty members of university departments of education and experts on women's studies. The Council also organised a workshop on development of vocational and technical courses for girls and women. This workshop, held at Muzzafarnagar, Uttar Pradesh, from 28 to 30 November, 1988, was attended by 30 participants.

A three-day workshop was held by the Council to develop a format for monitoring and evaluating the programmes designed to promote education for Women's Equality. This workshop held from 23 to 25 November 1988 was attended by 20 experts.

The Council continued its activities related to eval-

uation of textbooks and supplementary readers prescribed at different stages of school education with a view to eliminate sexist bias in these materials. A workshop was organised at New Delhi for the development of guidelines for the removal of sexist bias from textbooks. 30 participants attended this workshop.

### *Orientation Programmes for Key Persons from States/UTs*

During 1988-89, the Council organised three regional workshops and one national workshop on education for women's equality to work out effective implementation modalities and action plans for the empowerment of women through education. These workshops were attended by key persons in the States and Union Territories who are or are likely to be involved in the implementation of programmes to promote education for women's equality. The first regional workshop, attended by 25 participants, was held at Kanpur from 26 to 28 April 1988; the second, attended by 97 participants, was held at Bhubaneswar from 11 to 13 May 1988; and the third, attended by 37 participants was held at Bombay from 18-20 May 1988. The participants at the regional workshop included officials of the State Departments of Education, SCERTs/SIEs, State Social Welfare Boards, Women's Studies Centres in Universities and representatives of voluntary organisations. The National Workshop on Education for Women's Equality was held at New Delhi on 8 and 9 June 1988. This workshop was attended by 34 participants. During this workshop, action plans for the empowerment of women through education were evolved.

The Council also organised a regional workshop for generating awareness on women's equality at Kurnool, Andhra Pradesh, from 4 to 7 October 1988. This workshop was attended by 35 participants from Government Training Institutions/Government Colleges of Education and the SCERT in Andhra Pradesh. The main objective of this workshop was to generate awareness among participants of issues relating to women's education and development and to develop a framework for school/institution and community-based

action programmes to promote education for women's equality. In addition to these, the Council organised three workshops on education for women's equality in collaboration with the Priyadarshani Centre for Women's Studies, A & D Women's College, Kanpur, to reorient Principals of schools/colleges to the different aspects and components of education for women's equality. The first workshop held from 22 to 24 October 1988 was attended by 40 participants. The second workshop held from 22 to 24 December 1988 was attended by 44 participants and the third held from 26 to 28 December 1988 was attended by 55 participants. In addition to these, the Council organised a workshop on education for women's equality at Imphal from 14 to 16 December 1988, a workshop on education for women's equality for district level educational functionaries at Udaipur, Rajasthan from 4 to 6 January 1989 and a workshop on education for women's equality for district education officers at Kanpur, Uttar Pradesh from 23 to 25 January 1989. The workshop held at Imphal was attended by 32 participants, the workshop at Udaipur by 82 participants and the workshop at Kanpur by 46 participants. The other activities carried out by the Council during the year 1988-89 include organisation of an orientation programme for district education officers and principals of elementary teacher training institutions held at Dharamshala, Himachal Pradesh, from 14 to 16 November 1988, and organisation of an orientation programme for key persons involved in implementing programmes for education for women's equality at Daman from 5 to 9 December 1988. The programme held at Dharamshala was attended by 21 participants and the programme held at Daman was attended by 96 participants.

### **Education of the Scheduled Castes/ Scheduled Tribes**

The NCERT continued its activities directed at promoting the education of the Scheduled Castes and Scheduled Tribes. Research and developmental activities aimed at promoting the education of the Scheduled Castes and Scheduled Tribes constituted an important aspect of the work of the Department of

Non-formal Education and Education of the Scheduled Castes and Scheduled Tribes (DNFE & E SC/ST) of the NIE. A comparative study of educational achievements of Scheduled Caste and non-Scheduled Caste students of Class X in schools in Uttar Pradesh was completed during the year under report. Activities under the evaluative study of the pre-matric scholarship scheme for Scheduled Caste and Scheduled Tribe students continued. The report in respect of 11 States (Scheduled Castes Cluster I) was completed during the year. The draft report on Cluster 1 (Scheduled Castes) has also been prepared and the collection of data in respect of Cluster II (SC/ST) was initiated.

The Council continued its tasks related to the preparation of primers/textbooks in tribal dialects. Two Working Group meetings and two workshops were organised to develop primers in seven tribal dialects using the regional language scripts. These Working Group meetings and workshops were attended by primary school teachers conversant with the concerned tribal dialects, and tribal language experts from Tribal Research Institutes and University Departments. A Working Group meeting was organised at Udhagamandalam from 18 to 27 August 1988 for preparing primers for Irula tribal children in Tamil Nadu. During the workshop, which was attended by 10 participants, a primer for Class I was prepared in the Irula-tribal dialect using the Tamil script. Another Working Group meeting was organised at Hyderabad from 6 to 15 September 1988 to develop a primer for Class II for use by Gond tribal children in Andhra Pradesh. This primer was developed in the Gondi tribal dialect using the Telugu script. Besides these, two workshops were organised for developing primers for Classes I and II in five tribal dialects using the Devanagari script for use of five tribes of Bihar—the Santal, Ho, Mundari, Kharia and Kurukh tribes. The first workshop attended by 30 participants, was organised at Ranchi from 10 to 13 November 1988, and the second workshop, attended by 31 participants, was organised at Ranchi from 1 to 3 March 1989. The primers for Santal, Ho, Mundari, Kharia and Kurukh tribes of Bihar are being developed in collaboration with the Central Institute of Indian Languages (CIIL), Mysore.

The Council has undertaken a project for the preparation of a *Bibliography on Educational Development of Scheduled Castes*. The main objective of the project is to develop reference literature on the educational development of Scheduled Castes. The work on the compilation of reference titles was completed during the year under report.

### **Education of the Educationally Backward Minorities**

The NCERT has taken up several programmes to improve educational standards in schools managed by educationally backward minorities, particularly the Muslims. The major programmes organised by the Council during 1988-89 include the organisation of seminar-cum-workshops on guidance services, a training course for career teachers, a refresher course for career teachers, and attachment programmes for in-service teachers. These programmes, coordinated by the Department of Field Services and Coordination (DFS&C) of the NIE, were organised by the Department of Educational Psychology, Counselling and Guidance (DEPC&G) of the NIE and the Regional Colleges of Education at Bhopal and Mysore. The Council also provided financial and technical support to the Regional Resources Centres set up for the training of teachers, principals and managers of schools managed by educationally backward minorities.

#### *Seminar-cum-Workshops*

The Council organised three seminar-cum-workshops on guidance services for principals and managers of schools run by educationally backward minorities in order to motivate them for training teachers in school-guidance services. 58 managers and principals of schools attended the three 3-day seminar-cum-workshops on guidance services held at New Delhi.

#### *Training of Career Teachers*

The Council has been organising a four-week training course on career guidance services for teachers of schools managed by the educationally backward

minorities. A training course for career teachers from these schools was organised from 27 March to 21 April 1989 at New Delhi. 30 career teachers attended this course.

#### *Refresher Course for Career Guidance Teachers*

The Council organised a refresher course for career guidance teachers to train them in the organisational skills involved in extending career guidance services to school students. The course, organised at New Delhi from 26 to 28 December 1988, was attended by 31 career teachers from different States who were earlier trained in the four-week training course for career teachers organised by the NCERT. The schools of the participating teachers were provided with funds by the Central Wakf Council to set up career guidance services in the schools.

#### *Attachment Programme for In-service Teachers*

The NCERT has been organising training courses ranging in duration from a week to about 10 days for teachers in science, mathematics, English, etc. from schools managed by the educationally-backward minorities in order to improve the professional competence of teachers in these schools. During 1988-89, two 10-day attachment programmes were conducted at the Regional Colleges of Education at Mysore and Bhopal from 16 to 25 January 1989 and from 10 to 19 February 1989 respectively. The main purpose of these attachment programmes was to orient the teachers to modern and innovative methods of teaching science and mathematics. 58 teachers were trained during the attachment programmes. These attachment programmes were organised in collaboration with the Central Wakf Council. In order to train teachers, principals, and managers of minority educational institutions, the NCERT had drawn up a scheme to set up regional resource centres in 1986. Under the scheme, with the Council's support, regional resource centres for training teachers, principals and managers from minority educational institutions were set up at Aligarh Muslim University, Aligarh; Jamia Millia Islamia, Delhi; Osmania University, Hyderabad; Marathwada University, Aurangabad; and Kashmir University, Srinagar.

The Regional Resource Centre located at Aligarh Muslim University has so far organised 20 workshops and training courses, each of 10 days duration, for training teachers in mathematics, physics, chemistry, life sciences, geography, social studies, Urdu, English and educational evaluation. These workshops/training courses were attended by 329 teachers belonging to minority educational institutions in Bihar, Orissa, Uttar Pradesh, West Bengal and the States in the north eastern region and the Union Territory of Andaman and Nicobar Islands.

## Education of the Disabled

Research, development, training and extension activities to promote education of disabled children constitute some of the important activities of the NCERT. The major focus of the programmes for education of the disabled undertaken by the Council during 1988-89 has been on the development of capabilities in the States and Union Territories for the effective implementation of educational services for the benefit of disabled children with a view to achieving the goal of education for all. The development of context-specific strategies for education of the disabled under the UNICEF-assisted Project Integrated Education for the Disabled (PIED), development of software for the application of educational technology to meet educational needs of disabled children, development of instructional materials for teachers, training of educational administrators at the State and sub-State levels in the planning and management of the centrally-sponsored scheme of Integrated Education for Disabled Children (IEDC), training of teacher educators of Special Education Units in Universities and Colleges of Teacher Education, and surveys and research to facilitate implementation of the scheme of IEDC constitute the major activities carried out by the Department of Teacher Education, Special Education and Extension Services (DTESEES) of the NIE during 1988-89.

### *Project Integrated Education for the Disabled (PIED)*

Several activities directed to develop context-specific strategies for education of disabled children were car-

ried out under the UNICEF-assisted Project Integrated Education for the Disabled (PIED). The main objectives of the PIED are to increase enrolment of disabled children in general schools so that they can be educated with other children; to improve retention of disabled children in general schools through improved educational facilities by way of curriculum adjustment and adaptation of instructional methods and materials to their needs; and to develop context-specific delivery modalities to facilitate education of the disabled children. During 1988-89, the PIED was implemented in the States of Haryana, Madhya Pradesh, Maharashtra, Mizoram, Nagaland, Orissa, Rajasthan and Tamil Nadu. The major activities carried out under PIED are described in the following sections.

*Identification and assessment of disabled children* An important activity carried out under the PIED was identification and assessment of disabled children for placement in general schools. During 1988-89, about 3,750 disabled children were identified for placement in general schools in blocks covered under the PIED. These include 1,044 children in Madhya Pradesh, 993 children in Maharashtra, 75 children in Nagaland, 345 children in Orissa, 883 children in Rajasthan and 410 children in Tamil Nadu. The tasks related to identification and assessment of disabled children in blocks covered under PIED were also initiated in Haryana and Mizoram. Besides the identification and assessment of disabled children for placement in general schools, community contact programmes were also organised in the States of Madhya Pradesh, Mizoram, Nagaland, Orissa, Rajasthan and Tamil Nadu. About 3,000 community members participated in the community contact programmes.

*Curriculum adjustment and adaptation of instructional methods and materials* Curriculum adjustment and adaptation of instructional methods and materials to the needs of disabled children is another important activity under the PIED. A workshop was organised from 4 to 13 October 1988 at SCERT, Haryana, to analyse the curriculum and textbooks in science for the primary stage to identify areas of learning difficulty encountered by hearing-impaired children. The work-

shop was attended by 25 participants who included teachers of the deaf, general teachers, teacher-educators and science education experts. Based on the discussions during the workshop, a handbook on the adaptation of the science curriculum and instruction for primary schools teaching hearing impaired children in the general classroom was brought out. Another workshop was organised to analyse the curriculum and textbooks in Hindi and to identify areas of learning difficulty encountered by hearing-impaired children while learning Hindi.

*Development of instructional materials* The Council continued its activities directed at developing instructional materials for disabled children. A workshop was organised at New Delhi on 21 and 22 December 1988 to develop a tape-slide programme on creative arts for disabled children. The workshop was attended by 15 participants. Another workshop was organised from 19 to 21 December 1988 for developing instructional materials for use by disabled children in primary schools. This workshop was attended by 15 participants. The Council also organised a workshop on 12 and 13 May 1988 for identifying themes and preparing briefs for video programmes for the education of disabled children. Briefs for video programmes on themes related to learning disability, hearing impairment, mental retardation and visual impairment were developed in the workshops. This workshop was attended by 16 participants. Besides these, a workshop was organised on 8 February 1989 to develop guidelines for establishing project area centres. 10 participants attended this workshop.

*Development of guidelines for education of low-vision children* A national workshop on education of low-vision children was organised from 27 February to 3 March 1989 at New Delhi to develop guidelines for the education of low-vision children. This workshop was attended by 10 participants. In addition to this, a Working Group Meeting on Large Printing Technology was organised on 30 and 31 January 1989 to develop guidelines for the selection of large print technology for making available the textual material to low-vision

children without the use of projection facilities. Based on these guidelines, an experiment in the education of low-vision children will be started during 1989-90 under the PIED.

*Training of educational administrators and teachers* During 1988-89, two orientation/training programmes were organised for educational administrators at the State and sub-State levels and two training programmes for members of the team for the implementation of the PIED. The main objectives of the orientation/training programmes for educational administrators at the State/sub-State levels and members of the team for PIED was to develop capabilities within the States to implement the scheme of Integrated Education of Disabled Children. The Council also organised a few training programmes for training teachers on the methodology for the identification of the disabled children. The teacher-training programmes were organised at two levels. The first level training was meant for all teachers in a particular block covered by the PIED, while the second-level training course of six-weeks duration was meant for a selected ten percent of the teachers who attended the first level training programmes. The teachers for the second level training programme were selected during the first level training programme on the basis of their enthusiasm to work in the area of education of disabled children, performance during training and their location enabling their easy access to a couple of primary schools. The details of the training programmes conducted during 1988-89 are given in Table 5.1.

*Computer Assisted Teaching of Devnagari Script to Pupils with Poor Locomotor Control*

In order to develop software for computer assisted teaching of the Devanagari script to pupils with poor locomotor control, two workshops were organised. These workshops were attended by computer experts, educationists, special educators and experts in Hindi. The first workshop was held on 28 and 29 May 1988 at Pune. This workshop was attended by 10 participants. During this workshop, a framework for the development of computer programmes to teach Devan-

**TABLE 5.1**

*Training/Orientation Programmes Conducted During 1988-89*

S.No.	Title of the Programme	Date/ duration	venue	Number of participants
1.	Orientation Programme on PIED for educational administrators in Southern Region	21 to 24 September 1988	Hyderabad	22
2.	Training programme on functional assessment for a trainee from Mizoram (Attachment Programme)	6 to 20 November 1988	NCERT New Delhi	1
3.	Training Programme for members of the team for PIED from Mizoram and Tamil Nadu	21 November to 2 December 1988	NCERT Delhi	8
4.	Orientation Programme on PIED for educational administrators in Western Region	4 to 16 February 1989	SCERT Pune	30
5.	First level training programme for teachers of Masturi Block in Madhya Pradesh on identification of disabled children and management of their education	i) 30 May to 4 June 88 ii) 6 to 11 June 1988 iii) 20 to 25 June 1988 iv) 27 June to 2 July 1988 v) 11 to 16 July 1988	Masturi Block, Pune " "	586
6.	First level training programme for teachers of Chhabra Block in Rajasthan on identification of disabled children and management of their education	i) 22 to 27 June 1988 ii) 25 to 31 July 1988 iii) 1 to 5 August, 1988 iv) 6 to 10 August 1988	Chhabra Block, Rajasthan	400
7.	First level training programme for teachers in Mizoram on identification of disabled children	25 to 30 September 1988	Aizawl	300
8.	First level training programme for teachers of Bhiwani Block in Haryana on identification of disabled children	24 to 28 February 1989	Bhiwani Block, Haryana	91
9.	Second level training programme for selected teachers in Mizoram on education of disabled children	26 Feb. to 23 March 1989	Aizawl	60
10.	Second level training programme for selected teachers in Madhya Pradesh on education of disabled children	10 February to 25 March 1989	Bhopal	47

agari script to pupils with poor locomotor control was developed. The second workshop was organised at New Delhi from 27 February to 3 March 1989. This workshop was attended by nine participants. During this workshop, scripts for computer programmes were developed for experimental tryout. Three sample programmes were also developed during the workshop.

*Development of Tools for Identifying Learning Disability*

The Council organised two Working Group meetings for developing tools for identifying learning disability in the perceptual and production areas. The first Working Group meeting, attended by 10 experts, was orga-

nised from 18 to 22 July 1988 at New Delhi. During this workshop tools for identification of learning disability were developed. The tools covered such areas as visual perception, letter perception, number and sign perception, picture vocabulary, auditory perception, object vocabulary, function definition vocabulary, semantic test in production kinship terms, time concept-production, space concept-production, syntax test-numbers, syntax test-gender, discourse-comprehension of sequence test and sequence in verb phrase.

Another functional approach to the assessment of learning disability based on the error analysis approach

in language and mathematics was developed during the second Working Group meeting. The error analysis approach involved analysis of errors in speaking, in reading and writing, in arithmetic numbers and errors committed in arithmetic operations. A study of the discrepancy between identification and assessment of learning disability based on psychological testing and error-analysis approach was also initiated.

### *Special Education Curriculum for General Teachers*

In order to provide Special Education input during the preservice training of all general teachers the curriculum and guidelines on Special Education input in programmes of pre-service teacher education were developed. The input has been considered at three levels. At *level one*, a core programme on identification of disabled children, functional assessment and classroom management is to be incorporated in different teacher education courses. The plug points have been identified. For those prospective teachers who are interested in more inputs in Special Education, an elective course was designed at *level two*. Both these levels of special education constitute components of pre-service teacher education programmes based on the NCTE Curriculum Framework. At *level three*, a Multi-category Teacher Education Programme of one academic year duration was designed. This course provides knowledge and competencies in both cognitive and sensory disabilities. The teachers undertaking the level three course are expected to support general teachers teaching disabled children along with others in their classes in general schools. In addition to these, a few training modules on special education were developed in a Working Group meeting held at New Delhi from 8 to 10 March 1989.

### *Survey/Research*

Three research studies and surveys related to education of the disabled were completed during the year under report. The progress of implementation of the IEDC scheme was surveyed through a questionnaire. Data from 12 States was received and the report was prepared. In addition to this, a survey of instructional material developed by different agencies in govern-

mental and non-governmental organisations was undertaken. The survey covered information regarding the theme, language in which it has been published, target group, mode (print-non print), address from which available and the price. The directory of this information is ready for publication.

Another study entitled 'A Study to Explore Linguistic Competence of Hearing Impaired Studying in IED and Special Schools' was also completed. The study explored the linguistic competence of hearing impaired children studying in IED and Special Schools of Delhi and Haryana through a case-study approach. The main objectives of the study were to compare the linguistic competence of hearing-impaired children studying in IED settings with those studying in special schools.

The case-study approach was followed to assess the linguistic variables. 50 hearing impaired children studying in Classes IV and V in IED settings and special schools constituted the sample of this study.

The major findings of the study indicated that the hearing impaired children studying in IED settings had better linguistic skills and non-verbal intelligence than the hearing impaired children studying in special schools. The performance of the hearing impaired was found to be poorer than that of children without hearing impairment.

### *Dissemination/Publications*

For information exchange, four issues of the quarterly newsletter *COMMUNICATION: Equal Educational Opportunity* were brought out and distributed to all the schools in the PIED blocks, State IED Cells, non-governmental organisations involved in implementation of IED programmes and schools with IED programmes.

During the year 1988-89, the following publications were finalised for publication.

- (i) One Year Multi-category Training Programme;
- (ii) Six Weeks Training Programme—PIED;
- (iii) Use of Educational Toys for Disabled Children (for publication in Marathi, Mizo and



Tamil);

- (iv) Functional Assessment of Disabled Children (in press);
- (v) Instructional Material for Learning Disabled

Children;

- (vi) Play and the Disabled Children; and
- (vii) A Teacher's Handbook on Adaptation in Science Curriculum.

## REORIENTATION OF THE CONTENT AND PROCESS OF EDUCATION

Reorientation of the content and process of education at the school stage, as envisaged in the National Policy on Education (NPE)—1986 has been one of the most important concerns of the NCERT since the formulation of the NPE. The NCERT has initiated a series of coordinated activities for reorientation of the content and process of education at the school stage in order to give concrete shape to the emerging national system of education. These activities were directed towards the revision of the national curricular framework in the light of the NPE, the development of curriculum guidelines and syllabi based on the national curricular framework, the development of instructional materials in different curricular areas at the primary stage, the development of instructional materials in languages, social sciences and business studies for different stages of school education, implementation of the revised work experience programmes at all stages of school education, improvement of science and mathematics education at the school stage, development of science equipment, and examination reform including introduction of continuous and comprehensive evaluation to improve teaching-learning processes. The major activities carried out during 1988-89 by the NCERT for reorientation of the content and process of education at the school stage are given in the following sections.

### **Development of National Curricular Framework**

The "National Curriculum for Primary and Secondary Education—A Framework" which was developed by the NCERT with the help of the Departments/Directorates of Education, -SCERTs/SIEs, Boards of Secondary/Higher Secondary Education and other agencies at the state level and published in 1986 was revised in the light of the thrusts envisaged in the NPE-1986. The revised document entitled "National Curriculum for Elementary and Secondary Education—A Framework" was published in April 1988. A draft curricular framework for higher secondary education was also developed.

### **Development of Curriculum Guidelines and Syllabi**

The draft guidelines for the development of curriculum for the primary stage of education prepared by the Council in 1986-87, were revised in the light of the suggestions received from the various agencies in the country. In the revised document entitled "Minimum Levels of Learning at the Primary Stage—Syllabi Including Common Core Components", the minimum levels of learning in respect of curricular areas for all Classes at the primary stage have been indicated. This document was sent to the State/UT level agencies respons-

ible for renewal of curriculum and development of instructional materials. The curriculum guidelines and syllabi for the upper primary and secondary stages were also sent to the state level agencies for facilitating development of instructional materials, including textbooks, in different curricular areas.

### Development of Instructional Materials for Class V

The revised instructional materials, including the new textbooks, for Classes I & III developed by the NCERT during 1986-87 were introduced in the Kendriya Vidyalayas during the academic session 1987-88. The new textbooks for Classes II & IV developed by the

NCERT during 1987-88 were introduced in the Kendriya Vidyalayas during the academic session 1988-89. During 1988-89, the Department of Pre-School and Elementary Education (DPSEE) of the NIE undertook the task of developing new textbooks for Class V in the curricular areas of Language (Hindi), Mathematics, Environmental Studies Part I (Social Studies), Environmental Studies Part II (Science) and a Teacher's Manual for Art Education for use of teachers teaching Art Education in Class V. Nine meetings/workshops were organised by the DPSEE for developing/reviewing the manuscripts of these textbooks and the teacher's manual. The details of these workshops/meetings are given in Table 6.1.

**TABLE 6.1**  
*Meetings/Workshops organised during 1988-89 for developing textbooks and teachers' manuals for Class V*

Sl. No.	Title of the Programme	Date(s)	Venue
1.	Meeting of the Advisory Committee for finalising the format of the textbook in Environmental Studies (Science) for Class V	19 to 25 July 1988	NCERT New Delhi
2.	Meeting of the Advisory Committee of Hindi textbook for Class V	16 to 23 August 1988	NCERT New Delhi
3.	Meeting of the Advisory Committee to review the manuscript of the textbook (Hindi version) in Environmental Studies (Social Studies) for Class V	19 to 25 September 1988	NCERT New Delhi
4.	Meeting of the Advisory Committee for reviewing the textbook in Environmental Studies (Social Studies) for Class V	26 to 30 September 1988	NCERT New Delhi
5.	Working Group meeting to finalise the manuscript of the textbook in Environmental Studies (Science) for Class V	26 to 30 September 1988	NCERT New Delhi
6.	Meeting of the authors/experts for reviewing and editing the manuscript of the textbook (Hindi version) in Environmental Studies (Social Studies) for Class V	9 to 16 October 1988	NCERT New Delhi
7.	Workshop for reviewing the manuscript of the textbook in Mathematics for Class V	11 to 17 October 1988	NCERT New Delhi
8.	Meeting of the Review Committee for Hindi textbook for Class V	23 to 28 November 1988	NCERT New Delhi
9.	Meeting for reviewing the manuscript of the Teacher's Manual in Art Education for Class V	19 to 23 December 1988	NCERT New Delhi

## Education in Social Sciences and Humanities

An important task of the NCERT has been the development of instructional materials in Social Sciences and Humanities for different stages of school education. The new textbooks in Civics, History and Geography for Class VI developed by the Council during 1986-87 were introduced in the Kendriya Vidyalayas during the academic session 1987-88. The new textbooks in these subject areas for Class VII were introduced in the Kendriya Vidyalayas during the academic session 1988-89. Similarly, the revised textbooks in Hindi for Classes I, III and VI developed by the NCERT during 1986-87 were introduced in Kendriya Vidyalayas during the academic session 1987-88 and the revised textbooks in Hindi for Classes II, IV & VII developed by the NCERT during 1987-88, were introduced in Kendriya Vidyalayas during the academic session 1988-89.

The activities related to the development of curriculum and instructional materials in Social Sciences and Humanities for different stages of school education are coordinated by the Department of Social Sciences and Humanities (DESSH) of the NIE. During 1988-89, the DESSH completed the tasks related to the development of new textbooks in Civics, Geography and History for Classes VIII & IX and textbooks in Geography, History and Political Science for Class XI. The DESSH also undertook several activities directed towards development of instructional materials in Languages (Hindi, English and Sanskrit), development of textbook

in Business Studies and Accountancy and development of instructional materials for strengthening Art Education and teaching of Yoga in schools. The DESSH also continued the activities related to the 'Reading to Learn' project, and evaluation of textbooks from the standpoint of national integration and continued to act as the central, technical, coordinating and monitoring agency for implementation of the National Population Education Project.

### *Development of Instructional Materials in History Civics/Political Science and Geography*

During the year 1988-89, a series of workshops/meetings were organised by the NCERT for developing and reviewing the manuscripts of the textbooks in Civics for Class VIII, textbook in Political Science for Classes XI, XII, textbook in Geography for Classes VIII, XI & XII. The details of these workshops/meetings organised during 1988-89 are given in Table 6.2.

### *Development of Instructional Materials in Languages*

During the year under report, the Council organised several workshops/meetings for development of instructional materials, including textbooks, in Hindi, English and Sanskrit. The details of these workshops/meetings are given in Table 6.3. In addition to these, the Council organised an orientation course for key persons on teaching of Hindi at the primary stage from 6 to 10 March 1989 and an orientation programme on 24 February 1989 for teachers teaching Hindi as the second and third language.

**TABLE 6.2**  
*Workshops/Meetings organised during 1988-89 for development of textbooks in Civics for Class VIII, Geography for Classes VIII, XI & XII and Political Science for Classes XI & XII*

Sl. No.	Title of the Programme	Date(s)	Venue
1.	Workshop for revision and finalisation of the manuscript of the textbook in Civics for Class VIII	1 to 5 August 1988	NCERT New Delhi
2.	Workshop for review and finalisation of the manuscript of the textbook in Political Science for Classes XI & XII	18 to 22 July 1988	NCERT New Delhi

Sl. No.	Title of the Programme	Date(s)	Venue
3.	Workshop for preparation of textbook in Geography for Class VIII	8 to 12 August 1988	NCERT New Delhi
4.	Meeting to review and finalise the manuscript of the Hindi version of the textbook in Political Science for Classes XI & XII	14 to 18 November 1988	NCERT New Delhi
5.	Meeting to review and finalise the manuscript of the Hindi version of the textbook in Geography for Classes XI & XII	30 January to 3 February 1989	NCERT New Delhi
6.	Meeting to review and finalise the manuscript of the Hindi version of the textbook in Political Science for Class XI & XII	30 January to 3 February 1989	NCERT New Delhi
7.	Meeting to review and finalise the manuscript of the textbook in Political Science for Classes XI & XII	13 to 17 February 1989	NCERT New Delhi

**TABLE 6.3**  
*Workshops/meetings organised during 1988-89 for developing instructional materials in Languages (Hindi, English and Sanskrit)*

Sl. No.	Title of the Programme	Date(s)	Venue
<i>Instructional Materials in Hindi</i>			
1.	Workshop for preparation of textbook entitled "Hamari Hindi" Part-III for Navodaya Vidyalayas	11 & 12 April 1988	NCERT New Delhi
2.	Workshop for preparation of instructional materials on Hindi Grammar and Composition for the upper primary, secondary and higher secondary stages	16 to 21 August 1988	Brindaban Uttar Pradesh
3.	Workshop for preparation of textbook entitled "Hamari Hindi" Part III for Navodaya Vidyalayas	19 to 25 September 1988	Mysore
4.	Workshop for preparation of Hindi textbooks for Class X (A&B Courses)	26 to 30 September 1988	NCERT New Delhi
5.	Workshop for preparation of Hindi textbooks for Class X (A&B Courses)	22 to 28 December 1988	NCERT New Delhi
6.	Workshop for preparation of textbook in Hindi entitled "Arun-Bharati" Part-V for Class V (for Arunachal Pradesh)	23 to 30 January 1989	NCERT New Delhi
7.	Workshop for preparation of Workbook of "Arun Bharati" Part-V for Class V (for Arunachal Pradesh)	23 to 30 March 1989	NCERT New Delhi
8.	Workshop for preparation of Activities Book based on "Kishore Bharati" I, II & III for teachers teaching Hindi at the upper primary stage	1 to 8 March 1989	Patna
9.	Workshop for development of scripts for audio-cassettes based on the textbook titled "Hamari Hindi" Part-I	31 March to 3 April 1989	NCERT New Delhi
10.	Workshop for preparation of Hindi Textbooks for Class VIII	23 to 30 May 1988	NCERT New Delhi

# 1988-89

Sl. No.	Title of the Programme	Date(s)	Venue
11.	-do-	15 to 20 June 1988	Nainital
12.	-do-	16 to 21 August 1988	NCERT New Delhi
13.	Workshop for preparation of workbooks based on the Hindi textbook for Class V	12 to 16 September 1988	NCERT New Delhi
14.	Workshop for preparation of Hindi Dictionary for use of students at the upper primary stage	28 November to 5 December 1988	Varanasi
15.	Workshop for preparation of Hindi textbooks for Class XII	13 to 20 January 1989	Madras
16.	Workshop for preparation of Hindi textbooks for Classes X & XII	20 to 24 February 1989	NCERT New Delhi
	<i>Instructional Materials in English</i>	18 to 21 July 1988	NCERT New Delhi
1.	Meeting of the Working Group in English to improve teaching of English in secondary schools	November 1988	Bangalore
2.	Workshop for preparation of audio tapes on English Teaching in Class VII in Navodaya Vidyalayas	11 & 12 October 1988	NCERT New Delhi
3.	Workshop for finalisation of the manuscript of the textbook in English for Class X (Course B)	30 January to 3 February 1989	Bangalore
4.	Workshop for development of ancillary materials based on the Book "Let's Learn English"	31 March to 5 April 1989	NCERT New Delhi
5.	Workshop for development of ancillary materials in English Readings in language and language teaching		
	<i>Instructional Materials in Sanskrit</i>	28 to 31 December 1988	New Delhi
1.	Workshop for preparation of Sanskrit textbook (Part of Hindi A Course) for Class VI	7 to 11 February 1989	Puri
2.	Workshop for preparation of Sanskrit textbook for Class IX (Part of Hindi A Course)	11 to 15 July 1988	NCERT New Delhi
3.	Workshop for preparation of story books from Sanskrit literature highlighting values of national unity	25 August to 1 September 1988	Delhi
4.	Working Group meeting for revision of textbook in Sanskrit for Class VIII	28 November to 2 December 1988	NCERT New Delhi
5.	Workshop for revision of textbook in Sanskrit for Class XI		
6.	Workshop for preparation of syllabus in Sanskrit for Classes VI to X	6 to 8 December 1988	NCERT New Delhi
7.	Workshop for preparation of story books from Sanskrit literature highlighting values of national unity	27 to 30 March 1989	Delhi

## Development of Textbooks in Business Studies and Accountancy

The Council initiated several activities related to the

task of developing textbooks in Business Studies and Accountancy for Classes XI and XII. The main focus of the activities during 1988-89 was on development of textbooks for Class XI. Five workshops/meetings were

held for this purpose. The details of the meetings/workshops organised during the period under report are given in Table 6.4.

### *Development of Instructional Materials in Art Education*

The Council has been engaged in the task of developing instructional materials and other teaching resources to facilitate effective implementation of the curricular area of Art Education at different stages of school education. A workshop was organised at New Delhi from 27 February to 1 March 1989 for preparation of instructional materials and other teaching resources related to different art education activities. In addition to these, in order to promote art education activities in schools, the Council organised a camp at Pune from 22 to 30 October 1988 for art teachers in primary and secondary schools and for teacher educators in Maharashtra, a creative art club for children, parents and teachers from 13 to 30 March 1989 at New Delhi and an orientation programme for teachers and teacher educators in creative arts for the disabled from 23 March to 1 April 1989 at New Delhi.

### *Development of Instructional Materials on Yoga*

During the year under report, the Council organised two workshops for development of instructional materials on yoga. The first workshop was held from 21 to 23 December 1988 and the second from 8 to 11 March 1989.

### *Development of Handbook for Economics Teachers*

The Council has undertaken the task of preparing a Handbook for Economics teachers in schools. In this connection, a workshop of experts and teachers was held at New Delhi from 16 to 20 January 1989.

### *Development of Syllabus in General Studies*

The NCERT initiated activities directed towards the development of syllabus in General Studies which has been introduced as an integral part of the curriculum for the +2 stage. A workshop was organised by the Council at Calcutta from 23 to 27 January 1989 to develop a syllabus in General Studies at the +2 Stage.

### *Reading to Learn Series*

The NCERT has launched a new series of books in English and Hindi for children under the 'Reading to Learn' Series. The books under this series aim at grooming the children to become adept at reading, inculcating in them love for books and making them aware of the world of wonder and beauty around them. Under the Reading to Learn Series, five titles in Hindi were published during 1988-89. Nine meetings/workshops were organised for preparing the manuscripts of the titles to be brought out under the Reading to Learn Series. The details of these meetings/workshops are given in Table 6.5.

**TABLE 6.4**  
*Meetings/Workshops organised during 1988-89 for developing textbooks in Business Studies and Accountancy*

Sl. No.	Title of the Programme	Date(s)	Venue
1.	Meeting of the Advisory Board in Commerce	1 to 3 August 1988	Mysore
2.	Meeting of the Advisory Committee for developing curriculum in Business Studies and Accountancy at the higher secondary stage	27 & 28 March 1989	NCERT New Delhi
3.	Meeting of experts to develop textbooks in Business Studies and Accountancy for Class XI	10 to 15 October 1988	NCERT New Delhi
4.	Meeting of experts to develop textbooks in Business Studies and Accountancy for Class XI	5 to 7 November 1988	NCERT New Delhi
5.	Meeting to develop textbook in Accountancy for Class XI	23, 24 & 26 to 28 December 1988	NCERT New Delhi

**TABLE 6.5**

*Workshops/Meetings organised during 1988-89 for development of materials under the Reading to Learn Series*

Sl. No.	Title of the Programme	Date(s)	Venue
1.	Meeting of experts for development of materials under the Reading to Learn Series—English	11 & 12 April 1988	NCERT New Delhi
2.	Meeting of experts for development of materials under the Reading to Learn Series—Hindi	9 to 13 May 1988	NCERT New Delhi
3.	Meeting of experts for development of materials under the Reading to Learn Series—Hindi	23 & 24 May 1988	NCERT New Delhi
4.	Meeting of experts for development of materials under the Reading to Learn Series—Hindi	10 June 1988	NCERT New Delhi
5.	Meeting of experts for development of materials under the Reading to Learn Series—Hindi	19 to 23 August 1988	Srinagar
6.	Meeting of experts for development of materials under the Reading to Learn Series—Hindi	16 November 1988	NCERT New Delhi
7.	Editorial Board meeting under the Reading to Learn Project in English	24 to 26 October 1988	NCERT New Delhi
8.	Meeting of experts for development of materials under the Reading to Learn Series—Hindi	29 November to 3 December 1988	Trivandrum
9.	Meeting of experts for development of materials under the Reading to Learn Series—Hindi	6 to 10 March 1989	NCERT New Delhi

### *Evaluation of Textbooks from the Standpoint of National Integration*

As part of the programmes to promote national integration and study of India's freedom movement, the Council organised two workshops to evaluate the new textbooks in History from the standpoint of national integration and adequacy and appropriateness of the content related to the study of India's freedom struggle. During 1988-89, new textbooks in History developed in the States of Andhra Pradesh, Bihar, Gujarat, Maharashtra, Rajasthan and Uttar Pradesh were evaluated from the standpoint of national integration. For this purpose, two workshops were held. The first workshop was held at Gandhinagar from 18 to 20 August 1988 and the second at Trivandrum from 30 March to 3 April 1989.

### *Special Projects*

The Council has also been engaged in the implementation of certain special programmes/projects related to development of curriculum and instructional mater-

ials in the areas of social sciences and humanities. Several activities were carried out as part of the work on these projects by the DESSH during 1988-89. This include the following:

1. Preparation of a dictionary of national biography for school children. Under this project, a meeting was held at Goa from 21 to 23 September 1988. During this meeting a general framework of the dictionary was developed and the personalities to be included in the dictionary were identified.
2. Preparation of the country report of the Joint Research Study on "Some Critical Aspects of Secondary Education in the countries of Asia and the Pacific" conducted under the auspices of the UNESCO-NIER Regional Programme for Educational Development in Asia and the Pacific. The report of the study was published by the National Institute for Educational Research (NIER), Japan in December 1988.
3. Organisation of an All-India Competition on Children's Literature. The authors of the selected manuscripts on Children's Literature were given awards and certificates.



4. Organisation of a programme of seminar readings for school teachers. The selected teachers were given cash awards and merit certificates.
5. Preparation of teaching-learning material for neoliterates of Himachal Pradesh in collaboration with the Regional Resource Centre, Chandigarh. The manuscripts of three titles were finalised after pretesting in rural/tribal centres.

### Population Education

During 1988-89, the activities under the National Population Education Project were primarily directed towards promoting effective integration of Population Education elements into the content and process of sch-

ool education. These included finalisation of Minimum Essential Contents of Population Education for different stages of school education, Development of Compendium of Lessons, Development of National Source Book on Population Education, Production of Video programmes on Core Themes, Review of Instructional and Training Materials developed in States, Review of Supplementary Reading Materials, Training of Teacher Educators and Project Personnel, Development of Evaluation Tools for the students of +2 stage and Development of a scheme for quiz competition.

The major activities carried out by the NCERT under the National Population Education Project are given in Table 6.6.

**TABLE 6.6**  
*Meetings/Workshops organised during 1988-89 under the National Population Education Project*

Sl. No.	Title of the programme	Date(s)	Venue	No. of participants
1.	National Workshop for finalisation of Minimum Essential Contents of Population Education	30 March to 3 April 1988	Patna	40
2.	Workshop to develop outlines of the National Source Book on Population Education	7 to 11 April 1988	Mysore	20
3.	Workshop to Review Supplementary Reading Materials for Secondary Stage	25 to 29 May 1988	Shimla	20
4.	Workshop to develop Compendium of Lessons	20 September to 10 October 1988	New Delhi	30
5.	Review of Instructional and Training Materials in Hindi	7 to 11 March 1989	New Delhi	30
6.	Workshop to review chapters of the National Source Book on Population Education	13 to 17 March 1989	New Delhi	30
7.	Workshop to prepare the Scheme for Development of Evaluation Tools for the Students of +2 stage	23 to 25 January 1989	New Delhi	10
8.	Workshop to develop Attitude Scale	27 February to 3 March 1989	New Delhi	20
9.	Project Progress Review Meeting I	2 to 6 November 1988	Mysore	
10.	Project Progress Review Meeting II	14 to 18 November 1988	New Delhi	
11.	Tripartite Project Review Meeting	14 November 1988	New Delhi	
12.	Workshop to develop Scheme for Quiz Competition	10 to 14 October 1988	Bangalore	25

## Training of Work Experience Teachers

The NCERT has been training key persons from the States/UTs to facilitate effective implementation of the tasks related to reorientation of the content and process of education. As part of the effort to promote effective implementation of the revised work experience programme at different stages of school education, the Department of Vocationalisation of Education (DVE) of the NIE has been organising orientation/training programmes on work experience for key persons from States/UTs. During 1988-89, five orientation pro-

grammes on work experience were conducted for 119 key persons from Andhra Pradesh, Karnataka, Madhya Pradesh and two orientation courses for 90 work experience teachers working in Navodaya Vidyalayas. In addition to these, a ten-day training programme on work experience was organised for 48 work experience teachers working in collaboration with voluntary organisations and a 6-day orientation programme in instructional material development on work experience. The details of the orientation/training courses conducted by the DVE during 1988-89 are given in Table 6.7.

TABLE 6.7

*Orientation/Training Programmes on Work Experience conducted during 1988-89*

S.No.	Title of the Programme	Dates	Venue	No. of participants
<i>Orientation Programme on Work Experience</i>				
1.	Orientation Programme on Work Experience for Key Persons of Andhra Pradesh	9 to 12 May 1988	SCERT Hyderabad	56
2.	Orientation Course on Work Experience for Key Persons of Madhya Pradesh	3 to 6 October 1988	B.T.I. Bijalpur Indore	33
3.	Orientation Course on Work Experience for Teachers of Navodaya Vidyalayas	24 to 28 October 1988	NCERT New Delhi	45
4.	Orientation Course on Work Experience for Teachers of Navodaya Vidyalayas	19 to 23 December 1988	NCERT New Delhi	45
5.	Orientation Programme on Work Experience for Key Persons of Karnataka State	18 to 21 January 1989	Bangalore	30
<i>Training Programme on Work Experience</i>				
1.	Training of Work Experience Teachers Working in Collaboration with Voluntary Organisations	15 to 24 November 1988	Khiroda, Distt. Jalgaon (Maharashtra)	48
<i>Orientation Programme on Instructional Material Development on Work Experience</i>				
1.	Orientation Programme on Development of Exemplar Instructional Material on Work Experience related to Health Care for Mothers and Children	12 to 17 September 1988	NCERT New Delhi	9

### **Improvement of Science and Mathematics Education**

One of the major concerns of the NCERT has been the improvement of science and mathematics education at all stages of school education. The Department of Education in Science and Mathematics (DESM) has been engaged in development of instructional materials in science and mathematics, training and extension activities as well as research and development activities directed to improve science and mathematics education at the school stage. The DESM also acts as the nodal agency at the national level for implementation of the centrally sponsored "Scheme for the Improvement of Science Education in Schools" and the Computer Literary and Studies in Schools (CLASS) project being implemented in the States/Union Territories.

The major activities carried out by the DESM during 1988-89 include:

- Development of instructional packages, including textbooks in Science and Mathematics for Classes VII to XII.
- Development of teachers' guides, laboratory manuals, supplementary reading materials, teaching aids, etc. to facilitate effective transaction of the new textbooks.
- Development of popular science materials to promote interest in science and to inculcate the scientific temper.
- Development of supplementary books in mathematics for students who want to compete for various All India Competitive Examinations particularly for admission to the Engineering Colleges.
- Development of guidelines for different levels of functionaries in States to facilitate effective implementation of programmes for improvement of science and mathematics education in schools.
- Organisation of the 17th National Science Exhibition for Children to encourage scientific creativity in the children.
- Organisation of out-of-school activities in science and mathematics to nurture interest and talent in science and mathematics.
- Study of the effective utilisation of science laboratories in schools so as to take necessary steps for better functioning of laboratories in the school system.
- Development of computer software packages under the CLASS project and training of teachers in the use of computers.

### *Development of Instructional Materials in Science and Mathematics*

Development of instructional materials, including new textbooks, in Science and Mathematics for Classes VII to XII in the context of efforts to reorient the content and process of education at the school stage as envisaged in the NPE—1986, constituted the major task of the Council during 1988-89. To develop the revised instructional materials, including textbooks, in Science and Mathematics for Classes VII to XII, a Committee under the Chairmanship of Professor C.N.R. Rao, Chairman, Prime Minister's Science Advisory Committee and Director, Indian Institute of Science, Bangalore, was set up. Subsequently, five sub-Committees one each for integrated Science (Classes VII to X), Mathematics (Classes VI to XII), Physics (Classes XI & XII), Chemistry (Classes XI & XII) and Biology (Classes XI & XII) were set up for developing instructional materials, including textbooks, in Science and Mathematics. The details of the new textbooks in Science and Mathematics developed during 1988-89 are given in Table 6.8. In addition to these the Council also developed a supplementary book in Mathematics entitled "Elementary Dynamics" for the benefit of gifted students.

A series of workshops and meetings were organised during 1988-89 for the development of instructional materials, including textbooks, in Science and Mathematics. Besides the members of the writing teams, these meetings/workshops were also attended

by University Professors, classroom teachers, teacher educators, curriculum specialists and educational administrators. In addition to these, four workshops on effective utilisation of laboratory at the secondary

stage were also organised during the year under report. The details of the workshops/meetings held in connection with the development of instructional materials in Science and Mathematics are given in Table 6.9.

**TABLE 6.8**  
*Textbooks in Science and Mathematics developed during 1988-89*

Sr. No.	Title of the Book	Class	Chairman of the Writing Team
1.	A textbook of Mathematics—Part I	X	Professor U.N. Singh, Ex-Vice Chancellor, Allahabad University
2.	A textbook of Mathematics-Part II	X	Professor U.N. Singh, Ex-Vice-Chancellor, Allahabad University
3.	A textbook of Mathematics-Part I	XI	Professor Izhar Husain, Aligarh Muslim University, Aligarh
4.	A textbook of Mathematics-Part II	XI	Professor Izhar Husain, Aligarh Muslim University, Aligarh
5.	A textbook of Mathematics-Part I	VIII	Professor J.N. Kapur (Retired), Indian Institute of Technology, Kanpur
6.	A textbook of Mathematics-Part II	VII	Professor J.N. Kapur (Retired), Indian Institute of Technology, Kanpur
7.	A textbook of Physics-Part I	XII	Professor V.G. Bhide, Vice-Chancellor, Poona University, Pune
8.	A textbook of Physics-Part I	XI	Professor V.G. Bhide, Vice Chancellor, Poona University, Pune
9.	A textbook of Physics-Part II	XI	Professor V.G. Bhide, Vice Chancellor, Poona University, Pune
10.	A textbook of Chemistry-Part I	XI	Professor C.N.R. Rao, Director, Indian Institute of Science (IISc), Bangalore
11.	A textbook of Chemistry-Part II	XI	Professor, C.N.R. Rao, Director, Indian Institute of Science (IISc), Bangalore
12.	A textbook of Biology-Part I	XI	Professor H.Y. Mohan Ram, University of Delhi, Delhi
13.	A textbook of Biology-Part II	XI	Professor H.Y. Mohan Ram, University of Delhi, Delhi
14.	A textbook of Science-Part I	IX	Dr D. Balasubramaniam, Centre for Cellular and Molecular Biology (CCMB), Hyderabad
15.	A textbook of Science-Part II	IX	Dr D. Balasubramaniam, CCMB, Hyderabad
16.	A textbook of Science	VII	Dr D. Balasubramaniam, CCMB, Hyderabad

TABLE 6.9

Workshops/meeting held during 1988-89 for development of instructional materials in Science and Mathematics

Sr. No.	Title of the Programme	Venue of the Programme	Dates	No. of participants
1.	Workshop for Development of Instructional Packages in Mathematics for Class IX	NCERT New Delhi	11 & 12 April 1988	12
2.	Meeting of the authors of Class X Science textbook	CCMB Hyderabad	16 to 18 April 1988	4
3.	Meeting of the Authors of Class VIII Science textbook	-do-	28 April to 1 May 1988	5
4.	Workshop for Development of Instructional Packages in Mathematics for Class X	NCERT New Delhi	10 & 11 May 1988	3
5.	Workshop for Development of teachers' guide for Class VII Science textbooks	Bharatiya Vidya Bhavan, Cochin	25 May to 1 June 1988	22
6.	Meeting of the Writing Team for the development of Class XII Chemistry textbook	IISc., Bangalore	3 & 4 June 1988	5
7.	Workshop for preparation of draft guidelines, and adjustment of the NCERT's instructional material for teaching Science for Class VI	NCERT New Delhi	7 to 10 June 1988	2
8.	Meeting of the writing team to develop the textbook of Biology for Class XII	IISc., Bangalore	10 & 11 June 1988	7
9.	Meeting of the writing team for the development of Class X Science textbook	CCMB Hyderabad	13 to 15 June 1988	6
10.	Development of Instructional Packages for +2 stages in Physics (Class XI)	IISc., Bangalore	15 & 16 June 1988	10
11.	Meeting of the Writing Team for the development of Class VIII Science textbook	CCMB Hyderabad	16 to 18 June 1988	5
12.	Workshop for Development of Instructional packages for Class VIII Mathematics	NCERT New Delhi	21 & 22 June 1988	5
13.	Workshop for Development of instructional packages in Mathematics for Class X	NCERT New Delhi	27 to 30 June 1988	5
14.	Workshop for Development of instructional packages in Mathematics for Class VII	Calcutta	29 June to 4 July 1988	11
15.	Workshop for Development of instructional packages for +2 stage in Physics for Class XI	University of Poona, Pune	1 to 15 July 1988	4
16.	Workshop for development of instructional materials and teaching of teachers/teacher trainers in process based learning in Science	NCERT New Delhi	8 to 14 August 1988	18
17.	Workshop for finalisation of Hindi version of Class VII Science textbook	NCERT New Delhi	11 to 15 July 1988	11
18.	Workshop for development of instructional package for Class VIII Mathematics	NCERT New Delhi	21 & 22 July 1988	6
19.	Workshop for development of curriculum for Sr.Sec. stage in Chemistry for Class XII	NCERT New Delhi	28 July to 1 August 1988	28
20.	Workshop for development of instructional packages in Mathematics For Classes VIII, X & XII	NCERT New Delhi	17 to 19 August 1988	15
21.	Meeting of the writing team to review the draft of Class X Science textbook	NGRI Hyderabad	21 to 25 August 1988	6

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Sr. No.	Title of the Programme	Venue of the Programme	Dates	No. of participants
22.	Workshop for finalization of textual mathematics for Class XI	Calcutta	5 to 8 September 1988	14
23.	Workshop to review and revise the Hindi manuscript of Class IX Science Textbook	NCERT New Delhi	5 to 9 September 1988	17
24.	Workshop for Development of problems in mathematics for Class VII	NCERT New Delhi	12 to 16 September 1988	13
25.	Meeting of the writing team to develop Biology textbook for Class XII	IISc., Bangalore	17 to 20 September 1988	6
26.	Workshop for the development of instructional packages in Mathematics for Classes VIII	NCERT New Delhi	26 & 27 September 1988	7
27.	Workshop for development of instructional packages in Mathematics for Class X	NCERT New Delhi	26 to 29 September 1988	5
28.	Meeting of the writing team to review draft chapters of Class X Science textbook	NCERT New Delhi	3 to 5 October 1988	1
29.	Meeting of the writing team to review the draft of Class X Science textbook	NGRI Hyderabad	4 to 8 October 1988	4
30.	Workshop on effective utilization of Chemistry laboratory for Sr. Sec. Stage	Lucknow/ Calcutta	9 to 14 October 1988	24
31.	Meeting of the writing team for development of Biology textbook for Class XII	IISc. Bangalore	10 to 17 October 1988	4
32.	Workshop for development of instructional packages for Class VIII Science	NCERT New Delhi	12 & 13 October 1988	10
33.	Workshop on effective utilization of Sc. Laboratory for Sec. Stages	Bombay/Udaipur/ Coimbatore	22 to 25 October 1988	18
34.	Workshop for development of instructional packages in Mathematics for Class X	Maulana Azad College of Teachers Bhopal	22 to 27 October 1988	15
35.	Workshop for finalization of textual material in mathematics for Class XII	NCERT New Delhi	24 to 26 October 1988	1
36.	Meeting of the writing team for development of biology textbooks for Class XII	NCERT New Delhi	25 to 30 October 1988	13
37.	National Workshop to review and revise the draft manuscript of Class X Science textbook	NCERT New Delhi	28 to 30 October 1988	13
38.	Workshop for development of instructional packages for Class VIII Mathematics	NCERT New Delhi	31 October to 4 November 1988	23
39.	Meeting for the development of instructional material in Chemistry for Class XII	IISc. Bangalore	5 & 6 November 1988	6
40.	Workshop for development of instructional packages in Maths for Class X	NCERT New Delhi	11 to 15 November 1988	8
41.	National Workshop to review the draft chapters of Biology textbooks for Class XII Part I	NCERT New Delhi	14 to 17 November 1988	19
42.	Workshop for writing Class VIII Science textbook	NGRI Hyderabad	18 to 26 November 1988	
43.	Workshop for development of instructional material in Chemistry for Class XII	NCERT New Delhi	19 to 22 November 1988	11
44.	Writers workshop to review and revise mss. of Class X Science	NGRI Hyderabad	25 to 29 November 1988	

Sr. No.	Title of the Programme	Venue of the Programme	Dates	No. of participants
45.	Meeting of the writing team for the development of Biology textbook for Class XII Part I	CINAP Lucknow	1 to 4 December 1988	5
46.	Workshop for development of instructional packages for +2 stage in Physics Class XII	NCERT New Delhi	7 to 11 December 1988	20
47.	Workshop for development of instructional packages for Class X Maths	NCERT New Delhi	12 to 14 December 1988	6
48.	Review workshop by the teachers of Class VIII Science textbook manuscript	NCERT New Delhi	13 to 18 December 1988	23
49.	Orientation course for Physics teachers of Sainik School	Kunjapura Karnal	19 to 24 December 1988	3
50.	Identifying and nurturing of mathematically gifted pupils	NCERT New Delhi	20 to 22 December 1988	10
51.	Workshop for development of instructional packages in Maths for Class IX (Hindi Version)	NCERT New Delhi	20 to 23 December 1988	8
52.	Workshop for development of instructional packages in Maths for Class XI Part I (Hindi Version)	NCERT New Delhi	26 to 30 December 1988	12
53.	National Workshop to review the manuscript of Class X Science Textbook	NCERT New Delhi	2 to 6 January 1989	29
54.	Workshop for development of curricular package for Class XII Chemistry (Hindi)	NCERT New Delhi	9 to 12 January 1989	9
55.	Workshop to review and finalise Hindi mss. of Biology textbook for Class XI Part I	NCERT New Delhi	16 to 19 January 1989	5
56.	Workshop for development of instructional package in Physics for Class XII	NCERT New Delhi	20 to 24 January 1989	22
57.	Workshop for development of textual material of Class XII Maths	NCERT New Delhi	30 January to 1 February 1989	15
58.	Workshop for development of instructional package for Class X Maths	NCERT New Delhi	31 January to 3 February 1989	7
59.	Workshop for development of instructional packages for Class XII Maths	University of Hyderabad Hyderabad	10 to 13 February 1989	3
60.	Application-Oriented Maths Analysis of mathematical concepts used in Physics, Chemistry and Biology	SCERT Calcutta	13 to 17 February 1989	19
61.	Development of concrete material and frequency of instruction in Science	NCERT New Delhi	20 to 24 February 1989	18
62.	Workshop to review and finalise Hindi version of Class XI Maths Part II	NCERT New Delhi	20 to 24 February 1989	15
63.	Identifying and nurturing of mathematically gifted children	Udaipur	27 to 31 March 1989	19
64.	Identifying and nurturing of mathematically gifted pupils	NCERT New Delhi	27 & 28 February 1989	3
65.	Workshop for preparation of instructional packages in Physics for +2 stage	University of Pune, Pune	27 February to 10 March 1989	12
66.	Application Oriented Maths analysis of mathematical concepts used in Physics, Chemistry and Biology	NCERT, New Delhi	6 to 10 March 1989	19

Sr. No.	Title of the Programme	Venue of the Programme	Dates	No. of participants
67.	Workshop for development of instructional material and training of teacher training in process-based learning in schools	Hyderabad	13 to 18 March 1989	23
68.	Effective utilization of Chemistry laboratory at Sec. Stage	SCERT Gurgaon	24 to 28 March 1989	18
69.	Development of instructional material for preparing low cost three dimensional models	NCERT New Delhi	27 March to 4 April 1989	15
70.	Workshop for finalisation of instructional packages in Maths for Class XII Part II by teachers	NCERT New Delhi	29 to 31 March 1989	12
71.	Effective utilization of Science laboratory at Secondary Stage	Calcutta	30 March to 3 April 1989	19
72.	Workshop for finalization of instructional packages in Maths for Class XII Part II by authors	NCERT New Delhi	31 March to 2 April 1989	5
73.	Workshop for development of guidelines on teaching of Science for use of functionaries at different levels in the States	S.V. University Tirupati	23 to 28 November 1988	29

### Training of Mathematics Teachers

The Council collaborated with the different State-level agencies in organising training programmes for

science and mathematics teachers. The details of these training programmes are given in Table 6.10.

**TABLE 6.10**

*Training programmes for science and mathematics teachers organised by state-level institutions/agencies in collaboration with the NCERT during 1988-89*

Sl. No.	Title of the Programme	Dates	Venue
1.	Orientation of Science teachers of middle stage	19 to 22 September 1988	Shivali Public School Chandigarh
2.	Orientation of Laboratory designers at Secondary & Sr. Secondary stages	17 October 1988	Hans Raj Model School New Delhi
3.	Training of Key Personnel of U.P. State for the organisation of orientation programmes for high school teachers	8 to 10 December 1988	State Institute of Science Education, Allahabad
4.	Orientation of Sainik School teachers in Chemistry at Sr. Secondary stage	19 to 24 December 1988	Sainik School, Rewa
5.	Orientation of High School and Intermediate teachers of U.P. State for the development of instructional materials in Chemistry	8 & 9 September 1988	State Institute of Science Education, Allahabad
6.	Training of teachers of W.B. for the improvement of External Examination of West Bengal Board of Sec. Examination in Mathematics	19 to 23 August 1988	State Council of Educational Research and Training Calcutta
7.	Training of Mathematics teachers of Primary, Upper Primary & Sec. classes	4 & 5 July 1988	D.A.V. School Shallmar Bagh Delhi
8.	Training of Sainik School Teachers of +2 stage	19 to 24 December 1988	Rewa, Madhya Pradesh
9.	Orientation Course for physics teachers of Sainik Schools	19 to 24 December 1988	Kunjapura, Karnal



### **National Science Exhibition**

The Seventeenth National Science Exhibition for Children was organised at Jammu by the NCERT in collaboration with the Government of Jammu & Kashmir. The exhibition held from 5 to 11 November 1988 was inaugurated by the President of India. The theme of the exhibition was "Water and Man". About 500 students participated in the exhibition.

### **Technical Support for Implementation of the Scheme of Improvement of Science Education in Schools**

The NCERT has been engaged in several activities related to the implementation of the Centrally Sponsored Scheme of Improvement of Science Education in Schools. The Department of Education in Science and Mathematics (DESM) of the NIE has been acting as the nodal agency at the national level for implementation of activities related to training of science and mathematics teachers which is one of the main components of the scheme. The Regional Colleges of Education (RCEs) of the NCERT organised 12 summer institutes for training science and mathematics teachers in Higher/Senior Secondary Schools during 1988-89. These included four Summer Institutes, one each in Physics, Chemistry, Biology and Mathematics for teachers in Rajasthan organised by the RCE at Ajmer; four Summer Institutes, one each in Physics, Chemistry, Biology and Mathematics for teachers in Madhya Pradesh organised by the RCE at Bhopal and four Summer Institutes, one each in Physics, Chemistry, Biology and Mathematics for teachers in Karnataka organised by the RCE at Mysore. During these Summer Institutes the teachers also developed certain training materials which could be utilised in the subsequent training programmes and Summer Institutes proposed to be conducted under the scheme.

The other activities carried out by the NCERT in connection with the implementation of the Scheme of Improvement of Science Education in Schools include development of a manual for organising different training programmes under the Scheme and organisation

of a one-week workshop to develop instructional materials for use in training programmes for higher/senior secondary teachers in Uttar Pradesh, a 3-day orientation programme for higher secondary school teachers in Uttar Pradesh, an orientation programme for Key Persons and resource persons involved in training of science teachers in upper primary schools in Uttar Pradesh, a 3-day orientation programme for key persons in Bihar held at Patna from 12 to 14 December 1988, and a 3-day orientation programme for resource persons involved in training of senior/higher secondary teachers in Jammu and Kashmir held from 16 to 18 January 1989 and a 3-day orientation programme for key/resource persons in Mizoram held from 15 to 17 March 1989.

The Council organised a meeting of the representatives of some of the Voluntary Agencies on 19 & 20 September 1988 to discuss about their participation in the implementation of the scheme. The Council also organised a meeting of the representatives of the nodal agencies engaged in implementation of the scheme at the State/UT level on 31 October and 1 November 1988, and provided technical assistance to the State/UTs to carry out the different tasks envisaged under the scheme.

### **Computer Literacy and Studies in Schools (CLASS)**

Several advanced level training programmes for school teachers were organised by the NCERT and the Resource Centres set up under the Project 'Computer Literacy and Studies in Schools (CLASS)'. The total number of schools covered under the CLASS project rose to 2322 in 1988-89. During 1988-89 the project was extended to 380 more schools. Training programmes were organised by the Resource Centres to train teachers from the new schools participating in the project. About 1325 teachers were trained under the project during 1988-89. The Council also organised a 3-day training programme for Chief Executives and Principals of Cooperatives to familiarise them with computers, two introductory courses in software design and a workshop for the development of criteria for software evaluation. The 53 Resource Centres established

under the project provided technical support to the schools participating in the project. Necessary steps were taken to procure software package for the new schools and to select indigenous software packages for use in the new schools participating in the project.

A number of training programmes were organised by the NCERT under the CLASS Project to train the teachers in the use of computers for educational purposes. The details of the training programmes/meetings/workshops organised by the Department are given in Table 6.11.

### Development and Production of Science Equipment for Schools

As part of its effort to improve science education in schools, the NCERT continued to provide leadership in the design, development and production of prototypes of science equipment for schools. The Workshop Department (WD) of the NIE has been engaged in development of Science Kits, electronic kits, and mini tool kits for different stages of school education. The Workshop Department has been engaged in implementation of the Indo-FRG Project on 'Improved Science Education in Primary and Upper Primary Schools in Madhya Pradesh and Uttar Pradesh' since 1986. Under the Indo-FRG Project, prototypes of primary science kits were brought out by the end of 1987 and during 1988-89, these prototypes were manufactured by the Workshop Department of the NIE and were sent for try-out in schools in Madhya Pradesh and Uttar Pradesh. A detailed write-up on the construction, specifications and drawing of items in the science kits was prepared and circulated to the State level agencies. The

primary science kit and the mini tool kit developed by the NCERT form a part of the minimum essential facilities being provided to the primary schools under the Centrally-Sponsored Operation Blackboard Scheme. The integrated science kits developed by the NCERT is one of the important components of the package of materials being supplied to the upper primary schools under the Centrally Sponsored Scheme for Improvement of Science Education in Schools.

Research and development activities related to preparation of science kits and teachers' handbook for Classes III, IV and V based on the new curriculum for environmental studies at the primary stage constituted an important task of the Workshop Department during 1988-89. The research activities undertaken include a survey of teachers teaching science in schools in Madhya Pradesh and Uttar Pradesh and a survey of the status of the science kits and equipment in primary schools and elementary teacher training institutions in Madhya Pradesh and Uttar Pradesh conducted under the Indo-FRG Project 'Improved Science Education in Primary and Upper Primary Schools in Madhya Pradesh and Uttar Pradesh'. The kit manuals for the primary science kit, the mini tool kit and the integrated science kit were published during the year under report.

As part of its research and development activities directed to the designing and development of science kits and mini tool kits and development of teachers' handbooks, the Workshop Department organised a number of meetings/workshops. The details of the workshops/meetings organised during the year 1988-89 are given in Table 6.12.

**TABLE 6.11**  
*Training Programmes/Meetings/Workshops organised under the CLASS Project during 1988-89*

Sl. No.	Title of the Programme	Dates	Venue
1.	Meeting on concept formation on friction with Micro Computer	30 March to 5 April 1988	NCERT, New Delhi

Sl. No.	Title of the Programme	Dates	Venue
2.	Training programme for Chief Executives and Principals of cooperatives to familiarise them with Computers	4 to 6 May 1988	NCERT, New Delhi
3.	Teachers' Training Programme for CLASS Project school teachers from Haryana & Delhi	16 May to 9 June 1988	Delhi Public School R.K. Puram New Delhi
4.	Teachers' Training Programme for CLASS Project school teachers from Haryana & Delhi	13 June to 2 July 1988	Delhi Public School R.K. Puram New Delhi
5.	Introductory Course in Software Design	21 November to 2 Dec. 1988	NCERT, New Delhi
6.	Training Programme in Basic Language	19 to 30 December 1988	Delhi Public School Mathura Road New Delhi
7.	A workshop for the development of curriculum guide based on CBSE syllabus	26 to 30 December 1988	NCERT New Delhi
8.	Introductory course in Software Design	26 December to 3 Jan. 1989	NCERT New Delhi
9.	Workshop for the development of criteria for software evaluation	4 to 6 January 1989	NCERT New Delhi
10.	Development of language capabilities for 11-13 year old boys in English	23 & 24 February 1989	NCERT New Delhi

**TABLE 6.12**

Sl. No.	Title of the Programme	Data	Venue	No. of participants
1.	Meeting of the Academic team in NCERT, Science Kit workshop at Bhopal and Vigyan Kit Nirmanshala at Allahabad	5 to 7 April 1988	NCERT New Delhi	10
2.	Meetings of Evaluation of tryout programme of Primary Science Kit	24 to 27 May 1988	NCERT New Delhi	16
3.	Meeting for implementation of findings of tryout programme for design and development of kit and finalisation of Teachers' handbook and charts	10 to 24 June 1988	NCERT New Delhi	14
4.	Meeting of the Academic Team in NCERT, Science Kit Workshop, Bhopal, Vigyan Kit Nirmanshala Allahabad	18 to 31 July 1988	NCERT New Delhi	16
5.	Workshop for finalisation of the English and Hindi versions of the Teachers' Handbook	2 to 7 August 1988	NCERT New Delhi	6

Sl. No.	Title of the Programme	Date	Venue	No. of participants
6.	Workshop for finalisation of the Hindi Version of the kit manual	8 to 13 August 1988	NCERT New Delhi	8
7.	Workshop for finalisation of Teachers' Handbook for Classes III and V	8 to 23 September 1988	NCERT New Delhi	6
8.	Workshop for finalisation of the Teachers' Handbook for Class V and the Kit Manual	26 to 30 September 1988	NCERT New Delhi	5
9.	Seminar on the Survey on the status of science Kits and equipment in primary schools and elementary teacher training institutes in UP and MP	21 November 1988	NCERT New Delhi	25
10.	Workshop for final editing of the Hindi version of the Teachers' Handbook	12 to 15 Dec. 1988	NCERT New Delhi	4
11.	Workshop for finalisation of English and Hindi versions of the Kit Manual	22 December 1988 to 5 Jan. 1989	NCERT New Delhi	8

In addition to the research and development activities related to production of science kits and teachers' handbook, the Workshop Department also organised training programme of key resource persons from Madhya Pradesh and Uttar Pradesh. A preparatory training programme for key resource persons from Madhya Pradesh and Uttar Pradesh was organised from 22 to 25 February 1989 at New Delhi. This programme was attended by 18 participants. Another training programme for key resource persons from Madhya Pradesh and Uttar Pradesh was held from 14 to 20 March 1989 at New Delhi. This programme was attended by 18 participants. In addition to these, the Workshop Department also trained four engineering apprentices during 1988-89.

During 1988-89, the Workshop Department of the NIE produced and despatched 1706 primary science kits, 225 integrated science kits and six mini tool kits, to different States/UTs. In addition to the above, 250 primary science kits, 1 sample each of the primary science kit, mini tool kit and integrated science kit for use of the States/UTs were prepared. The States/UTs have been requested to utilise these sample kits for the purpose of training teachers and for procurement of such kits from the local industries. During the year 1988-89, the Workshop Department of the NIE also

brought out the following publications:

Teacher's Handbook on Environmental Studies  
—3 Volumes  
Kit Manual—Primary Science Kit  
Kit Manual—Integrated Science Kit  
70 Cards, Charts with display hanger.

### Examination Reform

The NCERT has been engaged in several tasks directed towards examination reform in order to improve evaluation practices in schools. During the period under report, the Department of Measurement, Evaluation and Survey and Data Processing (DMESDP) of the NIE initiated several measures and programmes for improving the evaluation practices in schools. A scheme of comprehensive and continuous evaluation was developed during the year under report. This was discussed in a two-week All India Training Course for Resource Persons Organised from 22 June to 5 July 1988. A sample cumulative card along with procedures for maintaining records of pupils' achievement in scholastic and non-scholastic areas were also prepared. The NCERT prepared guidelines for introduction of grading and scaling in examinations conducted by different

Boards of Secondary and Higher Secondary Education and organised four regional meetings of the Chairmen/Secretaries of the Boards of Secondary Education. During these meetings, the different aspects related to the introduction of scaling and grading in the examination conducted by the Boards of Secondary and Higher Secondary Education were discussed. The Council organised an eight-day workshop for training Key persons on alternative evaluation procedures such as oral examinations, open book examinations and project work. The Council also organised an 8-day training course on Evaluation in History, and five training courses for improving external examinations conducted by different Boards of Secondary/Higher Secondary Education. 302 persons attended these training courses. In addition to these, the Council continued its tasks of development of conceptual materials related to educational evaluation, preparation of criterion-referenced tests and training of test item writers in different subject areas. The details of the activities carried out by the Council during 1988-89 to improve evaluation practices in schools are given in Tables 6.13 and 6.14.

During 1988-89, the NCERT brought out certain publications for use of personnel engaged in tasks related to examination reform. These include the following:

1. Test items in English language
2. Read, Understand and Answer Volume 1
3. Evaluation in English
4. Unit Test in Physics for Class IX (Mimeographed)
5. Oral Examination—A Theoretical Framework (Mimeographed)
6. Guidelines on Scaling and Grading for Examinations Conducted by the Boards of Secondary/Higher Secondary Education (Mimeographed)
7. The Scheme of Formative Evaluation in Science (for Class VI) (Mimeographed)
8. Measures to check malpractices in Examinations (Mimeographed)

#### **Technical and Financial Assistance to States/UTs for the Reorientation of the Content and Process of Education**

In order to facilitate implementation of the tasks related to the reorientation of the content and processes of education at the school stage, the NCERT formulated a scheme under which financial assistance was provided to States/UTs for undertaking activities related to renewal of curriculum and development of instructional materials, including textbooks, in different curricular areas. Under the scheme, financial assistance was provided to the States of Andhra Pradesh, Bihar, Goa, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Orissa, Punjab, Tamil Nadu, Uttar Pradesh and West Bengal and the Union Territory of Delhi and to the Central Board of Secondary Education (CBSE) during the year 1987-88. A meeting of the nodal officers who are in-charge of the scheme was held on 21 and 22 November 1988 to review the progress in the implementation of the scheme. In addition to this, the Council also organised a national meet of the representatives of the Directorates of Education, SCERTs and Boards of Secondary Education from 2 to 4 June, 1988 to review the progress of implementation of the tasks related to the reorientation of the content and processes of education at the school stage. Representatives from 19 States/UTs participated in this meet. During the meeting, the difficulties and problems with regard to the implementation of the tasks related to the reorientation of the content and processes of education at the school stage and strategies required for overcoming the difficulties were discussed. During 1988-89, financial assistance was provided to the Board of Intermediate Education, Andhra Pradesh; SCERT, Nagaland; Board of Secondary Education, J&K; Gujarat Board of School Textbooks, Gujarat and the Board of Secondary Education, Meghalaya, for renewal of curriculum and development of instructional materials based on the national curricular framework.

**TABLE 6.13**  
*Workshops/Meetings/Seminars organised during 1988-89*

Sl. No.	Title of the Programme	Dates	Venue	No. of Participants
1.	Workshop for Developing Remedial Measures for the problem of Inter-Examiner variability in Board Examinations	8 to 13 August 1988	Meerut	60
2.	First Regional Meeting for implementing the Recommendations of the National Seminar on Scaling and Grading	7 to 9 August 1988	Obra UP	14
3.	Workshop for Developing Unit Tests in Physics for Class XI	14 to 18 November 1988	New Delhi	20
4.	Second Regional Meeting for Implementing the Recommendations of the National Seminar on Scaling & Grading	24 to 25 November 1988	New Delhi	11
5.	Workshop for Developing Communicative Test of Reading and Writing in English	21 to 28 December 1988	New Delhi	10
6.	Third Regional Meeting for Implementing the Recommendations of the National Seminar on Scaling and Grading	30 & 31 January 1989	Imphal	12
7.	Fourth Regional Meeting for Implementing the recommendations of the National Seminar on Scaling and Grading	27 & 28 February 1989	Trivandrum	12
8.	Workshop for developing questions in Biology for Class IX	7 to 14 March 1989	Agra	24
9.	Workshop for developing Scheme of Formative Evaluation for Upper Primary Classes in Science	6 to 10 March 1989	New Delhi	21
10.	Second Workshop for developing Unit Tests in Physics for Class IX	27 to 31 March 1989	New Delhi	16
11.	Workshop for vetting sample questions in Biology for Open Book Examination for Class IX	29 to 31 March 1989	New Delhi	10

**TABLE 6.14**  
*Training/Orientation Courses Organised during 1988-89*

Sl. No.	Title of the Programme	Date(s)	Venue	No. of participants
1.	All India Training Course in Comprehensive Continuous Evaluation	22 June to 5 July 1988	Mussoorie	19
2.	Training of Key Persons in Alternative Evaluation Procedures in Economics	4 to 11 October 1988	New Delhi	22
3.	Training Course in Evaluation in History	15 to 22 November 1988	New Delhi	23

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Sl. No.	Title of the Programme	Date(s)	Venue	No. of participants
4.	Training course for the improvement of External Examination of the West Bengal Board of Secondary Education	17 to 23 August 1988	Calcutta	45
5.	Training Course for improving External Examination of the Board of Higher Secondary Education, Tamil Nadu	5 to 11 January 1989	Madras	47
6.	Training Course for the improvement of External Examination of the Board of Intermediate Education, Andhra Pradesh	17 to 22 September 1988	Hyderabad	57
7.	Training Course for improving External Examination of the Manipur Board of Secondary Education	1 to 7 February 1989	Imphal	78
8.	Training Course for improving External Examination of the Kerala State	20 to 25 February 1989	Trichur	52

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One of the major tasks of the NCERT has been the development and implementation of programmes pertaining to the Vocationalisation of Higher Secondary Education. The Council undertook several programmes during 1988-89 to facilitate the effective implementation of the centrally-sponsored Scheme of Vocationalisation of Secondary Education. These programmes were implemented in collaboration with different agencies including professional, private and voluntary institutions and specialised R&D/Training Institutions involved in tasks related to vocationalisation of education. Studies related to formulation and implementation of the curriculum for vocationalisation of education; development of syllabi and instructional materials; training of vocational teacher educators, teachers and other personnel engaged in the implementation of vocational education programmes at the +2 stage; and organisation of extension and dissemi-

nation activities related to vocationalisation of education in collaboration with State/Union Territory level agencies and institutions have been some of the major activities carried out by the Department of Vocationalisation of Education (DVE) of the NIE during the period under report.

### Development of Curricula and Instructional Materials

The Council organised four workshops to develop model curricula, folders on vocational courses and on the preparation of a textbook for entrepreneurship development. These were organised in collaboration with specialised institutions. The details of the workshops/meetings organised during 1988-89 for development of curricula and instructional materials are given in Table 7.1

**Table 7.1**  
*Workshops/meetings organised during 1988-89 for development of curricula and instructional materials*

S.No.	Title of the programme	Dates	Venue	Number of participants
1.	National workshop for development of model curriculum in entrepreneurship	6 to 8 August, 1988	NIESBUD, Okhla, New Delhi	23



S.No.	Title of the programme	Dates	Venue	Number of participants
2.	Workshop for finalisation of minimum-competencies based curriculum in printing technology and book binding	6 to 10 September 1988	SCERT, Madras	9
3.	Workshop for development of popularisation folders on Vocational Courses	5 to 8 October, 1988 & 9 to 11 October 1988	Directorate of Education, Panaji, Goa	26
4.	Meeting of experts for preparation of textbook on entrepreneurship development	24 February 1989	NIESBUD, Okhla, New Delhi	11

For the purpose of popularising vocational courses the Council initiated work related to the production of 5 video programmes on five topics/themes. The topics of the video programmes on Secretarial Practice, Maintenance and Servicing of Scooter and Motor-Cycle, Inland Fishery, Food Processing and Preservation and Medical Laboratory Technician. These video programmes are being produced on themes provided by the Electronics Trade & Development Corporation (ET&T), New Delhi, under the overall supervision of the NCERT. Besides these, scripts for 10 more video programmes were developed.

### Orientation of Key Persons

The NCERT has been organising orientation programmes on vocationalisation of higher secondary education for key persons from States/UTs. The main objective of these programmes is to acquaint the participants (State officials/principals/education officers) with the different aspects of vocationalisation of education. In addition to the orientation programmes on vocationalisation of education, the Council also organised orientation programmes on instructional material development, orientation programme on district vocational survey for key persons, and orientation programme for coordinators and resource persons involved in conducting in-service training programmes for teachers. During 1988-89, the Council conducted eight orientation programmes on vocationalisation of

education, two programmes on instructional material development in different vocational areas, two programmes on District Vocational Survey and one orientation programme for coordinators and resource persons involved in training vocational teachers. The details of the orientation programmes conducted during 1988-89 are indicated in Table 7.2.

### Publication and Dissemination

During 1988-89, the Council, through its various development activities, developed and brought out four publications dealing with different aspects of vocationalisation of education. These include (i) *Guidelines for Evaluating the Implementation of Vocational Curriculum* (ii) *Minimum Competencies—Based Curriculum in Printing Technology and Book Binding*, (iii) *Guide Book for Auditing Practicals for +2 Vocational Course* and (iv) *General Foundation Course Curriculum*. The publications brought out by the Council were made available to institutions/agencies involved in implementation of programmes of vocationalisation of higher secondary education.

### Consultancy Services

As one of the on-going functions, the Council has been offering consultancy services to State Governments and other agencies in the form of discussion, meetings, participation in Seminars and Conferences,

**Table 7.2**  
*Orientation Programmes conducted during the year 1988-89*

S.No.	Title of the programme	Dates	Venue	Number of participants
<i>Orientation Programmes on Vocationalisation of Education</i>				
1.	Orientation Programme on Vocationalisation of Education for Key Persons of Union Territory of Delhi	11 to 13 May 1988	NCERT New Delhi	40
2.	Orientation Programme on Vocationalisation of Education for Key Persons of Karnataka State	24 to 27 May 1988	Directorate of Vocational Education, Bangalore	22
3.	Orientation Programme on Vocationalisation of Education for Key Persons of Madhya Pradesh	28 June to 1 July 1988	Government College of Education, Ujjain, Madhya Pradesh	39
4.	Orientation Programme on Vocationalisation of Education for Key Persons of Rajasthan	2 to 5 August 1988	Jaipur (Rajasthan)	60
5.	Orientation Programme on Vocationalisation of Education for Key Persons of Himachal Pradesh	3 to 6 August 1988	College of Education, Dharamshala, Himachal Pradesh	19
6.	Orientation Programme on Vocationalisation of Education for Key Persons of Kerala	13 to 16 September 1988	Government Technical High School, Trichur	29
7.	Orientation Programme on Vocationalisation of Education for Key Persons of North Eastern States	1 to 4 November 1988	Cotton College, Guwahati, Assam	32
8.	Orientation Programmes on Vocationalisation of Education for key persons of Uttar Pradesh	Ist Phase 25 to 27 February 1989	Directorate of Education, Uttar Pradesh, Lucknow	100
		IInd Phase 27 February to 1 March 1989		100
<i>Orientation Programme on Instructional Material Development</i>				
1.	Orientation Programme in Instructional Material Development in different Vocational areas	22 to 26 September 1988	Haryana Agricultural University, Hissar	30

S.No.	Title of the programme	Dates	Venue	Number of participants
2.	Orientation Programme on Development of Exemplar Instructional Materials in Different Vocational Areas	15 to 19 November 1988	Bangalore	35
<i>Orientation Programme on District Vocational Survey</i>				
1.	Orientation Programme on District Vocational Survey	26 to 29 July 1988	NCERT New Delhi	33
2.	Orientation Programme on District Vocational Survey	17 to 20 Febr- uary 1989	Panaji (Goa)	27
<i>Orientation Programme for Coordinators and Resource Persons</i>				
1.	Orientation Programme on Vocationalisation of Education for Resource Persons of Andhra Pradesh, Punjab, Haryana and Himachal Pradesh.	7 to 10 June 1988	Government Col- lege for Boys, Shimla	36

etc. Expertise available with the Council in the field of vocationalisation of education was made use of by organisations like the Central Board of Secondary Education, Indira Gandhi Open University, All India

Institute of Medical Sciences, Open School, Kendriya Vidyalaya Sangathan etc. which are engaged in carrying out different activities related to vocationalisation of education.

Improvement of pre-service and in-service education and training of school teachers has been a major concern of the NCERT. Research and experimental studies aimed at improving the elementary and secondary teacher education programmes; revision of the teacher education curriculum; preparation of instructional materials for the use of teacher educators, teacher trainees and in-service teachers; technical support for the implementation of the centrally-sponsored scheme for restructuring and reorganisation of teacher education; and training/orientation of teacher-educators and in-service teachers constituted some of the major activities of the Department of Teacher Education, Special Education and Extension Services (DTESE & ES) of the NIE during 1988-89.

### Research Studies

During the year 1988-89, the report of the research study undertaken to determine the relative effectiveness of different strategies in the training of secondary teacher educators and B.Ed. student teachers in Models of Teaching was brought out. The study was conducted in collaboration with the Faculty of Education, Devi Ahilya Vishwavidyalaya, Indore. The study was conducted in 12 Colleges of Teacher Education in eight States of the country. 42 teacher educators and 208 student teachers comprised the sample for the study.

The report of the study, designed to investigate into

the academic, economic, professional and social status of pre-primary, elementary, secondary and higher secondary teachers was also brought out during the period under report. The study inter-alia revealed that more teachers working at the upper primary, secondary and higher secondary stages of education in comparison to primary teachers possessed the minimum educational qualifications laid down by the State Education Departments. Most of the teachers in upper primary and secondary schools were found to be trained, whereas about 50 per cent of the pre-primary teachers were untrained. The study further indicated that the present status of teachers in India is low due to low salaries, unsatisfactory service and working conditions, limited avenues for promotion and career advancement, etc.

The promotion of research among elementary and secondary teacher educators has been an important area of concern in teacher education. Three workshops were organised with a view to encouraging research in teacher education institutions. Research designs for more than 100 research studies were developed during these workshops. The first workshop on planning and designing research projects was held at New Delhi from 29 August to 3 September 1988. 34 teacher educators participated in this workshop. The second workshop on promotion of research and experimentation in elementary teacher training institutions was held at Patna from 23 to 28 January 1989. 37 teacher educators participated in this workshop. The third workshop on

planning and designing research projects was held at Salem, Tamil Nadu, from 6 to 10 February 1989. This workshop was attended by 39 teacher educators.

As part of the effort to promote innovations on the part of teacher educators in elementary and secondary teacher training institutions, the NCERT has been organising an All-India Competition of Seminar Readings Programme for Teacher Educators every year. Under the programme 30 cash prizes of Rs 1,000 each are awarded for papers selected at the national level. Of these, 20 cash prizes are awarded to teacher educators working in elementary teacher training institutions and ten cash prizes to teacher educators working in secondary-level teacher training institutions. A national meet of awardees of the 14th and 15th All-India Competitions of Seminar Readings Programme for Teacher Educators was held at the Regional College of Education, Ajmer, on 31 March and 1 April 1989. 21 papers selected for awards were presented and discussed by the awardees during the national meet. The themes of the papers included Methodology of Teaching Science, Mathematics, Languages, Social Studies and Electronics, Value Education, National Integration, Functioning of Library Systems, etc.

#### **Development of Instructional/Training Materials**

The Council initiated activities to develop guidelines and syllabi in various courses which constitute the teacher education programme. Guidelines for the teaching of Hindi as a mother tongue and school experience at the elementary stage were developed in a workshop held at New Delhi, from 27 February to 7 March 1989. 17 experts participated in this workshop. Another workshop was organised at SCERT, Haryana for the development of guidelines for the school experience programme (student teaching) for elementary teacher education institutions. This workshop was attended by 20 teacher educators.

A workshop was organised at Amini, Lakshadweep from 26 February to 2 March 1989 to develop guidelines for evolving self-based and school-based in-service education and training. This workshop was attended by 28 primary teachers from Lakshadweep.

#### **Technical Support to the Scheme on Restructuring and Reorganisation of Teacher Education**

The NCERT has been providing technical support to the MHRD and States/UTs for the implementation of the centrally-sponsored scheme on restructuring and reorganisation of teacher education, particularly with regard to the following four components of the scheme:

- (i) programme of Mass Orientation of School Teachers (PMOST);
- (ii) setting up of District Institutes of Education and Training (DIETs);
- (iii) strengthening of Colleges of Teacher Education (CTEs) and upgrading some of them into Institutes of Advanced Studies in Education (IASEs); and
- (iv) strengthening of the State Councils of Educational Research and Training (SCERTs).

The major activities carried out in respect of these four components are discussed in the following sections.

#### *Programme of Mass Orientation of School Teachers (PMOST)*

Under the Programme of Mass Orientation of School Teachers (PMOST), orientation programmes for about five lakh school teachers are being conducted through the NCERT and the State governments in order to increase the motivation and professional expertise of teachers to better equip them to play a key role in the process of reorientation of the content and processes of education at the school stage. During 1988, 9,113 camps were organised to train primary and secondary school teachers. 4,39,261 teachers, comprising 2,97,977 primary teachers and 1,41,284 upper primary and secondary teachers, were trained through these camps. 10,300 resource persons were involved in the organisation of the camps for training teachers.

The content of the orientation programme was reviewed keeping in view the experience gained during the years 1986 and 1987. On the basis of the feedback received, the content of the orientation programmes

during the year 1988 was redesigned to include components directed at enhancing the professional competencies related to teaching of different curricular areas in addition to the components for creating an awareness about the major thrusts envisaged in the National Policy on Education—1986. For this purpose a revised training package, comprising separate volumes for primary school teachers and secondary school teachers was prepared. Guidelines for the Course Directors and resource persons of the orientation/training camps were prepared. In addition to these, guidelines for resource persons on the effective utilisation of telecast were also prepared. The television support to the programme was also strengthened by including certain new programmes related to the emerging curricular concerns.

The orientation programmes conducted during 1988 were evaluated by three universities, Kurukshetra University, Patna University and Pondicherry University. A national review meeting was held at New Delhi from 26 to 28 October 1988 to review the implementation of the PMOST. Based on the suggestions made in the evaluation reports and at the National Review Meeting, the content of the orientation programmes proposed to be conducted during 1989 was further modified to make it relevant to the requirements of the teachers.

A workshop was organised at SCERT, Haryana, from 6 to 11 January 1989 for the identification of activities which could be undertaken by the teachers who would attend the orientation camps under PMOST during 1989. 101 teachers participated in this workshop. In addition to this, an expert group meeting was held at RCE, Mysore, from 23 to 28 February 1989 to prepare the design of the study for evaluation of the PMOST and to develop guidelines for the preparation of tools for the evaluation studies. 13 Professors of Education from University Departments of Education attended this meeting.

### *Setting up of DIETs*

The Centrally-sponsored scheme on restructuring and reorganisation of teacher education envisages setting up of about 400 DIETs as pivotal institutions for qualitative improvement of elementary education and

elementary teacher education in the country. Besides providing pre-service and in-service education and training to elementary teachers, the DIETs are required to organise training programmes for personnel involved in nonformal and adult education programmes.

The draft guidelines for project formulation and setting up of DIETs were prepared by the Educational Consultants India Ltd. Based on the feedback received from the States in the formulation of projects for setting up the DIETs, the NCERT was entrusted with the task of revising the draft guidelines prepared by the Educational Consultants India Ltd. A working group meeting to review and revise the DIET document was held on 26 and 27 July 1988. A document indicating the revised guidelines for project formulation and setting up of DIETs was prepared by the Council. As part of the tasks related to preparation of the revised guidelines on different aspects of the DIETs, the Council prepared a suggested list of books in English and Hindi for different areas of elementary teacher education as reference material for the DIETs. The Council also prepared a suggested list of equipment and furniture required by the DIETs.

The Council undertook the task of developing a design for the Induction Courses proposed to be organised for the staff of the DIETs. A working group meeting for evolving the course content for the induction courses for the DIET faculty was held on 2 and 3 March 1989 at New Delhi and a draft course design was prepared.

### *Strengthening of Colleges of Teacher Education*

The Centrally-sponsored scheme on restructuring and reorganisation of teacher education envisages strengthening of 250 Colleges of Teacher Education (CTEs) and upgrading some of them into Institutes of Advanced Study in Education (IASEs). The draft guidelines with regard to this component of the scheme was prepared by the Educational Consultants of India Ltd. At the instance of the Ministry of Human Resource Development, Government of India, the NCERT undertook the responsibility of revising the document on CTEs/IASEs and of preparing detailed guidelines for strengthening the Colleges of Teacher Education and

converting some of them into IASEs. Some activities related to the revision of the document on CTEs/IASEs were carried out by the Council during the period under report.

### *Strengthening of SCERTs*

As part of the work related to the preparation of guidelines for strengthening of SCERTs, the Council prepared an Approach Paper for strengthening of SCERTs. The approach paper prepared by the NCERT was submitted to the Ministry of Human Resource Development, Government of India.

### **Training/Orientation Programmes**

In addition to the training programmes organised under the Programme of Mass Orientation of School Teachers (PMOST), the Council organised a few orientation/training programmes for teacher educators. The details of these programmes are given in Table 8.1.

### **National Council for Teacher Education**

The NCERT has been acting as the Secretariat of the National Council for Teacher Education (NCTE). The NCTE has its General Body, whose President is the Union Minister of Human Resource Development; a Steering Committee whose Chairman is the Member-Secretary, NCTE; and three Academic Standing Com-

mittees whose Chairpersons are experts in the concerned fields. While the Academic Committees meet more often to discuss the issues and problems concerning Teacher Education, the NCTE meets once a year to consider the recommendations of the Standing Committees and to give broad guidelines and recommendations on matters of policy. Academic programmes such as workshops for curriculum development, preparation of instructional/training materials, formulation of admission policy, and evaluation, etc. and seminars, orientation programmes, meetings of working groups and expert groups, etc. are organised in pursuance of the recommendations made by the NCTE.

During the year 1988-89, several activities were carried out under the auspices of NCTE. These include the following:

#### *Draft Bill for Statutory Status for NCTE*

The draft Bill for according statutory status to the NCTE was developed and discussed in several meetings conducted during 1988-89, in which the representatives of the Ministry of Human Resource Development (Department of Education), Government of India, also participated.

#### *Curriculum for Teacher Education—A Framework*

A fresh look at the Teacher Education Curriculum

**Table 8.1**  
*Orientation/Training Programmes for Teacher Educators conducted during 1988-89*

S.No.	Title of the Programme	No. of participants	Dates	Venue
1.	Orientation course on models of teaching	31	21 to 26 November 1988	Gorakhpur
2.	Orientation course on microteaching for elementary teacher educators	45	26 to 31 December 1988	Vasco da Gama
3.	Orientation Programme on plans and procedures for developing school-based in-service education and training	20	6 to 10 February 1989	Pondicherry

—A Framework' brought out by the NCTE in 1978 was necessitated in view of the experiences in the implementation of this curriculum and to update it to reflect the concerns arising out of the NPE and the 'National Curriculum for Elementary and Secondary Education—A Framework'. Working groups set up to undertake this task organised their meeting during May and June 1988. The draft document was placed before a National Conference held in December 1988 which approved it for its being placed before the General Body of the NCTE.

The revised Curriculum Framework highlights the changing context and perspectives of teacher education, the objectives of teacher education programmes at different stages and suggests curriculum designs for pre-service teacher education. The curriculum design at each stage is conceived under Foundation Courses, Stage Relevant Specialisations, Additional Specialisations and Practical/Field work with appropriate weightages to make teacher education more task-oriented and field-based. Strategies for transacting the curriculum are also indicated. The document suggests major inputs and strategies necessary for implementation of the revised curriculum.

#### *Admission Procedures for Teacher Education Institutions*

A meeting of the working group to review the existing position with regard to admission procedures being followed by elementary and secondary teacher education institutions in the country was held at the Department of Education, Devi Ahilya Vishwavidyalaya, Indore from 1 to 4 November 1988. The group evolved a blue-print for admission procedures, which included components related to testing of knowledge of school subjects, communication ability, understanding of contemporary Indian problems, etc.

#### *Integrated Teacher Education Programmes*

A meeting of the working group was held at the Regional College of Education, Bhopal, from 11 to 13 May 1989 to discuss the curriculum for Integrated Teacher Education Programmes. The Committee deliberated at length six viable alternative models which could be tried

out for implementation of the integrated programmes; particularly the 4-year courses for secondary teachers and recommended strategies to facilitate the implementation of the programme.

#### *Teacher Education for the +2 Stage*

The characteristics of learners at the +2 stage are different from those at the earlier stages. A need was, therefore, felt to develop a teacher education programme for teachers at the +2 stage. A meeting of the NCTE Committee was held at SIE, Srinagar, from 18 to 20 July 1989 to develop a suitable programme for preparing teachers at the +2 stage. The committee deliberated at length different models for training teachers at the +2 stage.

#### *Meeting of the Committee on Special Teachers' Education*

A meeting of the NCTE Committee on Special Education was held at New Delhi on 27 January 1989 to discuss the issues and problems in the area of education of teachers/teacher educators. The Committee suggested that multi-category training programmes for preparing teachers to handle more than one disability might be tried out on an experimental basis. It was suggested that the programme be evaluated and then considered for extension if it was found effective. The Committee also considered in-service training programmes for teacher educators in Special Education and the need for development of resource material for training teachers in Special Education.

#### *Meeting of the Committee on Secondary and College Teacher Education*

A meeting of the NCTE Committee on Secondary and College Teacher Education was held at New Delhi on 3 March 1989, to discuss various issues related to Secondary Teacher Education in the country. One of the issues deliberated upon intensively in the meeting was correspondence courses leading to the B.Ed. degree. It was suggested that in view of the trends in developing Distance Education, the issue of a correspondence course for the B.Ed. degree might be reviewed in a wider context. Though the Committee



reiterated that the first professional degree in education should preferably be through a regular face-to-face contact course, it was felt that the question should once again be examined.

The details of the NCTE meetings held during 1988-89 are given in Table 8.2.

### Publications

During 1988-89, the following publications related

to Teacher Education were brought out by the NCERT.

- (i) *Teacher and Education in the Emerging Indian Society* (Textbook for the use of teacher trainees and teacher educators of elementary teacher training institutions);
- (ii) *Tools for B.Ed. Admission—Their Predictive Efficiency.*

**Table 8.2**  
*NCTE meetings held during 1988-89*

S.No.	Title of the programme	No. of participants	Dates	Venue
1.	Meeting of the Committee on Revision of NCTE Teacher Education Curriculum Framework	6	2 to 4 May 1988	M.S. University, Baroda
2.	Meeting of the Working group on Four-Year Teacher Education Programme	14	11 to 13 May 1988	RCE, Bhopal
3.	Meeting of the Drafting Committee for NCTE Teacher Education Curriculum Framework	6	16 to 18 June 1988	Mysore University, Mysore
4.	Meeting of the Committee on Developing Teacher Education Programme for the +2 stage	7	18 to 20 July 1988	SIE, Srinagar, J&K
5.	Meeting of the NCTE Committee on Selection Criteria for Admission to Teacher Education Institutions	12	1 to 4 November 1988	Devi Ahilya Vis- vavidyalaya, Indore
6.	Meeting for finalisation of the National Curriculum for Teacher Education—A Framework		15 to 16 December 1988	NIE Campus, New Delhi
7.	Meeting of the NCTE Committee on Education of Special Teachers	13	27 January 1989	NIE Campus, New Delhi
8.	Meeting of the NCTE Committee on Secondary and College Teacher Education	18	3 March 1989	NIE Campus New Delhi

The development of innovative programmes of pre-service teacher education is one of the major concerns of the Regional Colleges of Education: They have been engaged in research studies related to different aspects of school education and teacher education; development of instructional materials for the use of teacher educators, teachers and teacher-trainees; and training and extension activities for qualitative improvement of school education and teacher education.

Each Regional College of Education (RCE) caters to the educational needs of the States/Union Territories under its jurisdiction. The RCE at Ajmer caters to the needs of the States of Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Rajasthan and Uttar Pradesh and the Union Territories of Chandigarh and Delhi. The RCE at Bhopal caters to the needs of the States of Goa, Gujarat, Madhya Pradesh and Maharashtra and the Union Territories of Dadra and Nagar Haveli and Daman & Diu. The States of Arunachal Pradesh, Assam, Bihar, Manipur, Mizoram, Meghalaya, Nagaland, Orissa, Sikkim, Tripura and West Bengal and the Union Territory of Andaman & Nicobar Islands are covered by the RCE at Bhubaneswar, while the States of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu and the Union Territories of Lakshadweep and Pondicherry are catered to by the RCE at Mysore.

### **Regional College of Education, Ajmer**

The RCE at Ajmer offers a four-year integrated course

in Science Education leading to the B.Sc. (Hons/Pass) B.Ed. Degree, a one-year course leading to the B.Ed. Degree with specialisation in Science/Agriculture/Commerce/Language (English/Hindi/Urdu), a one-year M.Ed. course with specialisation in Science/Commerce/Languages and a correspondence-cum-contact course leading to the B.Ed. Degree. The College also has facilities to register candidates for Ph.D in Education and Science.

### *Enrolment*

The enrolment of students in different courses during the year 1987-88 is given in the Tables 9.1 and 9.2.

### *Examination Results*

The examination results of the students in different courses in RCE, Ajmer, are given in Table 9.3.

### *Extension Services*

The Extension Services Department of the College organised workshops/meetings/seminars on different subjects related to school education and teacher education keeping in view the needs and demands of the States/Union Territories covered by the College. The details of programmes organised during the year 1988-89 are given in Table 9.4 and 9.5.

### *Publications*

The College published research reports, monographs and journals. Two journals which are published by the

College are:

1. *The Educational Trend*—a research journal published half-yearly, and
2. *School Science Resource Letter*—published quarterly.

*Silver Jubilee*

The College celebrated its Silver Jubilee on 22

December 1988. The Hon'ble Shri Sukhdeo Prasad, Governor of Rajasthan presided over the function. Dr K.L. Shrimali, the former Union Education Minister, delivered the key-note address. Prof.R.B. Upadhyaya, Vice-Chancellor, University of Ajmer, welcomed the guests and Dr P.L. Malhotra, Director, NCERT, proposed a vote of thanks. The function was attended by eminent educationists of the State.

**TABLE 9.1**

*Enrolment in Pre-Service Courses State-wise during 1988-89 in the Regional College of Education, Ajmer*

S.No.	Course	RAJ.	UP	PB.	HAR.	HP	DLH.	J&K	CHD.	Total
1.	B.Ed. Science	16	19	10	10	6	6	1	1	69
2.	B.Ed. Agriculture	5	15	—	—	—	—	—	—	20
3.	B.Ed. Commerce	8	8	2	3	3	3	1	—	28
4.	B.Ed. Hindi	9	10	2	5	3	4	1	1	34
5.	B.Ed. English	8	8	3	2	3	3	1	1	29
6.	B.Ed. Urdu	15	5	—	—	—	2	—	—	22
7.	I Yr., B.Sc.(H/P)B.Ed.	—	—	—	—	—	—	—	—	75
8.	II Yr., B.Sc.(H/P)B.Ed.	—	—	—	—	—	—	—	—	45
9.	III Yr., B.Sc.(H/P)B.Ed.	—	—	—	—	—	—	—	—	58
10.	IV Yr., B.Sc.(H/P)B.Ed.	—	—	—	—	—	—	—	—	38
11.	M/Ed. (No State-Wise Admissions are Made)	—	—	—	—	—	—	—	—	18
<b>TOTAL</b>										<b>436</b>

**TABLE 9.2**

*Enrolment of S.C./S.T. in Pre-service Courses during the Session 1988-89 in the Regional College of Education, Ajmer*

S.No.	Class	No. of students	SC students	ST students
1.	M.Ed.	18	—	—
2.	B.Ed. Science	69	3	3
3.	B.Ed. Agriculture	20	7	2
4.	B.Ed. Commerce	28	4	—
5.	B.Ed. Hindi	34	6	3
6.	B.Ed. English	29	4	—
7.	B.Ed. Urdu	22	—	—
8.	I Yr., B.Sc., (H/P) B.Ed.	75	1	—
9.	II Yr., B.Sc., (H/P) B.Ed.	45	3	—
10.	III Yr., B.Sc., (H/P)B.Ed.	58	—	1
11.	IV Yr., B.Sc., (H/P) B.Ed.	38	1	—
<b>Total</b>		<b>436</b>	<b>299</b>	

**TABLE 9.3**

*Examination Results for the Courses in the Regional College of Education, Ajmer for 1988*

S.No.	Course	Appeared	Passed	Pass percentage
1.	B.Ed. Science	59	56	94.91
2.	B.Ed. Agriculture	24	23	95.83
3.	B.Ed. Commerce	25	22	88.00
4.	B.Ed. English	27	24	88.08
5.	B.Ed. Hindi	33	31	93.93
6.	B.Ed. Urdu	9	8	88.88
7.	B.Ed. SSCC	98	91	92.85
8.	M.Ed.	18	18	100.00
9.	IV Yr., B.Sc.(H/P), B.Ed.	48	48	100.00
10.	III Yr., B.Sc.(H/P), B.Ed.	40	36	90.00
11.	II Yr., B.Sc.(H/P), B.Ed.	67	57	85.07
12.	I Yr., B.Sc.(H/P), B.Ed.	73	45	61.64

**TABLE 9.4**  
*Workshop/Meetings/Seminars conducted by the RCE, Ajmer, during 1988-89*

S.No.	Title of the Programme	No. of Participants	Dates	Venue
1.	Workshop for development of learning packages for Class X in Chemistry based on new curriculum of 10+2	25	26 September to October 1988	RCE, Ajmer
2.	Workshop on Value Education	32	3 to 8 October 1988	Udaipur
3.	Workshop for development of teaching aids and Models for +2 level in Chemistry	17	12 to 17 October 1988	Jalpur
4.	Workshop for development of innovative materials in Geography at +2 Stage	22	29 October to 3 November 1988	Mt Abu
5.	Conference of Principal/Headmasters	21	28 to 29 November 1988	Ajmer
6.	Workshop on strategies for stimulating cognitive growth	6	5 to 10 December 1988	Ajmer
7.	Workshop on Geography teaching through local resources	20	19 to 24 December 1988	Jaisalmer
8.	Workshop on teaching typewriting for +2 vocational teachers	16	5 to 10 December 1988	Ajmer
9.	Orientation programme on National Policy on Education-1986	26	16 to 21 January 1989	BHU Varanasi
10.	Oreintation programme for regular teachers on social interaction techniques in an integrated school	11	16 January to 18 February 1988	Ajmer
11.	Workshop on teaching book-keeping and accounting for +2 level vocational teachers	9	13 to 18 February 1989	Ajmer
12.	Orientation programme for Education Officers of northern States handling IED Programme	4	20 to 21 February 1989	Ajmer
13.	Production oriented workshop on preparation of the manuscript of the teacher's guide in potato culture and ornamental gardening	12	20 to 25 February 1989	Hissar
14.	Training programme for IED teachers	14	6 to 15 March 1989	Gurgaon
15.	Workshop for production of inquiry training materials in science	17	9 to 12 March 1989	Ajmer
16.	Orientation programme on science education for rural development	21	13 to 17 March 1989	Udaipur,
17.	Orientation programming for guidance counsellors and career masters to identify existing mild handicapping condition in regular school	18	25 to 27 March 1989	Jodhpur
18.	Marketing of SIE/SCERT officials	4	14 to 15 April 1989	RCE, Ajmer

**TABLE 9.5**  
*Programmes of the other agencies organised by RCE, Ajmer*

S.No.	Title of the Programme	Dates	Sponsoring agency
1.	Seminar on recent researches and innovations in ET (mass media)	4 to 6 October 1988	CIET, NCERT

S.No.	Title of the Programme	Dates	Sponsoring agency
2.	Workshop on experimental projects	1 to 6 October 1988	Board of Sec.Edu., Ajmer
3.	Planning meeting for the Training Programme for the lecturers of Sr.Sec.Schools of the State of Rajasthan in Physics and Biology	2 & 3 November 1988	MHRD/NCERT
4.	Training programme for lecturers of Sr Sec.Schools of the State of Rajasthan in Physics and Biology	9 to 28 January 1989	MHRD/NCERT
5.	Training Programme on Integrated Education of the Disabled (IED)	26 September to 2 November 1989	SIERT, Rajasthan
6.	SUPW Workshop	13 to 20 March 1989	Board of Sec. Edu., Ajmer
7.	Workshop on Research Methodology Course Level I	27 March to 5 April 1989	NCERT
8.	XIV and XV All India Competition of Seminar reading for Teachers Educators	31 March to 1 April 1989	NCERT
9.	Orientation programme for Key Resource Persons of Rajasthan & Haryana	3 to 7 April 1989	NCERT
10.	Orientation programme for Key Resource Persons of Uttar Pradesh	10 to 14 April 1989	NCERT
11.	Orientation programme for Key Resource Persons of J and K & HP	24 to 28 April 1989	NCERT
12.	Orientation programme for Key Resource Persons of Punjab, Delhi and Chandigarh	17 to 21 April 1989	NCERT
13.	Summer Institute in Chemistry and Mathematics for Lecturers of Sr Sec.Schools of the State of Rajasthan	5 to 24 May 1989	MHRD/NCERT
14.	IED Programme	25 May to 3 July 1989	SIERT, Rajasthan
15.	Summer Institute in Chemistry, Mathematics, Biology, Physics for Lecturers of Sr Hr.Sec.Schools of the State of Rajasthan	7 June to 5 July 1989	MHRD/NCERT
16.	Training of Key Resource Persons for Summer Institute under MHRD Project for the State of UP	10 to 12 April 1989	MHRD/NCERT
17.	Training of Key Resource Persons for Summer Institute under MHRD Project	25 to 27 April 1989	MHRD/NCERT
18.	Training of District Level Officers in Environment Conservation	March 1989	Govt of Rajasthan

## Regional College of Education, Bhopal

The Regional College of Education at Bhopal offers a four-year Integrated course in Science Education leading to the B.Sc. B.Ed. Degree; a four-year integrated course in English leading to the B.A.B.Ed.

Degree; a one-year B.Ed. Course with specialisation in science/Commerce; one-year B.Ed. course with specialisation in elementary education and a one-year M.Ed. Course with specialisation in science education, educational administration and guidance.

# 1988-89

## Enrolment

The enrolment in different courses during the academic session 1987-88 is given in the Tables 9.6 to 9.8.

## Examination Results

The examination results of the students in different courses offered by RCE, Bhopal, during the academic

session 1988-89 are given in Table 9.9.

## Training/Orientation Programmes

The College organised 45 programmes during the year 1988-89. The list of programmes conducted is given in Tables 9.10 and 9.11.

**TABLE 9.6**  
Enrolment in Pre-Service courses in RCE, Bhopal

S.No.	Course	Duration	Enrolment year-wise				Total
			1st Yr.	IInd Yr.	IIIrd Yr.	IVth Yr.	
1.	B.Sc.B.Ed.	4 Year	73	44	64	56	237
2.	B.A.B.Ed.	4 Year	31	27	27	22	107
3.	B.Ed. Science	One Year	63	—	—	—	63
4.	B.Ed. Commerce	One Year	44	—	—	—	44
5.	B.Ed. (Ele.Edu.)	One Year	44	—	—	—	44
6.	M.Ed.	One Year	12	—	—	—	12
7.	M.Ed. (Ele.Edu)	One Year	10	—	—	—	10
Total							517

**TABLE 9.7**  
Enrolment in Pre-Service courses State-wise in RCE, Bhopal

S.No.	Course	Breakup state-wise					Total
		MP	MAH	GUJ	DNH	Goa	
1.	B.Sc.B.Ed. I	61	11	—	1	—	73
2.	B.Sc.B.Ed. II	39	4	—	1	—	44
3.	B.Sc.B.Ed. III	59	2	3	—	—	64
4.	B.Sc.B.Ed. IV	55	1	—	—	—	56
5.	B.A.B.Ed. I	19	3	—	1	8	31
6.	B.A.B.Ed. II	20	3	—	—	4	27
7.	B.A.B.Ed. III	25	—	—	—	2	27
8.	B.A.B.Ed. IV	20	—	—	—	2	22
9.	B.Ed. Science	16	29	18	—	—	63
10.	B.Ed. Commerce	16	18	7	3	—	44
11.	B.Ed. (Ele.Edu.)	16	13	10	—	5	44
12.	M.Ed.	11	1	—	—	—	12
13.	M.Ed. (Ele.Edu)	10	—	—	—	—	10
		367	85	38	6	21	517

**TABLE 9.8**  
*Enrolment of SC/ST students in pre-service courses in RCE, Bhopal*

S.No.	Course	Total Students	SC	ST
1.	B.Sc.B.Ed. I	73	5	—
2.	B.Sc.B.Ed. II	44	2	—
3.	B.Sc.B.Ed. III	64	1	—
4.	B.Sc.B.Ed. IV	56	1	—
5.	B.A.B.Ed. I	31	2	—
6.	B.A.B.Ed. II	27	—	—
7.	B.A.B.Ed. III	27	1	—
8.	B.A.B.Ed. IV	22	—	—
9.	B.Ed. Science	63	12	1
10.	B.Ed. Commerce	44	6	3
11.	B.Ed. (Ele. Edu.)	44	7	3
12.	M.Ed.	12	—	—
13.	M.Ed. (Ele. Edu)	10	—	—
<b>Total</b>		<b>517</b>	<b>37</b>	<b>7</b>

**TABLE 9.9**  
*Examination Results in the RCE, Bhopal*

S.No.	Name of the Course	Total enrolment	Total appeared	Total passed	Pass percentage
1.	B.Sc.B.Ed.(Old Course)	Ex.Stu.	13	Result of 4 candidates withheld	
2.	B.Sc.B.Ed. I (New Course)	73	70*	Result not declared	
3.	B.Sc.B.Ed. II	46	46	40	83%
4.	B.Sc.B.Ed. III	65	65	55	84%
5.	B.Sc.B.Ed. IV	57	57	56	99%
6.	B.A.B.Ed. I (Old Course)	Ex.Stu.	2	1	50%
7.	B.A.B.Ed. I (New Course)	31	31	28	90%
8.	B.A.B.Ed. II	27	25	21	84%
9.	B.A.B.Ed. III	27	27	23	89%
10.	B.A.B.Ed. IV	23	23	23	100%
11.	M.Ed.	12	12	12	100%
12.	M.Ed. (Elec. Edu.)	10	7	7	100%
13.	B.Ed. Commerce	44	43	43	100%
14.	B.Ed. Science	63	59	59	100%
15.	B.Ed. (Ele.Edu.)	44	41	41	100%

\*Results not declared.

**TABLE 9.10**  
*Inservice programmes conducted by RCE, Bhopal, during 1988-89*

S.No.	Title of the Programme	No. of Participants	Dates	Venue
1.	Seminar-cum-workshop on nature of science for key persons of DIETs in western region	15	11 to 16 July 1988	Bhopal
2.	Seminar-cum-workshop for introducing computer education at B.Ed. level	44	25 July to 4 August 1988	Bhopal
3.	Workshop for finalising the NFE, instructional material prepared in the three workshops	32	17 August 1988	Bijalpur
4.	Orientation course in IEVH for teachers of western region	26	8 to 20 August 1988	Bhopal
5.	Orientation course for Chemistry teachers of western region	30	16 to 21 August 1988	Bhopal
6.	Training course for teacher educators on script writing	20	5 to 10 September 1988	Chandrapur
7.	Orientation programmes for NFE functionaries in Area Approach	27	8 to 9 September 1988	Rajnagar
8.	Orientation programme for key resource persons for N.T.S. scheme for Gujarat State	22	5 to 10 September 1988	Bhopal
9.	Orientation programme for vocational teachers at +2 stage	34	12 to 17 September 1988	Bhopal
10.	Orientation of teachers and teacher educators in content-cum-methods of Biology, IX & X	22	19 September 1988	Bhopal
11.	Orientation programmes on evaluation techniques in Chemistry	40	19 to 24 September 1988	Khandwa
12.	Orientation programmes on IEVH (Integrated Education for disabled with special reference to Visually Handicapped)	15	26 to 30 September 1988	Sagar
13.	Orientation Programme for key resource persons for NTS Scheme for Gujarat State (in Social Studies)	28	3 to 8 October 1988	Ambaji
14.	Training programmes on audio script writing	16	3 to 8 October 1988	Pendra
15.	Workshop for preparing language material in Gujarati	37	25 to 30 October 1988	Vapi
16.	Training courses for primary and secondary level teacher educators	21	15 to 19 November 1988	Ujjain
17.	SC/ST Project, Harrai	18	24 to 30 November 1988	Harrai
18.	Meeting of Principals of Khandwa	20	18 & 19 November 1988	Khandwa
19.	Meeting of Principals of Ujjain	20	7 December 1988	Ujjain
20.	Orientation and awareness programme for the IED co-ordinators and Principals/Headmasters of Common Schools for strengthening to Integrated Scheme of Education for Disabled with special reference to visually handicapped	20	19 to 23 December 1988	Pune
21.	Orientation Programme of Teacher Educators of Maharashtra and Goa in Child Centred Education	18	26 to 31 December 1988	Goa
22.	Workshop for developing educational activities and programme for the students of Model School and Kanya Shiksha Parisad of TWD in MP	20	26 to 31 December 1988	Chitrakut
23.	Meeting of co-ordinators and Hon. Director of Maharashtra State	41	9 to 11 January 1989	Pune



S.No.	Title of Programme	No. of Participants	Dates	Venue
24.	Orientation programme on Remedial Instruction in Chemistry	12	9 to 14 January 1989	Amarkantal
25.	NFE training programme	29	9 to 13 January 1989	Dakor
26.	Vocational training in Agriculture	7	16 to 23 January 1989	Bhopal
27.	Workshop for developing Commerce workbook	14	23 to 28 January 1989	Bhopal
28.	Orientation programme for teachers, and teacher educators in Biology at +2 stage	18	30 January to 4 February 1989	Bhopal
29.	Orientation programme for Physics teachers at +2 stage	14	13 to 17 February 1989	Bhopal
30.	Orientation programme on script writing	19	13 to 16 February 1989	Dwarka
31.	Orientation and awareness programme for the IED co-ordinators, Principals/Headmasters of Common Schools of Gujarat for strengthening the integrated scheme of education for the visually-handicapped	20	13 to 18 February 1989	Palanpur

**TABLE 9.11**  
*Programmes of other agencies organised by RCE, Bhopal, during 1988-89*

S.No.	Title of the Programme	Duration	Sponsoring Agency
1.	Orientation Programme for Key Persons of Madhya Pradesh	2 to 6 April 1988	NCERT
2.	Orientation Programme for Key Persons of Gujarat & Coa	7 April 1988	NCERT
3.	Orientation Programme for Key Persons of Maharashtra State	12 to 16 April 1988	NCERT
4.	Meeting of Navodaya Vidyalaya Test personnel	9 and 10 May 1988	Navodaya Vidyalaya Samiti
5.	Meeting of NCTE 4-Year Integrated Course	11 May 1988	NCTE
6.	Science Improvement Programme of Eklavya	23 May to 11 June 1988	Eklavya Society
7.	Teachers Training Programme for Computer Literacy and Studies in School (CLASS)	23 May to 12 June 1988	CLASS Project
8.	Summer Institute in Physics	14 June to 3 July 1988	MHRD
9.	Summer Institute in Maths	14 June to 3 July 1988	MHRD
10.	Summer Institute in Biology	14 June to 3 July 1988	MHRD
11.	UNESCO sponsored programme on vocationalisation of education	22 to 28-Feb. 1989	NCERT (UNESCO)

## Regional College of Education, Bhubaneswar

The Regional College of Education, Bhubaneswar, offers a four-year integrated course in Science Education leading to B.Sc.(Hons). B.Ed. Degree; a four-year Integrated course in English Education leading to B.A.(Hons) B.Ed. Degree; a one-year B.Ed.

(Secondary) course; a one-year B.Ed. (Elementary) course; a one-year M.Ed. course; and a two-year M.Sc. Ed. (Life Science) course.

While the M.Sc.Ed. (Life Science) course is an All-India course, all other courses offered in this College are meant for the students of the Eastern Region. Admission to all the courses are made on merit and a

# 1988-89

State-wise quota basis, with mandatory reservation of seats for Scheduled Caste, Scheduled Tribe and physically handicapped candidates.

## Enrolment

The enrolment in different pre-service courses during the academic session 1988-89 is indicated in Tables 9.12 and 9.13.

## Examination Results

The course-wise results of the students in the RCE,

Bhubaneswar, who appeared for the Utkal University Examination, 1988, are given in Tables 9.14 and 9.15.

## Extension Services

As part of its extension services, the RCE, Bhubaneswar, organised a number of in-service teacher training courses, keeping in view the National Policy on Education—1986. The details of the in-service programmes organised during 1988-89, together with the number of participants from States/Union Territories of the Eastern Region are given in Table 9.16.

**TABLE 9.12**  
Enrolment in pre-service courses during 1988-89 in RCE, Bhubaneswar

S.No.	Course	Total enrolment	Out of them	
			SC	ST
1.	B.Sc.B.Ed.	290	26	2
2.	B.A.B.Ed.	236	17	9
3.	B.Ed.	194	20	6
4.	M.Ed.	19	2	2
5.	M.Sc.(Life Science)Ed.	39	3	—
Total		778	68	19

**TABLE 9.13**  
State-wise enrolment in pre-service courses during 1988-89 in RCE, Bhubaneswar

S.No.	Course	State-wise enrolment				
		Total Enrolment	Orissa	Bihar	West Bengal	Assam & other States
1.	B.Sc.BEd.	290	85	71	73	61
2.	B.A.B.Ed.	236	76	49	56	55
3.	B.Ed.	194	72	62	49	11
4.	M.Ed.	19	10	4	3	2
5.	M.Sc. (Life Science) Ed.	39	Assam-1, Bihar-3, West Bengal-2, Orissa-8, Punjab-3, Delhi-1, Karnataka-3, U.P.-1, A.P.-6, Kerala-5, Rajasthan-2, Tamil Nadu-2, M.P.-1, Maharashtra-1			

**TABLE 9.14**  
*Course-wise results of the 1988 University Examination (RCE, Bhubaneswar)*

S.No.	Course	Total appeared	Total passed	Pass %
1.	B.Sc.B.Ed. Part-I	69	55	79.7%
2.	B.Sc.B.Ed. Part-II	70	68	97.1%
3.	B.Sc.B.Ed. Part-III	72	65	90.2%
4.	B.Sc.B.Ed. Part-IV	81	79	97.5%
5.	B.A.B.Ed. Part-I	59	54	91.5%
6.	B.A.B.Ed. Part-II	59	54	91.5%
7.	B.A.B.Ed. Part-III	56	56	100%
8.	B.A.B.Ed. Part-IV	54	54	100%
9.	B.Ed.	204	145	71%
10.	M.Ed.	14	14	100%
11.	M.Sc.Ed. (Life Science) Part-I	22	22	100%
12.	M.Sc.Ed. (Life Science) Part-II	20	20	100%

**TABLE 9.15**  
*B.Ed. summer school-cum-correspondence course results of the 1988 University Examination (RCE), Bhubaneswar*

S.No.	Course	Total appeared	Total passed	Pass %
<i>RCE, Bhubaneswar</i>				
1.	B.Ed. (SS/CC) Secondary	136	126	92.64%
2.	B.Ed. (SS/CC) Elementary	75	64	85.33%
<i>Manipur Sub-centre</i>				
1.	B.Ed. (SS/CC) Secondary	151	94	62.38%
2.	B.Ed. (SS/CC) Elementary	137	68	49.63%

**TABLE 9.16**  
*Inservice Programmes organised by the RCE, Bhubaneswar, during 1988-89*

S.No.	Title of the Programme	No. of Participants	Dates	Venue
1.	Orientation programme for State-level Key Persons under PMOST			
	1st Phase (Orissa)	36	2 to 6 April 1988	Bhubaneswar
	2nd Phase (West Bengal & Tripura)	36	7 to 11 April 1988	Bhubaneswar
	3rd Phase (A&N Islands)	44	12 to 16 April 1988	Bhubaneswar
2.	Teacher Training Programme under CLASS Project	29	23 May to 11 June 1988	Bhubaneswar
3.	National Workshop on Population Education	14	23 to 29 May 1988	Tirupati
4.	Content Enrichment course in Physical Science	28	6 to 15 September 1988	Port Blair
5.	Orientation Programme in the Teaching of Educational Psychology at the B.Ed.Level	10	19 to 23 September 1988	Bhubaneswar

# 1988-89

S.No.	Title of the Programme	No. of Participants	Dates	Venue
6.	Orientation Programme on teaching of Science and Maths at Primary Level for SC/ST teachers of Assam	24	11 to 16 October 1988	Mirzapur
7.	Orientation programme for Key Persons of the Eastern Region on Value-Oriented Education	18	12 to 18 November 1988	Bhubaneswar
8.	Content Enrichment course in Mathematics for Secondary School Teachers of Eastern States	16	9 to 18 November 1988	Calcutta
9.	Orientation programme on New Directions in teaching Social Studies as per the NPE for Elementary Teacher-Educators	14	13 to 19 November 1988	Jeypore
10.	Orientation Programme for SC and ST Elementary School Teachers on Teaching-learning Problems of Manipur	28	22 to 27 November 1988	Imphal
11.	Workshop on preparation of Flash-cards and Low-cost Teaching Aids for Primary School Teachers	22	20 to 26 December 1988	Bhubaneswar
12.	Orientation of Secondary School Teachers working under Farakka Super Thermal Power Project	24	26 December to 2 January 1989	Farakka
13.	Workshop on Teaching English at the Secondary Stage	26	7 to 11 January 1989	Agartala
14.	Content-cum-Method Enrichment Course in Social Sciences	31	9 to 15 January 1989	Car Nicobar
15.	Orientation Programme for Teachers working in the integrated Schools (Primary/Middle)	12	16 to 30 January 1989	Bhubaneswar
16.	Workshop for Ashram School SC/ST Teachers of Orissa for developing awareness for healthy living among students	39	24 February to 2 March 1989	Bhubaneswar
17.	Content Enrichment course in Biological Sciences for Secondary School Teachers	15	3 to 9 March 1989	Shillong
18.	Workshop on Cognitive Demand Classification of the Physical Science curriculum of Classes VII, VIII, IX and X of the CBSE system	22	6 to 11 March 1989	Bhubaneswar
19.	Training programme for key persons of Manipur in Mathematics (Secondary Stage)	25	6 to 13 March 1989	Imphal
20.	Orientation Programme on Content Enrichment in Science and Mathematics for teachers of CTSA	32	13 to 27 March 1989	Bhubaneswar

## *Celebration of Silver Jubilee*

On the completion of 25 years since its establishment, the Silver Jubilee of this College was celebrated on 12 January, 1989. The Hon'ble Shri J.B. Patnaik, Chief Minister of Orissa, inaugurated the function and the Hon'ble Shri J.N. Das Mohapatra, Minister for Education, Sports and Youth Services, Orissa, presided over the function. Dr Sadasiva Misra, formerly Vice-Chancellor, Utkal University, delivered

the Silver Jubilee lecture, while Shri P.S. Habeeb Mohammed, Administrator, Utkal University and Chairman, College Management Committee welcomed the guests. Dr Sadasiva Misra, Prof. B. Das, Dr B. Misra, Major P.K.Das (all formerly Vice-Chancellors of Utkal University and Chairmen of the College Management Committee) and Dr R.C. Das, formerly Vice-Chancellor of Berhampur University and formerly Principal of this College, attended the function as special invitees. They were honoured by the Chief

Minister for their contribution to the growth of the RCE, Bhubaneswar. Along with the others, Dr G.B. Kanungo, the then Principal of the College was also honoured. Hon'ble Shri Arun Kumar Kar, Education Minister of Tripura, also spoke at the function. Dr P.L. Malhotra, Director, NCERT, proposed the vote of thanks.

### Regional College Of Education, Mysore

The Regional College of Education, Mysore offers a four-year integrated course in Science Education leading to the B.Sc.Ed. degree; a four-year integrated course in English education leading to the B.A.Ed. degree; a one-year B.Ed. course; a one-year M.Ed. course; and two-year M.Sc.Ed. courses in chemistry mathematics and physics. It also offers the facility to candidates to register themselves for the Ph.D. degree in science and education.

### Enrolment

The enrolment in different pre-service courses during the academic session 1988-89 is indicated in Table 9.17.

### Examination Results

The course-wise examination results of the students in different courses offered by the RCE, Mysore are given in Table 9.18.

### In-service and Extension Programmes

The RCE, Mysore conducted a variety of in-service teacher training programmes during 1988-89. Thirty-six in-service and extension programmes were held in the College. Over 1,000 teachers, teacher-educators and educationists participated in these programmes. The details of the programmes conducted during 1988-89 are given in Table 9.19.

**TABLE 9.17**  
Number of students on the rolls during the year 1988-89 (RCE, Mysore)

Sl. No.	Course	AP		TN		KAR		KER		OS		Total		Grand Total	SC		ST		
		M	F	M	F	M	F	M	F	M	F	M	F		M	F			
1.	B.Ed.	17	3	4	15	6	6	4	5	—	—	31	29	60	1	4	—	—	
2.	M.Ed.	4	1	2	1	4	5	4	3	1	—	15	15	25	1	1	—	—	
3.	B.A.Ed.	I Yr	6	6	2	10	2	6	1	6	—	1	11	29	40	2	3	1	1
		II Yr	1	3	1	10	2	4	3	3	—	—	7	20	27	1	2	—	—
		III Yr	2	7	2	8	1	4	1	3	—	—	6	22	28	—	—	—	—
		IV Yr	3	5	—	9	3	2	—	6	—	—	6	22	28	—	—	—	—
4.	B.Sc.Ed.	I Yr	11	12	5	13	1	12	1	9	3	2	21	48	69	2	3	3	2
		II Yr	10	9	3	22	1	9	3	9	1	—	18	49	67	1	—	—	1
		III Yr	11	10	4	11	1	11	—	8	1	1	17	41	58	1	2	—	—
		IV Yr	6	9	6	11	2	6	2	8	—	1	16	35	51	—	2	—	—
5.	M.Sc.Ed. Physics	I Yr	9	3	2	4	1	1	2	2	—	1	15	10	25	1	—	—	—
		II Yr	9	1	3	2	2	—	—	1	—	—	14	4	18	—	—	—	—
	Chemistry	I Yr	2	3	1	7	1	3	1	3	—	4	5	20	25	1	—	—	—
		II Yr	—	1	2	3	1	—	1	—	1	3	5	7	12	—	—	—	—
	Mathematics	I Yr	4	1	1	5	3	2	—	3	—	2	8	13	2	—	—	—	—
		II Yr	5	3	—	1	—	—	1	1	2	2	8	7	15	—	—	—	—
Grand Total		100	77	38	132	31	71	24	70	9	17	202	367	569	11	17	5	4	

NOTE: M-Male; F-Female; AP-Ardrha Pradesh; TN-Tamil Nadu; KAR-Karnataka; KER-Kerala; OS-Others; SC-Scheduled Caste; ST-Scheduled Tribe

**TABLE 9.18**  
Results of University examination—May 1988 (RCE, Mysore)

Sl. No.	Course	No. of students appeared	I Class	II Class	III Class	Total Pass	No. of Students getting ordinance	% of Pass	No. of students appeared		No. of students passed	
									SC	ST	SC	ST
1.	B.Sc.Ed.	R 56 P 8(64)	26	13 1	— 3	39 4	17	69.64	2	—	1	—
2.	B.A.Ed.	R 26	6	14	2	22	4	84.61	—	—	—	—
3.	B.Ed.	R 73 P 4(77)	53	15	— 4	68	5	93.15	3	—	1	—
4.	B.Ed. (SSCC)	P4	—	—	—	—	—	—	—	—	—	—
5.	M.Ed.	R 23	10	11	2	23	—	100.00	2	1	2	1
6.	M.Sc. Ed.											
	Physics	R 11 P7(18)	3	4	—	7	4	63.63	—	—	—	—
	Chemistry	R 18	12	6	—	18	—	100.00	1	—	1	—
	Mathematics	R 14 P 2 (16)	9	4	—	18	1	92.95	—	—	—	—

Note: R-Regular P-Private

**TABLE 9.19**  
In-service teacher training programmes conducted during 1988-89 (RCE, Mysore)

S.No.	Name of the Programme	No. of Participants	Duration	Venue
1.	Orientation Programme for key persons from the States and Union Territories in the southern region under the PMOST 1988 (MHRD Programme)	AP:54 KAR/KER: 64 TN/Pondí 41	2 to 6 April 1988 7 to 11 April 1988 12 to 16 April 1988	RCE, Mysore RCE, Mysore RCE, Mysore
2.	Ten day orientation programme for the teachers of English in Lakshadweep Islands (Sec. School Teachers) (College Programme)	24	23 May to 1 June 1988	RCE, Mysore
3.	Orientation of key persons of Lakshadweep Islands in content enrichment and activity supplementation of existing curriculum in physics, chemistry, biology and mathematics at the sec. school level (College Programme)	30	23 May to 4 June 1988	RCE, Mysore
4.	Teacher Training Programme under CLASS Project (Council Programme)	25	11 to 31 May 1988	RCE, Mysore
5.	-do-	24	6 to 25 June 1988	RCE, Mysore
6.	Drafting Committee Meeting for devising of teacher education curriculum framework, 1978 (DTE, NCEIRT Programme)	6	16 to 18 June 1988	RCE, Mysore
7.	Pre-Internship Conference of headmasters and teachers of cooperative schools for B.Sc.Ed. and B.A.Ed. internship programme	35	5 to 7 July 1988	RCE, Mysore

S.No.	Name of the Programme	No. of Participants	Duration	Venue
8.	Summer Institute in mathematics for lecturers of Junior Colleges in Karnataka (Under the Centrally Sponsored Scheme of Improvement of Science Education in Schools) (MHRD Programme)	18	11 to 30 July 1988	RCE, Mysore
9.	Summer Institute in biology for lecturers of junior colleges in Karnataka (under the Centrally Sponsored Scheme of Improvement of Science Education) (MHRD Programme)	23	14 July to 2 Aug. 1988	RCE, Mysore
10.	Workshop for finalising the Class VIII Hindi Textbook <i>Hamari Hindi Bhag-III</i> for the Navodaya Schools in non-Hindi speaking areas (Council Programme)	23	14 July to 2 Aug. 1988	RCE, Mysore
11.	Workshop for the development of audio material for teaching of the mother-tongue Kannada to children from Primary schools (College Programme)	18	26 to 30 Sept. 1988	RCE, Mysore
12.	Ten-day Attachment Programme for the faculty of National Institute of Education, Maharagama, Sri Lanka (Council Programme)	11	3 to 12 Oct. 1988	RCE, Mysore
13.	Clarification of conceptional difficulties in some areas of chemistry at the sec. level for the teachers of Kerala State (College Programme)	20	10 to 15 Oct. 1988	Trivandrum
14.	Pre-internship Conference of headmasters and teachers from cooperating schools selected for Internship Programme of B.Ed. (Science) students, 1988-89	18	25 to 27 Oct. 1988	RCE, Mysore
15.	Training Programme for Udru teachers of sec. schools of Karnataka (College Programme)	28	31 Oct. to 5 Nov. 1988	RCE, Mysore
16.	Project Progress Review Meeting of Population Education Project (Council Programme)	30	2 to 6 Nov. 1988	RCE, Mysore
17.	Workshop to develop simple guided laboratory exercises in sec. school-level biology (College Programme)	11	14 to 23 Nov. 1988	RCE, Mysore
18.	Hindi week celebrations to popularise use of Hindi as the official language (College Programme)	65	15 to 18 Nov. 1988	RCE, Mysore
19.	Winter Institute in chemistry for lecturers of junior colleges in Karnataka (under the Centrally Sponsored Scheme of Improvement of Science Education in Schools) (MHRD)	30	11 to 30 Nov. 1988	Manadore University
20.	Winter Institute in physics for Lecturers of junior colleges in Karnataka (under the Centrally Sponsored scheme of Improvement of Science Education in Schools) (MHRD Programme)	33	21 Nov. to 10 Dec. 1988	RCE, Mysore
21.	Educational Development of SC/ST Content Enrichment Programme in Mathematics/Science for teachers from 8 SC/ST primary schools in Mysore City adopted by the College	36	25 Nov. to 2 Dec. 1988	RCE, Mysore
22.	Workshop on translation of Navodaya Vidyalaya Admission Test, May 1989 (Council Programme)	8	1 to 5 Dec. 1988	RCE, Mysore
23.	Educational Development of SC/STs Content Enrichment Programme in mathematics for teachers from APSWR Schools	40	12 to 17 Dec. 1988	Hyderabad
24.	Content Enrichment Programme in English and social studies for teachers of 8 SC/ST primary schools in Mysore city adopted by the college	28	6 to 8 & 11 to 13 Jan. 1989	RCE, Mysore
25.	Orientation of teachers of Lakshadweep in the use of NCERT Science Kits (Lakshadweep Admn. Programme)	65 34	8 to 12 & 15 to 19 Jan. 1989	Kavratti Kadmat, Lakshadweep

S.No.	Name of the Programme	No. of Participants	Duration	Venue
26.	Ten-day Attachment Programme for mathematics and science teachers from selected Muslim-managed high schools of AP, Karnataka, Kerala & TN (CWC Programme)	30	16 to 25 Jan. 1989	RCE, Mysore
27.	Workshop on education through computers for the sec. school teachers of AP, Karnataka, Kerala (College Programme)	24	23 to 28 Jan. 1989	RCE, Mysore
28.	Seminar-cum-Workshop on values and the teaching profession (College Programme)	36	6 & 7 Feb. 1989	RCE, Mysore
29.	Training Course in methodology of teaching mathematics at the sec. level for teacher-educators from Karnataka (College Programme)	16	13 to 18 Feb. 1989	RCE, Mysore
30.	Workshop for developing Design and Tools for the National Evaluating Study on the impact of PMOST (Council Programme)	15	24 to 28 Feb. 1989	RCE, Mysore
31.	Workshop for the development of remedial reading material for dyslexics of the South Indian language—Kannada (College Programme)	34	13 to 18 March 1989	RCE, Mysore
32.	Six-day Training Course for teachers handling vocational course in commerce at the +2 stage in Karnataka (College Programme)	16	13 to 18 March 1989	RCE, Mysore
33.	Orientation Programme-cum-Workshop on the national core elements and their implementation in the southern region (College Programme)	17	21 to 25 March 1989	RCE, Mysore
34.	Orientation Programme for IED personnel in the southern region to develop expertise for providing supervisory services to the teachers managing handicapped children (College Programme)	10	27 to 31 March 1989	RCE, Mysore
35.	Workshop on training-cum-research in value orientation of B.Ed. student teachers (Phase-II) (Council Programme)	35	27 to 31 March 1989	RCE, Mysore
36.	Workshop on use of creative art activities for the disabled children in schools (Council Programme)	20	28 to 31 March 1989	RCE, Mysore

## Demonstration Multipurpose Schools

Each Regional College of Education has a demonstration Multipurpose School attached to it. Teacher-trainees enrolled in various teacher education courses offered by the RCEs undergo practical training at the demonstration multipurpose schools attached to the RCE. These schools act as laboratories for trying out innovative practices in school education and teacher education.

## Enrolment

The enrolment in the different demonstration schools during the academic session 1988-89 are given in Tables 9.20 to 9.22.

## Examination Results

The results of the Board Examinations conducted during March-April 1988 are given in Tables 9.23 to 9.26.



**TABLE 9.20**

Total enrolment class-wise during the session 1988-89 including the number of SC/ST students at Demonstration School, Ajmer

Class	Boys	Girls	Total	S.C.	S.T.
I	21	12	33	4	1
II	29	8	37	5	—
III	23	12	35	6	—
IV	35	9	44	1	—
V	32	10	42	—	4
VI	65	13	78	—	1
VII	68	10	78	2	—
VIII	96	15	111	—	3
IX	99	24	123	4	2
X	83	19	102	1	—
XI	71	28	99	1	—
XII	72	22	94	1	—
<b>TOTAL</b>	<b>694</b>	<b>182</b>	<b>876</b>	<b>26</b>	<b>11</b>

**TABLE 9.21**

Class-wise enrolment in demonstration school, Bhubaneswar during the session 1988-89

Class	Total Enrolment	Out of them	
		SC	ST
I	70	5	2
II	76	6	3
III	87	8	2
IV	86	7	3
V	114	7	2
VI	114	9	3
VII	112	3	—
VIII	116	6	—
IX	112	5	1
X	107	4	1
XI	86	2	1
XII	101	2	1
<b>TOTAL</b>	<b>1,181</b>	<b>64</b>	<b>19</b>

**TABLE 9.22**

Class-wise enrolment during 1988-89 in the Demonstration School, Mysore

Class	Strength	SC	ST
I	86	15	2
II	89	15	3
III	92	7	—
IV	90	1	—
V	92	4	—
VI	87	4	—
VII	88	1	1
VIII	82	4	1
IX	86	3	—
X	80	4	1
XI O.M.S.P	20	—	—
B.E.T.	21	2	—
Humanities	9	—	—
Science	34	—	—
XII O.M.S.P.	19	—	—
B.E.T.	20	1	1
Humanities	6	—	—
Science	20	—	—
<b>Total</b>	<b>1,021</b>	<b>61</b>	<b>9</b>

**TABLE 9.23**

Examination results for the year 1987-88 and for 1988-89 at Demonstration School, Ajmer

Class	Total No. appeared	No. passed	Failed	Suppl.
<i>1987-88</i>				
X	102	98	4	—
XII	92	90	2	—
<i>1988-89</i>				
X	102	98	1	3
XII	93	86	1	6



**TABLE 9.24**

*Distinctions 1987-88 and 1988-89 at Demonstration School, Ajmer*

S.No.	Subject	1987-88	1988-89
1.	Agriculture	—	1
2.	Accountancy	12	6
3.	Biology	4	2
4.	Chemistry	3	11
5.	Commerce	3	6
6.	English	—	6
7.	Geography	7	—
8.	Hindi	6	4
9.	History	—	1
10.	Mathematics	6	2
11.	Physical Education	8	6
12.	Political Science	3	—
13.	Physics	8	15
14.	Secretarial Practice	—	2

**TABLE 9.25**

*Results of the CBSE Examination, 1988 at Demonstration School, Bhubaneswar*

Sl.No.	Class	No. of students appeared	No. of students passed	Pass %	Pass % of previous year
1.	X	112	103	91.9%	94.6%
2.	XII Science	33	33	100.0%	89.6%
	Arts	19	18	94.7%	62.5%
	Commerce	18	12	66.6%	71.4%
	Vocational	27	18	66.6%	25.0%

**Table 9.26**

Class	No. of students appeared	No. of students passed	Pass %
Science	33	31	93.9%
Arts	27	27	100.0%
Commerce	16	15	93.7%
Vocational	25	24	96%

**TABLE 9.27**

*CBSE Examination Results, 1988 at Demonstration School, Mysore*

Class	Students appeared	Passed	Pass percentage
X	83	79	95%
XII Science	32	29	91%
XII Humanities	09	08	89%
XII B.E.T.	18	02	11%
XII OMSP	13	05	38%

**TABLE 9.28**

*Enrolment of students in the Demonstration School at Bhopal during 1988-89*

S.No.	Class	Total number of students	Enrolment	
			SC	ST
1.	I	70	10	6
2.	II	78	12	5
3.	III	75	9	5
4.	IV	85	14	9
5.	V	81	12	6
6.	VI	92	17	7
7.	VII	87	15	1
8.	VIII	74	7	1
9.	IX	80	4	3
10.	X	62	4	2
11.	XI	73	2	1
12.	XII	73	1	0
Total		930	107	48

**TABLE 9.29**

*Results of Board Examinations conducted during March-April 1988 (DMS, Bhopal)*

Class	Number of students appeared	Number of students passed	Pass Percentage	Pass Percentage of previous year
X	63	62	98.4	94
XII	73	69	94.5	69

Promotion of educational technology, particularly mass-media, in the improvement and spread of education in the country and for the development of alternative systems of education constitutes one of the major tasks of the NCERT. The Central Institute of Educational Technology (CIET), which is one of the Constituent Units of the NCERT has been engaged in the development of software relevant to educational needs; the training of personnel working in the field of educational technology; and conducting research and evaluation of systems, programmes and materials in educational technology. The CIET also documents and disseminates information about hardware and software available in the country in the area of educational media and technology.

The CIET, headed by a Joint Director, functions through eight divisions; the Educational Television Script, Training and SIET Coordination Division; the Educational Television Production and Films Division; the Distance Education, Planning, Coordination and Research and Evaluation Division; the Educational Radio Division; the Graphics, Exhibition and Printing Division; the Information Documentation and Central Film Library Division; the Technical Planning, Operations and Maintenance Division; and the Administration and Accounts Division.

The Educational Television Script, Training and SIET Coordination Division is concerned with the planning of ETV, curricula, development of scripts for ETV production in the CIET, training of personnel of the SIETs

and of other institutes in various aspects of ETV production through in-country International Courses, and coordination of effort with the six State Institutes of Educational Technology (SIETs) for setting up production facilities and utilisation of the ETV service.

The Educational Television Production and Films Division is concerned with the production and capsuling of ETV programmes for in and out-of-school children and teachers at the primary level for feeding INSAT-1B. The division has been producing and coordinating the ETV component of the Programmes of Mass Orientation of School Teachers (PMOST) conducted during the summers of 1986, 1987 and 1988. It maintains a video tape library of all in-house productions and prepares a consolidated programme schedule for publicity. It liaises with the SIETs and Doordarshan for transmission of ETV programmes through INSAT-1B, HPTs and LPTs. The Division is responsible for the production of educational films (35mm and 16mm) and their dubbing in Hindi and/or English, and duplication of 16mm prints for sale.

The Distance Education Planning, Coordination and Research and Evaluation Division is concerned with training in distance education and educational technology, planning and coordination of the CIET's activities, and research and evaluation of programmes and materials in educational technology.

The Educational Radio Division produces software for educational purposes, catering to the needs of children from pre-primary to senior secondary stages, and

conducts training programmes for teachers, and freelance writers in script-writing and production of audio/radio programmes.

The Graphics, Exhibition and Printing Division is primarily concerned with the production of charts, low-cost teaching aids and tape slide programmes, arranges exhibitions and undertakes small printing jobs for the CIET and other constituent units of the NCERT.

The Information Documentation and Central Film Library Division has a stock of more than 8,000 educational films (16mm) in the Central Film Library. These are loaned free-of-cost to about 4,300 member institutions throughout the country. A children's book library (Bal Sahitya Kendra) has also been set up with the scripts for producing ETV programmes for 5-11 year old children. It has a collection of more than 5,500 titles. Besides conducting in-service training course/seminars on Media documentation and arranging festivals of Educational Films in various parts of the country, the Division acts as a clearing house for information on Educational Technology. It also coordinates publication of the *CIET newsletter*.

The Technical Planning, Operations and Maintenance Division provides technical support to various Divisions of the CIET. The Division coordinates the job of equipping the studios of six SIETs, one each in Uttar Pradesh, Maharashtra, Gujarat, Andhra Pradesh, Bihar and Orissa. It provides consultancy services in connection with equipment purchase and specifications for setting up small TV and sound studios for educational purposes. It monitors the new CIET building.

The Administration and Accounts Division looks after the administrative and financial matters of the CIET.

During the year 1988-89, the CIET was engaged in several research, developmental and training activities. The details of these activities are given in the following sections.

## Research Activities

The following research/evaluation activities were carried out during 1988-89.

- Studies to obtain feed-back from children about the ETV programmes. For this purpose, monthly feed-back reports were invited from a few selected user-teachers of Uttar Pradesh and Bihar who were especially oriented to the techniques of collecting feed-back and reactions of the children.
- Content analysis of viewers' mail with a view to determine the attitude and opinion of the children, teachers and parents towards ETV programmes.
- A sample survey to study utilisation of ETV service in the INSAT districts of Uttar Pradesh.
- A case study on ETV utilisation in selected INSAT districts of Gujarat and Maharashtra.
- A study of utilisation of the ETV component of the PMOST programme in 275 camps spread over six states.
- An in-depth case-study of the Open School in Tamil Nadu to study its organisational structure, operating processes and future plans.
- Field testing of audio programmes: five audio programmes in the series of India's Common Cultural Heritage, fifteen audio programmes on culture and 27 nursery rhymes developed by the Radio Division were tested and evaluated.

## Development of Educational Materials

The CIET was engaged in the development of educational software including ETV programme, audio/radio programmes and educational films, the details of which are as described below:

### *ETV Programmes for Children and Teachers at the Elementary level*

90 new ETV programmes for feeding the satellite, INSAT-1B, were produced during the year 1988-89, bringing the total to 418 programmes and their 744 language-versions. The details of the ETV programmes produced are given in Table 10.1.

**TABLE 10.1**

*Number of ETV Programmes produced during 1988-89*

ETV programmes for various groups				
5-8 years	9-11 years	Teachers	Misc. Pro-grammes	Total
36	34	16	4	90

In addition to these, the Oriya versions of 65 ETV programmes were also produced. ETV Programmes produced by the CIET and SIETs were telecast for 3 hours and 45 minutes from Monday to Saturday on about 220 school days in five different languages on a time-slot basis. In addition to being telecast in the six INSAT States (Andhra Pradesh, Bihar, Gujarat, Maharashtra, Orissa and Uttar Pradesh) the Hindi versions of the programmes were relayed by all high-power and low-power transmitters in Madhya Pradesh, Rajasthan, Punjab, Haryana, Himachal Pradesh and Chandigarh. Selected ETV programmes produced by the CIET were telecast twice a week by Doordarshan Kendra, Delhi and relayed by a network of 150 other stations of Doordarshan in the children's programmes.

### Audio/Radio Programmes

The thrust of production of educational audio/radio programmes in the CIET during the year was towards production of programmes on the common core components indicated in the National Policy on Education—1986 and the National Curricular Framework. 76 new audio programmes were produced during the period under report bringing the total number of educational radio programmes produced to about 900 in different areas. The details of the audio/radio programmes produced during 1988-89 are given in Table 10.2

### Educational Films

During the year under report, three 16mm colour

films in the geography series on Land and People namely, *The Malabar Coast*, *The Great Shores* and *Land Made by Green Fingers* were completed (in English). All the films are simultaneously being dubbed in Hindi.

In addition to these, the CIET purchased 32 educational films depicting India's freedom movement for its Central Film Library.

### Educational Charts

The CIET developed 18 biology charts in Series II for Classes IX and X. 22 biology charts in Series I have already been printed and sent to the States for adoption/adaptation. In addition to these, the CIET undertook several other developmental activities. These included the development of biology charts (Series II); ETV scripts on chemistry at the secondary level and on low-cost teaching aids; identification of topics and content for ETV programmes on common core components in the school curriculum and in environmental education; and the determination of the requirements and needs of Navodaya Schools for audio programmes to support curricula. A number of workshops/meetings were organised in connection with these developmental activities. The details of workshops/meetings/conferences organised during 1988-89 are given in Table 10.3.

**TABLE 10.2**

*Audio/Radio Programmes produced during 1988-89*

Theme of the Programme	Target Group	Number of Programmes
India's common cultural heritage	Primary	34
Freedom movement	Upper Primary	4
Letters from a father to a daughter	Upper Primary	3
Nursery rhymes	Pre-primary	21
National Identity	Primary	5
Curriculum-based programmes	Class VI (Navodaya Vidyalayas)	9
TOTAL		76

**TABLE 10.3**  
*Workshops/Conferences/Meetings/Seminars conducted during 1988-89*

S.No. Programme	Dates	Venue	No. of Participants
1. Workshop on identification of topics and content on scientific temper	22 & 23 April 1988	CIET	25
2. Workshop on Development of scripts for ETV programmes on low-cost aids	April, 1988	CIET	4
3. Five meetings of the Working Group to finalise ETV scripts in chemistry for teachers at secondary and senior secondary level	May, June 1988 and January March 1989	CIET	6
4. Workshop on identification of topics and content of series on astronomy	20 & 21 June 1988	CIET	4
5. Working Group Meeting to discuss autonomous management structure of the SIETs		CIET	12
6. Meeting of the representatives of the leading recording companies to discuss possible commercial dissemination of audio programmes produced by the Radio Division	5 June 1988	CIET	5
7. Workshop for developing ETV curriculum for SIETs	27 June to 6 July 1988	CIET	25
8. Workshop for developing video programmes on environmental education	9 & 10 August, 1988	CIET	15
9. Workshop on identification of topics on vocational education	22 & 23 August 1988	CIET	25
10. Workshop for development of visuals on the protection of environment	23 to 26 August 1988	Bal Bhawan New Delhi	41
11. Seminar on recent researches and innovations in ET related to mass media.	4 to 6 October 1988	RCE, Ajmer	10
12. Workshop on evaluation of the Biology Charts (Series II) for Classes IX and X.	4 & 5 October 1988	CIET	16
13. Workshop for identification of topics for development of charts in science (biology) for Classes XI and XII	13 & 14 October 1988	CIET	15
14. A Workshop on low-cost aids for the selected teachers of the District Institutes of Education, Jammu region.	14 to 18 November 1988	SIE Jammu	20
15. Meeting to discuss requirements and needs of Navodaya Schools for developing audio programmes to support curriculum.	24 November 1988	CIET	17
16. Two meetings to discuss mode of presentation of programme based on 'Letters from a Father to a Daughter'.	19 July 1988 & 19 December 1988	CIET CIET	6 6
17. Meeting to review the films produced by the erst-while Department of Teaching Aids	15 to 19 January 1989	CIET	14
18. Two workshops for development of self-check exercises for distance education lessons.	21 to 24 February and 10 & 11 April 1989	CIET	12
19. Conference of the officers of the States ET Cells and Film Libraries	14 to 16 March 1989	CIET	29
20. Two workshops on development of guidelines for editing distance education lessons	6 to 10 March & 31 March to 5 April 1989	CIET	10

S.No. Programme	Dates	Venue	No. of Participants
21. Two meetings of the working group for production of biology charts for Class XI	5 & 27 March, 1989	CIET	8
22. Meeting on child-centred approach to education	8 to 10 March 1989	CIET	10

### Training Programmes

The CIET continued to organise various in-country training courses in collaboration with international

institutions of repute for training a large number of people. The details of various training courses organised by the CIET during 1988-89 period are indicated in Table 10.4.

**TABLE 10.4**  
*Training/Orientation programmes conducted during 1988-89*

S.No. Programme	Dates	Venue	No. of participants
1. AIBD Training Course on Video Editing	6 June to 1 July 1988	CIET	20
2. BOSCH Training Course on BCN-51 Maintenance	20 June to 8 July 1988	CIET	2
3. Training course on Educational Radio in collaboration with the Radio Netherland Training Centre	26 October to 20 November 1988	RCE, Mysore	15
4. Seventh CIET-AIBD Training course on Basic Camera, ETV Production and Technical Operation	31 October to 9 December 88	SIET, Lucknow	47
5. CIET-AIBD Training Course in Studio Directing Techniques	5 to 23 December 1988	CIET	14
6. Training Course in educational technology for teacher educators	30 January to 27 February 1989	CIET	14
7. Training course in educational technology on the preparation and use of audio visual materials for teacher educators from District Institutes of Education	27 February to 10 March 89	CIET	21

### Extension Programmes

The CIET organised several extension programmes during the year. These are listed below.

- (i) The CIET continued to support the extension of the project on teaching Hindi as the first language at the primary level using audio

- tapes in 450 schools in Hoshangabad district (MP). During the year, another set of 17 audio cassettes were supplied to each school. Earlier, the schools were provided with two-in-one receiving sets.
- (ii) The CIET has offered 29 ETV programmes in 1/2" VHS format for sale through ET & T Ltd.

A general exemption from censorship has been obtained from the Ministry of Culture in respect of all ETV programmes produced upto 1988-89.

- (iii) An exhibition was organised on the role of the NCERT in the implementation of the National Policy on Education—1986 at the NIE Campus on the occasion of the National Symposium on Child-Centred Education.
- (iv) An exhibition was organised at the Jawahar Lal Nehru National Science Exhibition for Children at Jammu from 5-11 November 1988 explaining the thrust areas of the Council.
- (v) An exhibition was organised on the organisational structure and activities of the CIET on the occasion of the visit of the Director General of UNESCO to the NCERT on 13 December 1988.
- (vi) An exhibition was organised on the occasion of the Silver Jubilee Celebration of RCE, Mysore on thrust areas of NCERT.
- (vii) Two educational film festivals were organised in collaboration with the State Educational Institutions.
- (viii) A festival of educational films on the environment was held at Bhopal from 4-7 January 1989 in collaboration with the TTI (Bhopal), Film Development Corporation and 'Eklavya' Bhopal. About 100 persons representing environmentalists, scientists, activists, educationists and media producers participated.
- (ix) A number of extension lectures on the use and development of audio visual materials were organised for the benefit of visiting teachers and other functionaries within the

country and abroad.

- (x) The CIET undertook and completed 55 printing jobs on request from various Departments of the NIE.

### Dissemination

During the year, 222 educational films were procured for the Central Film Library (CFL). 3,754 films were loaned out to educational institutions. 32 new members were enrolled, bringing the total membership of the CFL to 4,332. 33 films, 14 tape-slide programmes and 550 biology charts produced by the CIET were supplied to various educational institutions in the country on a no-profit-no-loss basis.

To promote awareness about audiences and new paths in educational technology, the CIET started bringing out a quarterly, the *Educational Media Newsletter*. Two issues came out during the year.

### Publications

During 1988-89, the CIET brought out 12 publications. The titles of these publications are indicated in Table 10.5.

### New CIET Building Project

The work related to the construction of the new CIET building was completed during the period under report. The CIET coordinated civil, electrical, air-conditioning and acoustic works with the Department of Space, which has constructed the building. The building is equipped with two television production studios, two sound-recording studios, six video-editing/dubbing rooms, three sound-editing/dubbing rooms, production control rooms, set-construction, make-up and graphic room for the studios. The CIET carried out complete systems design, equipment layout, planning and specifications for the new TV and Radio Studios.

**TABLE 10.5**  
*Publications brought out during 1988-89*

S.No.	Title	Months of Publication
1.	Brochure on Workshop on Environmental Films—Prakriti	January 1989



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S.No.	Title	Months of Publication
2.	Report of Workshop on Environmental Films—Prakriti	March 1989
3.	Catalogue of children's books in the Bal Sahitya Kendra	March 1989
4.	Directory of educational radio broadcast at school level in India	March 1989
5.	Report of the meeting of the State Educational Technology Cells and Film Libraries	March 1989
6.	Training booklets for orientation course in ET for teacher educators	January 1989
7.	Report of the orientation course in ET for teacher educators.	March 1989
8.	Report of the seminar on recent researches and innovations in ET (Mass media)	March 1989
9.	Use of Educational Television in PMOST (1988)—a status report	March 1989
10.	Titles with synopses of ETV programmes produced in English version from 1984 to 1989	April 1989
11.	Catalogue of ETV programmes produced from 1984 to 1989	April 1989
12.	Educational Media Newsletter	Two issues

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The selection of students for admission to the Navodaya Vidyalayas in the country has been an important task of the NCERT since 1986-87. The preparation of selection tests, conducting the Navodaya Vidyalaya Selection Test, selecting students for admission to 256 Navodaya Vidyalayas in the country, developing conceptual materials for the use of teachers in Navodaya Vidyalayas, and research activities related to different aspects of implementation of the scheme for establishing Navodaya Vidyalayas constituted some of the important activities carried out by the Navodaya Vidyalaya Cell (NVC) of the NIE during 1988-89.

### Preparation of Selection Tests

Several meetings and workshops were organised for preparing and finalising the Navodaya Vidyalaya Selection Tests. The three components of the test were the Mental Ability Test, Language Test, and Arithmetic Test. The weightages for the Mental Ability Test, Language Test and Arithmetic Test were 60 per cent, 20 per cent and 20 per cent respectively. The Mental Ability Test contained only non-verbal items. This was done with a view to making the selection procedure as culture-neutral as possible and to minimise the bias due to environmental factors.

All the items in each of the Tests were of objective type. The tests were moderated and translated into regional languages by experts. The tests were finalised in the following 18 languages. Assamese, Bengali, Eng-

lish, Garo, Gujarati, Hindi, Kannada, Khasi, Malayalam, Manipuri, Marathi, Mizo, Oriya, Punjabi, Sindhi, (Arabic Script and Devanagari Script), Tamil, Telugu and Urdu.

### Conduct of the Test

In order to give wide publicity to the Navodaya Vidyalaya Selection Test (NVST), in every block of each district where Navodaya Vidyalayas have been established, the NCERT Field Advisers carried out a publicity campaign through advertisements in the newspapers, radio and television broadcasts, posters in schools having Class V, and the distribution of handouts. Apart from this, an information brochure giving details of the nature of the tests, with illustrative material for the guidance of examinees, was also published and circulated by the NCERT.

Application forms were printed in 18 languages and distributed through the District Education Officers (DEOs). The issue and receipt of application forms was done through DEOs acting as district coordinators under the overall supervision and direction of the NCERT Field Adviser. Necessary arrangements were made for the smooth conduct of the test. The centres for the examination were fixed in each Community Development Block. District Level Observers (DLOs) and Centre Level Observers (CLOs) were appointed to oversee the conduct of the test. Orientation programmes for DLOs, CLOs and Centre Supervisors were

organised in order to acquaint them with the procedures involved in the conduct of the test. Necessary guidelines for the conduct of the test were prepared and distributed to all the personnel involved in the conduct of the test.

The Navodaya Vidyalaya Selection Test for selection of students for the academic session 1988-89 was conducted on 15 May 1988 in 253 districts. The test could not, however, be conducted on that date in three districts, Leh and Kargil in Jammu & Kashmir and Lohit in West Tripura. A supplementary test was conducted on 28 August 1988 in these districts along with three centres, one in Cuddapah in Andhra Pradesh and one centre each in Nalanda and Monghyr districts in Bihar, where re-examination had to be undertaken because of the use of unfair means or mishandling of the test booklets. Thus the NVST-1988 was conducted at 3,241 centres located in 2,980 blocks spread over 256 districts.

### *Selection of Students*

The entire process of selecting students—evaluating the test booklets, processing the results, analysing data and preparing merit lists and wait lists—was computerised.

The total number of candidates registered for the NVST-1988 was 4,63,960 out of which 3,70,379 candidates appeared in the test. In all, 14,769 students were selected for admission to 256 Navodaya Vidyalayas. Of these, 11,059 (75 per cent) students were from rural areas while 3,710 (25 per cent) were from urban

areas. The selected candidates included 10,001 (68 per cent) boys and 4,768 (32 per cent) girls. Of the 14,769 students selected for admission to the Navodaya Vidyalayas 1,775 (19 per cent) belonged to the Scheduled Castes while 1,638 (11 per cent) belonged to the Scheduled Tribes. 655 candidates belonging to the Scheduled Castes and 551 candidates belonging to the Scheduled Tribes were selected on open merit.

### *Development of Conceptual Materials*

A scheme of continuous comprehensive evaluation was evolved by a sub-committee set up by the Navodaya Vidyalaya Samiti under the chairmanship of the Head, Navodaya Vidyalaya Cell, NCERT. The scheme, developed by the sub-committee, was published and distributed to all Navodaya Vidyalayas.

In order to develop a pool of good test items for the Mental Ability Test, Language Test and Arithmetic Test, five workshops for item writers were organised during 1988-89. The details of these workshops are given in Table.11.1.

As a result of these workshops a pool of good items for a confidential Item Bank was developed for use in future NVSTs.

### *Research Study*

A 'Position Study of Some Background Factors Related to students selected for Admission to Navodaya Vidyalayas in 1986' was undertaken by the NCERT. The study was completed during the year under report and the report of the study was prepared.

**TABLE 11.1**  
*Workshops for development of test items organised during 1988-89*

S.No.	Title of the Programme	Dates	Venue
1.	Workshop for developing items for Mental Ability Test	31 October 1988	Jaipur
2.	Workshop for developing items for Language Test	5 to 11 December 1988	Panaji
3.	Workshop for developing items for Language Test	27 February to 2 March 1989	Delhi
4.	Workshop for developing items for Mental Ability Test	13 to 18 March 1989	Bangalore
5.	Workshop for developing items for Arithmetic Test	28 to 31 March 1989	Chandigarh

The qualitative improvement of school education through the application of the disciplines of educational psychology and of counselling and guidance has been one of the major concerns of the NCERT. Research, development and training activities related to counselling and guidance, identification of creative potential among children in elementary grades and behaviour technology, development of instructional materials in psychology for Classes XI and XII and the preparation of training materials for use of teachers and teacher educators constitute the major activities of the Department of Educational Psychology, Counselling and Guidance (DEPC&G) of the NIE. The major projects/programmes undertaken by the DEPC&G during the year 1988-89 include the following.

### **Research and Development Activities Related to Vocational Guidance**

A research project entitled 'A Study of the Educational Vocational Planning, Academic and Selected Psychological and Home Background Variables of Tribal High School Students in and around Shilong in Meghalaya' was completed during the year 1988-89. The main objective of taking up this project was to provide an empirical base to the guidance services in schools in Meghalaya relevant to the psychological needs and the cultural and home background of the particular student groups. The report of the study was

finalised and submitted to the Educational Research and Innovations Committee (ERIC) of the NCERT during the period under report.

Besides this, another research project entitled "Vocational Behaviour and Adjustment of Students in Academic and Vocational Streams at +2 Stage" was also completed. This project consists of three separate studies aimed at investigating the behaviour of students in academic and vocational streams on a number of variables related to the educational and vocational planning process, career maturity and adjustment of vocational students after entering the vocational courses. The work on the preparation of the draft report of the studies was initiated.

The Council initiated activities for the development of a guidance programme to promote self-employment among students in vocational streams in senior secondary schools in Delhi. Selected students were exposed to the information on different aspects of setting up small enterprises. The information related to self-employment opportunities was provided to students through lectures, group discussions, visits to work places and conferences-cum-exhibitions. Individual counselling of students was also undertaken in order to motivate them to go in for self-employment. A follow-up study of the school leavers was also initiated in order to find out the efficacy of the guidance programme.

The Council also initiated actions for developing a

guidance programme to develop the career potential of girls in senior secondary schools. A guidance programme comprising of career information, group discussions, counselling and the presentation of women role-models in the arts and commerce was conducted from December 1988 to February 1989 in two Government Girls Senior Secondary Schools in Delhi. The programme was evaluated by school principals, teachers, counsellors and students. The work on the preparation of the report of the programme was also initiated.

#### **Development of Instructional/Training Materials**

The Council continued its tasks related to the development of textbooks in psychology for Classes XI and XII. The manuscript of the revised version of the textbook in psychology for Class XI entitled *Psychology: An Introduction to Human Behaviour—Part I* was reviewed. The manuscript of the textbook was revised by the authors to incorporate the suggestions made by the reviewers.

The manuscript of the textbook in psychology for Class XII entitled *Psychology: An Introduction to Human Behaviour—Part II* was also reviewed by experts. The tasks related to the finalisation of the manuscript of the textbook for Class XII was initiated by the authors.

As part of the work related to the development of a Teacher's Handbook for the textbook in psychology for Class XI, a workshop of experts was organised from 20 to 23 February 1989. 22 participants attended this workshop. Another workshop was organised for the refinement of test items in psychology at the higher/senior secondary stage. The workshop held from 3 to 6 May 1988, was attended by 16 teachers/teacher-educators. 900 test items related to the content areas and topics such as conscious mental process, human development and personality and mental hygiene which had been developed earlier, was refined during the workshop.

The Council organised two workshops for development of self-instructional modules for vocational teachers. The first workshop held at Goa from 1 to 3 March 1989 was attended by 21 participants. During this workshop, the curriculum outline and framework for

the self-instructional modules for vocational teachers were developed. The second workshop was held at Pune from 30 March to 3 April 1989 to develop draft self-instructional modules on the selected topics. This workshop was attended by 21 participants and 16 modules were developed during the workshop. The participants of both the workshops included principals of schools, teacher-educators and key persons involved in the implementation of the scheme of vocationalisation of education in States/UTs.

During 1988-89, the Council also initiated activities related to the development of a Manual of Instruction for Primary Teachers/Teacher Educators on Behaviour Modification Techniques in Classroom Settings, a Manual of Learning and Development for Primary Teacher Educators and a Handbook on Nurturing Creative Potential in Elementary School Children. Some of the chapters of these instructional/training materials were prepared during the year under report.

The NCERT continued its tasks related to the establishment of the National Test Development Library (NTDL). The NTDL serves as a reference test library; an information centre for psychological tests; a forum to review psychological tests and identify the gaps in test development in India; an agency for providing critical reviews of all published Indian tests and as a resource centre for the trainees of the 9-month Diploma Course in Educational and Vocational Guidance, organised every year by the NCERT. The Council also initiated certain steps for strengthening the guidance laboratory and for developing an Occupational Information Corner.

#### **Training and Extension Programme**

The NCERT has been conducting a 9-month Diploma Course in Educational and Vocational Guidance for promoting and strengthening guidance services in schools in the country. The course is designed to train counsellors to operate guidance bureaux in secondary schools and to train personnel from State Bureaus of Guidance, Colleges of Teacher Education and University Departments of Psychology.

The 27th Diploma Course in Educational and Voca

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tional Guidance ended in April 1988. This course was attended by 29 trainees, including three SC trainees, one ST trainee and six trainees deputed by State/UT governments. Of the 29 trainees who joined the course, 25 were declared successful.

The 28th Diploma Course commenced on 1 August 1988. On the basis of an all-India selection test, 37 candidates joined the course. Of these, four were deputed by the Governments of Punjab and Nagaland. Two candidates belonged to Scheduled Castes. For the first time, Hindi was introduced as a medium of expression in the selection test as well as in internal and external examinations.

In addition to the Diploma Course in Educational and Vocational Guidance, the Council organised a few short-term enrichment/training courses. These included two enrichment courses on learning and development for teacher educators, one training course for teacher educators for identifying and encouraging creative potential in children in elementary schools, two training courses on the application of behaviour modification techniques in classroom settings and two enrichment courses for teachers teaching psychology in intermediate colleges in Uttar Pradesh. The details of the training programmes organised during 1988-89 are given in Table 12.1.

The Council organised a National Symposium on Child-Centred Education from 10 to 12 October 1988 to discuss different aspects of child-centred education and to evolve an action plan for introducing a child-centred approach to education in schools. The symposium was attended by 160 eminent educationists, psychologists, educational administrators, social workers, educational planners and scholars of international repute.

Besides this, the Council also organised an All-India Conference of Heads of State Bureaus of Guidance at Bangalore from 6 to 8 February 1989. The main objectives of the conference were to take stock of the present status of guidance services in various States, to exchange ideas and to help the States in organising guidance services in schools. The Conference was attended by 13 Heads of State Bureaus of Educational and Vocational Guidance and representatives of some voluntary agencies.

## Publication

During the year under report a publication entitled *Identification and Development of Talent* was brought out by the Council.

**TABLE 12.1**  
*Training/Enrichment programmes organised during 1988-89*

S.No.	Title of the Programme	Dates	Venue	No. of participants
1.	Enrichment course for teachers teaching psychology in intermediate colleges in Uttar Pradesh	6 to 10 June 1988	Varanasi	23
2.	Enrichment course on learning and development for SIE/SCERT personnel and teacher educators in elementary teacher training institutions	15 to 24 June 1988	Aizawl	16
3.	Training course on application of behaviour modification techniques in classroom/school settings for teacher-educators in elementary teacher training institutions	25 to 31 October 1988	Panaji	33
4.	Enrichment course for the teachers teaching psychology in intermediate colleges in Uttar Pradesh	12 to 17 December 1988	Allahabad	40

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S.No.	Title of the Programme	Dates	Venue	No. of participants
5.	Training course on application of behaviour modification techniques in classroom/school settings for teacher-educators in elementary teacher training institutions	23 to 29 December 1989	Jammu	33
6.	Enrichment course on learning and development for SIE/SCERT personnel and teacher-educators in elementary teacher training institutions	12 to 17 January 1989	Panaji	32
7.	Training course for teacher-educators on identifying and encouraging creative potential in children in elementary schools	13 to 18 March 1989	Calcutta	33

The NCERT has been engaged in several activities related to the identification and fostering of talent, creation of a data-base for educational planning, and computerisation and data processing. The organisation of the National Talent Search Examination; conducting the Fifth All-India Educational Survey and other research studies to provide a data-base for the formulation and implementation of educational programmes; and the processing of data related to various educational surveys and research and evaluation studies have been some of the major activities of the Department of Measurement and Evaluation, Survey and Data Processing (DMESDP) of the NIE during 1988-89.

### **National Talent Search**

The NCERT has been implementing a National Talent Search Scheme with the main objective of identifying talented students at the end of Class X and giving them financial assistance to help them get the best possible education so that their talent may develop and they may best serve the country by excelling in their chosen disciplines. Under the scheme, 750 scholarships, including 70 scholarships for the Scheduled Caste and Scheduled Tribe students are awarded each year.

The selection of students for the award of scholarships under the National Talent Search Scheme is done in two stages. The first stage selection is made by the State/Union Territory through a State-level written examination, normally held during October-December

every year. On the basis of the performance of students in the State-level test, a stipulated number of candidates are recommended to the NCERT for the second-level or the national-level test. The first-level test was conducted by the States/UTs during October-December 1987 and the second-level test was held by the NCERT on 8 May 1988 to select the requisite number of awardees. The second-level test was conducted at 31 centres all over India. Some candidates who are Indian citizens presently studying abroad in Class X also appeared in the second-level test conducted by the NCERT on 8 May 1988.

During 1988, 3,104 students appeared in the second-level test. 750 students, including 70 SC/ST students, were selected for the award of scholarships. The details regarding State-wise quota allotted, number of students who appeared in the second-level test and number of scholarships awarded are given in Table 13.1.

The total number of scholars on the rolls (including the awardees of 1988) are given in Table 13.2. During the year under report, scholarships amounting to Rs. 79,99,863 were released for N.T. S. awardees.

### **Educational Survey**

During 1988-89, the Council carried out several activities related to the Fifth All-India Educational Survey. The date of reference of the Survey was 30 September 1986. The main purpose of the Fifth All-India



**TABLE 13.1**  
*Number of NTS Scholarships Awarded during 1988*

S.No.	State/UT	Quota allotted	No. of students who appeared in second-level test	No. of scholarships awarded (General)	Reserved scholarships awarded to SC/ST
1.	Andhra Pradesh	215	209	48	9
2.	Assam	80	79	10	—
3.	Bihar	195	193	46	7
4.	Gujarat	175	163	10	—
5.	Haryana	70	68	19	1
6.	Himachal Pradesh	30	28	2	1
7.	Jammu & Kashmir	25	24	—	—
8.	Karnataka	155	155	21	3
9.	Kerala	250	249	54	1
10.	Madhya Pradesh	155	152	31	5
11.	Maharashtra	320	318	122	12
12.	Manipur	25	23	—	—
13.	Meghalaya	25	25	—	1
14.	Nagalad	25	25	—	—
15.	Orissa	90	90	27	2
16.	Punjab	90	87	19	1
17.	Rajasthan	125	123	42	4
18.	Sikkim	25	13	—	—
19.	Tamil Nadu	225	224	55	6
20.	Tripura	25	25	6	2
21.	Uttar Pradesh	500	489	70	3
22.	West Bengal	235	225	44	9
23.	A.N. Islands	10	7	—	—
24.	Arunachal Pradesh	10	10	—	2
25.	Chandigarh	10	8	6	—
26.	D.N. Haveli	10	4	—	—
27.	Delhi	55	55	46	—
28.	Goa, Daman & Diu	10	10	1	—
29.	Lakshadweep	10	1	—	—
30.	Mizoram	10	7	—	1
31.	Pondicherry	10	10	1	1
32.	Bhutan	6	1	—	—
33.	Kuwait	4	1	—	—
34.	Kathmandu	3	—	—	—
35.	Kabul	1	—	—	—
36.	Muscat	2	1	—	—
	<b>Total</b>	<b>3,211</b>	<b>3,104</b>	<b>680</b>	<b>70</b>

**TABLE 13.2**  
*Total Number of Scholars on the rolls (including the awardees of 1988)*

S.No.	General	SC/ST	Total
1. +2 Stage	1,362	136	1,498
2. Ist Degree in Science & Social Science	344	23	367
3. II Degree in Science & Social Science	59	2	61
4. Ist Degree in Engineering	1,355	58	1,413
5. IInd Degree in Engineering	21	2	23
6. Ist Degree in Medicine	727	34	761
7. IInd Degree in Medicine	187	3	190
8. M.B.A.	63	1	64
9. Ph.D.	12	—	12
Total	4,130	259	4,389

Educational Survey was to take stock of the conditions prevailing in schools and the facilities available for regular or formal school education, non-formal education and adult education in rural and urban areas. This survey was particularly directed at providing the database for the implementation of various programmes for improving the quality of education as envisaged in the National Policy on Education-1986 and the Programme of Action evolved for the implementation of the NPE. The specific objectives of the Survey were:

- To assess the present position of educational facilities at different stages of school education, in respect of coverage of school-going population; the distance to be covered by a child to reach the school; enrolment in general, and of Scheduled Caste and Scheduled Tribe children and girls in particular.
- To assess the availability of physical facilities like school buildings, playgrounds, drinking water facility within the school, furniture, facilities for medical check-up, other equipment, incentive schemes and the number of beneficiaries.
- To assess the position of inputs like blackboards and chalks, libraries, laboratories, text-book banks, etc.
- To find out the academic and professional qualifications of working teachers with special refer-

ence to the teaching of science and mathematics, and to determine attrition rates in the teaching profession.

- To prepare block maps showing habitations, existing educational facilities, and the proposed provision of facilities in a planned manner over a period of time.

To fulfil these objectives three questionnaires, viz. the Village Information Form, Urban Information Form and School Information Form, were developed to collect the relevant data.

Specifically, the following items were covered in the survey through these questionnaires:

- Enumeration of every distinct habitation.
- Enumeration of every primary, upper primary, secondary and higher secondary/senior secondary School/intermediate/pre-university/junior college.
- Habitations with and without educational facilities for primary, upper primary, secondary and higher secondary stages.
- In the cases of habitations without schooling facilities for these stages, the distance at which these facilities are available and also habitations under various population slabs.
- Schooling facilities for various school stages in habitations populated predominantly by Sche-

- duled Castes.
- Schooling facilities for various school stages in habitations populated predominantly by Scheduled Tribes.
- Proportion of Scheduled Caste population in villages and schooling facilities available in these villages.
- Proportion of Scheduled Tribe population in villages and schooling facilities in them.
- Age-wise enrolment of pupils at various school stages (class-wise).
- Age-wise enrolment of pupils belonging to Scheduled Castes and Scheduled Tribes.
- Qualifications of teachers (State-wise) working in schools.
- Academic inputs available in the schools relevant to various stages of education.
- Mobility of teachers during a specific period.
- Qualifications of teachers teaching science and teachers having science qualifications.
- Availability of vocational courses and the vocational courses provided in these schools at the +2 stage.
- Workshop facilities and on-the-job training.
- Qualifications of teachers teaching mathematics at the secondary and higher secondary stages.

The survey was conducted by the NCERT with the help and cooperation of Education Departments of different States and Union Territories. The required data were collected from all the villages, all the urban areas, and all the recognised schools in the country. The NCERT was responsible for developing the questionnaires, providing guidance and training to the staff appointed for the survey work in different States and Union Territories, and helping them check and tabulate the data at the block, district and State levels. Finally, the State tables, received from the different States and Union Territories, were used for compiling the national tables of the survey.

The survey data is expected to be used for educational planning, not only at the national level, but also at the State and district levels. The data is expected to

be particularly helpful in formulating the Eighth Five Year Plan, in planning and implementing projects for the improvement of educational facilities envisaged in NPE-1986 and the Programme of Action. The survey data would also help the States in decentralised educational planning at the district and block levels, which would include school mapping.

In order to make available the important statistics obtained from the Survey, a preliminary report of the survey was brought out for the benefit of educational planners and administrators and other users of the survey data. The preliminary report of the survey entitled "Fifth All-India Educational Survey: Selected Statistics" was published in February 1989. This report contains State-wise demographic information, information on educational facilities in rural areas, the number of institutions at the primary, upper primary, secondary and higher secondary stages, the number of children enrolled in schools in different classes, the quality of school buildings, the number of teachers and availability of certain other facilities in schools. Information on the students belonging to Scheduled Castes and Scheduled Tribes has also been reported separately. In respect of teachers, information has been provided on the proportion of female teachers and teachers belonging to Scheduled Castes and Scheduled Tribes. Wherever possible, comparison has been made with the data of the Fourth All-India Educational Survey conducted in 1978. The work related to the preparation of the final report of the Fifth All-India Educational Survey was also initiated.

During 1988-89, the Council also completed a survey of educational facilities for Schedule Tribes in Orissa. The main objectives of the survey were:

- To study the availability of educational facilities in a predominantly tribal district vis-a-vis those available in a predominantly non-tribal district.
- To study the extent of stagnation and drop-out in these two districts and also to study the causes of stagnation and drop-out.
- To identify measures for better enrolment and higher retention rates in respect of school-going children in general and ST children in particular.

Two educational districts of Orissa State—one predominantly tribal and the other non-tribal—were selected for the study. Keonjhar Sadar and Anandpur were the tribal and non-tribal districts respectively. All the villages and primary and upper primary schools in the two districts were covered by the study. Two information blanks namely the village Information Form and the School Information Form were developed to collect data for the study from villages and schools.

The report of the study was finalised and submitted to the Educational Research and Innovations Committee (ERIC) of the NCERT.

## **Data Processing**

The Computer Centre, set up in the NCERT in 1987-88, as a central facility was shared and utilised by the different departments and units of the NIE. During the year under report, the following activities were carried out:

- transferring the data on to computer media, like magnetic tape/floppy with off-line data entry systems;
- development of application software for validation of data and further carrying out various

- types of statistical analysis; and
- processing of data on the computer.

The specific tasks carried out during the year include:

- computer processing of data pertaining to a number of research projects undertaken by the different departments/units of the NIE;
- scoring of NTS examination answer sheets and further processing of results, including preparation of merit list, etc;
- providing computer facilities to faculty members for their Ph. D. projects, and
- providing guidance to researchers in the development of coding design, preparation of data, application of statistical techniques, development of analysis plan and interpretation of results.

In addition to the above, computerisation of the NTS scholarship distribution system was undertaken. With this, the disbursement of NTS scholarships is expected to become more expeditious and systematic. The computerisation of the production, stocking, distribution and sale of books and other publications brought out by NCERT was also undertaken.

The promotion and coordination of research in all branches of school education and teacher education are important activities of the NCERT. Apart from the Constituent Units of the Council undertaking research, the NCERT has been supporting educational research by providing financial assistance to outside organisations. It has also been providing junior research fellowships and conducting research methodology courses in order to create a band of competent research workers in different parts of the country.

#### **Research and Innovations**

The Educational Research and Innovations Committee (ERIC), which was set up in 1974, is the principal mechanism for supporting research. The committee consists of eminent researchers in education and allied disciplines from universities and research institutions, representatives from the SIEs/SCERTs, and all the Heads of Departments/Units of NIE, CIET and Regional Colleges of Education (RCEs) of the NCERT. In

addition, some selected professors of the NIE, the CIET and the RCEs are permanent invitees.

The ERIC helps to identify priority areas in educational research and provides financial assistance to undertake research studies and innovative projects on education and allied disciplines. The ERIC offers fellowships for doctoral work under the co-guidance of the NCERT faculty, and publication grants for doctoral theses, research papers and monographs. It also acts as a clearing house for ideas and information on educational research by disseminating research findings from time to time and organises conferences/meetings/seminars on educational research.

#### *Completed Research Projects*

49 research projects supported by the ERIC were completed during 1988-89. These included 31 projects undertaken by the various constituent units of the NCERT and 18 projects undertaken by outside research institutions. The research projects completed during the period under report are given in Table 14.1.

**TABLE 14.1**  
*Research projects completed during 1988-89*

S.No.	Title of Project	Duration	Principal Investigator(s)
<i>Departmental Projects</i>			
1.	A Research Study for Identification of Teaching Skills & Training Strategies for Implementing Environmental Approach at Primary Level	3 years	Dr.J.S. Rajput, RCE, Bhopal

S.No.	Title of Project	Duration	Principal Investigator(s)
2.	Identification of Various Approaches/Practices of Non-formal Education in Voluntary Organisations	2 years	Dr.H.L. Sharma, DNFE& ESC/ST, NCERT
3.	Conservation of Aquatic Ecosystem in Orissa	3 years	Dr.P.K. Durani & A.L.N. Sharma, RCE Bhubaneswar
4.	A Study of Development of Tools for Supervision and Evaluation of Student Teaching and other Practical Work in Colleges of Education	1 year	Dr. T.S. Bhatnagar, DTESE&ES, NCERT
5.	An Evaluation Study of the Different Models of Pre-School Training Programmes from the Point of View of their Impact on Children	2 years	Dr.(Smt.) R. Muralidharan DPSEE, NCERT
6.	Systematic Studies of the Fauna in and around Bhubaneswar for Development of Museum	2 years	Dr. N. Khatter, RCE, Bhubaneswar
7.	Sample Survey of Educational facilities for Scheduled Castes & Scheduled Tribes in Rajasthan	1 year	Dr.S.M.Bhargava & Dr.S.C.Mittal, DMESDP, NCERT
8.	Effect of Yoga on School Students		Dr. Kuldeep Kumar, DFS&C, NCERT
9.	Know the Plants Around You	3 years	Prof. C.R. Ghose, Retd Head, DESM, NCERT
10.	Curriculum Evaluation at the 10+2 Stage in the Light of Instructional Development & Social Objective of Education	8 months	Prof. Baqer Mehdi, Head, DPRPP, NCERT
11.	An Experimental Study of the Relative Effectiveness of Selected Strategies of Integration of Teaching Skills Acquired by Student Teachers through the Techniques of Micro-Teaching.	1 year 6 months	Dr.R.C. Das, Dr.N.K. Jangira, Dr.Ajit Singh & Dr.B.K. Passi, DTESE&ES, NCERT
12.	Evaluation of Instructional materials of Non-formal Education Centre	1 year	Dr. (Smt.) Neerja Shukla DNFE&E SC/ST, NCERT
13.	Survey and Cultivation of Edible Mushrooms of Orissa as a Work Experience Vocational Subject for High/Higher Secondary School	3 years	Dr.M.P. Sinha, RCE, Bhubaneswar
14.	An Exploratory Study on the use of Teaching Aids for Developing Concepts among Handicapped (Deaf) Children	2 years	Dr.M.C. Sharma, CIET, NCERT
15.	A Study of the Perceptions of Secondary School Learning Environment by the Students, Staff and Administrators	2 year 6 months	Dr.J.S. Grewal, RCE, Bhopal
16.	Development of Criterion—Reference Tests in Environmental Studies (Science) for Primary Stage.	2 years	Dr.Pritam Singh, Navodaya Vidyalaya Cell, NCERT
17.	The Determination and Development of Schemes of Thought in Science during Adolescence	3 years	Prof. N. Vaidya, DTESE&ES, NCERT
18.	A study of Flora of Bhopal to Produce Resource Material for the Biology Teachers of M.P.	3 years	Dr.P.K. Khanna, RCE, Bhopal
19.	Improving the Kannada Reading Performance of Educable Mentally Retarded Children	14 months	Dr.M.A. Khader, RCE, Mysore

S.No.	Title of Project	Duration	Principal Investigator(s)
20.	Survey of Researches in Special Education in India	15 months	Dr.N.K. Jangira, DTESE&ES, NCERT
21.	Futurology of Teacher Education—Pilot Study	6 months	Dr.J.C. Goyal, Dr.L.C. Singh, DTESE&ES, NCERT
22.	The Effect of Teacher Led, Self Learning, Peer Group Discussion & Mass Media Approaches of Teaching Population Education to Classes IX & X on Knowledge, Attitude & Beliefs of the Students about Population Explosion in India.	3 years	Prof. R.P. Kathuria, FA, Bhopal
23.	Try-out of Innovative Individualised system of Instruction in Class XI Mathematics Course 'Master Assessments'.	2 years	Dr.R.N. Mathur & Dr.R.P. Gupta, DESM, NCERT
24.	Survey of Educational Facilities for Weaker Sections of the Society namely, Scheduled Tribes, Orissa	1 year	Dr.S.M. Bhargava, DMES&DP, NCERT
25.	A Study of Administrative Structure of NFE and the Scheme of Monitoring and Supervision	1 year	Dr.(Smt.) S.R. Arora DNFE&ESC/ST, NCERT
26.	A Study of the Status of the Teachers in India	2 years	Dr(Smt.) R.K. Chopra, DTESE&ES, NCERT
27.	Comparative Study of Educational Achievement of SC/ST Students of Class X of U.P.	17 months	Dr.B.S. Gupta, DNFE&E SC/ST, New Delhi
28.	Explorations in Optimising Learning Sciences in School	3 years	Dr(Smt.) Shardhamba Rao, FA, Karnataka
29.	An Invisible Study of the Accomplishments of National Science Talent Scholars	2 year 6 months	Prof. M.K. Raina, DPRPP, NCERT
30.	A Study of the Effect of Psycho-Social Factors on the Comprehensibility of Language Used in Textbooks at Primary Stage	2 years	Dr.I.S. Sharma, DESSH, NCERT
31.	Know life between tide Mines	2 years	Dr.P.K. Durani, RCE, Bhubaneswar

### Outside Projects

1.	Construction and Standardisation of Silent Reading/ Comprehension tests in Gujarati for pupils of Classes V, VI & VII	1 year 6 months	Dr.B.V. Patel, Gujarat
2.	Socio-linguistic Study of Santali Language	10 months	Dr. D.P.Mukherjee, West Bengal
3.	Rural Enrichment Education Project Featuring Development of Alternating Models and Strategies for Self-Learning for the Rural Youth on Topics Relevant to their Life.	2 years	Dr.N.K. Upasani, Pune
4.	An Investigation into the Problems of Adjustment of Blind Students Studying in Secondary Schools of West Bengal	3 years	Prof. N.Banerjee, Santiniketan
5.	A Linguistic Study of Hindi Morphophone MIC Changes	2 years	Dr.B.N. Tiwari, Delhi
6.	A Study of School Broadcasts in Baroda District	1 year	Dr.G.R. Sudame, Baroda

S.No.	Title of Project	Duration	Principal Investigator(s)
7.	A Study of Family Background Variables, some Motivational Variables, Cognitive Characteristics and School Performance of Primary-School Children	18 months	Dr.M.B. Buch, Baroda
8.	Comparative Profiles of Adolescents with different Talents in terms of Some Selected Variables	26 months	Dr. Arun K. Gupta, Jammu
9.	Developing and Testing Models of Environmental Education in Botany Relevant for the Socially Disadvantaged Children in the Schools of Kerala	3 months	Prof.N. Vedamani Manuel & Dr.J. Exemmel, Trivandrum
10.	A Study of the Problem of First Generation Learners in Standards I to IV in Ahmedabad City	4 months	Dr. Leela Patel, Ahmedabad
11.	Project Report on Tribals and Education—A Quest for Integration in the Regional Mainstream	18 months	Dr.Hemlata Talesara
12.	A Follow-up Study of Creatively Talented College Students	2 years	Dr. Girijesh Kumar, Moradabad
13.	Development of Tools for Identifying Creative Thinking Abilities among Pre-School Children for their Education and Proper Personality Development	9 months	Dr. Bhoodev Singh
14.	An Evaluation of the Non-Detention System from Different Angles	1 year	Dr.A. Venkata Rami Reddy, Tirupati
15.	Developing and Implementing A Classroom Instructional Programme for Children with Learning Difficulties	20 months	Dr. (Smt.) Prerana Mohite, Baroda
16.	The Study of Special Facilities (Incentive and Educational Development of Tribal Students and Attitude of Society towards them)	1 year	Dr. Ashwani Kumar Gaur, Udaipur
17.	Study of Current Status and Relevance of Community Nutrition and Health Programmes through the Health Care System	2 years	Dr. C. Gopalan
18.	A Comparative Study of the Relative Effectiveness of the Teaching Methods Based on Motivation Due to Competition and Motivation Due to Initiative, Spirit, Interest and Tendency to Co-operate	2 years	Prof. S.B. Malhara, Maharashtra

### On-going Projects

Work on six research projects undertaken by the Constituent Units of the NCERT and four research pro-

jects undertaken by outside research institutions continued during the period under report. These on-going research projects are listed in Table 14.2.

**TABLE 14.2**  
*On-going Research Projects During 1988-89*

S.No.	Title of the Project	Principal Investigator(s)
<i>Departmental Projects</i>		
1.	A Cross-Sectional Study of Logical Reasoning among Socially Disadvantaged Groups of Children of 9 to 14 years	Dr.V.D.Bhat, Dr.V.K.Jain, DTESE&ES, NCERT
2.	A Study of the Methods Adopted by Selected Secondary Schools in India for Development of Moral and Ethical values and Measurement of Value Judgement of Students of Class X of these schools	Dr.R.C. Das & Dr.G.S. Hati, RCE, Bhubaneswar



S.No. Title of the Project	Principal Investigator(s)
3. Student Learning Styles : Analysis of Theory, Research & Instruments of Theory, Research & Instrumentation	Dr.M.K. Raina, DPRPP, NCERT
4. Critical Survey of History Teaching in Rajasthan	Dr.V.K. Raina, RCE, Ajmer
5. A Study of NFE curriculum and Instructional Materials and their Implications for Instructional Programme	Dr.(Km.) P.Das Gupta, DNFE&E SC/ST, NCERT
6. A Comparative Study of Child rearing Practices of Mothers of high & low achievers in Socio-economically disadvantaged Groups	Dr.(Smt.) Vanita Kaul Dr.(Smt.) Chitra Ramachandran
<i>Outside Projects</i>	
1. Effect of Jurisprudential Strategy Teaching on the Development of Social Consciousness and Ability to Solve Value Conflicts	Dr.S.K. Pal & Dr.K.S. Misra, University of Allahabad
2. Attributional Analysis of Teacher Education in Secondary Schools	Dr. Shivganesh Bhargava, Bhopal University
3. A Study of Effectiveness of Mastery Learning Approach in Teaching Mathematics at the Secondary Level of Education in West Bengal	Prof. Madan Mohan Chel & Prof.K.C. Mandal, Fakir Chand College
4. A Study of the Special Facilities (Incentives and Educational Development of Tribal Students and Attitude of the Society towards them)	Dr.A.K. Gaur, Udaipur

### Projects Closed

13 research projects undertaken by Constituent Units of the NCERT and two research projects under-

taken by research scholars outside NCERT were closed during 1988-89. The list of these projects are given in Table 14.3.

**TABLE 14.3**  
*Projects Closed during 1988-89*

S.No. Title of the Projects	Date of Closure
<i>Departmental Projects</i>	
1. Multi-community Field Study of Child Socialisation in India Cross Cultural Appreciation of Parental Acceptance-Rejection Theory (Dr.(Smt.) U.Bevli, DPSEE, NCERT).	5 July 1988
2. An In-depth Follow-up Study of the National Talent Search Awareness for the year 1971-75 (Dr.K.N. Saxena, DME, NCERT).	7 June 1988
3. Measurement of Effective outcomes of Primary School Education (Dr.P.M. Patel, DME, NCERT)	16 August 1988
4. A Study of Piagetian Concrete Operational Stage (A.C. Pachaury, RCE, Bhopal)	17 August 1988
5. A Longitudinal Investigation into the Drop-out Process and Characteristics of Drop-outs (Dr. A. Sharma, DPRPP, NCERT)	12 August 1988

S.No.	Title of the Projects	Date of Closure
6.	Development of Measurement Tools (observation schedule and rating scale) for Evaluating Working with Community (Dr.B.K. Mattoo, FA, J & K)	31 August 1988
<i>Outside Projects</i>		
1.	Measuring Disparities in Enrolment and Schooling Facilities using the Data Generated by All India Educational Surveys of the NCERT (Dr.J.L. Azad)	25 August 1988
2.	Evaluation Tools and Teaching Methods of Hindi Short Story at + 2 and Under Graduate Level (Dr.R.C. Sharma, New Delhi)	16 August 1988

### *NIE Lecture Series*

As part of the effort to promote educational research and dissemination and sharing of ideas on educational research, the Council has been organising talks/lectures by eminent educationists and research scholars

from India and abroad under the NIE Lecture Series for the benefit of those interested in research and education. Under the NIE Lecture Series, three eminent educationists were invited to deliver talks on different topics as mentioned in Table 14.4.

**TABLE 14.4**  
*Talks Delivered under the NIE Lecture Series during 1988-89*

S.No	Speaker	Topic	Date
1.	Shri Tokio HaseGawa, Director, Mithila Museum, Oike, (Japan)	Cosmos Vis-a-Vis Madhubani Paintings Mithila Folk Arts	16 March 1989
2.	Shri M.P. Pandit, Aurobindo Ashram, Pondicherry	Shri Aurobindo's Philosophy & National Policy on Education	5 April 1989
3.	Shri M.L. Malhotra, Director of Public Grievances, Cabinet Secretariat, Government of India	Administrative Reforms and Public Grievances	17 April 1989

### *ERIC Sub-Committee Meetings*

The research proposals that the NCERT receives from its Constituent Units and other institutions are evaluated and screened by the sub-committee of ERIC comprising eminent educationists. Three ERIC sub-committee meetings were held for screening the projects received during the period under report.

### *Regional Seminar for Improving the Quality of Educational Research in the Country*

In pursuance of a decision taken by the ERIC, two regional seminars for improving the quality of educational research were held during the period under report. The First Regional Seminar for the northern region was held at the University of Kashmir, Srinagar

from 11 to 15 July 1988. The seminar identified a number of research questions and problems useful for M.A. Education/M.Phil/Ph.D. research. The Second Regional Seminar for improving the quality of educational research was held at the SRK Mission College of Education, Coimbatore from 28 September to 3 October 1988. 25 participants, comprising of educationists, social scientists and researchers from different universities/institutions, participated in the seminar. The Seminar identified research questions/problems concerning seven themes and four areas. The reports of the two regional seminars have been widely circulated and sent to the Education Secretaries in the States/UTs, Directors of Education, Directors and Principals of SIEs/SCERTs and selected Departments of Education and Universities in the country.

#### *Research Methodology Course/Workshops*

A workshop was held at Alagappa University, Karaikudi, Tamil Nadu from 8 to 11 December 1988 to develop outlines for a research methodology course. Three separate courses to meet the needs of different levels of research workers were developed during the workshop. The Level-I Course is meant for Master's Degree holders in education and allied disciplines who are in the process of doing their Ph.D. The Level-III Course is meant for advanced doctoral level and post-doctoral students, research guides and others who have already developed a certain amount of competence in conducting educational research. The Level II Course is to be conducted in the form of a seminar to provide the participants a broad perspective of research in education.

Based on the revised syllabus of the Level - I Course,

the NCERT conducted a Methodology Course at Ajmer from 27 March to 5 April 1989. 24 participants from all parts of the country attended the course.

#### *Revision of Fellowship for JRF*

The NCERT has a programme of providing Junior Research Fellowships for doing doctoral research work. At present there are two junior research fellows working for their Ph.D. at the NIE, New Delhi. During the period under report, the NCERT enhanced the fellowship from Rs. 1,000 to Rs. 1,800 p.m. and a contingency of Rs. 5,000/7,000 per annum, as per the UGC norms, with effect from 1 April 1987.

#### *In-House Group Meeting on Educational Research*

The second meeting of the in-house group on educational research was held on 25 May 1988. The meeting discussed the new proforma for project formulation and procedure for support for ERIC sponsored projects.

#### *Dissemination of Research Findings*

Dissemination of research findings is one of the major functions of the NCERT. The Fourth Survey of Research in Education was finalised for publication during the year under report. This survey, like the First, Second and Third Surveys of Research in Education, provides information on research work done in different fields of education in India.

#### *Publication of Ph.D. Theses/Monographs*

The Ph.D. Theses/Monographs published with the assistance of the ERIC during 1988-89 are given in Table 14.5.

**TABLE 14.5**  
*Ph.D. Theses/Monographs published during 1988-89*

S.No	Title	Name of the Author
1.	History of Educational Development	Dr.K.B. Budhori, Srinagar, Garhwal
2.	The Sikh Gurus on Education	Dr.D.N. Khosla, NCERT, New Delhi

S.No	Title	Name of the Author
3.	Biology Teaching: Modular Approach	Dr.W.A.F. Hopper, Madras
4.	Leadership and its Correlates	Dr. Saroj Pandey, Allahabad
5.	Development of Representational Competence Among Children	Dr. Aradhana Shukla, Gorakhpur
6.	Secular Matter in Rigveda	Dr. Raman Rani Pal, Ghaziabad, U.P.
7.	Attitudes, Self Concept, Values and Achievement of College Students	Dr.R.N. Manav OraI, U.P.
8.	Hypothesis Making and Testing Abillities	Dr (Smt.) Avinash Grewal, RCE, Bhopal
9.	Physical Education and Adjustment	Dr. Jamini Devi, Imphal
10.	Universal Primary Education as Innovation : A Study of Wastage in Indian Village	Dr.,Indu Grover, Hissar
11.	Children's Literature in English with Special Reference to India	Dr. Indira Kulshreshtha, NCERT
12.	Teaching-Learning Strategies and Mathematical Creativity	Dr. Bhoodev Singh, Sultanpur
13.	School Science Education in India	Dr.H.L. Sharma, NCERT
14.	Role of Home Background in Academic Achievement	Dr.A.J. Wadkar, Pune
15.	Educating the Indian Elite	Dr.R.P. Singh, NCERT
16.	Value-oriented Education (A Validation Study)	Dr. Swadesh Mohan, NCERT
17.	Moral Development in School Children	Dr.K.M. Gupta, NCERT

During 1988-89, approval was granted for financial assistance for the publication of the following Ph.D.

Theses and research monographs (Table 14.6).

**TABLE 14.6**  
*Approval for Assistance for the Publication of Ph.D. Theses/Monographs Granted during 1988-89*

S.No	Title	Name of the Author
1.	Children's Literature in English with Special Reference to India	Dr. Indira Kulshreshtha, NCERT, New Delhi
2.	A Study of School Effectiveness in Relation to Organisational Climate	Dr. Ranjana Srivastava, Allahabad

S.No	Title	Name of the Author
3.	Some Aspects of Education Policy in India: Past and Present	Dr. Suresh Chandra Ghosh, New Delhi
4.	Effectiveness of Advance Organiser and Inquiry Training Models for Teaching Social Studies to Class VIII Students	Shri Niwas Pandey, Jaunpur
5.	An Investigation into the Interrelationship between Measures of Selected Guilford's S.D. Factors and Set Concept Achievement of Secondary Level Students of Delhi State	Dr.A.D. Tiwari, Bhiwani, Haryana
6.	Effect of Variation in Advance Organisation on the Cognitive Subsumption in Life Science	Dr. Sanat Kumar Ghosh, Howrah
7.	Profile of the Effective Teacher	Dr.N.A. Nadeem, Srinagar
8.	A Study of the Effect of Education upon Socio-psychological Pattern of Rural life of Kumaon region in Uttar Pradesh	Dr.G.C. Upadhyay
9.	A Comparative Study of the Adjustment Problems of High Creative-High Intelligent and High Creative-Low Intelligent Children in Secondary Schools	Dr. Umesh Chandra, Delhi

### Promotion of Research and Innovation amongst Teachers and Teacher Educators

The NCERT has been organising every year a Seminar Reading Programme on topics related to innovations and experimentation related to teaching methodology in order to promote the spirit of research, experimentation and innovative practices among teachers in schools. Under this programme, 50 cash prizes of Rs. 1,000 each are awarded to school teachers. Of these, 25 cash awards are given for the reports selected under the competition 'Innovations by Elementary School Teachers' and 25 cash awards are given under the competition 'Innovations by Secondary/Higher Secondary School Teachers'. The themes for the Seminar Readings Competition for the year 1988-89 were as follows:

- (i) Teaching of population education in schools;
- (ii) Teaching of languages in schools;
- (iii) Teaching of Science and Mathematics in schools;

- (iv) Inculcating desirable values among school children through education;
- (v) Promoting national integration through education;
- (vi) Inculcating scientific temper among school children, and
- (vii) Environmental Education.

The NCERT has also been organising every year a Seminar Readings Programme for Teacher Educators on topics related to innovation and experimentation related to teaching methodology in order to promote innovations, experimentation and research among teacher educators in elementary teacher training institutions and secondary teacher training colleges. Under the programme, 30 cash prizes of Rs. 1,000 each are awarded for papers selected at the national level. Of these, 20 cash prizes are awarded to teacher educators working in elementary teacher training institutions and ten cash prizes to teacher educators working in secondary-level teacher training institutions.

In addition to these, the offices of the Field Advisers

of the NCERT have been providing some financial assistance to school teachers to undertake certain experimental projects related to methodology of teaching as part of the Council's effort to promote innovation and experimentation among school teachers. During 1988-89, a sum of Rs. 5,000 was allotted to each office of the Field Adviser for this purpose. Financial assistance between Rs. 500 to Rs. 1,000 was provided to each project approved by the Office of the Field Adviser.

### *Scheme of Professional Assistance to Educational Organisations*

As part of the effort to sustain and promote volun-

tary effort for the improvement of education, especially school education, the NCERT has been operating a scheme of financial assistance to Professional Educational Organisations (PEOs) for the past few years. During 1988-89, seven Professional Educational Organisations were given grants for the publication of journals and seven PEOs were given grants for the organisation of conferences/seminars/workshops. The details of grants related to these PEOs are given in Tables 14.7 and 14.8.

**TABLE 14.7**  
*Grants given to Professional Educational Organisations during the year 1988-89 for publication of Journals*

S.No	Name of the Organisations	Title of Journal	Amount Sanctioned
1.	English Language Teachers' Association of India 3, First Trust Link Street Mandavelipakkam Madras-28	<i>Journal of English Language Teaching</i>	Rs.3,000
2.	Association for Improvement of Mathematics Teaching 25, Fern Road, Calcutta-19	<i>Indian Journal of Mathematics Teaching</i>	Rs.4,000
3.	Society of Educational Research and Development, 46 Hari-Nagar, Gotri Road, Baroda-390007	<i>Perspectives in Education</i>	Rs. 5,000
4.	Association for the Promotion of Science Education 3, First Trust Link Street Mandavelipakkam Madras-28	<i>Junior Scientist</i>	Rs.5,000
5.	Indian Physics Association c/o Tata Institute of Fundamental Research. Homi Bhabha Road Bombay-5	<i>Physics News</i>	Rs.5,000
6.	S.I.T.U. Council of Educational Research 3, First Trust Link Street, Mandavelipakkam Madras-28	<i>Experiments in Education</i>	Rs. 3,000
7	Indian Association of Physics Teachers 2-A/229, Azadnagar Kanpur-208002	<i>Physics Teachers</i>	Rs.4,000

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**1988-89**

**TABLE 14.8**  
*Grants given to Professional Educational Organisations for the organisation of conferences/seminars/workshops during the year 1988-89*

S.No	Name of the Organiser	Title of Programme	Amount Sanctioned
1.	Academy of Hospital Administration Deptt. of Hospital Administration A.I.I.M.S., Ansari Nagar New Delhi-110029	National Workshop on Human Resource Development in Hospital	Rs.5,000
2.	The Friends at Archives Groups National Archives of India Janpath, New Delhi-110001	Seminar on 'Gandhi and Nehru's Contribution for the Alleviation of Poverty in India'	Rs.5,000
3.	All India Science Teachers Association Bhartiya Vidya Bhavan Kasturba Gandhi Marg, New Delhi	12th Biennial Conference of Asian Association for Biology Education	Rs.20,000
4.	Indian Academy of Social Sciences Iswar Saran Degree College Campus Allahabad-4	13th Social Science Congress on 'Social Implications of Development: The Asian Experience'	Rs. 10,000
5.	All India Juvenile Literary Conferences Silver Jubilee Celebration Committee 79-B, Pocket-3 Mayur Vihar, Delhi-110091	All India Seminar on Children's Literature	Rs.5,000
6.	Centre for Research in Rural Industrial Development 2, A, Sector 19-A, Madhya Marg Chandigarh-160019	Seminar on Nation Building Development Process and Commun- ication	Rs. 15,000
7.	Bengal Library Association P-134, CIT Scheme No.52 Calcutta-700014	Joint Session of the All India Library Conference	Rs.5,000

## PUBLICATION, DOCUMENTATION AND DISSEMINATION

Publication of school-level textbooks, workbooks, teacher's guides and other instructional materials for teachers, research reports and monographs, educational journals, etc; and documentation and dissemination of educational information constitute some of the major activities of the NCERT. The Publication Department of the NCERT looks after the publication programmes of the Council. The Department of Library, Documentation and Information (DLDI) of the NIE looks after the documentation services, besides providing the usual library services, while the Journals Cell of the Council looks after the tasks related to dissemination of educational information through publications of six educational journals.

### Publication

The Council's publications broadly fall into the following major categories:

- (i) School textbooks, workbooks and prescribed supplementary readers.
- (ii) Teachers' guides, teachers' handbooks and other instructional materials.
- (iii) Research reports and monographs.
- (iv) Reports of the educational conferences and seminars, pamphlets, booklets, folders, etc.
- (v) Educational journals.

During the year under report, 236 publications

under different categories were brought out. The break-up is given in Table 15.1.

**TABLE 15.1**  
*Publications brought out during 1988-89*

Category of publication	No. of Titles
First edition of textbooks/workbooks/prescribed supplementary readers	61
Reprints of textbooks/workbooks/prescribed supplementary readers	108
Textbooks/workbooks for other government agencies	16
Research monographs/reports and other publications	37
Educational journals/periodicals (issues)	14
<b>Total</b>	<b>236</b>

A list of these publications is given at the end of this chapter.

### Publication of New Textbooks

In conformity with the Programme of Action (POA) for the implementation of the National Policy on Education-1986, the NCERT had taken up the task of developing and producing new instructional packages, including textbooks, for Classes I to XII. The new textbooks for Classes I, III and VI were published in 1987 and introduced in the Kendriya Vidyalayas and some



of the other schools affiliated to the Central Board of Secondary Education (CBSE) during the academic session 1987-88. The new textbooks for Classes II, IV, VII, IX and XI developed and published by the NCERT during the year 1988-89 were introduced in the Kendriya Vidyalayas and some of the schools affiliated to CBSE during 1988-89. The Council also initiated activities related to the production of new textbooks for Classes V and VIII, new textbooks in science and mathematics for Classes X and XII, new textbooks in languages and social sciences for Classes IX & XI and new textbooks in Business Studies and Accountancy for Class XI. These new textbooks developed by NCERT are expected to be introduced in the Kendriya Vidyalayas during the academic session 1989-90.

#### *Exemplar Instructional Materials*

Twenty titles of Exemplar Instructional Materials on major areas of Work Experience in school education have been printed.

#### *Books on Vocational Courses*

Fifteen titles of Instructional-cum-practical Manuals and Teachers' guides on vocational courses have been published.

#### *Reading to Learn Series*

The NCERT has been bringing out titles in a new series of books in English and Hindi for different stages of school education under the Reading to Learn Series. The books in this series aim at grooming the children to become adept at reading, to inculcate in them a love for books and to make them aware of the world of wonder and beauty around them. So far nine titles under this series have been published.

#### *Padhen Aur Seekhein Yojna*

The NCERT has also been bringing out books in Hindi for different age-groups, covering interesting and informative topics for children. Many eminent scientists have written these books for the NCERT. So far 19

titles under this series have been published.

#### *Lotus Series*

The NCERT has been engaged in developing a new series of popular books called the Lotus Series. These series aims at introducing young readers in the age group 11-16 to the world of knowledge by making available to them low-priced books on a variety of subjects. The books under this series will be in two editions—the one-rupee paper-back edition and a higher priced hardbound library edition. The first book under this series *The Historic Trial of Mahatma Gandhi* and its Hindi edition have proved to be popular. The second book, *Living Thoughts of Jawaharlal Nehru* and its Hindi version have also been published.

The Hindi version of this book was released by Shri G. N. Singh, Hon'ble Governor of Bihar at the Patna Book Fair in November 1988.

#### *Popular Science Series*

The NCERT has undertaken the task of bringing out a new series of supplementary readers termed Popular Science Books which will be written by competent scientists. These books are primarily meant for children of 8-10 years of age. Initially four books are being written under this series. The first book entitled *Energy* is likely to be released during 1989.

#### *Sales*

During the year under review the net receipts from the sales of the NCERT publications amounted to Rs. 6,85,09,026 which was an increase of 13.6% over the last year.

#### *Copyright Permissions*

A number of State-level agencies showed interest in the books brought out by the NCERT. Table 15.2 shows the agencies to whom the Council gave permission during the year under report to adapt/adopt and publish its textbooks and other publications.

**TABLE 15.2**

*Copyright Permission granted during 1988-89*

Delhi Bureau of Textbooks, Aliganj, Karbala  
Market, Lodhi Road, New Delhi

Copyright permission was granted to reprint the following new textbooks for Classes I, III and VI and print and distribute new textbooks for Classes II, IV and VII.

*Class-I*

1. Bal Bharati Bhag-I
2. Abhyas Pustika Bal Bharti Bhag-I
3. Ganit Bhag-I

*Class-II*

1. Bal Bharati Bhag-II
2. Abhyas Pustika Bal Bharati Bhag-II
3. Ganit Bhag-II

*Class-III*

1. Bal Bharati Bhag-III
2. Abhyas Pustika Bal Bharati Bhag-III
3. Ganit Bhag-III
4. Hum Aur Hamara Desh
5. Parvesh Anveshan Bhag-I (Science)

*Class-IV*

1. Bal Bharati Bhag-IV
2. Abhyas Pustika Bal Bharati Bhag-IV
3. Ganit Bhag-IV
4. Hamara Desh Bharat
5. Parvesh Anveshan Bhag-II (Science)

*Class-VI*

1. Kishore Bharati Bhag-I
2. Sanskshipt Ramayan
3. Ganit Bhag-I
4. Desh Aur Unke Niwasi Bhag-I
5. Prachin Bharat
6. Hamara Nagrik Jeevan
7. Vigyan Bhag-I

*Class-VII*

1. Kishore Bharati Bhag-II
2. Sankshipt Mahabharat
3. Ganit Pustak-II (Bhag-I and II)
4. Vigyan Bhag-II
5. Desh Aur Unke Niwasi Bhag-II
6. Madhyakalin Bharat
7. Hum Apna Shasan Kaise Chalate Hain

Copyright permission was granted to reprint the following new textbooks for Classes I, III and VI and print and distribute new textbooks for Classes II, IV and VII.

*Class-I*

1. Bal Bharati Bhag-I
2. Abhyas Pustika Bal Bharati Bhag-I
3. Ganit Bhag-I

Secretary, H.P. Board of Secondary Education,  
Dharamsala, Distt. Kangra

**Class-II**

1. Bal Bharati Bhag-II
2. Abhyas Pustika Bal Bharati Bhag-II
3. Ganit Bhag-II

**Class-III**

1. Bal Bharati Bhag-III
2. Abhyas Pustika Bal Bharati Bhag-III
3. Ganit Bhag-III
4. Hum Aur Hamara Desh
5. Parvesh Anveshan Bhag-I (Science)

**Class-IV**

1. Bal Bharati Bhag-IV
2. Abhyas Pustika Bal Bharati Bhag-IV
3. Ganit Bhag-IV
4. Hamara Desh Bharat
5. Parvesh Anveshan Bhag-II(Science)

**Class-VI**

1. Kishore Bharati Bhag-I
2. Sanskshipt Ramayan
3. Ganit Bhag-I
4. Desh Aur Unke Niwasi Bhag-I
5. Prachin Bharat
6. Hamara Nagrik Jeevan
7. Vigyan Bhag-I

**Class-VII**

1. Kishore Bharati Bhag-II
2. Sanskshipt Mahabharat
3. Ganit Pustak-II (Bhag-I & II)
4. Vigyan Bhag-II
5. Desh Aur Unke Niwasi Bhag-II
6. Madhyakalin Bharat
7. Hum Apna Shasan Kaise Chalate Hain

Copyright permission was granted to translate into Bengali and publish the following textbooks

1. Modern India Class XII
2. Medieval India Part II Class XII

Copyright permission was granted to print and distribute the following textbooks:

1. Bal Bharati Bhag-I
2. Bal Bharati Bhag-II

Copyright permission was granted to translate into Malayalam and publish the following books

1. Introduction to Economics Theory
2. Indian Democracy at Work, Class XII
3. Political System for Class XI
4. Understanding Society for Class XI
5. Foundation of Political Sciences for Class XI
6. Medieval India Part I for Class XI
7. Medieval India Part II for Class XII

The Chief Executive Officer, West Bengal  
State Book Board, Rajaji Market Square,  
Calcutta

The Director of School Education, Govern-  
ment of West Bengal, K.S. Roy Road,  
Calcutta-700001.

Director, State Institute of Language, Kerala,  
Nalanda, Trivandrum

8. Ancient India for Class XI
9. Indian Constitution and Government for Class XII
10. National Income Accounting for Class XII
11. Evaluation of Indian Economy for Class XI
12. Physics for Class XI-XII
13. Chemistry Part I for Class XI
14. Biology Part II Vol. I
15. Biology Part II Vol. II
16. Biology Part I for Class XI
17. Indian Society
18. Electricity at Work
19. Introduction to House-wiring
20. Repair and Maintenance of Household Electrical Appliances

The Officer-in-charge, The State Institute of Language, Kerala, Regional Centre, Calicut-673001

Copyright permission was granted to publish the following two books:

1. Chemistry Part I Class XI
2. Chemistry Part II Class XII

Secretary, Haryana Board of School Education, Bhiwani (Haryana)

Copyright permission was granted to reprint the following books for Classes IX-X

1. Ganit Bhag-I, Khand-I
2. Ganit Bhag-I, Khand-II
3. Steps to English-4 English Reader
4. Steps to English-4 Workbook to English Reader
5. Steps to English-4 Supplementary Reader
6. Manushya Aur Vatavaran
7. Steps to English-5 English Reader
8. Steps to English-5 Workbook to English Reader
9. Steps to English-5 Supplementary Reader
10. Nagrik Aur Shashan
11. Sabhyata Ki Kahani

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## Distribution

As in the past years, the Council's publications continued to be distributed and sold through the Publications Division of the Ministry of Information and Broadcasting, the Council's national distributors, and the wholesales depots situated at New Delhi, Calcutta, Bombay, Madras, Trivandrum, Patna, Lucknow and Hyderabad. In the Union Territory of Delhi, the Council's publications were distributed and sold through 14 wholesale agents appointed by the NCERT. For further decentralisation of the sale and distribution of the Council's publications in the States, a proposal for appointing wholesale agents at Jammu (for J & K), Bangalore (for Karnataka), Bhopal (for Madhya Pra-

desh), and Guwahati (for the N.E. region) was under the active consideration of the Council. The Urdu publications were exclusively distributed and sold through the Urdu academy, Delhi Administration. Two distributors were also appointed in Delhi and Madras for the sale of the special NCERT publication, *India's Struggle for Independence—Visuals and Documents*.

Besides the sale and distribution arrangements mentioned above, orders for the supply of the Council's books were also entertained directly from schools and other educational institutions. During the year, 1,071 direct orders, including 350 from Kendriya Vidyalayas, 35 from Sainik Schools, 85 from Central Schools for Tibetans, 255 from Navodaya Vidyalayas, 317 from other schools and 29 from the schools and District

Education Officers of Arunachal Pradesh were received. Several orders from educational institutions abroad were executed through merchant exporters. Textbooks for Classes IX and XI were supplied direct to the Government of Sikkim and selected textbooks for Classes XI and XII were also supplied to the Board of School Education, Haryana.

In addition to the above, a large number of orders received from individuals and institutions were executed. Thousands of individual buyers also visited the Department's Sales Counter to buy our books. Several titles published during the year under report were mailed according to the approved mailing list. Demands for the Council's unpriced publications, received from a sizeable number of educational institutions and researchers were complied with.

## Documentation and Library Services

The Department of Library, Documentation and Information (DLDI) of the NCERT continued to support research and development activities of various departments and units of the NCERT. The Department not only catered to the information needs of faculty members of the NCERT but also to those of research scholars and educationists from all over the country. The department also continued to organise inservice training programmes for school librarians, teachers in charge of school libraries and librarians of teacher-training colleges. The department also collected a lot of material on international aspects of education and population education to strengthen the resources of the International Educational Resource and Documentation Centre of the Department. The details regarding the collection of books and circulation are given below.

### Position of Holdings

(a) Total Holdings as on 31.3.1988	= 1,22,752
(b) Books added during 1988-89	
(i) By purchase	= 973
(ii) By gift	= 425
(iii) Bound Periodicals Accessioned	= 503
(c) Books withdrawn during 1988-89	= 496
(d) Total Holdings as on 31.3.1989 (a+b+c)	= 1,24,157
(e) Expenditure on books during 1988-89	= Rs 2,79,245
<i>Periodicals and Magazines</i>	
(a) Subscribed or received Gratis or in Exchange	= 414
(b) Newspapers subscribed	= 17
<i>Teacher Education—Research</i>	
(a) <i>Documentation Services</i>	
(i) Accession List	= 5 issues
(ii) Current Contents	= 2 issues
(iii) Index to articles in current periodicals received in DLDI	= 3 issues
(b) <i>Bibliographies</i>	
(i) Educational Technology	= July 1988
(ii) Education of Indian Women	= August 1988
(iii) The Child	= October 1988
(iv) Distance Education	= February 1989
(v) An alphabetical subject index to National Policy on Education—1986; Programme of Action	= February 1989
(c) Press Clippings from Current Newspapers	= 1,435
(d) Photocopies supplied	= 93,504
<i>Circulation Service</i>	

(a) Total number of members as on 31.3.1989	= 3,374
(b) Number of external members during the year under review	= 80
(c) Number of external visitors availing reference/consultation facilities	= 761
(d) Number of books issued during the year	= 17,724
(e) Number of books issued on inter-library loan	= 46

## Training Programme

The Council provided technical assistance to the Board of Secondary Education, Orissa for organising a training programme for in-service teachers in-charge of libraries in schools in Orissa from 9 to 18 December 1988. The NCERT organised a workshop on development of libraries of elementary teacher training institutions at Attingal (Trivandrum) from 12 to 16 December 1988. 37 participants attended this workshop. The Council organised another workshop on development of libraries in elementary teacher training institutions at Edapalli (Kerala) from 6 to 10 March 1989. 27 participants attended this workshop.

## Publication of Journals and Dissemination of Educational Information

The NCERT has been publishing six journals for the dissemination of educational information. The Journals brought out by the NCERT are as follows:

*Indian Educational Review* (a quarterly) carries research articles, abstracts of doctoral, post-doctoral and institutional research in education and allied disciplines and also research notes and reviews of books on education and research.

*Journal of Indian Education* (a bi-monthly) carries articles, documents, books reviews, etc. to augment the possibility of innovations and better schooling. At times special thematic issues are also brought out.

*School Science* (a quarterly) disseminates information on innovations and experimentation in school science, besides carrying articles on popular science for the benefit of the community.

*Primary Teacher* (a quarterly) is addressed to pre-primary and primary school teachers to help them solve classroom problems, try experiments and improve teaching.

*Primary Shikshak* (a quarterly in Hindi) is addressed to scholars and school teachers to help them improve classroom teaching. It carries information on innovations in education as a regular feature, and special thematic issues are also brought out.

During the year under report, the following issues of these journals were brought out:

- Indian Educational Review*: One Issue
- Journal of Indian Education*: Four Issues
- Primary Teacher*: Two Issues
- Primary Shikshak*: Two Issues
- School Science*: Two Issues
- Bhartiya Adhunik Shiksha*: Three Issues

During 1988-89, the Council organised three workshops to write papers for a yearbook (source book) on Educational Journalism. The first workshop was organised at Almora, U.P. from 14 to 16 June, 1988 the second at Rajgir, Bihar from 21 to 23 February 1989 and the third at Trichy from 17 to 19 March 1989. In addition to these, the Council organised a workshop at Jaipur on 16 and 17 March 1989 for developing the manuscript for the special issue of *Bharatiya Adhunik Shiksha* on children's literature.

## Participation in Book Fairs/Exhibitions

As part of the work related to its dissemination services, the Council exhibited its publications at the following book fairs/exhibitions:

- Book exhibition on the occasion of the Teachers Day on 5 September 1988 at Vigyan Bhawan, New Delhi.
- Jawaharlal Nehru National Science Exhibition organised by the NCERT in November, 1988 at Jammu.
- National Children's Book Fair organised by the National Book Trust, India at Ramlila Maidan, New Delhi in November 1988.

- Patna Book Fair organised by Federation of Educational Publishers in India in November 1988.
- National Book Fair organised by the National Book Trust, India, held at Lucknow in December 1988.
- National Children's Book Fair organised by the National Book Trust, India at Bombay, December 1988-January 1989.

Besides these exhibitions, the Council's publications were also organised on several occasions at the NCERT Campus.

The Council also participated in the following international book fairs/exhibitions by sending selected NCERT publications through the National Book Trust, India.

- Exhibition of Indian Books in Bangla Desh April-May 1988.
- Indian Book Exhibition in Guyana 4-12 May,

- 1988.
- 18th International Book Fair, Sofia (Bulgaria from 2-7 June 1988)
- Malaysia Book Fair, Kuala Lumpur from 29 July to 7 August 1988.
- 20th Singapore International Festival of Books and Book Fair 1988 from 3-11 September 1988.
- 40th Frankfurt Book Fair 1988 from 5-10 October 1988.
- Cairo 21st International Book Fair from 24 January to 6 February 1989.
- Exhibition of Indian Books in USSR as part of the Festival of India in USSR.

### List of Publications during 1988-89

Table 15.3 indicates the list of books and journals published by the department during the year 1988-89.

**TABLE 15.3**  
*Publications brought out by the Publication Department of the NCERT during 1988-89*

S.No.	Title	Date of publication	No. of copies printed	
<i>Textbooks, Workbooks and prescribed Supplementary Readers</i>				
<i>Class-I</i>				
1.	Workbook for Let's Learn English (S.S.)	Nov. '88	1,80,000	
2.	Abhyas Pustika Bal Bharati Bhag-I	Jan. '89	1,70,000	
<i>Class-II</i>				
3.	Bal Bharati Bhag-II	April '88	3,10,000	New Book
4.	Abhyas Pustika Bal Bharati Bhag-II	May '88	3,10,000	New Book
5.	Let's Learn Mathematics Book-II	June '88	3,10,000	New Book
			2,50,000	
6.	Workbook for Let's Learn English Book-II	Nov. '88	1,50,000	
7.	Abhyas Pustika Bal Bharati Bhag-II	Feb. '89	2,50,000	
<i>Class-III</i>				
8.	Bhasha Kiran Bhag-III	July '88	10,000	New Book
9.	Bal Bharati Bhag-III	Jan. '88	70,000	
10.	Exploring Environment Book-I	Dec. '88	85,000	
11.	Abhyas Pustika Bal Bharati Bhag-III	Jan. '89	25,000	

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12.	Let's Learn Mathematics Book-III	March '89	2,10,000	
13.	Let's Learn English Book-III (S.S.)	March '89	2,00,000	
14.	Hum Aur Hamara Desh	Jan. '89	50,000	
15.	Workbook for Let's Learn English Book-III	March '89	1,40,000	
16.	Desh Aur Uske Niwasi Bhag-III	March '89	10,000	
<i>Class-IV</i>				
17.	Abhyas Pustika Bal Bharati Bhag-IV	May '88	2,50,000	New Book
18.	Hamara Desh Bharat	June '88	75,000	New Book
19.	Exploring Environment Book-II	June '88	1,40,000	New Book
20.	Let's Learn Mathematics Book-IV	June '88	2,10,000	New Book
21.	Our Country India (S.S.)	June '88	1,00,000	New Book
22.	English Reader Book-I (S.S.)	Dec. '88	1,55,000	
23.	Workbook for English Reader-I (SS)	Jan. '89	80,000	
24.	Read for Pleasure Book-I	Dec. '88	1,10,000	
25.	Environmental Studies Book-II	Dec. '88	1,10,000	
26.	Bal Bharati Bhag-IV	March '89	1,30,000	New Book
27.	Hamara Desh Bharat	Dec. '88	70,000	
28.	Let's Learn Mathematics Book-IV	Nov. '88	2,10,000	
<i>Class-V</i>				
29.	Abhyas Pustika Swasti Bhag-I	April '88	65,000	
30.	Workbook for English Reader Book-II	Jan '89	20,000	
31.	English Reader Book-II (S.S.)	March '89	1,20,000	
32.	Abhyas Pustika Bal Bharati Bhag-V	Feb. '89	2,05,000	New Book
33.	Swasti Bhag-I	Jan. '89	60,000	
34.	Bal Bharati Bhag-V	Feb. '89	2,05,000	New Book
35.	Hamara Desh Aur Sansar	March '89	85,000	New Book
<i>Class-VI</i>				
36.	Science	April '88	1,65,000	
37.	Ancient India	April '88	1,00,000	
38.	Read for Pleasure	Dec. '88	70,000	
39.	Our Civic Life	Dec. '88	60,000	
40.	Mathematics	Dec. '88	1,30,000	
41.	Prachin Bharat	Dec. '88	55,000	
42.	Swasti Bhag-II	Dec. '88	60,000	
43.	Workbook for English Reader Book-III (S.S.)	Dec. '88	40,000	
44.	Science	Dec. '88	1,60,000	
45.	English Reader Book-III (S.S.)	Jan. '89	1,25,000	
46.	Abhyas Pustika Swasti Bhag-II	Dec. '88	25,000	
47.	Lands and Peoples Part-I	Dec. '88	70,000	
48.	Read for Pleasure Book-III	March '89	70,000	
49.	Ancient India	Dec. '88	50,000	
50.	Kishore Bharati Bhag-I	Dec. '88	1,20,000	
51.	Desh Aur Unke Niwasi	Dec. '88	60,000	
52.	Hamara Nagrik Jeevan	Dec. '88	50,000	
53.	Sanskshipt Ramayan	Dec. '88	80,000	
<i>Class-VII</i>				
54.	English Reader Book-IV (S.S.)	April '88	60,000	
55.	Sanskshipt Mahabharat	May '88	80,000	New Book
56.	Hum Apna Shasan Kaise Chalatey Hai	May '88	65,000	-do-
57.	Madhyakalin Bharat	June '88	65,000	



58.	How We Govern Ourselves	May '88	70,000	
59.	Medieval India	June '88	70,000	
60.	Mathematics Part I	June '88	1,30,000	
61.	Science	June '88	1,30,000	
62.	Kishore Bharati Bhag-II	June '88	1,25,000	
63.	Desh Aur Unke Niwasi Bhag-II	June '88	65,000	-do-
64.	Lands And Peoples Part-II	August '88	75,000	-do-
65.	Mathematics Part-II	Oct. '88	1,30,000	
66.	Swasti Bhag-II	Dec. '88	40,000	-do-
67.	Madhyakalin Bharat	Jan. '89	70,000	
68.	Abhyas Pustika Swasti Bhag-III	Dec. '88	25,000	
69.	Sankshipt Mahabharat	Dec. '88	85,000	
70.	Read for Pleasure Book-IV	Jan. '89	40,000	
71.	Mathematics Part-II	Jan. '89	80,000	
72.	Medieval India	March '89	80,000	
73.	Science	Jan. '89	1,50,000	
74.	Desh Aur Unke Niwasi Part-II	March '89	75,000	
<i>Class-VIII</i>				
75.	Read For Pleasure Book-V	Dec. '88	60,000	
76.	Swasti Bhag-IV	Dec. '88	25,000	
77.	Abhyas Pustika Swasti Bhag-IV	Dec. '88	20,000	
78.	English Reader Book-V	Jan. '89	75,000	
79.	Lands and Peoples Part-III	March '89	90,000	New Book
80.	Our Country Today—Problems and Challenge	March '89	90,000	-do-
81.	Kishore Bharati Bhag-III	March '89	1,50,000	-do-
82.	Trividha	March '89	30,000	-do-
83.	Mathematics Part-I	March '89	1,50,000	New Book
<i>Class IX</i>				
84.	Steps to English IV—Workbook to English Reader	April '88	40,000	
85.	Mathematics Part I—A Textbook for Secondary Schools	July '88	2,00,000	New Book
86.	Science Part-I	July '88	2,00,000	-do-
87.	Science Part-II	Oct. '88	50,000	-do-
88.	Mathematics Part-II	Dec. '88	40,000	-do-
89.	Science Part I & II (Combined)	Dec. '88	1,90,000	
90.	Language Through Literature Supplementary Reader 'B' Course	Feb. '89	1,50,000	New Book
91.	Parag Bhag-I,	Feb. '89	2,00,000	-do-
92.	Swasti Bhag-I	March '89	2,00,000	-do-
93.	Chitra Bhag-I	March '89	35,000	-do-
94.	Kisley	Feb. '89	35,000	-do-
95.	Understanding Environment	March '89	1,10,000	-do-
96.	Language Through Literature-I—Workbook to English Reader 'B' Course	March '89	1,50,000	-do-
97.	The Story of Civilization Part I	March '89	1,10,000	-do-
<i>Class IX-X</i>				
98.	Nagrik Aur Shasan	July '88	10,000	
99.	Citizen and Government	Dec. '88	25,000	
100.	India on the Move	Feb. '89	20,000	
101.	Hamari Arthavyavastha Ka Parichay	March '89	60,000	New Book
<i>Class-X</i>				
102.	Bharat Vikas ki Car	April '88	90,000	
103.	Steps to English-V Supplementary Reader	April '88	60,000	

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104.	India on the Move	April '88	1,00,000	
105.	Steps to English-V English Reader	March '89	35,000	
106.	Mathematics Part-I	March '89	90,000	New Book
107.	The Story of Civilization Part-II	Feb. '89	35,000	
108.	Sabhyata ki Kahani Bhag-II	March '89	20,000	
<i>Class XI-XII</i>				
109.	Field Work and Laboratory Techniques in Geography	April '88	4,000	
110.	Chemistry Part-I	June '88	30,000	
111.	Physics	July '88	35,000	
112.	Chemistry Part-II—A Textbook for Higher Secondary Schools	July '88	45,000	
<i>Class XI</i>				
113.	Abhinav Kavya Bharti Bhag-I	April '88	8,000	
114.	Political System	April '88	5,000	
115.	Psychology—An Introduction to Human Behaviour	May '88	2,000	
116.	Evolution of the Indian Economy	May '88	10,000	
117.	Physics	June '88	80,000	New Book
118.	Ancient India	July '88	15,000	
119.	Chemistry Part-I	July '88	80,000	New Book
120.	Biology Part-I	Aug. '88	80,000	-do-
121.	Mathematics Part-I	Aug. '88	80,000	-do-
122.	Physics Vol. I Part-II	Oct. '88	30,000	
123.	Chemistry Part-II	Nov. '88	95,000	-do-
<i>Class-XI</i>				
124.	Biology Part-II	Dec. '88	80,000	New Book
125.	Mathematics Part-II	Dec. '88	90,000	-do-
126.	Mandakini Bhag-I	March '89	65,000	-do-
127.	Niharika Bhag-I	March '89	25,000	-do-
128.	One Act Plays	March '89	4,000	
129.	I, The People	Feb. '89	10,000	
130.	Ancient India	Feb. '89	6,000	
131.	Evolution of the Indian Economy	Feb. '89	6,000	
132.	Society, State and Government	March '89	25,000	New Book
133.	Stories, Plays, Tales of Adventure—English Supplementary Reader	March '89	37,000	
134.	Parwai Bhag-I	Feb. '89	4,000	New Book
135.	Pallav Bhag-I	Feb. '89	25,000	New Book
136.	Principles of Geography Part-I	March '89	15,000	New Book
<i>Class-XII</i>				
137.	A Course in Written English (Core Course)	April '88	35,000	
138.	Biology Part-II Vol.I	April '88	40,000	
139.	Abhinav Gadhya Bharti Bhag-II	June '88	45,000	
140.	Bhartiya Samaj	March '89	2,500	
141.	Social Change +2 Stage	Feb. '89	2,000	
142.	Mathematics Book-V	March '89	20,000	
143.	Dear to All The Muse	Feb. '89	2,000	
144.	On Top of the World	Feb. '89	2,000	
145.	Elementary Statistics	Feb. '89	5,000	
146.	Indian Society	March '89	2,000	
147.	A Course in Written English	Feb. '89	15,000	
148.	Manav Evam Arthik Bhugol	March '89	4,000	
149.	Physics Part-I	March '89	70,000	
150.	Mathematics-Book-III	Feb. '89	20,000	

## Textbook for Arunachal Pradesh

151.	Arun Bharti Bhag-I	July '88	30,000
152.	Arun Bharti Bhag-II	Aug. '88	24,000
153.	Arun Bharti Bhag-III	Aug. '89	19,000
154.	Abhyas Pustika Arun Bharti Bhag-III	July '88	17,000
155.	New Dawn Readers Workbook-II	July '88	43,000
156.	Supplementary Reader for New Dawn Readers-II	July '88	27,000
157.	Abhyas Pustika Arun Bharti Bhag-I	Aug. '88	37,000
158.	Supplementary Reader for New Dawn Readers -II	July '88	43,000
159.	Abhyas Pustika Arun Bharti Bhag-II	July '88	20,000
160.	New Dawn Reader Textbook-I	July '88	25,000
161.	New Dawn Reader Textbook-II	July '88	44,000
162.	New Dawn Reader Book-III	April '88	35,000

## Textbooks for West Bengal

163.	Gadhya Bharti for Secondary Classes	Dec. '88	10,000
164.	Kavya Bharti for Class-IX	Dec. '88	10,000

## Textbooks for Navodaya Vidyalayas

165.	The World Around Me—English Workbook for Navodaya Vidyalayas Class-VIII	Aug. '88	10,000
166.	Hamari Hindi Bhag-I Class-VI	July '88	14,000

## Teacher's Guides

167.	Teachers and Education in the Emerging Indian Society	Aug. '88	3,000
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## Exemplar Instructional Material for Work Experience

168.	Dairying—Feeds and Feeding of Dairy Animals Vol. III	Aug. '88	5,000
169.	Crop Management	Feb. '89	5,000
170.	Vegetable Crops	March '89	5,000
171.	Fundamentals of Food Production	March '89	5,000
172.	Floriculture	Aug. '88	5,000
173.	Textile Core and Design	March '89	5,000
174.	Work Experience on Basic Book-Keeping Classes IX-X	March '89	10,000
175.	Milk and Milk Products	Nov. '88	5,000

## Supplementary series

### Padhen Aur Seekhen Mala

176.	Chamatkar Parmanu Urja Ke	Dec. '88	10,000
177.	Sahas ke Dhari	May '88	5,000
178.	Mitti Ka Mol	April '88	10,000
179.	Purshotam Dass Tandon	Jan. '89	5,000
180.	Rocket Ek Parichay	Oct. '88	10,000
181.	Iqbal Educational Philosophy	Nov. '88	5,000

### Kamal Pustak Mala

182.	Jawahar Lal Nehru Ke Amar Vichar	Nov. '88	18,000
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### The Lotus Series

183.	Living Thoughts of Mahatma Gandhi	Oct. '88	18,000
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## Research Reports, Monographs and Other Publications

184.	National Curriculum for Elementary and Secondary Education —A Framework	April '88	20,000
185.	Prarambhik Aur Madhyakalīn Shiksha Ka Rashtriya Pathyakram	May '88	10,000
186.	Handbook for Vocational Survey Workers	April '88	5,000
187.	Communicable Diseases	Sep. '88	5,000
188.	A Handbook of Evolution in English	July '88	5,000
189.	Jawaharlal Nehru National Science Exhibition for Children, November 1988 (English)	Oct. '88	2,000

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190.	Structure and Working of Science Models—1988	Oct. '88	3,000
191.	Jawaharlal Nehru National Science Exhibition for Children. November, 1988 (Hindi)	Oct. '88	2,000
192.	School Education After Independence.	Oct. '88	10,000
193.	Swatantra Bharat Mein School Shiksha	Nov. '88	10,000
194.	Operation Blackboard—Essential Facilities at the Primary Stage and Specifications	Dec. '88	5,000
195.	Curriculum And Quality in Education	July '88	1,000
196.	Annual Report (English)	Dec. '88	1,000
197.	Annual Report (Hindi)	Dec. '88	500
198.	Fifth All India Educational Survey	Feb. '89	8,000
199.	Histotechnology—Medical Laboratory Techniques Vol. VIII	July '88	5,000
200.	Laboratory Set-up and Procedure, Medical Laboratory Techniques for Routine Diagnostic Tests-Vol.III	Feb. '89	5,000
201.	Identification and Development of Talent	Oct. '88	2,000
202.	Elements of Electrical Technology, Instructional-Cum-Practical Manual Vol.I	June '88	5,000
203.	Lineman Practice, Instructional Cum-Practical Manual Vol.I	Aug. '88	5,000
<i>Urdu Textbooks, Workbooks/Supplementary Readers</i>			
<i>Class-II</i>			
1.	Riyazee (Mathematics) Book-II	April '88	3,000
<i>Class-IV</i>			
2.	Mahaul Ke Zariye Taleem (Environmental Studies) Pt.I	April '88	2,000
<i>Class-V</i>			
3.	Bharat Aug Duniya (India and the World)	May '89	1,500
4.	Mahaul Ke Zariye Taleem (Environmental Studies) Pt.III	April '88	2,000
<i>Class-VI</i>			
5.	Hisab (Mathematics) Pt.I	June '88	3,000
6.	Science Seekhna (Learning Science) Pt.I	Sept. '88	3,500
7.	Tareekh Aur Ilm-e-Shahriyat (History and Civics) Pt.I	April '88	3,500
8.	Mumalik Aur Unka Bashinda (Lands and People)	April '88	3,500
<i>Class-VII</i>			
9.	Science Seekhna (Learning Science) Pt.II	May '88	3,000
10.	Mumalik Aur Unka Bashinda (Lands and People) Pt.II	April '88	2,000
<i>Class-VIII</i>			
11.	Science Seekhna (Learning Science) Part-III	May '88	3,000
12.	Tareekh Aur Ilm-e-Shahriyat (History and Civics) Part-III	Aug. '88	3,000
13.	Mumalik aur Unka Bashinda (Lands and People) Part-III	April '88	3,000
<i>Class-IX</i>			
14.	Insan Aur Mahaul (Man and Environment)	April '88	3,000
<i>Class IX-X</i>			
15.	Shahri Aur Hukumat (Citizen and Government)	Feb. '89	2,000
<i>Class-X</i>			
16.	Tahzeeb Ki Kahani (Story of Civilization) Pt. II	June '88	2,000
<i>Class-XI</i>			
17.	Ibtedal Shumariyat (Elementary Statistics)	Feb. '88	2,000
<i>Class-XII</i>			
18.	Urdu Ki Nai Kitab	Feb. '89	2,000
19.	Supplementary Reader Badhta Bachcha-Zaruratain Aur Masalel (The Needs and Problems of the Growing Child)	Jan. '89	1,000
<i>Journals</i>			
1.	The Primary Teacher	Jan. '88	
2.	Bhartiya Adhunik Shiksha	Jan. '88	

3.	Primary Shikshak	Jan. '88
4.	Journal of Indian Education	Nov. '87
5.	Journal of Indian Education	Jan. '88
6.	School Science	Dec. '87
7.	Journal of Indian Education	March '88
8.	Bhartiya Adhunik Shiksha	April '88
9.	Indian Educational Review	April '88
10.	School Science	June '88
11.	Journal of Indian Education	July '88
12.	The Primary Teacher	July '88
13.	Primary Shikshak	July '88
14.	Bhartiya Adhunik Shiksha	Oct. '88

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The NCERT has been acting as a major agency for implementing the provisions of bilateral Cultural Exchange Programmes (CEP) that are executed by the Government of India with other countries in the field of school education and teacher education. The Council has been undertaking UNESCO/APEID, UNDP and UNICEF sponsored projects/programmes and has been arranging meetings with delegations/experts from other countries for the exchange of ideas/views in the fields of school education and teacher education. It has also been undertaking training programmes for foreign nationals under attachment programmes in the fields of school education, and teacher education. The NCERT also sponsors its faculty members for participation in the international conferences/seminars/symposia/meetings/workshops/training programmes.

The International Relations Unit (IRU) at the NCERT is responsible for coordination of the above mentioned activities/programmes of the NCERT. The unit also acts as the Secretariat of the National Development Group (NDG) for educational innovations and as a clearing-house agency for furnishing information on school education in India to different countries and international agencies and organisations.

### **Bilateral Cultural Exchange Programmes**

The major activities under the Bilateral Cultural Exchange Programmes with other friendly countries are exchange of educational materials and visits of edu-

cationists for the study of the educational system. During the year 1988-89, the NCERT exchanged educational materials with a few countries under the Cultural Exchange Programmes. Educational materials were supplied at their request to Belgium, Czechoslovakia, Japan, Nigeria, People's Republic of Korea, Republic of Korea, Syria, Thailand, Uganda, United Arab Emirates, USA and USSR. The Council received educational materials from Pakistan and Thailand through the Embassies of these countries in fulfilment of the items under the Cultural Exchange Programmes.

### **Foreign Visitors to the NCERT**

The NCERT received educationists from different countries as detailed below:

1. A training programme for faculty members of the National Institute of Education (NIE), Maharama, Sri Lanka was organised at the NCERT from 15 March to 18 April 1988.
2. A team of 25 headmasters and teachers from the United Kingdom visited the NCERT on 5 April 1988 and discussed the activities and functions of the NCERT with the Joint Director, NCERT and faculty members of DTESE&ES, DESSH and CIET in the areas of Teacher Education, Value Education and Educational Technology.
3. A four-member delegation from Iran visited NCERT on 21 April 1988. The delegation met the Joint Director, CIET and the senior faculty mem-

- bers of the NCERT and had discussions on the educational research in India.
4. Mr. Mohamad Ibrahim and Dr. Hafijullah Kheghan from Afghanistan (WHO Fellows) visited the NCERT on 28 and 29 April 1988 and discussed Health Education Programmes with NCERT faculty members.
  5. Mr. Emmanuel Apea, Human Resource Development Group, Commonwealth Secretariat, London visited the NCERT on 13 May 1988 and discussed with the NCERT faculty members the details of the plan for the training of science teachers in India.
  6. A delegation from Uganda visited the NCERT on 12 May 1988. The delegation met the Joint Director, NCERT, Dean (Academic), Head, DPSEE and had discussions on the National Policy on Education and its implementation.
  7. Mr. F.C. Vohra, Senior Programme Specialist, Division of Science, Technical and Environmental Education, UNESCO Headquarters, Paris visited the NCERT on 20 June 1988 and had discussions with the Director and senior faculty members of the NCERT.
  8. A ten-day Fellowship Training Programme for 12 fellows from Bangladesh on the content and process of primary education and the Curriculum Renewal Programme based on Minimum Learning Continuum was organised at NCERT from 11 to 20 July 1988.
  9. A Group of ten American students visited the NCERT on 5 August 1988. They had a meeting with Director, NCERT, Dean (Academic) and some faculty members of the Council. The visit was under the Indo-US Educational Exchange Programme.
  10. Prof. H. Mukerjee, Commonwealth Secretariat, London visited the NCERT on 16 August 1988 and had discussions with the Director, Joint Director, Head, DVE and Head, Women's Study Unit on different aspects of education in India.
  11. Four Women Education Officers from Somalia attended the training programme in the field of Non-Formal Education under the ITEC Programme for six months at NCERT in the Department of Non-Formal Education and education of SC/ST held from 15 February 1988 to 14 August 1988.
  12. A group of 5 senior government officials of Vietnam visited the NCERT on 25 August 1988. They had a meeting with the Director and Joint Director, NCERT, Joint Director, CIET and the senior faculty members of DPSEE. They had discussions on matters related to nutrition and health education in the primary school system in India.
  13. Mr. Hector Garcia, Mexican Research Worker, National Museum of Science and Industry, Paris visited the NCERT on 16 September 1988. He held discussions with faculty members of the DESM on matters related to students' attitude to science and the Science Popularisation Programme.
  14. Dr Ahmed Fathy, Hon'ble Education Minister of Egypt, visited the NCERT on 19 September 1988. He had a meeting with the Director, Joint Director and senior faculty members of the NCERT.
  15. The members of the working group on the International Literacy Year (ILY) visited the NCERT on 12 October 1988. They had a meeting with the Director, Joint Director, NCERT and the faculty members of the Non-Formal Education and SC/ST Department and DPSEE, NCERT. They had a brief discussion on the various aspects of non-formal education and universalisation of elementary education and were apprised of the work done by the NCERT in these areas.
  16. A training programme for the second batch of eleven faculty members of the National Institute of Education, Maharagama, Sri Lanka was organised by the NCERT from 5 September to 13 October 1988.
  17. The Hon'ble Minister of Education from Afghanistan visited the NCERT on 30 September 1988. He had discussions with the Director, the Joint Director and the Deans on various aspects of education.
  18. Mr. J. Ratnaike, Senior Science Programme Specialist, UNESCO, Bangkok visited the NCERT from 3 October 1988. He had discussions with the Head, DESM on 3 October 1988 and with the Head, DPSEE, NCERT on 4 October 1988 on

science education and elementary education in India respectively.

19. Prof. John Crocket Smyth, UNESCO, Paris visited the NCERT on 26 September 1988 and held discussions with the Director, Joint Director (NCERT); the Joint Director, CIET; Head, DESM and Head, DVE, on evaluation of the international Environment Education Programme under UNESCO/UNEP programmes 1984-88.
20. A group of participants from different countries of the world who were undergoing a training programme organised by the National Institute of Educational Planning and Administration (NIEPA) visited the NCERT on 25 October 1988. The Joint Director, NCERT along with senior faculty members of the NCERT discussed with the Group various aspects of the functioning of the NCERT and its contribution to the field of education in the country.
21. Dr. Camy Georges, Senior Expert on Human Resources Development, Social Development Division, ESCAP, Bangkok visited the NCERT on 8 November 1988 and held discussions with the Joint Director, NCERT, Joint Director, CIET, Head, DPSEE, Head, DVE and Head, DESM on the implementation of the ESCAP Plan of action on Human Resource Development.
22. Mr. Joseph Kuthemba Mwale, Department of Education, Chancellor College, Zomba, Malawi visited NCERT on 27 October 1988 under the Commonwealth Education Cooperation Plan "Short-term Visit of Senior Educationists Scheme" and held discussions with the Joint Director, NCERT and Joint Director, CIET. He visited various departments of the Council. He had discussions regarding functioning of the departments and their contribution to the field of education.
23. Prof. Uttama Dissoondyal, Director, Mahatma Gandhi Institute, Mauritius visited the NCERT on 10 November 1988. He had discussions with the Director, NCERT on different aspects of education.
24. Dr. Robert B. Slaney, Associate Professor, Southern Illinois University, Carbondale (U.S.A.) visited the Department of Educational Psychology, Counselling and Guidance, NCERT from 14-19 November, 1988. He delivered lectures to the participants of the Diploma Course in Educational and Vocational Guidance.
25. The USSR delegation headed by Dr. Nichulesehev, Executive Director of the Ministry of Education, USSR visited the NCERT on 16 November 1988 and had discussions on educational matters with the Director, NCERT.
26. Dr. Toshio Kanaya, Director of Education Co-operation, NIER, Japan visited the NCERT on 14 November 1988 and had discussions with the Director, NCERT.
27. The Japan Cultural and Information Centre, Embassy of Japan, New Delhi, in co-operation with the NCERT, held a workshop on 15 November 1988 on the theme of 'Profiles of Japan'. The discussion was mainly in the area of school education in Japan and latest trends and developments. Senior faculty members of the NCERT including the Director and Joint Director, NCERT attended the programme.
28. Dr. Devi Venkataswamy, Deputy Director and the Network Member in Mauritius (Mauritius Institute of Education, Mauritius) visited the NCERT on 28 November 1988 and held discussions with senior faculty members of the DESM. She discussed the international Network for Information in Science and Technology Education to strengthen links between the Mauritius Institute of Education, the NCERT and SEAMEQ, RECSAM and on the future INISTE meeting in Asia and suggested an outline agenda as well as the venue for this meeting.
29. Mrs. Reshmi Dhanwantree Ramdhany, Education Officer at the Mahatma Gandhi Institute and Press Attache of the Minister of Labour and Industrial Relations, Woman's Rights and Family Welfare of Mauritius has been attached to the NCERT from 15 December 1988 for a period of two to three months under one of the items of the Indo-Mauritius Cultural Exchange Programme for the Year 1987-89 which is marked to the U.G.C. for implementation. The NCERT is to provide the aca-



ademic support for the development of her project entitled 'Ancient Indian Culture and Civilization.'

30. Mr. Ian Rai Jeff McIntyre, Policy Officer for Science in the Ministry of Education, Victoria, Australia visited the NCERT on 12 December 1988. He held discussions with the Joint Director, NCERT and senior faculty members of the NCERT on different aspects of education.
31. Dr. Federico Mayor, Director General, UNESCO visited the NCERT on 13 December 1988. He held discussions with the Director, Joint Director and Senior faculty members of the NCERT on different aspects of education.
32. A delegation of six teachers of Indian languages from Mauritius visited NCERT on 20 January 1989 and held discussions with senior faculty members of DESSH, NCERT on different aspects of education.
33. Sir Wilfred Halliday Cockroft from the U.K. visited the NCERT on 24 January 1989 and held discussions with the Director, NCERT and delivered a talk: 'Mathematics Count—6 years on' to senior faculty members of NCERT.
34. Ms. Dirgitta Ulvhammer, Swedish Member of the UNESCO Executive Board along with Karl Gunner Lindstrom visited the NCERT on 7 February 1989 and held discussions with the Director, the Joint Director, and senior faculty members of NCERT.
35. Mr. Peter Okongo, Head of the Planning and Statistics Unit in the Ugandan Ministry of Education visited the NCERT on 9 February 1989 and held discussions with the Joint Director, NCERT on educational surveys, school mapping, curriculum development and teacher training initiatives.
36. Prof. J. Prason, Department of Design and Technology, Loughborough University of Technology, U.K. visited the NCERT on 3 March 1989 and held discussions with the Joint Director, NCERT along with the Heads of Departments of DPSEE, DESM, DVE, CIET, DTESE&ES and Workshop Department on matters related to Improved Technology in Schools and Design Technology in Schools.
37. Mr. G.V. Rao, Former Assistant Director General, UNESCO, visited NCERT from 4 to 6 March 1989

and delivered a talk on UNESCO through its 40 years which was attended by all Heads of Department and senior faculty members of NCERT.

### Deputation of NCERT Faculty Members Abroad

During 1988-89, the following faculty members of NCERT were deputed to participate in programmes organised abroad.

1. Prof. N.K. Jangira, DTESE&ES, NCERT attended the UNESCO consultation meeting on the Future Development of Special Education held at Paris from 2 to 6 May 1988.
2. Dr. G.L. Arora, Reader, DESSH, NCERT participated in the Study Group meeting on Re-orientation and Reform of Secondary Education held at Bangkok from 9 to 17 May 1988.
3. Prof. Arjun Dev, DESSH, NCERT participated in the Editorial Committee Meeting on Secondary Education in Asia and the Pacific held at Tokyo from 23 May to 8 June 1988.
4. Dr. (Mrs.) Savita Verma, Lecturer, DPSEE, NCERT attended the Technical Working Group Meeting on Continuing Education for Early Primary School Leavers held at Bangkok and Chiang Mai, Thailand from 4 to 11 October 1988.
5. Prof. S.D. Roka, DPSEE, NCERT attended the Regional Seminar on the Promotion of Universal Primary Education held at Hiroshima, Japan from 14 to 27 September 1988.
6. Prof. M.M. Chaudhri, Joint Director, CIET attended the UN International Seminar on the Development and Applications of Satellite Communication Systems held at Beijing, China from 19 to 23 September 1988.
7. Dr. A.K. Jalaluddin, Joint Director, NCERT attended the Meeting on Computers in Education held at Tokyo from 3 to 8 October 1988.
8. Dr. J.S. Grewal, Professor, Regional College of Education, Bhopal attended the APEID Regional Study Group Meeting on Reform in Teachers' Education—Alternative Structures, Training Strategies and Exemplar Materials held at the

Korean National University of Education, Chung Cheong Buk Do, Republic of Korea from 27 September to 6 October 1988.

9. Prof. D.S. Muley, Department of Education in Social Science and Humanities attended the UNESCO Workshop organised by Federal Republic of Germany at the Georg-Eckert Institute for International Schulbuchforschung (Eraunschweig) from 7 to 11 November 1988 on the subject of International Education and Peace.
10. Dr. B.R. Goyal, Reader, DTESE&ES, NCERT attended the Sub-Regional Training Workshop on Multi-grade Teaching in Primary Schools held at Jakarta from 23 November to 2 December 1988.
11. Dr. A.K.Dhote, Lecturer, DVE, NCERT participated in the Sub-Regional Seminar on Educational Programme and Methods aimed at preparing young people for productive work held at Chiang Mai, Thailand from 28 November to 5 December 1988.
12. Prof. A.N. Maheshwari, Principal, RCE, Mysore participated in the consultation meeting to review experimental activities and pilot projects in science and technology education held at UNESCO Headquarters, Paris from 14 to 16 November, 1988.
13. Dr.R.P. Gupta, Reader, DESM, NCERT participated in the UNESCO-APEID Sub-Regional workshop on the Training of Teachers in the Use of Information in Education held at PROAP, UNESCO, Bangkok, Thailand from 6 to 10 December 1988.
14. Dr. Jagdish Singh, Reader, CIET, NCERT participated in the Second Meeting on Evaluation of Large-Scale Asian Distance Education Systems organised by UNESCO from 5 to 9 December 1988 at Bangkok.
15. Prof.P.N. Dave, Head, DPSEE, NCERT attended as a resource person in the Regional Workshop on Achievement of Children in Primary School held at Tokyo from 23 January to 10 February 1989.

## UNESCO/APEID Projects

The NCERT has been participating in UNESCO's

activities directly, through the Asia and the Pacific Programme of Educational Innovation for Development (APEID), and by undertaking studies/projects/programmes related to school education and teacher education. During the year 1988-89, the Council signed contracts with UNESCO for undertaking the following projects/programmes.

- (i) National Workshop on Multi-grade Teaching in Primary Schools (Contract No. 133.34.11.8/AC/154/88).
- (ii) National Training Workshop on Improvement of Methods, Forms and Structures of Technical and Vocational Education (Contract No. 816.166.8 (88/277) (280).
- (iii) Biotechnology Teaching in Developing Countries (Contract No. 113.098.8).
- (iv) National Training Workshop on Multi-grade Teaching in Primary Schools (Contract No. 810.521.9 (89/38) (376).
- (v) (a) An Environmental Education Dimension of Curriculum for Secondary School (Grade-VII-XII) in South Asia.  
(b) An Environmental Education Dimension of Curriculum for Pre-service Training of Secondary School (Grades VII-XII) Teachers in South Asia. (Contract No. 116.082.9).

## Activities under the National Development Group for Educational Innovations

The National Development Group (NDG) was set up by the Government of India in the context of the Asia and the Pacific Programme of Educational Innovation for Development (APEID) of UNESCO. The Secretariat of the NDG, located in the International Relations Unit, NCERT, has been undertaking activities directed at stimulating educational innovations and at performing coordination and clearing-house functions. The major activities carried out by the NDG during the year under report are described below.

### NDG Meeting

A meeting of the General Body of the NDG was held on 29 June 1988 at New Delhi under the Chairman-

ship of Shri Anil Bordia, Educational Secretary, Ministry of Human Resource Development (Department of Education). The NDG has made certain recommendations for building a country-wide network of apex institutions/organizations for promoting inter-sectoral cooperation in educational endeavours. The NDG has suggested that steps be taken to undertake or farm-out joint innovative inter-sectoral projects.

#### *Meeting of the State Development Groups (SDGs)*

Seven States and two Union Territories have set up SDGs so far. The State Education Secretaries act as the Chairpersons of the SDGs and the Directors of the SCERTs act as the Member-Secretaries of the SDGs. The Secretariat of the National Development Group (NDG) for Educational Innovations organized the first national Meet of the State Development Groups (SDGs) for Educational Innovations at Pune from 23 to 25 January 1989. This meeting of the SDGs was attended by the Member Secretaries of the SDGs (Directors of SCERTs or their representatives) and the Programme Coordinators of SDG activities from Himachal Pradesh, Karnataka, Maharashtra, Orissa, Rajasthan, Tamil Nadu and Uttar Pradesh.

The meeting considered various matters like roles and functions of the SDGs, composition of the SDGs and financial provisions for the SDGs. The meeting stressed the need for joint ventures in different development sectors in educational endeavours and the need to have close relationships among the NDG, the SDGs and institutions/organizations responsible for innovations in education. The meeting also considered certain strategies for conducting joint innovative inter-sectoral projects for accelerating the pace of national development. A tentative Plan-of-Action for each SDG was also developed.

#### *Regional Seminar (Southern Region) on Educational Innovations for Development*

The NDG Secretariat organized a Regional Seminar on Educational Innovations for Development at Madras from 27 to 30 March 1989. In this seminar, the participants were invited from the southern States and Union Territories. About 50 participants (including

special invitees) from the States of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu and Union Territories of Lakshadweep and Pondicherry attended the seminar. This was the first regional seminar in the second cycle of inter-sectoral seminars being organised by the NDG. These seminars provide forums for educational innovators working in different development sectors like education, health, agriculture, rural development and social welfare, to meet and exchange innovative ideas and experiences. During the seminar designs of some joint innovative inter-sectoral projects were developed.

#### *NDG Newsletter 'Educational Innovation'*

As part of its coordination and clearing house functions, the NDG Secretariat finalised manuscripts for July-December, 1987 and January-June 1988 issues of the NDG Newsletter. Besides this, the NDG Secretariat collected and compiled information on significant educational innovations from departments of the NCERT and submitted the same to UNESCO, Bangkok for inclusion in the APEID Newsletter. The Associated Centres of APEID in India were advised to send the information direct to the UNESCO office.

#### *Reconstitution of the NDG*

The NDG, in its meeting held on 29 June 1988, reconstituted its general body in order to make it a broad-based inter-sectoral body. The revised constitution of the NDG includes Heads of Associated Centres of APEID, two chairpersons of SDGs, and representatives from various Ministries (Human Resource Development, Rural Development, Health and Family Welfare, Science and Technology, Labour) and the Planning Commission. In order to facilitate its work, the NDG has approved the constitution of an Executive Committee as well.

#### *Development of a Brochure Titled "India & APEID"*

The NDG Secretariat has initiated activities directed at developing a brochure titled *India & APEID*. In this brochure, it is proposed to include precise information on APEID, the NDG, the SDGs and Associated Centres of APEID in India.

# 1988-89

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*Report of Special Regional Meet of South Asian Countries on APEID*

The NDG Secretariat brought out the Report of the Sub-Regional Meet of South Asian Countries on APEID organized at New Delhi from 22 and 23 January 1987. The cyclostyled report of the Sub-Regional Meet was prepared earlier and sent to the concerned institu-

tions/organizations. This UNESCO-sponsored Sub-Regional Meet was organized for making an in-depth study of the work plan of APEID for its Fourth Programming Cycle (1987-1991) in the light of national educational plans and policies with a view to evolving strategies for its implementation and identifying action for sub-regional cooperation focused on common problems and issues.

The Council has set up 17 Field Offices for liaising with the Departments/Directorates of Education and other institutions in the States and the Union Territories. These Field Offices provide the necessary information to the State Education Departments about the activities and programmes of the different constituent units of the NCERT. They also collect and communicate to the NCERT and its constituent units information regarding the specific requirements of the States/Union Territories under their jurisdiction and provide necessary support to the different constituent units of the NCERT to organize training and extension programmes. The Field Offices also provide financial support for small-scale action-research projects undertaken by school teachers, and organise in-service training programmes at the request of the State Education Departments.

During the year 1988-89, the Field Offices assisted the Various Departments of the NIE, the Regional Colleges of Education and the Central Institute of Educational Technology (CIET) in organizing their programmes in the States and Union Territories. They provided guidance and assistance to the State Departments/Boards of Education to conduct the National Talent Search Examination at the State/Union Territory level. An activity common to all the Field Offices was the organisation of the meeting of the Programme Advisory Committees at which proposals for the programmes for the year 1986-87 were finalised. Besides these activities, the Field Offices carried out several

activities related to the organisation of training programmes under the programme of Mass Orientation of School Teachers, admission tests for Navodaya Vidyalayas, opening of new Navodaya Vidyalayas in the States and Union Territories, conducting the National Talent Search Examinations and Interviews, and organisation of the State-level toy-making competition.

In addition to the above mentioned activities, the Offices of the Field Advisers also conducted certain programmes related to the priority areas of the NCERT. The details of these programmes are as follows.

#### **Field Office at Ahmedabad**

A training programme for preparing teaching aids to support the Operation Blackboard Scheme was organized at N.V. Patil Vidya Mandir, Narora from 27 February to 4 March 1989. 40 teachers and teacher educators prepared teaching aids for primary classes during the training programme.

Fourteen experimental projects and innovations in classroom teaching were financed by the Field Office at Ahmedabad.

The Office of the Field Officer undertook a project for providing vocational guidance to SC/ST students of Class X in Balsar district. 9 schools were provided guidance under the project.

## **Field Office at Allahabad**

A workshop of teacher educators to prepare research designs and programme proposals for DIETs was organised at Haridwar from 17 to 21 November 1988. 22 participants attended the workshop.

A Study-cum-Workshop to suggest remedial education for educationally backward SC/ST students was held at Dehradun from 21 to 25 February 1989. The workshop was attended by 27 participants.

A workshop on Examination Reform in Uttar Pradesh was held on 28 March 1989. 15 participants attended this workshop.

## **Field Office at Bangalore**

A workshop on developing teaching skills in language-oriented approach in environmental studies at elementary level was organised at Bangalore from 4 to 6 January 1989. 40 teachers attended the workshop. As the follow-up to this workshop, a one-day orientation programme was conducted to orient elementary school teachers of Bangalore rural district in collaboration with the DDPI, Bangalore (Rural District). This programme was attended by 35 participants.

## **Field Office at Bhopal**

A 10-day workshop on training for creative writing was organised at Panchmarhi from 5 to 14 October 1988. 20 lecturers and 20 students attended this workshop.

An orientation programme on innovative practices in teaching was organised for tribal school teachers in Madhya Pradesh from 16 to 24 January 1989. The programme was attended by lecturers of Model School, Kanya Shiksha Parisars, Gurukul Vidyalaya and teachers of Bastar Division in Madhya Pradesh.

A workshop on the research project entitled, 'Effects of Teacher Led, Self-Learning, Peer Group Discussion and Mass Media Approaches of Teaching Population Education to Students in Classes IX and X' was completed and the report was prepared.

## **Field Office at Bhubaneswar**

A six-day workshop on the development of life-based and process-based practicals in science for pupils of rural secondary schools of Orissa was organised from 12 to 17 December 1988 at Gopalpur-on-sea, District Ganjam, Orissa. 24 secondary-level science teachers of Orissa participated in the workshop.

A six-day training programme for the teachers of tribal Seva Ashrams on value education at primary level was conducted at Baripada, District Mayurbhanj, Orissa from 25 to 30 November 1988. 19 teachers belonging to SC/ST communities attended the workshop.

## **Field Office at Calcutta**

An orientation programme for researches in education/psychology and allied subjects on research methodology was held from 30 January to 4 February 1989. 17 participants attended the orientation programme.

A workshop for national awardee teachers to explore their current interest in education was organised from 8 to 10 March 1989. The workshop was attended by 11 participants.

Under the scheme of Experimental Projects for Schools, 8 proposals were approved for grant of financial assistance.

## **Field Office at Hyderabad**

A workshop for identifying the problems of SC/ST education in Andhra Pradesh was conducted at Koperala, Vizianagaram District, Andhra Pradesh from 28 to 30 December, 1988. The workshop was attended by 20 principals/headmasters and senior teachers.

A workshop for the preparation of instructional materials on environmental studies for primary teachers was organised at Hyderabad from 27 to 30 March 1989. The workshop was attended by 19 participants.

## **Field Office at Jaipur**

A workshop on the educational problems of SC/ST

students was organised at Navodaya Vidyalayas, Burwa (District Banswara), Rajasthan.

A four-day workshop to study the educational problems of the handicapped children was organised at Jaipur from 31 March to 3 April 1989.

#### **Field Office at Madras**

A five-day workshop on environmental study approach for the benefit of elementary school teachers in Tamil Nadu was held at Palani, Tamil Nadu, from 6 to 10 February 1989. 40 teachers attended the workshop.

A five-day workshop on environmental study approach for the benefit of elementary school teachers working in the schools run by the Directorate of Tribal Welfare, Government of Tamil Nadu, was organized at Perumugai, Tamil Nadu, from 13 to 17 March 1988. The workshop was attended by 40 teachers.

#### **Field Office at Pune**

An orientation programme on new management techniques for principals of the Colleges of Education in Maharashtra and Goa was conducted from 29 to 31 March 1989. 18 principals of Colleges of Education attended the programme.

A seminar-cum-workshop to study causes of non-enrolment and drop-outs of girls (SC/STs in particular) of rural areas in Maharashtra and to identify the measures to improve their retention was held from 24 to 26 March 1989. This workshop was attended by 22 participants.

#### **Field Office at Srinagar/Jammu**

A three-day workshop on the development of need-based courses for vocationalisation of education at the secondary stage was held at Jammu from 4 to 6 April 1988. 45 participants attended the workshop.

A workshop for the development of innovative experimental subjects at the secondary level was organised at Srinagar. 35 teachers participated in this workshop.

A workshop for the improvement of teacher education in Jammu and Kashmir State was organised from 11 to 14 April 1988. 40 teacher educators attended this workshop.

A workshop for the development of experimental projects at the secondary level was organised at Srinagar from 14 to 16 April 1988. 50 secondary teachers attended this workshop.

A training programme for the instructors of Non-formal Education Centres was organised at Jammu from 19 to 25 December 1988. 65 elementary teachers and teacher educators attended the training programme.

A workshop on educational problems of SC/ST students in Jammu and Kashmir was held at Jammu from 22 to 24 December 1988. The workshop was attended by 60 participants.

A workshop for the development of curriculum strategies at the secondary stage was organised at Jammu and Kashmir from 9 to 11 January 1989. 30 teachers and teacher educators participated in this workshop.

A training programme for the instructors of non-formal education centres was organised at Jammu from 16 to 18 February 1989. 30 instructors of NFE centres attended the programme.

A workshop for the development of need-based courses for vocationalisation at the secondary stage was organized at Jammu from 23 to 25 February 1989. 50 secondary teachers and teacher educators participated in this programme.

#### **Field Office at Trivandrum**

An orientation programme on testing and evaluation for teachers was organised from 21 to 25 November 1988. 42 teachers attended the programme.

A training programme on experiment projects for teachers was organised from 26 to 29 September 1988 at Kasargod. 30 teachers attended the programme.

A training programme of SC/ST teachers in the National Policy on Education was organised at Cannanore from 11 to 14 October 1988. The programme was attended by 36 participants.

## Field Office at Patna

An orientation programme on classroom research (experimental projects) for teachers of secondary schools was held at Patna from 16 to 18 January 1989. 19 participants attended the programme.

An orientation programme on teaching science through the environment was held at Deoghar from 27 to 29 March 1989. 24 SC/ST primary teachers teaching science attended the programme.

## Field Office at Shillong

A Training Programme for Science teachers on Management of the Science Laboratory was conducted from 20 to 25 February 1989 at Shillong. 38 teachers from Meghalaya, Mizoram and Tripura attended the programme.

## Programmes to Promote National Integration

The activities of the field offices are coordinated by the Department of Field Services and Extension Coordination

(DFS&EC) of the NIE. This Department also coordinates the programmes to promote national integration, such as the community singing programme.

Under the scheme of community singing to promote patriotism and to develop love and respect for languages and cultures in the country, the Council organised 22 training camps for school teachers at the State, regional and national level. Details of these programmes are given in Table 17.1.

A pilot study was conducted to examine the possibility of organizing students' exchange programmes to develop understanding of diverse cultures. The study was organised in collaboration with the SCERT, Mizoram and the Faculty of Education and Psychology of M.S. University of Baroda. 20 Mizo students and 20 Gujarati students, drawn from schools in Aizawl and Baroda, in the age group 12 to 14 years, participated in the study. Mizo students stayed with families of Gujarati students in Baroda during the Deepavali festival season for ten days and, in turn, Gujarati students stayed with families of Mizo students during the Christmas festival for ten days.

**TABLE 17.1**  
*Community Singing Programme Conducted during 1988-89*

S.No.	Nature of the Programme	Venue	Dates	No. of participants
1.	Community Singing Camp	Presidency Girls Hr. Sec. School, Egmore, Madras (T.N.)	20 to 29 May 1988	50
2.	Community Singing Camp	Govt. High School, Baldyan, Distt. Shimla (H.P.)	10 to 19 June 1988	50
3.	Community Singing Camp	Govt. High School, Chail, Distt. Solan, (H.P.)	21 to 30 June 1988	44
4.	Community Singing Camp	Govt. Girls Hr. Sec. School, Bhagalpur (Bihar)	11 to 20 July 1988	20
5.	Community Singing Camp	Teacher Training School, Carhi, Distt. Banswara (Raj.)	11 to 20 July 1988	50
6.	Community Singing Group	Institute of Primary Education Ramavermapuram, Trichur (Kerala)	2 to 11 August 1988	61
7.	Special Training Camp for Choir Singing	N.I.E. Campus, New Delhi	1 to 10 August 1988	83



S.No.	Nature of the Programme	Venue	Dates	No. of participants
8.	Community Singing Camp	Youth Services Hostel, Itanagar (A.P.)	6 to 15 August 1988	75
9.	Community Singing Camp	Govt. In-service Training Centre, Patiala (Pb)	16 to 25 August 1988	45
10.	Community Singing Camp	Govt. Jubilee Inter College, Lucknow (U.P.)	22 to 31 August 1988	99
11.	Community Singing Group	Govt. Jubilee Inter College, Lucknow (U.P.)	2 to 11 September 1988	114
12.	Special Choir Singing Camp	NCERT Campus, New Delhi	2 September to 6 November 1988	
13.	Teachers Choir Camp	Teachers Training Centre, Kendriya Vidyalaya Sangathan, Sector-II, R.K. Puram, New Delhi	29 October to 6 November 1988	46
14.	Teachers Choir Camp	Presentation of Musical Composition and welcome to delegates of Afro-Asian Peoples Conference, Vigyan Bhawan, New Delhi	24 November 1988	13
15.	Community Singing Camp	SCERT, Egmore, Madras (T.N.)	15 to 24 February 1989	50
16.	Community Singing Camp	State Institute of Education Allahabad (U.P.)	18 to 27 February 1989	44
17.	Community Singing Camp	J.S.S. Composite Pre-University College, Bangalore	27 February to 8 March 1989	48
18.	Community Singing Camp	State Institute of Education, Allahabad (U.P.)	9 to 18 March 1989	45
19.	Community Singing Camp	SCERT, Pune (Mah.)	12 to 21 March 1989	42
20.	Community Singing Camp	Govt. High School, Samastipur, Bihar	25 March to 3 April 1989	29
20.	Community Singing Camp	Marthoma High School, Patnamthita, Kerala	29 March to 7 April 1989	41
21.	Community Singing Camp	Presidency Girls Hr. Sec. School, Egmore, Madras	30 March to 8 April 1989	50

### ADMINISTRATIVE AND WELFARE ACTIVITIES AND FINANCE

The NCERT Secretariat continued to perform its functions in accordance with the rules, regulations and procedures of the Council.

#### **Administrative and Welfare Activities**

The work related to the construction of 24 Type II, 24 Type III and 6 Type V quarters was completed during the year under report. The work related to the construction of 16 Type I quarters was almost completed. The construction work of 16 Type IV quarters was also initiated.

The work on the construction of a shopping complex-cum-community centre was initiated. As a measure of staff welfare, the Council continued to provide facilities for sports and games to its employees.

The Eighth Inter-Regional Colleges of Education, NIE and CIET Staff Tournament was organised at Regional College of Education, Mysore, from 26 to 28 December 1988. Competitions were held in volley ball, football, basketball, table tennis, tennis, badminton, cricket, tenequoit, musical chairs and tug-of war (special item). About 180 players took part in these games. The players showed keen interest and participated in the games in the spirit of comradeship.

#### **Activities of the Hindi Cell**

In order to implement the National Language Policy

and to promote the use of Hindi in official work, the Hindi Cell of the NCERT undertook several activities during the year 1988-89. The *Raj Bhasha Karyanavayan Samiti* of the NCERT (constituted in 1980) had three meetings during the year under report. The Samiti made an assessment of the use of Hindi by the Department of Measurement, Evaluation, Survey and Data Processing (DMESDP), and the Department of Education in Social Sciences and Humanities (DESSH) and provided them necessary guidelines with regard to the use of the official language. The Parliamentary Committee for Official Language was informed about the steps taken for promotion of Hindi in the NCERT, particularly the development of textbooks, exercise books and other supplementary materials to teach Hindi in schools. The Hindi Cell undertook the translation work of three documents besides doing the routine translation work of various Departments/Units of the NIE. The Cell also developed a small booklet containing administrative/educational terms and sentences for use by the Constituent Units of the NCERT. A number of books on children's literature were selected by the Hindi Cell for purchase by the Department of Library, Documentation and Information (DLDI) of the NIE.

The Hindi Week was celebrated from 28 November to 2 December 1988. Various competitions like poetry recitation, translation work, essay writing, noting and

drafting, typing and oratory etc. were organised and prizes were awarded to the winners. For doing maxi-

mum work in Hindi, trophies were given to some of the Sections/Units of the NCERT.

## Finance

### Consolidated Receipts and Payments Accounts of the NCERT for the year 1988-89

Receipts	Amount (Rs)		Payments	Amount (Rs.)	
<i>Opening Balance</i>			<i>Budgetary Expenditure</i>		
Cash in hand & bank	6,86,90,207		<i>Pay of officers</i>		
Funds in transit	40,20,000		Non-Plan	3,33,05,331	
GPF/CPF in S.B. A/c	1,38,13,333	8,65,23,540	Plan	5,19,800	3,30,25,131
<i>Grants Received From Min. of HRD for Budget Expenditure:</i>			<i>Pay of Establishment</i>		
Non-plan	11,60,77,000		Non-plan	3,47,74,756	
Plan	3,51,10,089	15,11,87,089	Plan	8,34,213	3,56,08,969
<i>Grants &amp; Refunds Relating to Specific Projects</i>		24,86,76,982	<i>Allowances &amp; Honoraria</i>		
<i>Council's Receipts</i>			Non-plan	3,04,78,085	
Rent on buildings	12,61,017		Plan	5,84,082	3,10,62,167
Int. on loans & S.T.D.	7,59,538		<i>Travelling Allowance</i>		
Recovery of overpayments	10,71,657		Non-plan	13,60,450	
Sale of science kits	2,62,752		Plan	18,832	13,79,282
Fees & charges	5,70,998		<i>Other charges</i>		
Sale of books & publications	6,85,09,026		Non-Plan	2,33,70,212	
L.S.P.C.	3,40,159		Plan	5,42,867	2,39,13,079
C.G.H.S.	1,34,778		<i>Scholarship &amp; fellowship</i>		
Int. on PF investments & investment matured	1,51,53,226		Non-plan	7,67,280	
Royalty	30,341		Plan	5,79,510	13,46,790
Misc. receipts	50,14,788	9,31,08,280	<i>Programmes</i>		
			Non-Plan	5,49,46,409	
			Plan	1,24,03,580	6,73,49,989
			<i>Equipment and furniture</i>		
			Non-plan	17,14,958	
			Plan	14,43,591	31,58,549
			<i>Land and building</i>		
			Non-plan	71,22,965	
			Plan	62,73,427	1,33,96,392
			<i>Payments on specific projects</i>		17,51,17,551
			<i>Programme advances</i>		50,064

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Receipts	Amount (Rs)	Payments	Amount (Rs.)
		<i>Miscellaneous payments</i>	
		Pension & gratuity	75,31,502
		L.S. & P.C.	2,38,881
		C.G.H.S.	6,36,804
		House rent	8,629
		Audit fee	86,750
		Advertisement	1,51,793
		D.L.I.S.	50,000
		Others	2,940
		<i>G.P.F. &amp; C.P.F.</i>	
		Int. on G.P.F.	81,97,342
		CPF int. & Council's contribution	2,96,987
		<b>Loans and Advances</b>	<b>84,94,249</b>
M.C. scooter advance	9,08,048	M.C. scooter advance	14,81,105
Cycle advance	50,194	Cycle advance	42,800
Fan Advance	11,192	Fan Advance	12,400
Festival advance	5,47,610	Festival advance	5,50,450
House bldg. advance	24,99,501	House bldg. advance	37,31,317
Transfer TA/pay adv	80,585	Transfer TA/pay adv.	2,13,462
Permanent advance	683	Permanent advance -	400
			60,31,934
		<b>Funds and Investments</b>	
GPF	2,63,53,120	G.P.F. Current A/c	82,62,361
Interest on GPF	81,97,342	S.B. A/c	82,46,025
CPF	(-) 35,29,673	CPF current A/c	49,016
Interest on CPF	2,96,907	S.B. A/c	1,59,570
Receipt from current A/c	1,20,00,000	Transfer to S.B. A/c	
Short term investment	99,00,000	Short term investment	1,20,00,000
		Short term investment	99,00,000
		GPF/CPF investment	2,60,00,000
			6,46,16,972
		<b>Deposits</b>	
Earnest money & security deposit	3,21,550	Earnest Money & security deposit	3,16,653
Caution money	69,505	Caution money	1,34,299
Other deposits	6,47,375	Other deposits	7,85,683
			12,36,635
		<b>Remittance</b>	
GPF/CPF	2,80,500	GPF/CPF	3,27,786
PLI/LIC	94,671	PLI/LIC	97,325
P.M.N.R. Fund	5,982	P.M.N.R. Fund	25,446
Income-tax	18,86,693	Income-tax	18,97,628
Death, relief fund	35,466	Death relief fund	21,884
T.C. Society	4,43,885	T.C. Society	4,75,330
G.L.I.S.	18,38,579	Sub-office remittance	38,37,653
Sub-office remittance	39,98,202		
Periodical remittance	15,58,64,811	Periodical remittance	15,58,64,811



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## APPENDIX A

## THE NCERT COMMITTEES FOR THE YEAR 1988-89

### Members of the National Council of Educational Research and Training (General Body) (Under Rule 3 of the Rules of the Council)

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|-------|---|----|--|
| (i)   | The Minister of Education<br>President <i>ex officio</i>  | 1. | Shri P. Shiv Shankar<br>Union Minister of Human Resource Development<br>New Delhi  |
| (ii)  | Chairman of the University Grants Commission<br><i>ex officio</i>                                       | 2. | Prof. Yash Pal<br>Chairman<br>University Grants Commission<br>Bahadur Shah Zafar Marg<br>New Delhi   |
| (iii) | Secretary to the Ministry of Education <i>ex-officio</i>  | 3. | Shri Anil Bordia<br>Secretary<br>Ministry of Human Resource Development<br>(Department of Education)<br>Government of India<br>Shastri Bhavan<br>New Delhi |
| (iv)  | Four Vice-Chancellors of Universities, one from each<br>Region, nominated by the Government<br>of India | 4. | Prof. V. G. Bhide<br>Vice-Chancellor<br>Poona University<br>Pune<br>Maharashtra  |
|       |   | 5. | Dr. N.S. Bose<br>Vice-Chancellor<br>Vishwa Bharati University<br>Santiniketan<br>West Bengal   |

(v) One representative of each State Government and Union Territory with a legislature who shall be the Education Minister of the State/Union Territory (or his representative) and in case of Delhi the Chief Executive Councillor, Delhi (or his representative)

6. Dr. S.S. Bal  
Vice-Chancellor  
Guru Nanak University  
Amritsar  
Punjab
7. Prof. V.C. Kulandaiswamy  
Vice-Chancellor  
Anna University  
Madras  
Tamil Nadu
8. Minister of Education  
Government of Andhra Pradesh  
Secretariat Building  
Hyderabad  
Andhra Pradesh
9. Minister of Education  
Government of Arunachal Pradesh  
Itanagar  
Arunachal Pradesh
10. Minister of Education  
Government of Assam  
Secretariat Building  
Guwahati  
Assam
11. Minister of Education  
Government of Bihar  
New Secretariat Building  
Patna  
Bihar
12. Minister of Education  
Government of Goa  
Secretariat  
Panaji  
Goa
13. Minister of Education  
Government of Gujarat  
Block No. 1, Sachivalaya  
Gandhi Nagar 382 010  
Gujarat
14. Minister of Education  
Government of Haryana  
Haryana Civil Secretariat  
56/4, Chandigarh

15. Minister of Education  
Government of Himachal Pradesh  
Shimla  
Himachal Pradesh
16. Minister of Education  
Government of Jammu & Kashmir  
Srinagar  
Jammu & Kashmir
17. Minister of Education  
Government of Karnataka  
Vidhana Soudha  
Bangalore  
Karnataka
18. Minister of Education  
Government of Kerala  
Ashoka, Nanthencode  
Trivandrum  
Kerala
19. Minister of Education  
Government of Madhya Pradesh  
Bhopal  
Madhya Pradesh
20. Minister of Education  
Government of Maharashtra  
Mantralaya Main  
Bombay  
Maharashtra
21. Minister of Education  
Government of Manipur  
Secretariat  
Imphal  
Manipur
22. Minister of Education  
Government of Meghalaya  
Secretariat  
Shillong  
Meghalaya
23. Minister of Education  
Government of Mizoram  
Aizawal  
Mizoram
24. Minister of Education  
Government of Nagaland  
Kohima  
Nagaland



25. Minister of Education  
Government of Orissa  
Secretariat  
Bhubaneswar  
Orissa
26. Minister of Education  
Government of Punjab  
Chandigarh
27. Minister of Education  
Government of Rajasthan  
Government Secretariat  
Jaipur  
Rajasthan
28. Minister of Education  
Government of Sikkim  
Secretariat Tashilling  
Gangtok  
Sikkim
29. Minister of Education  
Government of Tamil Nadu  
Port St. George  
Madras  
Tamil Nadu
30. Minister of Education  
Government of Tripura  
Civil Secretariat  
Agartala  
Tripura
31. Minister of Education  
Government of Uttar Pradesh  
Lucknow  
Uttar Pradesh
32. Minister of Education  
Government of West Bengal  
Writers Building  
Calcutta  
West Bengal
33. Shri Jag Prवेश Chandra  
Chief Executive Councillor  
Delhi Administration  
Old Secretariat  
Delhi

(vi) All Members of the Executive Committee not included above

34. Minister of Education  
Government of Pondicherry  
Assembly Secretariat  
Victor Simonal Street  
Pondicherry
35. Shri L.P. Shahi  
Minister of State for Education and Culture  
Ministry of Human Resource Development  
Government of India  
Shastri Bhavan  
New Delhi
36. Dr. P.L. Malhotra  
Director  
NCERT  
New Delhi
37. Prof. D.S. Kothari  
Chancellor  
Jawaharlal Nehru University  
New Mehrauli Road  
New Delhi
38. Prof. N.S. Bose  
Vice-Chancellor  
Visva-Bharati  
Santiniketan  
West Bengal
39. Shri S. Narasimhulu  
Secretary  
Nandini Public School  
Chirag Ali Lane  
Hyderabad  
Andhra Pradesh
40. Fr. John Patrick  
Principal  
Sahoday School  
C-1 Safdarjung Development Area  
New Delhi
41. Prof. A.K. Jalaluddin  
Joint Director  
NCERT  
New Delhi
42. Prof. O.S. Dewal  
Principal  
Regional College of Education  
Ajmer  
Rajasthan

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|-------|-----|-----|--|
|       |     | 43. | Dr. A.K. Sharma<br>Head, Department of Teacher Education,<br>Special Education and Extension Services<br>(DTESEES)<br>NCERT<br>New Delhi |
|       |     | 44. | Smt. Lakshmi Aradhya<br>Reader<br>Regional College of Education<br>Mysore  |
|       |     | 45. | Shri Y.N. Chaturvedi<br>Joint Secretary (S)<br>Ministry of Human Resource Development<br>Shastri Bhavan<br>New Delhi                     |
|       |     | 46. | Shri L.S. Narayanan<br>Financial Adviser<br>Ministry of Human Resource Development<br>Shastri Bhavan<br>New Delhi                        |
| (vii) | (a) | 47. | Chairman<br>Central Board of Secondary Education<br>New Delhi <i>ex officio</i>  |
|       | (b) | 48. | Commissioner<br>Kendriya Vidyalaya Sangathan<br>New Delhi <i>ex officio</i>  |
|       | (c) | 49. | Director<br>Central Health Education Bureau (DGHS)<br>New Delhi <i>ex officio</i>  |
|       | (d) | 50. | Deputy Director General<br>Incharge of Agricultural Education<br>ICAR<br>Ministry of Agriculture<br>New Delhi <i>ex officio</i>          |
|       | (e) | 51. | Director of Training<br>Directorate General Training &<br>Employment<br>Ministry of Labour<br>New Delhi <i>ex officio</i>                |
|       |     |     | Deputy Director General<br>Incharge of Agricultural Education, ICAR<br>Ministry of Agriculture<br>Dr. Rajendra Prasad Road<br>New Delhi  |
|       |     |     | Director<br>Central Health Education Bureaus (DGHS)<br>Ministry of Health & Family Welfare<br>Govt. of India<br>Kotla Road<br>New Delhi  |
|       |     |     | Director of Training<br>Directorate General of Training and Employment<br>Ministry of Labour<br>Shram Shakti Bhavan<br>New Delhi         |

- (f) Representative of Education  
Division Planning Commission  
*ex officio*
- (viii) Such other persons, not exceeding six, as the Government of India may nominate. Not less than four of these shall be school teachers
52. Educational Adviser  
Planning Commission  
Yojna Bhavan  
Parliament Street  
New Delhi
53. Prof. V.G. Kulkarni  
Director  
Homi Bhaba Centre for Science Education  
Tata Institute of Fundamental Research  
Homi Bhaba Marg  
Colaba, Bombay
54. Shri S.C. Behar  
Principal Secretary  
Department of Education  
Government of Madhya Pradesh  
Vallabh Bhavan  
Bhopal  
Madhya Pradesh
55. Shri Raza Alla Baksh  
Head Master  
Panchayati Samiti Elementary School  
Parkash Nagar  
Holmaspet  
Cuddapah, Andhra Pradesh
56. Shri David Sarring Lepcha  
Head Master  
Numpatam Primary School  
P.O. Mayam, North Sikkim  
Sikkim
57. Smt. Radhika Herzberger  
Director  
Rishi Valley School  
Harseley Hills  
Distt. Chittoor  
Andhra Pradesh
58. Smt. Rajani Kumar  
Principal  
Springdales School  
Pusa Road  
New Delhi
59. Secretary  
Council of Indian School Certificate  
Examination  
Pragati House, 3rd floor  
47 Nehru Place  
New Delhi

Special Invitees

60. Shri O.P. Kelkar  
Secretary  
National Council of Educational Research and Training  
New Delhi

**Members of the Executive Committee**

- (i) President of the Council who shall be the *ex-officio* President of the Executive Committee.
- (ii) (a) The Minister of State in the Ministry of Education who shall be the *ex-officio* Vice-president of the Executive Committee
- (b) A Deputy Minister in the Ministry of Education, nominated by the President, NCERT
- (c) Director of the Council
- (d) Secretary, Ministry of Education *ex-officio*
- (iii) Chairman of the University Grants Commission, Member *ex-officio*
- (iv) Four Educationists with known interest in school education (two of whom shall be school teachers) nominated by the President
- (i) Shri P.V. Narasimha Rao  
Minister of Human Resource Development  
Government of India  
Shastri Bhavan  
New Delhi (Up to 25.6.88)
- (ii) Shri P. Shiv Shankar  
Minister of Human Resource Development  
Government of India  
Shastri Bhavan  
New Delhi (w.e.f. 26.6.88)
- Shri L.P. Shahi  
Minister of State for Education and Culture  
Government of India  
Shastri Bhavan  
New Delhi
- 
- Dr. P.L. Malhotra  
Director  
N.C.E.R.T.  
New Delhi  
Shri Anil Bordia  
Secretary  
Ministry of Human Resource Development  
(Department of Education)  
Shastri Bhavan  
New Delhi
- Prof. Yash Pal  
Chairman  
University Grants Commission  
Bahadur Shah Zafar Marg  
New Delhi - 110001  
(from 1.4.1988 to 30.8.1988)
- (i) Prof. D.S. Kothari  
Chancellor  
Jawaharlal Nehru University  
New Delhi  
(from 1-4-1988 to 30-8-1988)

(ii) Dr. C.L. Anand  
Prof. of Education  
North Eastern Hill University  
Shillong

(iii) Shri M.L. Babbar  
Principal  
NDMC Navyug School  
Sarojini Nagar  
New Delhi

(iv) Shri D.P. Singh  
Principal  
Sidharth School  
P.O. Ramgarh Cantt.  
Distt Hazaribagh (Bihar)

(From 1.9.1988)

(i) Prof. D.S. Kothari  
Chancellor  
Jawaharlal Nehru University  
New Mehrauli Road  
New Delhi

(ii) Prof. N.S. Bose  
Vice-Chancellor  
Visva Bharati  
Santiniketan (W.B.)

(iii) Shri S. Narasimhulu  
Secretary  
Nandini Public School  
Chirag Ali Lane  
Hyderabad-500001

(iv) Fr. John Patrick, M.A., Ph.D.  
Principal  
Sahoday School  
C-1, Safdarjung Development Area  
New Delhi 110016

(v) Joint Director of the Council

(i) Dr. A.K. Jalaluddin  
Joint Director  
NCERT  
New Delhi

(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

(i) Prof. K.N. Saxena  
Head, DEPC&G  
NCERT (upto 31.3.1989)

(ii) Dr. A.K. Sharma  
Head, DTESEES  
NCERT

(iii) Dr. G.L. Arora  
Reader, DESSI  
NCERT

(vii) One representative of the Ministry of Education; and

(From 1.9.1988)

- (i) Dr. A.K. Sharma,  
Head DTESEES  
NCERT  
New Delhi
- (ii) Mrs. Lakshmi Aradhya  
Reader  
Regional College of Education  
Mysore
- (iii) Prof. O.S. Dewal  
Principal  
Regional College of Education  
Ajmer

(viii) One representative of the Ministry of Finance, who shall be the Financial Adviser of the Council

Shri L.S. Narayanan  
Financial Adviser, NCERT  
Ministry of H.R.D.  
(Department of Education)  
Shastri Bhavan  
New Delhi

Shri O.P. Kelkar  
Secretary  
NCERT  
New Delhi

**Finance Committee**

*(Under Rule 62 of the Council  
Valid upto 25.12.1989)*

1. The Director of NCERT *ex-officio*

1. Dr. P.L. Malhotra  
Director  
NCERT  
New Delhi

2. Financial Adviser  
*ex officio*

2. Shri L.S. Narayanan  
Financial Adviser, NCERT  
Ministry of Human Resource  
Development  
Shastri Bhavan  
New Delhi

3. Joint Secretary (SE)  
Ministry of Human Resource Development

3. Shri Y.N. Chaturvedi  
Joint Secretary (S)  
Ministry of Human Resource Development  
(Department of Education)  
Shastri Bhavan  
New Delhi

4. Secretary, NCERT  
Member Convenor

#### **Establishment Committee**

*(Under Regulation 10 of the Council)*

- (i) Director, NCERT Chairman
- (ii) The Joint Director  
NCERT
- (iii) A nominee of the Ministry of Human Resource  
Development  
Department of Education  
Government of India to be nominated by the President
- (iv) Four educationists to be nominated by the President of  
whom at least one is a scientist

4. Prof. S.K. Khanna  
Secretary  
University Grants Commission  
Bahadur Shah Zafar Marg  
New Delhi
5. Dr. V.P. Dutt  
Head  
Department of Chinese and Japanese Studies  
Arts Faculty Building  
University of Delhi  
Delhi
6. Shri O.P. Kelkar  
Secretary  
NCERT  
New Delhi

1. Dr. P.L. Malhotra  
Director, NCERT  
Chairman
2. Dr. A.K. Jalaluddin  
Joint Director  
NCERT
3. Shri Y.N. Chaturvedi  
Joint Secretary (SE)  
Ministry of Human Resource Development  
Shastri Bhavan  
New Delhi
4. Prof. N.S. Bose  
Vice Chancellor  
Visva Bharati  
Santiniketan  
West Bengal
5. Dr. K. Venkata Subramanian  
Vice Chancellor  
Pondicherry University  
Pondicherry 605001
6. Smt. V.A. Gangoli  
Principal  
Food Craft Institute  
Shivaji Nagar  
Pune 411005



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| (v) One representative from the Regional College of Education to be nominated by the President   | 7. Shri N. Behera<br>Asstt. Programme Coordinator<br>RCE<br>Bhubaneswar  |
| (vi) One representative of the National Institute of Education, Delhi, to be nominated by the President  | 8. Prof. K.N. Saxena<br>Head<br>DEPC&G<br>NCERT  |
| (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 the Appendix to this Regulation | 9. Shri J.S. Saxena<br>Reader<br>RCE<br>Ajmer  |
| (viii) Financial Adviser<br>NCERT  | 10. Shri M.S. Bist<br>Store Keeper Gr. I<br>NCERT<br>New Delhi   |
| (ix) Secretary<br>NCERT  | 11. Shri L.S. Narayanan<br>Financial Adviser<br>NCERT<br>Ministry of Human Resource Development<br>Shastri Bhavan<br>New Delhi |
|  | 12. Shri O.P. Kelkar<br>Secretary-Member Convenor<br>NCERT   |

### Building and Works Committee

(Valid upto 23.12.1988)

- |   |                      |   |
|---|----------------------|---|
| 1. Director, NCERT<br><i>ex officio</i>                   | <i>Chairman</i>      | Dr. P.L. Malhotra<br>Director, NCERT  |
| 2. Joint Director, NCERT<br><i>ex officio</i>             | <i>Vice Chairman</i> | Dr. A.K. Jalaluddin<br>Joint Director<br>NCERT  |
| 3. Chief Engineer, CPWD or<br>his nominee                 | <i>Member</i>        | Shri V.D. Tiwari<br>Chief Engineer (Const.)<br>CPWD, R.K. Puram<br>New Delhi                    |
| 4. A Representative of the Ministry of Finance<br>(Works) | <i>Member</i>        | Shri H.L. Bhatia<br>A.F.A. (Works)<br>Ministry of Finance (Works)<br>Nirman Bhavan<br>New Delhi |

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| 5. The Consulting Architect of the NCERT                             | Member | Shri R.S. Kaushal<br>Senior Architect, CPWD<br>(NDZ-IV) (Room No. 426)<br>'A' Wing, Nirman Bhavan<br>New Delhi   |
| 6. Financial Adviser of the Council or his nominee                   | Member | Shri L.S. Narayanan<br>Financial Adviser, NCERT<br>Ministry of Human Resource<br>Development<br>Department of Education<br>Shastri Bhavan<br>New Delhi |
| 7. A nominee of the Ministry of H.R.D.                               | Member | Shri Y.N. Chaturvedi<br>Joint Secretary (Schools)<br>Ministry of Human Resource<br>Development<br>Shastri Bhavan<br>New Delhi                          |
| 8. A Civil Engineer of Standing (Nominated by the President)         | Member | Shri R.K. Bhandari<br>Chief Engineer, DDA<br>Vikas Minar, I.P. Estate<br>New Delhi   |
| 9. An Electrical Engineer of Standing (Nominated by the President)   | Member | Shri R.D. John<br>Chief Engineer<br>Department of Space<br>Cauvery Bhavan 'F' Block<br>9th Floor, Kempegowda Road<br>Bangalore-560009                  |
| 10. A Member of the Executive Committee (Nominated by the Committee) | Member | Prof. A.K. Sharma<br>Head<br>DTESE&ES<br>NCERT<br>New Delhi  |

## Programme Advisory Committee

1. Director, NCERT—*Chairman*
2. Joint Director, NCERT—*Vice Chairman*
3. Dr. J.N. Joshi, Professor and Dean, Department of Education, Panjab University, Chandigarh
4. Dr. R.P. Nayar, Prof. and Chairman, Department of Post-Graduate Studies and Research in Education, University of Mysore, Manasagangotri, Mysore 570006
5. Prof. R.P. Panchamukhi, Director, Indian Institute of Education, 128/2 J.P. Naik Path, Off Karve Road, Kothrud, Pune 411019

6. Prof. Arti Sen, Principal, Vinaya Bhavan, Visva Bharati, Santiniketan 751285 (W.B.)
7. Prof. Yogendra Singh, Centre for the Study of Social Systems, School of Social Sciences, Jawaharlal Nehru University, New Mehrauli Road, New Delhi 110067
8. Director, State Institute of Education, Poojapura, Trivandrum-13 (Kerala)
9. Director, State Institute of Education, Raikhad, Ahmedabad (Gujarat)
10. Director, State Council of Educational Research and Training, 6 Mall Avenue, Lucknow 216001 (U.P.)
11. Principal, State Institute of Education, Maulana Azad Road, Srinagar 190001 (J & K)
12. Principal, State Institute of Education, Govt. of Arunachal Pradesh, P.O. Changland 792120, Distt. Tirap (A.P.)
13. Head, Department of Education in Social Sciences and Humanities (DESSH), NCERT, New Delhi 110016
14. Dr. (Km.) S.K. Ram, Professor (DESSH), NCERT, New Delhi 110016
15. Head, Department of Education in Science and Mathematics (DESM) NCERT, New Delhi-110016
16. Dr. K.V. Rao, Professor, (DESM), NCERT, New Delhi-110016
17. Head, Department of Pre-school and Elementary Education, (DPSEE), NCERT, New Delhi-110016
18. Dr. C.J. Daswani, Professor (DPSEE), NCERT, New Delhi-110016
19. Head, Department of Teacher Education, Special Education and Extension Services (DTESEES), NCERT, New Delhi 110016
20. Dr.N.K. Jangira, Professor, (DTESEES), NCERT, New Delhi-110016
21. Head, Department of Vocationalization of Education (DVE), NCERT, New Delhi-110016
22. Dr. (Smt.) S.P. Patel, Professor (DVE), NCERT, New Delhi 110016
23. Head, Department of Educational Psychology, Counselling and Guidance (DEPCG), NCERT, New Delhi 110016
24. Dr. J.S.Gaur, Professor, (DEPCG), NCERT, New Delhi-110016
25. Head, Department of Measurement and Evaluation, Survey and Data Processing (MSEDP), NCERT, New Delhi-110016
26. Dr.A.B.L. Srivastava, Professor (DMESD), NCERT, New Delhi-110016
27. Head, Department of Field Services and Extension Coordination (DFSEC), NCERT, New Delhi-110 016
28. Dr. (Km.) Indu Seth, Reader, (DFSEC), NCERT, New Delhi 110016
29. Head, Workshop Department (WD), NCERT, New Delhi-110016
30. Dr. B.M.Gupta, Reader, (WD), NCERT New Delhi-110016
31. Head, Publication Department, NCERT, New Delhi-110016

32. Head, Department of Library, Documentation and Information, NCERT, New Delhi-110016
33. Head, Department of Policy Research Planning and Programming, NCERT, New Delhi-110016
34. Joint Director, Central Institute of Educational Technology, NCEERT, New Delhi-110016
35. Dr.C.H.K.Misra, Professor (CIET), NCERT, New Delhi-110016
36. Principal, Regional College of Education, Mysore (Karnataka)
37. Dr.C.Seshadri, Professor, Regional College of Education, Mysore, Karnataka
38. Principal, Regional College of Education, Bhubaneswar-571007 (Orissa)
39. Dr.S.T.V.G. Acharyulu, Professor in Education, Regional College of Education, Bhubaneswar-571007 (Orissa)
40. Principal, Regional College of Education, Ajmer (Rajasthan)
41. Dr. (Smt.) Amrit Kaur, Professor, Regional College of Education, Ajmer (Rajasthan)
42. Principal, Regional College of Education, Shyamala Hills, Bhopal (M.P.)
43. Dr.J.S.Grewal, Professor, Regional College of Education, Shyamala Hills, Bhopal, (M.P.)
44. Secretary, NCERT, New Delhi-110016
45. Dr.P.M.Patel, Professor In-charge, Programme Section, NCERT, New Delhi-110016 *Convenor*

#### **Members of the Educational Research and Innovations Committee**

- |   |   |
|---|---|
| 1. The Director<br>State Council of Educational Research and Training<br>Jahangirabad<br>Bhopal (M.P.)                            | 5. Dr. Joseph P. John<br>Director<br>Science Technology Promotion<br>Department<br>New Mehrauli Road<br>New Delhi-110016              |
| 2. The Director<br>State Institute of Education<br>M.S. Sadashiva Peth<br>Cumtnokar Road<br>Pune (Maharashtra)                    | 6. Dr. B.K. Passi<br>Professor and Head<br>Department of Education<br>Indore University<br>Indore (M.P.)                              |
| 3. Dr. S.N. Saraf<br>Vice-Chancellor<br>Sri Satyasai Institute of Higher Learning<br>Prasanthinilayam-525134                      | 7. Dr. B.N. Mukherjee<br>Professor and Head<br>Computer Centre<br>Indian Statistical Institute<br>Barrackpore Road<br>Calcutta-700035 |
| 4. Dr. Iqbal Narain<br>Member Secretary<br>Indian Council of Social Science and Research<br>3, Ferozshah Road<br>New Delhi-110001 |   |

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|---|--|
| 8. Dr. V. Eswara Reddy<br>Director<br>Department of Continuing and Adult<br>Education<br>Osmania University<br>Hyderabad (A.P.) | 13. Principal<br>Regional College of Education<br>Bhubaneswar-751007           |
| 9. Dr. K.P. Pandey<br>Professor of Education and Head<br>Kashi Vidyapith<br>Varanasi-221002                                     | 14. Principal<br>Regional College of Education<br>Mysore-570006                |
| 10. Dr. V.V. Chiplunker<br>Ashirwad Mukund Nagar<br>Opp. Ap I, Jalna Road<br>Aurangabad<br>Maharashtra-431003                   | 15. Dr. S.I. Bhyrappa<br>Regional College of Education<br>Mysore-570006        |
| 11. Principal<br>Regional College of Education<br>Ajmer-305001  | 16. Dr. S.C. Chaturvedi<br>Regional College of Education<br>Bhubaneswar-751007 |
| 12. Principal<br>Regional College of Education<br>Shyamala Hills<br>Bhopal-460013   | 17. Shri R.K. Bharitiya<br>Regional College of Education<br>Ajmer-305001       |
|   | 18. Dr. P.K. Khanna<br>Regional College of Education<br>Bhopal-460013          |

**Academic Committee of the NIE**

1. Director, NCERT *Chairman*
2. Joint Director, NCERT *Vice-Chairman*
3. Joint Director, CIET, NCERT
4. Dean (Research), NCERT
5. Dean (Coordination), NCERT
6. Head, Department of Education in Science and Mathematics (DESM) NCERT, New Delhi
7. Head, Department of Education in Social Science and Humanities (DESSH), NCERT, New Delhi
8. Head, Department of Vocationalisation of Education (DVE), NCERT, New Delhi
9. Head, Department of Measurement and Evaluation, Survey and Data Processing (DMES&DP), NCERT, New Delhi
10. Head, Department of Pre-school and Elementary Education (DPSEE), NCERT, New Delhi

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11. Head, Department of Educational Psychology, Counselling and Guidance (DEPC&G), NCERT, New Delhi
12. Head, Department of Teacher Education, Special Education and Extension Services (DTESEES), NCERT, New Delhi
13. Head, Department of Policy Research, Planning and Programming (DPEP&P), NCERT, New Delhi
14. Head, Workshop Department (WD), NCERT, New Delhi
15. Head, Publication Department, NCERT, New Delhi
16. Head, Department of Field Services, and Extension Coordination (DFSEC), NCERT, New Delhi
17. Head, Department of Library, Documentation and Information (DLDI), NCERT, New Delhi
18. Dr. (Km.) S.K. Ram, Professor, DESSH, NCERT
19. Dr.K.V.Rao, Professor, DESM, NCERT
20. Dr. (Smt.) S.P. Patel, Professor, DVE, NCERT
21. Dr.A.B.L.Srivastava, Professor, DMES&DP, NCERT
22. Dr.C.J. Daswani, Professor, DPSEE, NCERT
23. Dr. Kuldip Kumar, Professor, DEPC&G, NCERT
24. Dr.N.K.Jangra, Professor, DTESEES, NCERT
25. Professor In-charge, Programmes, NCERT
26. Dr.J.N. Joshi, Professor and Dean, Department of Education, Panjab University, Chandigarh
27. Prof. Yogendra Singh, Centre for Study of Social Systems, School of Sciences, JNU, New Delhi
28. Dean (Academic), NCERT
29. Head, IR Unit, NCERT
30. Head, Women's Studies Unit, NCERT
31. Head, Journals Cell, NCERT
32. Head, P.C.E.Unit, NCERT
33. Head, Navodaya Vidyalaya Cell, NCERT

## **Departmental Advisory Boards**

1. *Department of Educational Psychology, Counselling and Guidance (DEPC&G)*
  - (i) Head, DEPCG—Convenor
  - (ii) Dr. Kuldip Kumar, Professor, DEPCG
  - (iii) Dr. V.K.Singh, Professor, DEPCG

- (iv) Head, DTESEES
- (v) Head, DMESDP
- (vi) Head, DVE
- (vii) Dr. Mehroo D. Bengalee, Vice-Chancellor, University of Bombay, Bombay-400020
- (viii) Prof. (Mrs.) Purnima Mathur, Head, Department of Humanities and Social Sciences, Indian Institute of Technology, Hauz Khas, New Delhi-110016

2. *Department of Teacher Education, Special Education and Extension Services (DTESEES)*

- (i) Head, DTESEES—Convenor
- (ii) Dr. N.K. Jangira, Professor, DTESEES
- (iii) Dr. L.R.N. Srivastava, Professor, DTESEES
- (iv) Dr. L.C. Singh, Professor, DTESEES
- (v) Head, DESSH
- (vi) Head, DESM
- (vii) Head, DEPCG
- (viii) Head, DPSEE
- (ix) Nominee of Joint Director, CIET
- (x) Head, DMESDP
- (xi) Dr. D.K. Menon, Director, National Institute for Mentally Handicapped, Secunderabad (A.P.)
- (xii) Dr. C.L. Kundu, Professor and Head, Department of Education, Kurukshetra University, Kurukshetra (Haryana).

3. *Department of Education in Social Sciences and Humanities (DESSH)*

- (i) Head, DESSH—Convenor
- (ii) Dr. (Km.) S.K. Ram, Professor, DESSH
- (iii) Dr. D.N. Panigrahi, Professor, DESSH
- (iv) Shri R.G. Saxena, Professor, DESSH
- (v) Shri Arjun Dev, Professor, DESSH
- (vi) Smt. S. Luthra, Reader, DESSH
- (vii) Head, DPSEE
- (viii) Head, DESM
- (ix) Head, DTESEES
- (x) Nominee of Joint Director, CIET
- (xi) Prof. Rasheeduddin Khan, 162, New Campus, Jawaharlal Nehru University, New Delhi
- (xii) Dr. M.G. Chaturvedi, Professor In-Charge Delhi Branch, Central Hindi Institute, Aurobindo Ashram, Sri Aurobindo Marg, New Delhi-110016

4. *Department of Education in Science and Mathematics (DESM)*

- (i) Head, DESM—Convenor
- (ii) Dr. K.V. Rao, Professor, DESM
- (iii) Dr. Chottan Singh, Professor, DESM
- (iv) Dr. R.D. Shukla, Professor, DESM
- (v) Shri R.C. Saxena, Professor, DESM
- (vi) Head, DTESEES
- (vii) Head, Publication Department
- (viii) Head, DPSEC
- (ix) Professor Mohan Ram, Department of Botany, University of Delhi, Delhi-110007
- (x) Professor A.C. Jain, Department of Chemistry, Delhi University, Delhi-110007

5. *Department of Measurement and Evaluation, Survey and Data Processing (DMESDP)*

- (i) Head, DMESDP—Convenor
- (ii) Shri V.S. Srivastava, Reader, DMESDP

- (iii) Shri P.N. Arora, Reader, DMESDP
  - (iv) Shri S.M. Bhargava, Reader, DMESDP
  - (v) Head, DESM
  - (vi) Head, DESSH
  - (vii) Head, DVE
  - (viii) Dr. R.G. Misra, A-75/2 Saket, New Delhi-110017
  - (ix) Dr. Jacob Tharu, Professor, Central Institute of English and Foreign Languages, Hyderabad (A.P.)
6. *Department of Vocationalization of Education (DVE)*
- (i) Head, DVE—Convenor
  - (ii) Dr. (Smt.) S.P. Patel, Professor, DVE
  - (iii) Dr. A.P. Verma, Reader, DVE
  - (iv) Head, DPSEE
  - (v) Head, DMESDP
  - (vi) Head, DEPCG
  - (vii) Nominee of Joint Director, CIET
  - (viii) Shri S.K. Giri, Director, Training, Directorate General of Employment and Training, Ministry of Labour, Shram Shakti Bhavan, Rafi Marg, New Delhi-110 001
  - (ix) Dr. S.C. Saxena, Dean, College Development Council, Shivaji University, Gwalior (Madhya Pradesh)
7. *Department of Pre-School and Elementary Education (DPSEE)*
- (i) Head, DPSEE—Convenor
  - (ii) Dr. M.S. Kharparde, Professor, DPSEE
  - (iii) Dr. V.P. Gupta, Reader, DPSEE
  - (iv) Smt. S. Bhattacharya, Reader, DPSEE
  - (v) Head, DESM
  - (vi) Head, DESSH
  - (vii) Head, DVE
  - (viii) Head, DTESEES
  - (ix) Head, Publication Department
  - (x) Nominee of Joint Director, CIET
  - (xi) Shri P.N. Rusia, Joint Director, Non-Formal Education, Bhopal, Madhya Pradesh
  - (xii) Dr. Amit Verma, Professor, Department of Child Development, Faculty of Home Science, M.S. University of Baroda, Vadodara-390002
8. *Department of Field Services and Extension Coordination (DFSEC)*
- (i) Head, DFSEC—Convenor
  - (ii) Dr. S. Prasad, Reader, DFSEC
  - (iii) Head, DTESEES
  - (iv) Head, DPSEE
  - (v) Head, DESSH
  - (vi) Head, DESM
  - (vii) Head, Navodaya Vidyalaya Cell
  - (viii) Nominee of Joint Director, CIET
  - (ix) Professor Vinay Bala Mehta, Principal, SNDT College, Pune
  - (x) Director, State Council of Educational Research and Training, Bhopal (Madhya Pradesh)
9. *Workshop Department (WD)*
- (i) Head, WD—Convenor
  - (ii) Dr. B.M. Gupta, Reader, WD
  - (iii) Head, DESM
  - (iv) Head, DPSEE



- (v) Professor N.K. Tiwari, Mechanical Engineering Department, Indian Institute of Technology, New Delhi-110016
- (vi) Shri P.K. Bhaumik, Science Centre, National Council of Science Museum, Khyber Pass, Institutional Area, Delhi-110003

10. *Department of Library, Documentation and Information*

- (i) Director, NCERT—*Chairman*
- (ii) Joint Director (C)
- (iii) Joint Director (CIET)
- (iv) Dean (Academic)
- (v) Dean (Research)
- (vi) Dean (Coordination)
- (vii) Head, DESM
- (viii) Head, DESSH
- (ix) Head, DPSEE
- (x) Professor In-Charge, Programmes
- (xi) Sri S.P. Agarwal, Director, Documentation Centre, ICSSR, 35, Ferozeshah Road, New Delhi-110001
- (xii) Dr T.K. Dutta, Scientist In-Charge, Indian National Scientific Documentation Centre, 14, Satsant Vihar, Shahid Jit Singh Sansanwal Marg, Special Institutional Area, New Delhi-110057
- (xiii) Head, Zakir Hussain Centre for Education, Jawaharlal Nehru University (JNU), New Mehrauli Road, New Delhi-110 057
- (xiv) Librarian, NIEPA, NCERT Campus, New Delhi
- (xv) Professional Senior, DLDI
- (xvi) Head, DLDI—*Convenor*

11. *Departmental Advisory Board for International Relations Unit*

- (i) Director, NCERT—*Chairman*
- (ii) Professor In-Charge/Head, International Relations Unit—*Convenor*
- (iii) One faculty member of IR Unit
- (iv) Dr C. Seshadri, Professor, Regional College of Education, Mysore (Karnataka)
- (v) Nominee of Joint Director, CIET, NCERT
- (vi) Head, DESSH, NCERT
- (vii) Head, DESM, NCERT
- (viii) Head, DTESEES, NCERT
- (ix) Prof. P.D. Kulkarni, Principal, TTTI, Chandigarh
- (x) Dr (Smt.) R. Mattoo, Principal, State Institute of Education, Maulana Azad Road, Srinagar-190001

12. *Departmental Advisory Board for Women's Studies Unit*

- (i) Director, NCERT—*Chairman*
- (ii) Professor In-charge/Head, Women's Studies Unit—*Convenor*
- (iii) One Faculty Member from the Women's Studies Unit
- (iv) Head, DESSH, NCERT
- (v) Head, DESM, NCERT
- (vi) Head, DVE, NCERT
- (vii) Head, DTESEES, NCERT
- (viii) Head, DPSEE, NCERT
- (ix) Nominee of Joint Director, CIET
- (x) Head, DLDI, NCERT
- (xi) Prof. (Smt.) Lotika Sarkar, L-1/10 Hauz Khas, New Delhi-110 016
- (xii) Prof. (Smt.) Sushila Kaushik, Department of Political Science, Delhi University, Delhi-110 007

**Technical Committee**

- 1. Joint Director, CIET, NCERT—*Chairman*
- 2. Head, DESM, NCERT—*Member*
- 3. Engineer/Reader (Electronics) CIET, NCERT—*Member*

4. CAO/IFA NCERT—*Member*
5. Deputy Secretary, (EC) NCERT—*Member*
6. Head, Workshop Department, NCERT—*Member*

#### **Committee on Dissemination**

1. Dr. A.K. Jalaluddin, Joint Director, NCERT—*Chairman*
2. Dr. R.P. Singh, Head, Journals Cell—*Vice Chairman and Convenor*
3. Joint Director, CIET—*Member*
4. Dean (Academic)—*Member*
5. Dean (Research)—*Member*
6. Dean (Coordination)—*Member*
7. Head, Workshop Department—*Member*
8. Head, Publication Department—*Member*
9. Professor In-charge, Programmes—*Member*
10. Head, DEPC&G—*Member*
11. Head, DESSH—*Member*
12. Dr. J.N. Joshi, Professor, Department of Education, Panjab University, Chandigarh—*Member*
13. Prof. R.P. Panchmukhi, Director, Indian Institute of Education, Pune—*Member*
14. Librarian, NIEPA, NCERT Campus, New Delhi—*Member*
15. Dr. S.C. Biswas, Director, Central Secretariat Library, MHRD, Shastri Bhavan, New Delhi—*Member*
16. CPO, Publication Department—*Member*
17. Head, DLDI, NCERT—*Member*

#### **Committee on Educational Extension and Coordination**

1. Dean (Coordination)—*Chairman and Convenor*
2. Dean (Research)—*Member*
3. Dean (Academic)—*Member*
4. Head, DEPC&G—*Member*
5. Head, DPSEE—*Member*
6. Head, DTESEES—*Member*
7. A nominee of the Joint Director, CIET—*Member*
8. Principal, RCE, Ajmer—*Member*
9. Principal, RCE, Bhubaneshwar—*Member*
10. Principal, RCE, Mysore—*Member*
11. Principal, RCE, Bhopal—*Member*
12. Dr. K.S. Khichi, FA (NCERT), Jaipur—*Member*
13. Dr. W.A.F. Hopper, FA (NCERT), Madras—*Member*
14. Shri. S.K. Gupta, FA (NCERT), Guwahati—*Member*
15. Dr. R.P. Kataria, FA (NCERT), Bhopal—*Member*
16. Director of Education, Government of Uttar Pradesh, 10, Park Road, Lucknow—*Member*
17. Director of Public Instruction, Government of Kerala, DPI Office, Vazhuthacaud, Trivandrum 695 014 —*Member*
18. Director (Primary Education), New Secretariat, Government of Bihar, Patna-800015—*Member*
19. Director of Education, (Primary & Secondary Education), Government of Maharashtra, Central Building, Pune—*Member*
20. Dr. N. Mala Reddy, Proi. of Education, Osmania University, Hyderabad (A.P.)—*Member*
21. Dr. Suresh Shukla, Prof. of Education, Jamia Millia Islamia, Delhi—*Member*

#### **Committee for Art Education**

1. Shri Mulk Raj Anand, 20, Cuffe Parade, Bombay 400 005—*Chairman*
2. Shri Rajinder Nath, C-5, Press Enclave, Saket, New Delhi 110017—*Member*

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3. Shri J. Swaminathan, Director, Roopankar, Lalit Kala Sangrahalaya Bharat Bhavan, Shyamala Road, Bhopal 462002 (M.P.)—*Member*
4. Prof. Debu Choudhry, J-1852 Chittaranjan Park, New Delhi 110019—*Member*
5. Shri Keshav Malik, D-5/90, Connaught Circus, New Delhi 110001—*Member*
6. Shri H.A. Gade, 70-T, Central Avenue, Chembur, Bombay 400071—*Member*
7. Smt. Mrinalini Sarabhai, Director, Darpana Academy of Performing Arts, Ahmedabad 380013—*Member*
8. Shri B. Sanyal, B-15, Nizamuddin East, New Delhi 110 015—*Member*
9. Smt. Sumati Mutatkar, C-33, Chhatra Marg, University of Delhi, Delhi 110007—*Member*
10. Smt. Uma Sharma, 52, Community Centre, East of Kailash, New Delhi 110063—*Member*
11. Dr. L.G. Sumitra, Reader and Head, Radio Division, CIET, NCERT, New Delhi 110016—*Member*

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## APPENDIX B

## LOCATION OF FIELD ADVISERS IN THE STATES

		Telephone Nos.	
		Office	Residence
1.	Field Adviser (NCERT) 1-B Chandra Colony Near Samerpan Flats Behind Law College Ahmedabad-380006	445992	445992
2.	Field Adviser (NCERT) 555-E Mumfordganj Allahabad-211002	52212	4039
3.	Field Adviser (NCERT) 621, 80 Feet Road 11 Block, Rajaji Nagar Bangalore-560010	350006	—
4.	Field Adviser (NCERT) MIG-161, Saraswati Nagar Bhopal-462003	64465	76014
5.	Field Adviser (NCERT) Homi Bhabha Hostel RCE Campus Bhubaneswar-751007	50516	52224
6.	Field Adviser (NCERT) P-23, CIT Road (Scheme-55) Calcutta-700014	245310	361510

7.	Field Adviser (NCERT) Kothi No. 23, Sector 8-A Chandigarh-160008	26923	26923
8.	Field Adviser (NCERT) Zoo Narangi Road Guwahati-781031	87003	—
9.	Field Adviser (NCERT) Avanti Nagar Bashir Bagh Hyderabad-500029	235878	234895
10.	Field Adviser (NCERT) B-55, Yashpath Tilak Nagar Jaipur-302004	428264	459139
11.	Field Adviser (NCERT) No. 64, IV Avenue Ashok Nagar Madras-600083	428254	459139
12.	Field Adviser (NCERT) Kankarbagh Patrakar Nagar Patna-800016	53243	53243
13.	Field Adviser (NCERT) 128/2 Kothrud Karve Road Pune-411029	447314	447314
14.	Field Adviser (NCERT) Boyce Road Laitumukhrah Shillong-783003	26317	—
15.	Field Adviser (NCERT) Himrus Building Circular Road Shimla-171001	4548	4548
16.	Field Adviser (NCERT) 87 Rawalpura Srinagar-190005	31490	31490
17.	Field Adviser (NCERT) SIE Campus P.O. Poojapura Trivandrum-695012	64389	64948

**APPENDIX C**

**Category-wise Sanctioned Staff Strength  
of the NCERT as on 1.4.1989  
Summary**

Source of Information	Academic			Non-Academic (Ministerial)			Non-Academic (Technical)				Total
	Group A	Group B	Group C	Group A	Group B	Group C	Group A	Group B	Group C	Group D	
Council Headquarters	302	1	3	32	133	610	82	101	268	388	1920
RCE, Ajmer	66	27	46	1	6	49	4	4	40	95	338
RCE, Bhopal	62	26	47	1	6	44	4	5	35	93	323
RCE, Bhubaneswar	84	31	61	1	6	41	4	5	45	86	364
RCE, Mysore	87	22	50	1	6	47	4	8	41	83	349
FA's Offices	35	—	—	—	—	52	—	—	18	36	141
<b>Total</b>	<b>636</b>	<b>107</b>	<b>207</b>	<b>36</b>	<b>157</b>	<b>843</b>	<b>98</b>	<b>123</b>	<b>447</b>	<b>781</b>	<b>3435</b>