

# ANNUAL REPORT 1986-87



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# ANNUAL REPORT

## 1986-87



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

November 1987  
Kartika 1909

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**PUBLICATION TEAM**

C.N. Rao	<i>Head, Publication Department</i>
Prabhakar Dwivedi	<i>Chief Editor</i>
Santo Datta	<i>Editor</i>
D. Sai Prasad	<i>Production Officer</i>
J.P. Sharma	<i>Assistant Editor</i>
Rati Ram	<i>Production Assistant</i>

*Cover . Santo Datta*

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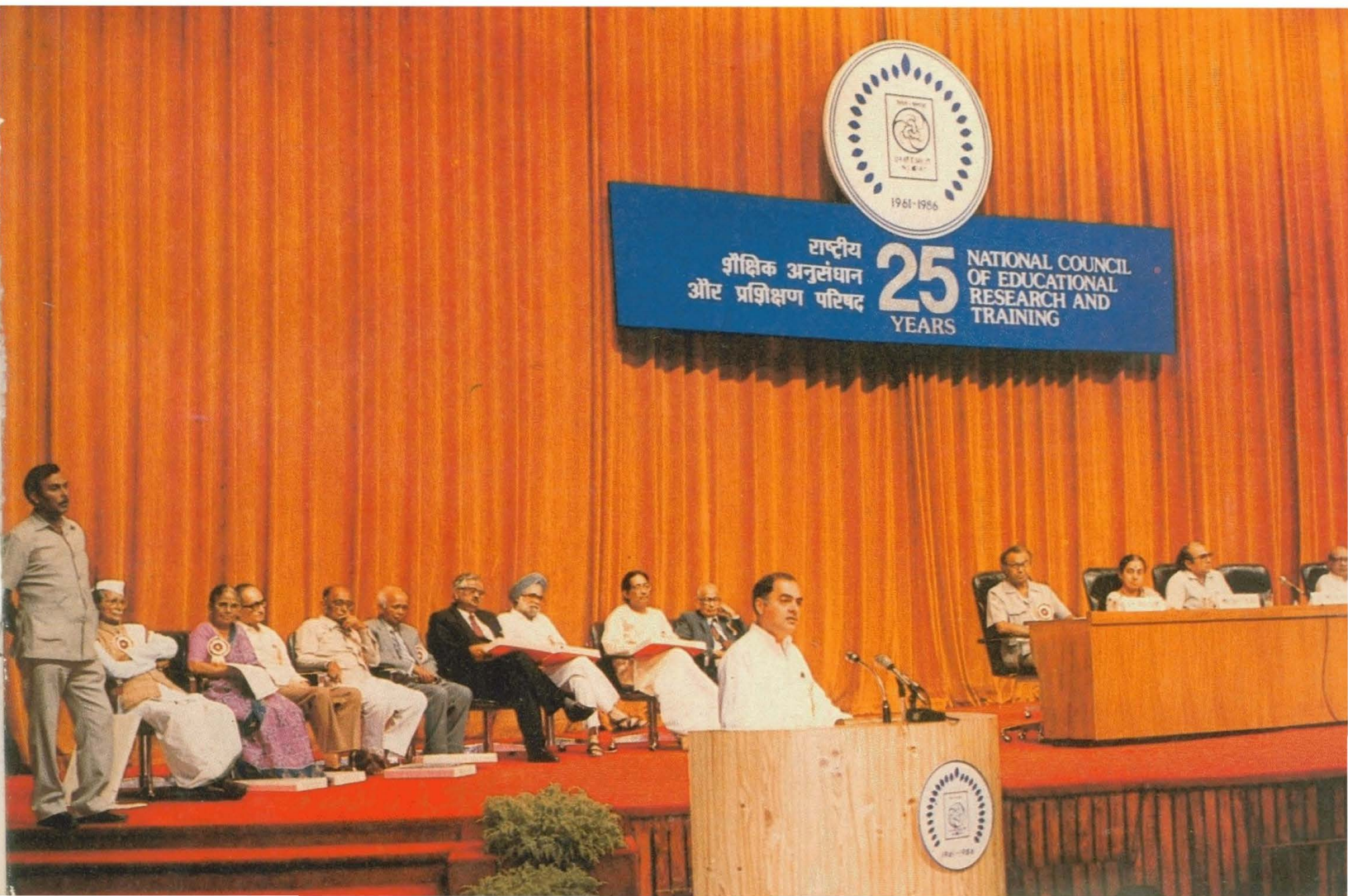
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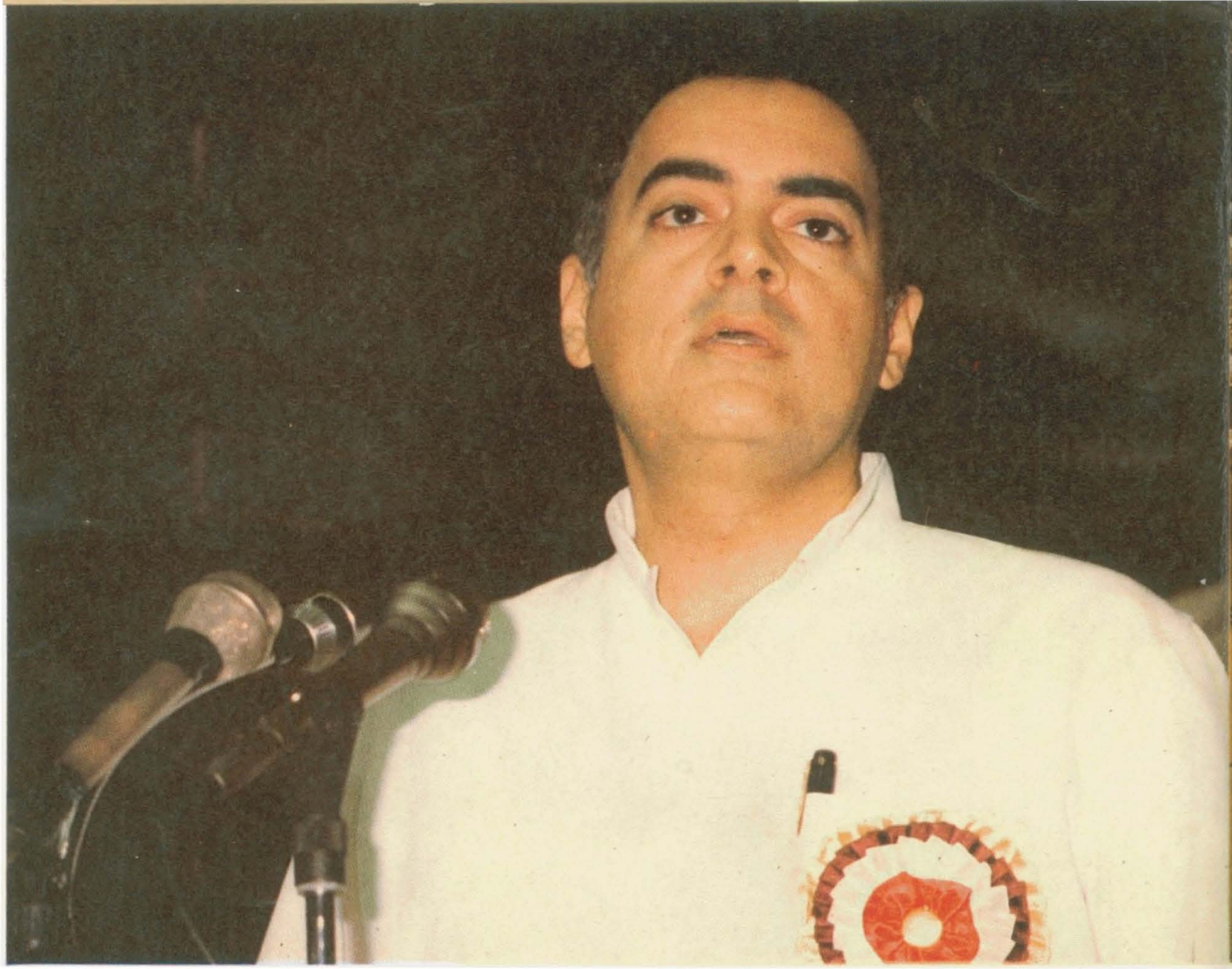
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विज्ञान भवन में 11 सितम्बर 1986 को हुए परिषद् के रजत जयंती समारोह का उद्घाटन करते हुए प्रधानमंत्री श्री राजीव गांधी  
Prime Minister Rajiv Gandhi inaugurating the Silver Jubilee celebrations of the NCERT at Vigyan Bhawan on 11 September 1986







परिषद् के रजत जयंती समारोह के अवसर पर विज्ञान भवन में एकत्र विशिष्ट जनों को सम्बोधित करते हुए प्रधान मंत्री

रजत जयंती समारोह के अवसर पर प्रधान मंत्री द्वारा एन.आई.ई. राष्ट्रीय फेलोशिप से समादृत 19 विख्यात शिक्षाविदों में से कुछ

Some of the 19 eminent educationists whom the Prime Minister honoured with National Fellowships of NIE, marking the Silver Jubilee celebrations







The Prime Minister addressing a distinguished gathering at Vigyan Bhawan on the occasion of the Silver Jubilee of the NCERT

परिषद् के तीन विशिष्ट प्रकाशनों को विमोचित करते हुए प्रधान मंत्री  
Three special publications of the NCERT were released by the Prime Minister







राष्ट्रीय फेलोशिप पाने वाले महानुभावों के साथ प्रधानमंत्री

The Prime Minister with the National Fellows

विख्यात स्वतंत्रता सेनानी प्रो. एन. जी. रंगा और श्रीमती अरुणा आसफ अली को परिषद् के गौरवशाली प्रकाशन 'इंडियाज़ स्ट्रगल फॉर इंडिपेंडेस : विजुअल्स एंड डॉक्यूमेंट्स' की प्रतियाँ भेंट करते हुए प्रधानमंत्री

The Prime Minister honoured two eminent freedom fighters, Prof. N.G. Ranga, and Mrs. Aruna Asaf Ali, by presenting them with copies of 'India's Struggle for Independence: Visuals and Documents', a prestigious publication of the NCERT



ONE

## NCERT : ROLE AND STRUCTURE

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

### Role and Functions

The NCERT functions as an academic adviser to the Ministry of Human Resource Development. In formulating and implementing its policies and programmes in school education, the Ministry draws upon the expertise of the NCERT to a considerable extent. The Council is fully financed by the Government.

The objectives of the NCERT, as indicated in its Memorandum of Association, are to assist and advise the Ministry of Human Resource Development (MHRD) in implementing policies and major programmes in the field of education, particularly school education.

### Programmes and Activities

For the realization of the above objectives, the Council undertakes the following programmes and activities :

- Conducts, aids, promotes and coordinates researches in all branches of school education;
- Organizes pre-service and in-service training of teachers, mainly on advanced level;
- Organizes extension services for institutions, organizations 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 the State-level institutions, organizations and agencies in developing and implementing programmes for qualitative improvement of school education;

- Collaborates with international organizations like UNESCO, UNICEF, etc., and with national-level educational institutions of other countries;
- Extends facilities for training and study of educational personnel from other countries; and
- Serves as the academic secretariat of the National Council for Teacher Education (NCTE) and National Development Group (NDG), and Asia and the Pacific Programme of Educational Innovation for Development (APEID), Bangkok.

### Research

Being the apex national body for research in school education, the NCERT performs many important functions to organize and support research, and to train personnel in educational research, etc. Its Educational Research and Innovations Committee (ERIC) helps in identifying priority areas in research, and sanctions funds for research projects of NCERT, those of other research institutes in States, and those submitted by individual scholars. It also offers fellowships for doctoral work within the Council and publication grants for doctoral theses from all over the country.

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

The NCERT supports research programmes by providing financial assistance and academic interaction to individuals and organizations. 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 band 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*

Development activities in school education constitute an important function of the Council. This function has been further enhanced by the Council's additional responsibility of implementing the National Policy on Education (NPE) and Programme of Action (POA) 1986. Significant among these are the development of curricula and instructional materials on various levels of school education and relating them to the changing and growing needs of children and society. The Council's innovative development activities also include development of curricula and instructional materials in the area of non-formal education and vocationalization of education. Educational technology and population education are other significant activities in this domain.

#### *Training*

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

Functioning as the academic secretariat of the National Council for Teacher Education, the NCERT is involved in various activities including revision of syllabi for teacher education on various levels and the working of the Centres of Continuing Education.

Summer School-cum-Correspondence Courses for teachers of elementary and secondary schools are also organized for removing the backlog of untrained teachers.

#### *Extension*

The NCERT has comprehensive programmes of extension in education in which various departments of the

NIE, the Regional Colleges of Education and the Offices of the Field Advisers in the States are engaged in various ways. The Council in the States also works extensively with the extension service departments and centres in teacher training colleges and schools for providing assistance to various categories of personnel, including teachers, inspectors, administrators, paper-setters and textbook-writers, etc. Conferences, seminars, workshops and competitions are regularly organized as ongoing programmes. These programmes are organized in rural and backward areas in order to reach the functionaries in areas with special problems and where special efforts are needed. The Council has separate programmes for an integrated education for the disabled and for the education of the disadvantaged sections of society. The extension programmes of the NCERT cover all the States and the Union Territories in the country.

#### *Publication and Dissemination*

The NCERT publications cover all branches of school education. These include textbooks for various school subjects covering Classes I-XII. The Council also brings out books on teacher education, teachers' guides, and supplementary readers, work books and research reports, etc. The instructional materials produced on the basis of research and development work serve as models to various agencies in the States and Union Territories. These are made available to them for adoption and adaptation. The textbooks are published in English, Hindi and Urdu.

For the dissemination of educational information, the NCERT publishes five journals: (i) *The Primary Teacher*, published both in English and Hindi, aims at giving meaningful and relevant materials to primary school teachers for direct use in the classroom; (ii) *School Science*, an open forum for discussion of various aspects of science education; (iii) *Journal of Indian Education*, 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 research workers, and (v) *Adhunik Bhartiya Shiksha* (Hindi), a forum for encouraging critical thinking in education on contemporary issues, disseminating ideas on educational problems and practices.

A house journal, the *NCERT Newsletter*, is also published every month. In addition, each Regional College of Education publishes its own journal.

## *Textbook Evaluation*

Evaluation of textbooks and other materials, specially from the point of view of national integration, is undertaken on a continuing basis. For this, effective criteria, tools and techniques have been developed. Guidelines and procedures for evaluation have also been laid down for evaluating the format and content of textbooks. The feed-back from schools helps in the revision of textbooks.

## *Identification and Nurturing of Talent*

Every year, the NCERT administers tests in all the languages recognized under the Constitution of India for the award of 750 talent scholarships (including 70 for students belonging to the Scheduled Castes/Tribes). Students, who would be appearing at the Class X examination at the end of the session, are considered eligible to compete for the scholarships. The awardees may pursue studies up to Ph. D. in science, mathematics and social sciences, or take up professional courses in areas like engineering and medicine.

## *Exchange Programmes*

The Council functions as the secretariat of the National Development Group for the Asian Centre for Educational Innovations and Development (ACEID). It also acts as a major agency for implementing the bilateral cultural exchange programmes that are signed by the Government of India with different countries, so far as school education is concerned. The Council exchanges educational materials with other countries.

For its efforts to improve the quality of education, the NCERT receives assistance from international agencies like UNESCO, UNICEF, UNDP and UNFPA. On request from these agencies the Council nominates its faculty members for participation in international conferences, seminars, workshops and symposia, etc. The Council also arranges training for foreign nationals.

## **Structure and Administration**

The General Body is the policy-making body of the Council. The Union Education Minister is its President and Education Ministers of all the States and the Union Territories are among its members. In addition, the

Chairman of the University Grants Commission, the Secretary to the Ministry of Education, four Vice-Chancellors of Universities (one from each region), all members of the Executive Committee (not included above) and such other persons, not exceeding twelve, as the President may, from time to time, nominate (no fewer than four of these have to be school teachers) are its members.

The main governing body of the NCERT is the Executive Committee which has the Union Education Minister as its President (*ex-officio*), and consists of the Minister of State in the Ministry of Education (as *ex-officio* Vice-President), the Deputy Minister in the Ministry of Education, the Secretary to the Ministry of Education, the Director of the Council, the Chairman of the University Grants Commission, four educationists with known interests 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 from the level of Professors and Heads of the Departments), one representative of the Ministry of Education, and one representative of the Ministry of Finance (who shall be the Financial Adviser of the Council).

The Executive Committee is assisted in its work by the following standing committees:

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

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

1. Dr. P.L. Malhotra, Director
2. Dr. A.K. Jalaluddin, Joint Director
3. Dr. M.M. Chaudhri, Joint Director (CIET)
4. Shri H.K.L. Chugh, Secretary from 19.2.86 to 5.10.86
5. Shri O.P. Kelkar, IAS, Secretary from 6.10.86



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

<i>Name and Designation</i>	<i>Responsibilities</i>
Prof. P.N. Dave Dean (Academic)	To coordinate the academic work in the Departments of NIE
Prof. Atmanand Sharma Dean (Research)	To coordinate the research programmes, and to look after the work of Educational Research and Innovations Committee.
Prof. Baqer Mehdi Dean (Coordination)	To coordinate the activities of Services/ Production Departments, Field Offices and the Regional Colleges of Education.

During 1986-87 the Council was running :

The National Institute of Education (NIE)  
Central Institute of Educational Technology (CIET)  
Regional Colleges of Education (4) and  
Field Units (17)

### *National Institute of Education*

The Departments/Units of NIE were reorganized in May 1984. During 1986-87, the National Institute of Education, New Delhi, had the following Departments/Units involved in research, development, training, extension, evaluation and dissemination in their specific areas:

1. Department of Education in Social Sciences and Humanities (DESSH)
2. Department of Field Services and Coordination (DFSC)
3. Department of Teacher Education and Special Education and Extension Services (DTESEES)
4. Department of Pre-School and Elementary Education (DPSEE)
5. Department of Educational Psychology, Counselling and guidance (DEPCG)
6. Department of Education in Science and Mathematics (DESM)
7. Department of Measurement, Evaluation, Survey and Data Processing (DMES&DP)
8. Department of Vocationalization of Education (DVE)
9. Department of Policy Research, Planning and

Programming (DPRPP)

10. Publication Department (PD)
11. Workshop Department (WD)
12. Department of Library Documentation and Information (DLDI)
13. Journals Cell (JC)
14. International Relations Unit (IRU)
15. Planning, Coordination and Evaluation Unit (PCEU)

### *Central Institute of Education*

The Central Institute of Educational Technology (CIET) was set up in 1984 by the merger of the erstwhile Centre for Educational Technology and the Department of Teaching Aids of the NCERT to give a boost to the promotion of educational technology for the improvement and spread of education in the country.

The CIET, headed by a Joint Director, functions as one of the constituent units of the NCERT with a good measure of autonomy. An Advisory Council guides the institute about the programmes and activities.

The CIET has the following major divisions :

1. Educational Technology and Training Division, TV Division and Distance Education Division (ETTD)
2. Research, Education and Coordination Division (RECD)
3. Technical Planning, Operation and Maintenance Division (TPOMD)
4. Graphics, Exhibition and Printing Division (GEPD)
5. Archives, Information and Documentation Division (AIDD)
6. Films and Photo Division (FPD)
7. Audio-Radio Division (ARD)

### *Regional Colleges and Field Units*

The Regional Colleges of Education are located in Ajmer, Bhopal, Bhubaneswar and Mysore. These colleges provide the following courses:

- B.A. (Hons) B. Ed.
- B.Sc. (Hons)/(Pass) B.Ed.
- B.Ed. Arts (Elementary/Secondary Education)
- B.Ed. Science (Elementary/Secondary Education)

- B.Ed. (Agriculture/Commerce/Social Science)
- B.Ed. (English/Hindi/Urdu)
- B.Ed. (Summer School-cum-Correspondence Course)
- M.Ed. (Elementary/Secondary Education)
- M.Sc.Ed. (Physics/Chemistry/Mathematics/Life Sciences)
- Ph.D. (Education)

While the College at Ajmer offers only four-year B.Sc. B.Ed. courses, the Colleges at Bhubaneswar and Mysore offer M.Sc. Ed. programmes, the former in Life Sciences and the latter in Physics, Chemistry and Mathematics. There is provision for Ph. D. programmes as well as one-year B.Ed. and M.Ed. courses in all the four colleges.

The colleges are residential institutions with adequate laboratory, library and other facilities. Each college has a Demonstration Multipurpose School attached to it where

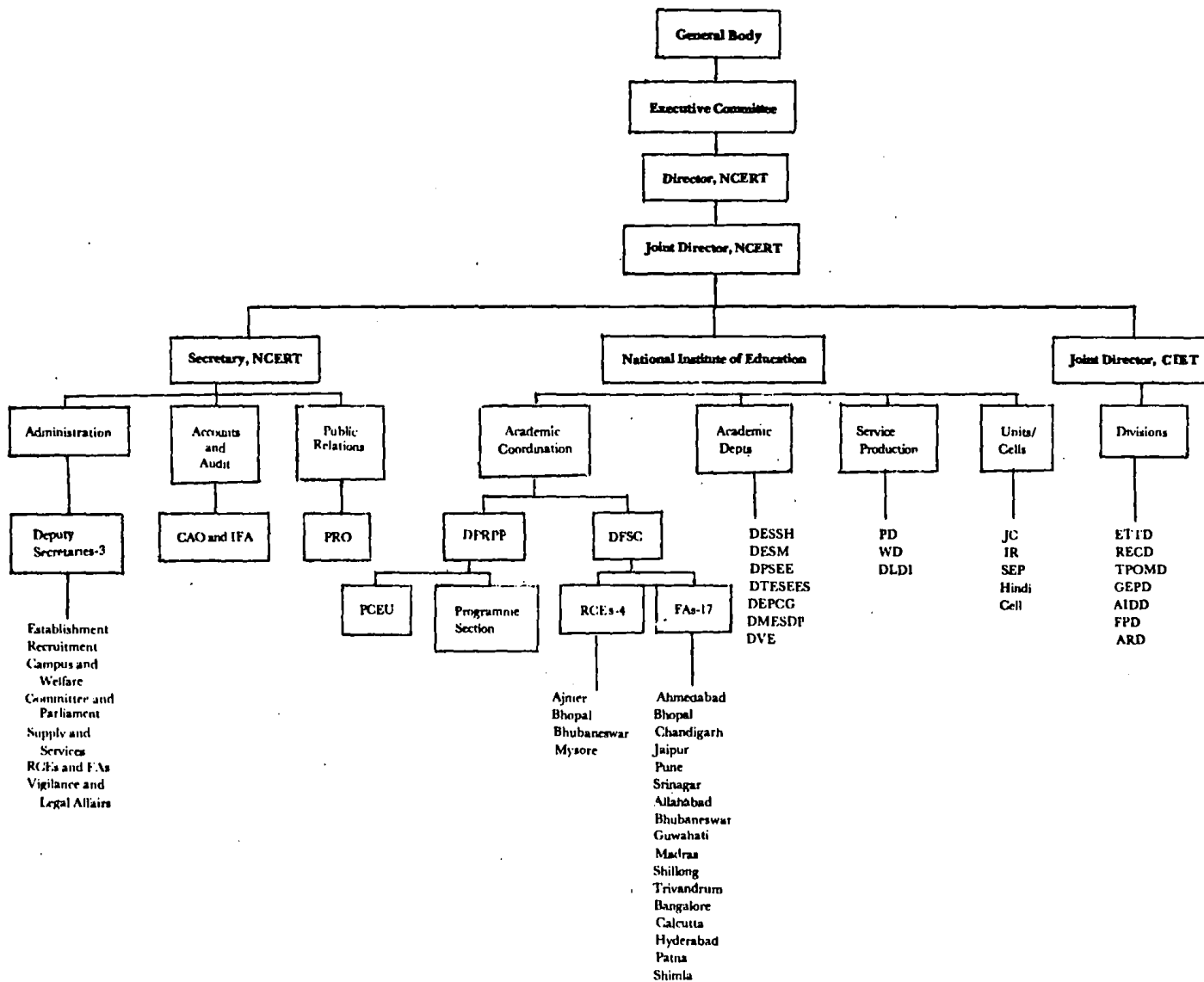
developed methodologies are tested in actual classroom situations.

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

Ahmedabad  
Allahabad  
Bangalore  
Bhopal  
Bhubaneswar  
Calcutta  
Chandigarh  
Guwahati

Hyderabad  
Jaipur  
Madras  
Patna  
Pune  
Shillong  
Shimla  
Srinagar  
Trivandrum

## Organizational Structure of the NCERT



1986-87

## TWO

### AN OVERVIEW OF THE ACTIVITIES DURING 1986-87

THE period under report was marked by the role played by the Council in activities directed towards the formulation and implementation of the new National Policy of Education 1986 and the Programme of Action (POA) approved by the Indian Parliament. The NCERT made sustained, concerted and continuous efforts to improve the quality of school education and teacher education in the country. In main during 1986-87, the activities aimed at developing guidelines for the development of syllabi; development of syllabi in various subjects followed by the development of instructional and exemplar materials; training packages for formal as well non-formal education programmes; programmes related to early childhood education, especially, in the context of Universalization of elementary education; vocationalization of education; promotion of ideas focussed on national integration; improvement in the evaluation techniques; utilization of educational technology and enhancement of the professional competence of teachers and teacher educators. The Council also continued to play the role of central coordinating agency for providing technical support to the UNICEF assisted projects in the education sector, INDO-FRG project, National Population Education Project and Computer Literacy and School Studies (CLASS) Project now being implemented in different States/Union Territories.

#### **NPE 1986 and Development of Textual and Other Instructional Materials**

##### *(A) Development of Syllabi*

The NCERT had brought out a document entitled 'National Curriculum Framework for Primary and Secondary Education', in early 1986. The need for developing a National curriculum framework for higher secondary education was expressed in the NPE and POA, 1986, so as to complete the cycle of curriculum regeneration. The Development of National Curriculum Framework for

higher secondary education is in progress. Another task emanating from the framework was the development of syllabi. The NCERT developed the Guidelines for developing syllabi and developed the detailed syllabi in the areas of languages, including Hindi as a mother tongue (Primary), Hindi as a mother tongue (upper primary and secondary), Hindi as a second language, English, Sanskrit, and Social Sciences, including History, Geography, Civics and Economics, Arts, Health and Physical Education. The syllabi for the +2 stage in the areas of History, Political Science, Geography, Economics and Sociology were also developed.

##### *(B) Preparation of Textbooks and Instructional Materials*

Preparation of textbooks, supplementary readers and other instructional materials for the use of students and teachers at different stages of school education constituted an important activity of the Council during the year 1986-87. Some of these were developed in collaboration with the Central Board of Secondary Education (CBSE). The NCERT developed new syllabi in Integrated Science, Physics, Chemistry, Biology and Mathematics for upper primary, secondary and senior secondary classes and new textbooks in Science and Mathematics for Class VI, keeping in view the NPE on Education and the curriculum framework developed by the NCERT. In addition to these a teachers' guide in Science and problem book in Mathematics were also developed. Other important textual materials developed so far include English and Hindi versions of Environmental Studies Part I for Class III, textbooks in History, Civics and Geography, and Kishore Bharati Part I for Class VI, Indian Society for Class XII, National Income Accountancy for Class XII, An Introduction to Economic Theory for Class XII, textbooks in Sanskrit and Urdu for Class VI. In order to develop instructional materials in Science and Mathematics, a committee was set up by the Council this year under the chairmanship of Prof. C.N.R. Rao, Chairman, Prime Minister's Science Advising Commi-

tee. Prof. C.N.R Rao has further set up five sub-committees one each in Integrated Science (VII-X), Mathematics (IV-XII), Physics (IX-XII), Chemistry (XI-XII), and Biology (XI-XII). These committees are busy with their assignments.

Under the National Scheme of Inservice Training of School Teachers, 12 modules on the Promotion of National Integration, Value Education, Health and Physical Education, Art Education, Population Education, Environmental Studies (Primary), Teaching and Learning of English (Primary), Prathamik Kakshaon Men Matri Bhasha Shikshan, Population Education (Secondary), Teaching of Social Science (Secondary), and Dwitiya Bhasha Ke Roop Men Hindi Ka Shikshan, were developed. In pursuance of the directive in POA 1986, exemplar materials in 10 core curricular areas were developed by the Council during the year under review.

Eleven instructional packages developed during the period are : (i) Beautiful Things around Us, (ii) Our Struggle for Freedom, (iii) Respecting our National Symbols, (iv) Celebrating our National Festivals, (v) Understanding our National Goals, (vi) Natural Resources and Their Conservation, (vii) Saving the Environment from Pollution, (viii) Women's Role in Indian Struggle for Independence, (ix) Removal of Sexist Bias, (x) Value, Beliefs and Family, and (xi) Marriage and Family.

Further, in pursuance of Programme of Action (POA) 1986, an experimental edition of Resource Book of Physical Education was also developed by the Council. Activities related to the preparation of reading materials for children under the project 'Reading to Learn' continued, during the year.

### (C) *New Textbooks for the School Session 1987-88*

In conformity with the guidelines of the New Education Policy, the NCERT has taken up the responsibility of producing new textbooks for Classes I to XII. In the first phase of its programme, the NCERT concentrated on developing textbooks/workbooks/teachers' manuals for Classes I, III and VI for the academic session 1987-88. For the first time, NCERT had decided to publish alternate textbooks in Hindi language for Classes I and III and a model textbook in Social Studies for Class III, for the states. About 45 new books are under production, out of these, six titles were brought out during the year under report.

### **Early Childhood Education**

During the period, the Council was actively involved in developing instructional materials for early childhood education and training packages for the use of teachers, teacher educators and supervisory personnel involved in early childhood education were carried out under the UNICEF-assisted projects, Early Childhood Education (ECE) and Children Media Laboratory (CML). 'Home-based Programme in Child Development' is now being tried out in tribal and urban areas of Orissa. Another study 'Child to Child Programme' is being undertaken in 32 primary schools of Municipal Corporation of Delhi. This programme has evolved innovative methods of teacher training, effective instructional materials and a set of 14 activity-sheets related to the areas of health, hygiene and nutrition, and strategies relevant to their implementation, monitoring, supervision and education. The NCERT continued with development of picture books, audio, video programmes and other relevant instructional materials in regional languages. Under the Child Media Laboratory (CML), 20 more audio-scripts in Hindi and Assamese were prepared, and dissemination of audio programmes in Hindi was started. The audiotapes are being duplicated for broadcast by different stations of All India Radio. In addition to this, the NCERT developed various training/orientation programmes for key persons, and also organised a National Toy Making Competition for teachers.

### **Non-formal Education Programme**

Preparation of suitable teaching learning materials for Non-formal Education Programmes continued to be an important activity of the Council during 1986-87. The NCERT brought out eight titles in the areas of natural sciences, Social Science, Mathematics and languages. Under the Council's training programme, 200 experts from 13 States and Union Territories were trained in the integrated approach to teaching learning, and 165 NFE functionaries of States and resource persons from voluntary organisations actively participated in five orientation programmes organized by the Council. Besides this, a two-day annual conference of incharges of NFE programmes in States and representatives of voluntary agencies was organized to discuss the strategies of implementation of NFE programmes in the light of NPE and POA 1986.

The NCERT continued to implement the UNICEF assisted project Comprehensive Access to Primary Education (CAPE) in 17 States and one Union Territory. Under this project, 30 programmes related to the development of materials in literacy, numeracy and problem/situation based environmental studies were organized. Besides this, the Council organized a training course on the methodology of developing test items based on learning episodes, and an orientation course for RDRC team members on the methodology of training facilitation. The Council also provided assistance to the States of Andhra Pradesh, Haryana, Jammu and Kashmir, Madhya Pradesh, Meghalaya, Mizoram, Rajasthan and Uttar Pradesh, in developing learning episodes in literacy, numeracy and environmental studies. The learning materials developed under the project are accessible to voluntary organisations also. Similarly, another UNICEF-assisted project, Developmental Activities in Community Education and Participation (DACEP), was implemented through its 82 community education centres in 19 States and one Union Territory. Fifty-Seven centres had an enrolment of 6,276. In addition, 70 programmes of orientation, internship training and workshops, etc. were organized for 14 participating States, and 40 titles were published. Internal evaluation of the status report of the project is in progress.

### **Teaching of India's Freedom Movement in Schools**

During the year under report, the NCERT published the report of the working group on teaching of India's Freedom Movement in schools, set up by the Ministry of Education and Culture, Government of India.

### **National Seminar on Mind, Brain and Consciousness**

The NCERT organized a three-day National Seminar on Mind, Brain and Consciousness, in which scientists and scholars from NIMHANS, Bangalore, I.I.S., Bangalore, A.I.I.M.S., New Delhi, Krishna Murti Foundation—India, J.N.U., New Delhi, and faculty members of the NCERT participated.

### **Promotion of National Integration**

The Council continued its activities related to the evaluation of school textbooks with a view to removing passages which might impede national integration. The NCERT published a brochure entitled 'Evaluation of Textbooks from the Standpoint of National Integration—

Guidelines'. On the basis of these guidelines evolved by the Council in collaboration with States/Union Territories, a large number of textbooks in different subject areas were reviewed. During 1986-87 the States of Maharashtra, Gujarat, Tamil Nadu, Mizoram, Haryana and Andhra Pradesh completed the work on the second phase of the programme. The Council also conducted evaluation of textbooks on sample basis and organized orientation programmes for authors and reviewers of textbooks. Thus, the programme of evaluation of textbooks from the standpoint of national integration has been institutionalized. The NCERT also organized the Eighth National Conference on school textbooks, which was attended by 70 delegates from various textbook agencies. The conference discussed the issue of writing textbooks *vis-a-vis* the National Policy on Education, 1986.

Another programme directed to promote national integration has been the organisation of camps to train teachers in the art and techniques of community singing, involving songs in 15 regional languages. During 1986-87, the NCERT, in collaboration with various agencies at the State/Union Territory level, organized 31 camps to train teachers in community singing. About 850 teachers from 16 States/Union Territories had attended these camps. These camps, together with the distribution of a book containing these songs in respective language-scripts along with musical notations and audio-tapes for use in schools, have helped institutionalizing community singing in a large number of schools in the country.

### **Computer Literacy**

Several advanced level training programmes for school teachers and NCERT staff along with orientation programme for resource persons were organized by the NCERT under the project, 'Computer Literacy and Studies in School' (CLASS). Fourteen new indigenous software packages were tested and introduced in the schools under the CLASS project. Video tape programmes were also developed. Three members on the staff of the Council received one month's training in computer education under CLASS project in U.K. The CLASS project was extended to 436 schools during 1986-87. Eight new resource centres were identified for organising teacher training in addition to existing 50 such centres in December 1986. Administrative support to the programme in the States/Union Territories has been strengthened by nominating a senior officer by the State Government as the nodal officer

of the programme in 23 States/Union Territories.

### Population Education

The NCERT undertook measures to intensify the implementation of the National Population Education project. Curriculum at plus two stage was finalized in a National workshop held at Puri. The curriculum spelt out major and specific objectives subject-wise, and contents identified in all the six areas of population education, viz. (i) Population Dynamics, (ii) Economic Development and Population, (iii) Social Development and Population, (iv) Health, Nutrition and Population, (v) Family Size, Biological Factors and Population, and (vi) Environment and Population. Action was also initiated to develop curriculum for elementary teacher training level. New thrusts and future plan of work along with guidelines were identified in a tripartite review committee meeting in which representatives of UNESCO Regional Office, Bangkok, local UNFPA office and Ministry of Human Resource Development participated.

### Vocationalization of Education

The Council undertook several activities for providing necessary academic inputs to the States/Union Territories for two important schemes, namely, (a) Vocational Education at the higher secondary stage, and (b) Work experience as an integral part of general education, during the year 1986-87. The Council conducted six short-term courses with a view to updating the knowledge and expertise of vocational teachers in their respective vocations, especially, Business and Commerce, Technology, Agriculture and Pedagogy, One hundred forty-eight teachers were trained through these courses. Other programmes conducted during this time included six orientation programmes for state level key functionaries of the States already offering vocational education at +2 level, two orientation programmes for State level key persons in the area of work experience and an orientation programme for orienting the key persons engaged in District Vocational Surveys. About 380 key persons from Uttar Pradesh, Madhya Pradesh, Andhra Pradesh, Rajasthan, Bihar, Orissa, Manipur, Meghalaya, Goa, Daman and Diu benefited from these orientation programmes. In addition to these, the Council shared the responsibility of developing model curricula, guidelines and other curricular materials entrusted to it in the POA 1986. Several workshops were

organised to develop curricula based on Minimum Vocational Competencies, related to different vocations, comprehensive guidelines for curriculum evaluation; revised edition of the handbook for vocational survey workers; guidelines for establishing school-industry linkages; exemplar instructional materials for pre-vocational courses; revised instructional materials in courses under work experience for upper primary stage; guidelines for pupils' evaluation of work experience in Navodaya Vidyalayas and scheme for integration of productive work in secondary education; involving voluntary organizations. These materials were developed and published during the year.

### Teacher Education

In the field of Teacher Education, the NCERT completed two research projects on value orientation of B.Ed. students, and status of teachers in India. The studies in progress include 'Futurology of Teacher Education', 'Development of Tools for Student Teaching' and 'Conditions of Affiliation of Colleges of Education'. A training-cum-research project and models of teaching was initiated, and two workshops were organized on planning and designing of research projects for teachers. Several other workshops and working group meetings were also organized to develop instructional materials for pre-service and in-service teacher education programmes. The materials for the development of which working group meetings were held include development of elementary teacher education curriculum, source book on teacher education, Hindi version of the textbook titled 'Teacher and Education in the Emerging Indian Society'. Source book on non-formal education, guidelines for school-based in-service education and training of teachers.

In order to stimulate immediate implementation of the NPE 1986 at the instance of the Ministry of Human Resource Development (MHRD), the NCERT undertook the training of five lakh primary and secondary school teachers in the country. The Council developed modular instructional materials and got the training programme supported by the T.V. The training programme was organized at three levels. Key persons were trained at the NCERT, while about 10,000 resource persons were trained at the State level. At the State level, 2500 training centres were established all over the country. Nine thousand ten-day camps were organized. In the process, evaluation was carried out by the model agencies, and the NCERT obtained feedback through its



own faculty. A review meeting was held and programmes for the next year were chalked out.

The Council continued to coordinate the activities of the centres of continuing education during 1986-87; 64 CCEs including six new CCEs, three each in Punjab and Himachal Pradesh, carried out their activities.

The four Regional Colleges of Education, run by the Council, continued to offer the one-year B.Ed. Course, the four-year integrated teacher education programme leading to B.A. Ed. or B.A. B.Ed. degree and B.Sc. Ed. or B.Sc. (Hons/Pass) B.Ed. degree and one-year M.Ed. course. The RCEs at Bhubaneswar and Mysore also offered two-year M.Sc. Ed. courses. The total enrolments in the four-year integrated courses at Ajmer, Bhopal, Bhubaneswar and Mysore were 236, 380, 524 and 350 respectively, while the total enrolments in B. Ed. course were 190, 116, 199 and 99 respectively. The enrolment in M.Ed. course was 14, 10, 19 and 26 in RCEs at Ajmer, Bhopal, Bhubaneswar and Mysore, respectively. The enrolment in the M.Sc. Ed. in Life Science course was 41 at RCE Bhubaneswar, while it was 106 at RCE Mysore in M.Sc. Ed. courses in Physics, Chemistry and Mathematics. Besides, 192, 316 and 355 candidates were enrolled for the summer school-cum-correspondence course leading to B.Ed. Degree in the colleges at Ajmer, Bhopal and Bhubaneswar.

The enrolments in Classes I to XII in the demonstration multipurpose higher secondary schools attached with each of the RCEs at Ajmer, Bhopal, Bhubaneswar and Mysore were 854, 908, 1164 and 1968, respectively. The RCEs also organized extension programmes/workshops/seminars on different areas related to school education and teacher education. The total number of programmes organized by the RCEs at Ajmer, Bhopal, Bhubaneswar and Mysore were 12, 38, 13 and 23, respectively. Number of participants attending these programmes were 305, 723, 258 and 683, respectively. In addition to these, each RCE also carried out research studies related to school education and teacher education. Various scholars received guidance in the RCEs for their Ph.D. degrees in Science and Education.

### Education of the Disabled

The Council undertook several activities related to the integrated education of the disabled during the period under report. A case study of the Integrated Education of the Disabled (IED) in Maharashtra was completed. Another

research study was initiated to explore linguistic competencies of students with impaired hearing from integrated and special schools. A prototype kit comprising 30 essential instructional aids for visually handicapped children in integrated settings, developed by the NCERT, is being tried out. The Council also developed a guide book for teaching language to the hearing impaired children under IED programme for Classes I and II. Besides this, a handbook for primary school teachers, teaching disabled children in integrated settings and instructional materials for training of teachers of the disabled were also developed. In response to the NPE 1986 suggestion regarding use of educational technology in special education, three video films titled *Dishayen*, *Kahte Sunte Swar* and *Khel Mein Mel* were developed which cover four disability areas, namely orthopaedic, visual, hearing and mental handicap. The NCERT also developed awareness modules for general teachers on education of the hearing impaired children. For further strengthening the IED scheme a handbook for administrators in planning and management of the IED programmes was brought out by the NCERT.

In addition to the above, the NCERT organized a three months training course in Integrated Education for the Disabled which was attended by 19 participants from Bihar, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka Madhya Pradesh, Maharashtra, Tamil Nadu and Uttar Pradesh. The NCERT also undertook a Unicef-assisted project on Integrated Education for the Disabled (IED).

### Education of the Scheduled Castes/Scheduled Tribes

The NCERT completed the study of methods, process, and practice of non-formal education programmes for tribal students and continued with four other research studies on students and student-teachers with SC/ST and non-SC/ST backgrounds and a comparative study of physical facilities and evaluation of pre-matric scholarship scheme. The manuscript of a textbook for tribal children belonging to Gonda tribe of Andhra Pradesh in their dialect and Telugu script was developed. The *Sarora Primer Part II* was disseminated in 120 experimental schools. The Council also organized six orientation programmes, each of seven days' duration, in tribal life and culture and problems of education of the tribal children and non-formal education programmes in tribal areas. Out of these, three programmes were meant for elementary teacher-educators and the rest three for key persons of non-formal education programme.

### Women's Education

The Council undertook one research study on the identification of areas of sex bias in textbook and supplementary readers. Four programmes of five days each were organized in Andhra Pradesh, Mizoram, Rajasthan and Uttar Pradesh in the context of evaluation of language materials with a view to eliminating sex bias. Instructional material developed for non-formal education with the addition of the requisite components for generation of awareness among women in general and empowerment of female instructors in particular were tried out during the year under report. Quantitative and qualitative indicators for the identification of educational backward pockets in terms of girls' education were also finalized and disseminated to the States/Union Territories. The NCERT brought out a publication on 'Image of Women in Curriculum in English'. The manuscript of another publication titled 'Orchestral Harmony' was also developed. During the year 1986-87, 270 books were reviewed from the view-point of values related to sex discrimination.

Besides the above, the third meeting of the Standing Committee on Women's Education was held to take stock of the action taken *vis-a-vis* implications of the NPE, 1986.

### Educational Evaluation

In order to improve the measurement and evaluation procedures in schools, the Council undertook the development of conceptual materials related to educational evaluation, preparation of criterion-referenced tests and training of item writers in different subject areas. The materials developed include test items in Physics, Chemistry, Biology, Mathematics, History, Economics, Geography and Civics for teaching, diagnosis and remediation, items for Mental Ability Tests, unit tests in Physics, Chemistry, Biology and Mathematics for Classes IX and X based on the NCERT textbooks, a brochure entitled 'Open Book Examination—Questions in Economics' and a format for evaluating practical work in Geography. Besides these, a Glossary of Technical Terms in Educational Evaluation was also finalized.

The Council conducted five three/four/five day courses for training item writers in different subject areas and paper-setters of external examinations conducted by different Boards of Secondary Education. In addition to these, the Council also organized three courses for training State-level personnel, for the improvement of external

examinations at the secondary stage and a fourteen-day course on educational evaluation for the staff of educational institutions. In all 333 personnel were trained through these courses.

The NCERT undertook some fresh initiatives of converting the annual course in educational evaluation into the theme of comprehensive continuous evaluation. The examination reform programmes envisaged development and training programmes on the use of non-traditional and not so far fully explored and exploited techniques and procedures of evaluation.

The second level examination for the award of National Talent Search Scholarship was conducted by the NCERT on 11 May 1986 at 30 centres in India. 3,047 students in Class X, selected on the basis of the written tests conducted by the States/Union Territories in October-November 1985, appeared in this test. In all, 680 candidates in general category and 70 candidates in the reserved category for SC/ST children were selected for the award of the NTS scholarships.

The recommendations of the Review Committee on National Talent Search Chaired by Prof. Rais Ahmed along with the NCERT's observations were forwarded to the Ministry of Human Resource Development.

### Educational Survey

Besides continuing with four studies related to the availability of facilities of various kinds in schools, an intensive study of Teaching Aids in middle schools was initiated. Fifth All India Survey was also launched in November 1986 with 30 September 1986 as the base date.

### Technical Support to Navodaya Vidyalayas

The Navodaya Vidyalaya Scheme was envisaged by the Ministry of Human Resource Development to identify talent at the primary stage and nurture them by providing good education through its schools called Navodaya Vidyalayas. With a view to dealing with the work of Navodaya Vidyalayas, a Navodaya Vidyalaya Cell has been established in the NCERT. During 1986-87, the Navodaya Vidyalaya Cell conducted three admission tests for these schools. The first examination conducted for schools at Jhajjar (Haryana) and Amaravati (Maharashtra) was organized in June 1986. The second test was conducted in September 1986 for 81 Navodaya Vidyalayas. The third test was organized for one school at Baghaha-II district,

Champanan in January 1987. The selection test consisted of a verbal test on language and arithmetic carrying a weightage of 20 per cent each and non-verbal test of General Mental Ability with a weightage of 60 per cent. The tests were administered in 19 languages of India. In all, 6,227 students were selected out of 1,21,151 candidates appeared at 1,172 Centres. 4,459 students were selected in the general category. The number of SC and ST students were 1,129 and 639, respectively. There were 4,810 rural students and 1,108 girls selected for the schools.

### **Educational Technology**

Several projects and programmes directed to the utilization of educational technology and methods of distance learning, including the use of radio and television for bringing about qualitative improvement in education and for widening areas to education were undertaken by the Central Institute of Educational Technology (CIET) in collaboration with the State Institutes of Educational Technology (SIETs). Assistance from UNDP/Unesco/Unicef was also utilized for the purposes of equipment, consultancy and training. The CIET undertook five new research studies besides continuing one ongoing research project. The studies focussed on the use of teaching aids for the handicapped children, ETV programmes of INSAT-1, Audio-Radio programmes and distance education. The CIET produced 119 programmes pertaining to software of Audio-Radio tapes on music education, freedom movement, folk tales and humour. The educational films, namely, *Gopal Padne Laga*, *Solar Eclipse* and *Desert Gold* were completed during the year. Three films on 'land and people' and three on west coast are in the making. Besides these two films, 'Eternal Sounds' and 'Desert Gold' were dubbed in Hindi. The CIET produced 139 ETV programmes for children in the age-group 5-8 years, 9-11 years, teachers and others.

The CIET continued the project of developing portraits of national leaders. Various workshops/seminars were organized by the CIET which benefited 246 key personnel in the field. Two Unesco workshops on (i) Strategies and procedures for educational and developmental radio for the disadvantaged and the out-of-school population and (ii) Media material development of the disadvantaged and the out-of-school population were also organized by the CIET. Fifty media experts participated these workshops. The CIET also organized two educational film festivals in Manipur and Delhi, which benefited about 18,500 students and teachers.

### **Educational and Vocational Guidance**

The Council continued its activities in the field of Educational and Vocational Guidance. Two research studies entitled 'A Study of Psychological Characteristics vis-a-vis Educational and Vocational Planning of Scheduled Caste High School Boys and 'Improving Cognitive Functions and Classroom Behaviour of Elementary Students by Contingency Management' were completed during the year under report. Another two studies related to educational and vocational planning and vocational behaviour of students are nearing completion. The Council continued to run its Diploma Course in Educational and Vocational Guidance and organized a three-day seminar-cum-workshop of Resource Persons for orienting vocational teachers in Guidance, a five-day refresher course-cum-production workshop on Research in Guidance and Counselling, a two-day orientation programme on Guidance and Counselling for Principals/Headmasters of Pondicherry, two ten-day enrichment courses on learning and development for elementary and secondary teacher-educators and SIE/SIERT personnel, two workshops of ten days each on the application of behaviour modification technique in schools and a ten-day training course for teacher-educators on identifying and encouraging creative potential in elementary grades. In all, 171 key persons participated in these seminars/workshops.

### **Training of Staff of Schools Maintained by Educationally Backward Minorities**

A 26-day training course for career teachers of educationally backward minorities managed schools was organized. Forty teachers were trained in organization and managing of occupational information service in schools. Their Principals/Managers had already been oriented. For the Managers and Principals of minority managed schools, three seminar-cum-workshops of three days each were organized. Fifty-one Principals/Managers from various States/Union Territories participated in the programme. They were oriented in (i) philosophy and procedures of educational and vocational guidance services in schools and (ii) organizational facilities required for effective functioning of guidance services in schools. With a view to uplift the standard of schools managed by educationally backward minorities in the country, five resource centres are proposed to be set up in the University of Aligarh, Jamia Millia Islamia, Kashmir, Marathwada and Osmania, which would organize training programmes for both high school

and higher secondary school teachers of English, Science and Mathematics.

### Educational Research

The Educational Research and Innovations Committee (ERIC) of the NCERT continued its task of identifying priority areas of research and conducting and sponsoring need-based research projects on different aspects of school education. During 1986-87, nine research studies were completed. Twelve projects were recommended by ERIC sub-committees for financial assistance from ERIC.

Further on the instance of the President, NCERT, a case study of Kerala in the field of education was planned. A research design was developed in a workshop held in January 1987 and the work on Phase I has been started. In the light of the decision of the ERIC to commission researches in the priority areas, four meetings/seminars were organized in the area of vocationalization of education at the +2 stage. These were attended by 610 participants and provided a rich data/information for holding National Seminar-cum-workshop for identifying the thrust areas, problems and issues for developing research designs.

In order to create a pool of competent researchers in the country, the Council organized four research methodology courses which benefited 57 participants. It also continued its scheme of providing financial support for the publication of Ph.D. theses/monographs. Under this scheme 15 publications were brought out and another 11 were selected for providing assistance during the year.

### 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. Several delegations and experts from different countries visited the NCERT during 1986-87. The Council undertook several Unesco-sponsored projects/programmes and played a key role as an Associate Centre of the Asia and Pacific Programme of Educational Innovations for Development (APEID) and as the secretariat of the National Development Group (NDG) for educational innovations.

### Silver Jubilee Celebrations

The National Council of Educational Research and

Training began its Silver Jubilee celebrations on 1 September 1986 with its staff members and school children planting saplings in the NIE Campus. The main Silver Jubilee function was organized in Vigyan Bhawan, New Delhi on 11 September with the Prime Minister inaugurating the function. The Union Minister of Human Resource Development, Shri P.V. Narasimha Rao, presided over the function. The Prime Minister released two commemorative volumes entitled *School Education in India—Present Status and Future Needs* and *25 Years of the NCERT* (an album) on the occasion.

To mark the Silver Jubilee of the NCERT, the Prime Minister conferred National Fellowships on 19 eminent educationists. They were: Mr. Amadou Mahtar M'Bow, Director General, UNESCO, Shri P.V. Narasimha Rao, Shri K.L. Shrimali, Prof. D.S. Kothari, Dr Man Mohan Singh, Prof. M.G.K. Menon, Prof. Raja Ramanna, Prof. Yash Pal, Prof. C.N.R. Rao, Prof. V.V. John, Dr. P.N. Kirpal, Prof. S.V.C. Aiyar, Prof. Rais Ahmed, Prof. Shib K. Mitra, Prof. (Smt) Chitra Naik, Prof. (Smt.) Rajamal P. Davadas, Shri A.R. Dawood, Prof. V.K. R.V. Rao and Prof. D.P. Chattopadhyaya.

The Prime Minister also honoured the two eminent freedom fighters, Prof. N.G. Ranga and Smt. Aruna Asaf Ali on the occasion. He presented them with the NCERT's prestigious publication entitled *India's Struggle for Independence—Visuals and Documents*. The Silver Jubilee lecture was delivered by Prof. Yash Pal, Chairman, University Grants Commission.

The Council also brought out a two-page supplement in selected English and regional language dailies on 11 September 1986. The articles published in the supplement were specially written by eminent educationists. A special issue of the *NCERT Newsletter* containing these articles, was also brought out on the occasion and distributed to the gathering in Vigyan Bhawan. There was an excellent coverage of the Silver Jubilee celebrations in the Press. The AIR and the Doordarshan also brought out special programmes.

The Silver Jubilee was also celebrated in all the four Regional Colleges of Education and Field Offices of the NCERT in the States with full zeal and enthusiasm. A variety of programmes, exhibitions, etc. were organized there on this occasion.

The details of the activities/programmes carried out during 1986-87 by different Departments of the National Institute of Education (NIE) and other constituent Units of the NCERT are reported in the subsequent chapters.

## THREE

## PRE-SCHOOL AND ELEMENTARY EDUCATION

**T**HE task of preparing the guidelines for development of curricula at the primary stage and instructional materials for Classes I and III, was assigned to the Department of Pre-school and Elementary Education (DPSEE) as a part of the Council's responsibility towards the implementation of the NPE, 1986. Research, development and training activities related to early childhood education and non-formal education were the other major activities that continued during the year. The Department continued to act as the central, technical and coordinating agency for all the Unicef-assisted projects in the education sector being implemented in the context of the Programme of Universalization of Elementary Education in different States/Union Territories. Action was also initiated for undertaking a new Unicef-assisted project, integrating and coordinating the various educational projects implemented by different developmental agencies in the States/Union Territories. The project proposal has been approved by MHRD/Unicef. A project document entitled "Area-Intensive Education Project for Human Resource Development" was finalized and circulated to the States/Union Territories for preparing a plan of action.

### Guidelines for Developing Curriculum and Instructional Materials at the Primary Stage

As part of the initial steps for the implementation of the NPE, 1986 the Department undertook the task of preparing Guidelines for the Development of Curriculum at the Primary Stage. The draft guidelines were discussed and approved by the Academic Committee of the NCERT and further revised in the light of recommendations of the committee and the suggestions received from educationists from all over the country. The revised version of the guidelines was brought out in November 1986. These guidelines also include the prototype syllabi in the subject areas of Mother-tongue (or the first language), Mathematics, Environmental Studies, Work Experience and Art Education.

Development of prototype instructional materials (for Classes I and III) based on the new curriculum was also undertaken by the Department. A number of meetings/workshops were organized for developing and finalization of the manuscripts of various textbooks and Teachers' Guides for Classes I and III. The details are mentioned in Table 1.

TABLE 1

<i>Sl.No.</i>	<i>Title of the Programme</i>	<i>Date/Duration</i>	<i>Venue</i>	<i>Number of Participants who Attended the Programme</i>
1.	Meeting of the Working Group of Elementary Education	11.6.1986 (One day)	NIE Campus New Delhi	8
2.	Meeting of the Expert Committee in Hindi	3 to 4 November 1986 (2 days)	NIE Campus New Delhi	2
3.	Meeting for the Development of Instructional Material for Classes I and III Mathematics	7 to 12 November 1986 (6 days)	RCE Bhopal	4
4.	Meeting for the Development of Instructional Materials for Class III (Social Studies for Sikkim State	11 to 13 November 1986 (3 days)	NIE Campus New Delhi	6

<i>Sl. No.</i>	<i>Title of the Programme</i>	<i>Date/Duration</i>	<i>Venue</i>	<i>Number of Participants who Attended the Programme</i>
5.	Meeting of the Review Committee for Textbooks (Mathematics for Class I)	12 to 15 November 1986 (4 days)	NIE Campus New Delhi	13
6.	Meeting for Development of Instructional Materials for Class III Social Studies (KVS)	14 to 21 November 1986 (8 days)	NIE Campus New Delhi	2
7.	Meeting of the Authors of Class I Hindi Textbooks	17 to 21 November 1986 (5 days)	NIE Campus New Delhi	4
8.	Meeting of the Committee for Reviewing the Draft Manuscript of Teachers' Handbook and Activity Book, SCERT, Pune	19 to 26 November 1986 (8 days)	SCERT, Pune	9
9.	Expert Committee Meeting for Reviewing manuscripts of Textbook in Environmental Studies/Science for Class III	24 to 28 November 1986 (5 days)	NIE Campus New Delhi	10
10.	Meeting of the Expert Committee Reviewing Class I Textbooks in Hindi	27 to 28 November 1986 (2 days)	NIE Campus New Delhi	4
11.	Meeting of the Experts to Develop Curriculum Guidelines in Health Education, Physical Education at the Primary Stage	1 to 5 December 1986 (5 days)	NIE Campus New Delhi	5
12.	Meeting of the Review Committee to Review the Manuscripts of Class III (Mathematics)	19 to 23 December 1986 (5 days)	NIE Campus New Delhi	15
13.	Workshop for the Development of Teachers' Guide for Work Experience for Classes I and II	20 to 27 December 1986 (8 days)	NIE Campus New Delhi	7
14.	Finalization of Manuscripts of Instructional Packages Including Textbooks for Classes I, III, and VI: Meeting of Experts, Teachers and Graphic Designers	10 to 14 January 1987 (5 days)	NIE Campus New Delhi	29
15.	Workshop for Preparation of Hindi Version of the Textbooks in Environmental Studies for Classes I and III	7 to 14 March 1987 (8 days)	Allahabad	13
<b>Total Participants :</b>				<b>141</b>

By the end of March 1987, the manuscripts of 19 titles of Textbooks and Teachers' Guides in the subject areas of Hindi, Mathematics, Environmental Studies, Work Experience and Art Education were finalized. The following is the list of Instructional Material developed :

<i>S.No.</i>	<i>Title</i>	<i>Class</i>
1.	Kiran Bharti	I
2.	Kiran Bharti	III
3.	Let Us Learn Mathematics — Book One (English version)	I

<i>S. No.</i>	<i>Title</i>	<i>Class</i>
4.	Aao Ganit Seekhain I (Hindi version)	I
5.	Let us Learn Mathematics — Book Three (English Version)	III
6.	Aao Ganit Seekhain-III	I
7.	Teachers' Guide : Environmental Studies (English version)	I
8.	Parivesh Adhyan-Adhyapak Darshika	I
9.	Environmental Studies-I (Our State Sikkim) (English version)	III

S. No.	Title	Class
10.	Exploring Environmental Book-I (English version)	III
11.	Pariveshya Anivenshan Pustak I (Hindi version)	III
12.	Handbook for Teachers in Work Experience (English version)	I and II
13.	Kariyanubhav Adhyapak Darshika	I and II
14.	Handbook for Teachers in Work Experience (English version)	III
15.	Karyanubhav Adhyapak Darshika (Hindi version)	III
16.	Teachers 'Handbook in Art Education (English version)	I
17.	Kala Shiksha Ki Shikshak Pustika (Hindi version)	I
18.	Teachers' Handbook in Art Education (English version)	III
19.	Kala Shiksha Ki Shikshak Pustika (Hindi version)	III

The Department continued to assist the State agencies in the area of development of curriculum and instructional materials. The guidelines for developing curriculum were also supplied to the State agencies, for their reference and guidance or for adoption/adaptation.

### Early Childhood Education (ECE)

Activities related to development of instructional material (print and non-print) for pre-school teachers and teacher-educators and orientation of pre-school teachers,

teacher-educators and supervisory personnel associated with the early childhood education continued during the year under report. These activities were carried out under two Unicef-assisted projects, viz. Early Childhood Education (ECE) and Children's Media Laboratory (CML).

#### (a) Research

During 1986 two research projects were initiated at the NCERT level as per details in Table 2.

The home-based study is an alternative strategy to early childhood stimulation. The assumption is that by developing the required confidence in the family (mothers/grand mothers/siblings) to take the role of educator, there is possibility that child learns more. The intervention approach adopted is to develop a home-based instructional package to promote the awareness of the parents as potential educators and to develop the necessary skills in them. The package covers the areas of health, nutrition and education of children in the age-group 0-6 years. The study is being conducted in tribal and urban areas of Orissa.

The 'child-to-child' programme essentially involves working with school-age children so as to make them understand simple rules for healthy living, thereby not only helping children improve themselves but also their younger brothers and sisters.

The concept is based on the conviction that the older children can very effectively play the role of educators, specially in the homes where the parents are uneducated and poor.

It is, therefore, important to train and equip these children not only with appropriate knowledge but also with the methodology of effective imparting of the message in the family and the community.

TABLE 2

Sl. No.	Name of the Project	Duration of the Project	Principal Investigator	Date of Commencement	Date of Completion	Remarks
1.	A Tryout of a Home based Programme in Child Development	3 years	Prof. R. Murli-dharan	December 1986	December 1989	In the tribal and urban slum areas of Orissa
2.	Child to Child Programme	3 years	Prof. R. Murli-dharan	January 1986	January 1989	Project in collaboration with MCD



Keeping this in view, the 'child-to-child' programme was initiated in the Municipal Corporation Primary Schools of Delhi in January 1986 and is now in operation in a chain of 32 Municipal Corporation Primary Schools. The programme involves primary school children and teachers of Classes IV and V and focusses on introducing the 'child-to-child' approach in the general teaching-learning of the primary schools. The components of the programme include Health, Hygiene and Nutrition which have been especially selected from within the existing school syllabus of Classes IV and V.

Since the onset of the programme in January 1986, the 'child-to-child' project has evolved innovative methods of teacher training (workshops/orientation programmes), effective instructional material (a set of 14 activity sheets related to the areas of Health, Hygiene and Nutrition) and relevant strategies for implementation, monitoring, supervision and education.

### (b) Development and Training

The ten States (Bihar, Maharashtra, Orissa, Tamil Nadu, Karnataka, Rajasthan, Uttar Pradesh, Madhya Pradesh, Nagaland, and Goa, Daman and Diu) participating in the ECE programme are at various stages of progress. During 1986, teacher-educators of Nagaland, Goa, Daman and Diu and new members of ECE Cells of SIEs/SCERTs of other eight States were oriented in the concepts and techniques

of Early Childhood Education. Twelve teacher-educators of the States in the third phase of the project were oriented in the use of play-way methods and activity approach for Class I of the primary schools to which the ECE centres are attached. Meetings/workshops/orientation courses organized are reported in Table 3.

Under the Children's Media Laboratory (CML) the dissemination of the already developed audio programmes in Hindi was started. The audio tapes are being duplicated for broadcast by different stations of the All India Radio. Twenty more audio scripts in Hindi and Assamese were prepared.

Close collaboration with the SIE/SCERT is under way at all levels of organization; for the orientation of supervisory staff, heads of schools, workshops for training teachers in different aspects like puppetry, toy-making and the like as well as for parents' education programmes wherein the local community is oriented about the importance and coverage of early childhood education. The NCERT faculty assists the State teams in organizing the workshops, courses, etc.

### (c) Early Childhood Education Project in Schools of Municipal Corporation of Delhi

The Early Childhood Education Project has been implemented in ten schools of MCD by the Department. During the period under report a 10-day refresher course

TABLE 3

S.No.	Title	Dates/Duration	Venue	Number of Participants Attended
1.	Orientation Course for Class I Teachers of MCD Schools on Play-way Method	10 days	MCD Primary School, Bhimnagari	41
2.	Workshop on Development of Audio Scripts in Marathi (12)	12 to 21 April 1986	SCERT, Pune	25
3.	National Seminar on Children's Literature	2 to 4 December 1986 (3 days)	NIE Artists, Writers, Publishers, Illustrators	27
4.	Development of Audio Scripts for Parents (10)	throughout the year	Commissioned	15
5.	Regional Workshop on Children's Books	16 to 25 June 1986 (10 days)	SIE, Udaipur	19 Representatives from Hindi speaking States.
				Total : 127

for Nursery Teachers of project schools was organized to provide them an insight in working with children under their own set-up. Twenty-two teachers drawn from project schools and one supervisor of MCD participated in the course. It was all followed by a ten-day orientation programme for 28 Class I teachers of MCD where the teachers were trained in the play-way method and activity approach so as to prepare them for smooth transition from Nursery to Primary classes.

*(d) National Workshop on Toy-making*

In order to develop an awareness among teachers about the importance of educational toys and games and the play-way method of instruction at pre-school and early primary stages, a five-day National Workshop on toy-making was organized. 'Toys to Develop Science Concepts and for Fostering Sensory Development' was the main theme of the workshop. The workshop was attended by 16 pre-school and primary school teachers who were the first prize-winners at the State-level toy-making competitions organized by the Department in Collaboration with Field Advisers of the NCERT.

During the workshop a two-day seminar on Educational Toys for Young Children was also organized in which manufacturers of toys were invited. The objective was to motivate manufacturers to produce more toys on the ideas given by teachers and also to identify ways in which the NCERT and toy manufacturers can collaborate cash awards for the best toys developed by teachers were announced by

the All India Toy Manufacturers Association (AITMA), the Educators and Manufacturers Association (EDMA) and National Association for Child Education and Development (NACED).

**Non-formal Education Programme**

The Department continued its research and development activities related to non-formal education and community education programmes and training/orientation of personnel involved in these programmes. The major activities carried out include the following.

*Support to Centrally Sponsored NFE Programme Implemented by the Government of India*

The Department has been involved in various activities related to research, development of prototype material and orientation of personnel under this programme.

*(a) Research:* Two new research projects were started during 1986 and work on the third project, started in 1985, continued. These are mentioned in Table 4.

*(b) Development and Training :* Activities related to development of instructional material, orientation of personnel involved in NFE programmes were continued during the period under report. The details of meetings/workshops/working meetings/orientation programmes organized are given in Table 5.

**TABLE 4**

<i>Sl. No.</i>	<i>Name of the Project</i>	<i>Date of Commencement</i>	<i>Expected Date of Completion</i>	<i>Principal Investigator</i>
1.	Preparation of Standardized Tools and Techniques for Evaluation of Children's Achievement in NFE Centres (on-going)	March 1986	June 1986	Dr. Neerja Shukla
2.	A Study of Administrative Structures of NFE and the Scheme of Supervision and Monitoring (ERIC Project)	March 1986	—	Dr S.R. Arora
3.	An Evaluation Study of Academic Aspects of Non-formal Education in Nine Educationally Backward States	March 1985	March 1987	Dr K.G. Rastogi Dr N.K. Ambasht Dr. S.R. Arora

TABLE 5

Sl. No.	Title of the Programme	Dates/Duration	Venue	Number of Participants Attended
1.	Development of Instructional Material in Urdu	2 to 6 September 1986 (4 days) 12 to 21 January 1987 (10 days)	NIE Campus	14
2.	Workshop for the Development of Format of Teachers' Handbook in Work Experience for Classes I, II and III	1 to 5 December 1986 (5 days)	New Delhi	6
3.	Workshop for the Development of Teachers' Guide and Workbook for the Science book <i>Jeevan Aur Vigyan</i> -Part III	6 to 13 Dec. 1986 (8 days)	Gujarat	8
4.	Development of NFE Instructional Material for Middle Level (Mathematics-Book I)	8 to 12 Sept., 1986 (5 days)	NIE Campus	11
5.	Workshop for the Development of Teachers' Guide and Workbook for NFE Language Base <i>Bhasha Suman</i>	3 to 10 March 1987 (8 days)	New Delhi	9
6.	Training Programme for the Tilonia Group of NFE Teachers	10 November 1986 (One day)		50
7.	Orientation Programme for the NFE Resource Persons from the States and Union Territories (Primary Level)	16 to 20 February 1987 (5 days)		35
8.	Training Programme for NFE Instructors from Jammu	9 to 13 March 1987 (5 days)		40
9.	Orientation Programme for the NFE Functionaries from Voluntary Organizations	31 March to 2 April 1987 (3 days)		30
10.	Group Meeting on Developmental Strategies and Material for Training/Orientation of NFE Instructors with regard to Tasks/Jobs Performed by them	22 to 24 October 1986 (3 days)		10
Total :				201

The Department brought out eight titles in the area of Natural Sciences, Social Science, Mathematics and Language. In the course of development of materials about 200 experts from 13 States/Union Territories were trained following integrated approach to teaching and learning. The States were also helped in the process of developing similar materials.

For the orientation of NFE functionaries of States and

Resource Persons from Voluntary Agencies the Department organized five orientation programmes. About 165 persons participated in these programmes.

The NFE film 'Gopal Padhney Laga' was completed and released during this period. The film aims to create awareness about the needs and functioning of NFE programmes.

A two-day Annual Conference was also organized in

which officers incharge of NFE programmes in States and representatives of voluntary agencies participated. Strategies for implementation of NFE programmes recommended in the light of NPE, 1986 were discussed in detail in this conference.

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

The specific objectives of the Unicef-assisted project "Comprehensive Access to Primary Education (CAPE)" are developing non-formal approach of education and evolving problem-centred work-based decentralized curricula and learning materials relevant to the needs and

life situations of diverse groups of children. The project is being implemented in 17 States and one Union Territory.

*Development and training:* Besides providing technical assistance to the participating States in the planning, management, monitoring and evaluation of the project activities, the project team organized 30 programmes related to development of material in literacy, numeracy and problem/situation based environmental studies. Forty-nine persons associated with the project participated in these programmes. The details of the programmes conducted are mentioned in Table 6.

**TABLE 6**

Title of the Programme	Duration/Date	Venue	Number of Participants
Workshop for Reviewing the Workbook in Hindi	14 to 17 April 1986 (4 days)	NIE Campus	1
Workshop of Experts for Preparing Workbook Related to Learning Materials in Hindi	28 April to 2 May 1986 (5 days)	NIE Campus	4
Workshop for Reviewing Workbook in Hindi	22 to 26 June 1986 (5 days)	NIE Campus	1
Workshop of Experts for Developing Learning Materials in Hindi	21 to 25 July 1986 (5 days)	NIE Campus	4
Development of Learning Episodes in Hindi for Level II	25 to 28 August 1986 (4 days)	NIE Campus	5
Development of Learning Materials in Hindi	30 August to 2 September 1986 (4 days)	NIE Campus	1
Workshop for Finalization of Learning Materials Related to EVS for Level I in Hindi	16 to 22 September 1986 (7 days)	NIE Campus	5
Workshop for Finalizing Learning Materials for Level I	9 to 16 October 1986 (8 days)	NIE Campus	6
Workshop for Finalizing Learning Materials in Hindi	8 to 10 December 1986 (3 days)	NIE Campus	6
Workshop for Finalization of Learning Materials in Hindi	24 to 31 December 1986 (8 days)	NIE Campus	1
Working Group and Meeting for the Development and Finalization of Outlines of Workshop in Urdu	10 to 12 September 1986 (3 days)	NIE Campus	7
Workshop for Finalizing Literacy materials in Urdu and Numeracy Materials Developed by SIEs Srinagar and Jammu	5 to 9 May 1986 (5 days)	Kud Distt. Jammu	25
Workshop for Finalization of Literacy Materials in Urdu	19 to 25 May 1986 (7 days)	NIE Campus	3
Finalization of Literacy Materials in Urdu for Level I	5 to 7 and 11 to 13 August 1986 (6 days)	NIE Campus	2

<i>Title of the Programme</i>	<i>Duration/Date</i>	<i>Venue</i>	<i>No of Participants</i>
Working Group Meeting of Experts for Refinement of CAPE Learning Materials in Urdu of Jammu and Kashmir	9 to 11 July 1986 (3 days)	NIE Campus	2
Workshop for Finalizing Learning Materials Related to Numeracy	23 to 27 June 1986 (5 days)	NIE Campus	14
Meeting of the Experts to Finalize Numeracy Materials Related to Level I and II	12 to 14 November 1986 (3 days)	NIE Campus	1
Development of Numeracy Materials in Mizoram	25 to 29 August 1986 (5 days)	SCERT Shillong	6
Meeting of Experts for Reviewing and Finalizing Learning Episodes on Childhood Disabilities	18 January 1986 (one day)	NIE Campus	1
Workshop for Development and Adaptation of Numeracy Materials in Telugu	3 to 7 October 1986 (5 days)	SCERT Hyderabad	13
Training Course on the Methodology of Developing Test Items Based on Learning Episodes	28 April to 2 May 1986 (5 days)	NIE Campus	14
Meeting for Developing Curriculum Framework Based on Learning Materials/Episodes Developed by SCERT Patna/Udaipur	2 to 6 June 1986 (5 days)	NIE Campus	5
Meeting for Developing Curriculum Framework Level on Learning Materials	16 to 27 June 1986 (12 days)	NIE Campus	3
Orientation Course for RDRC Team Members on the Methodology of Training Facilitation	1 to 4 July 1986 (4 days)	NIE Campus	1
Meeting of Coordinators to Finalize the Annual Plan of Action, 1987	10 to 12 November 1986 (3 days)	NIE Campus	18

In addition to the above, orientation programmes on the methodology of developing test items for the question bank were also organized. Assistance and guidance for development of learning episodes in literacy, numeracy, environmental studies was given to State teams of Andhra Pradesh, Haryana, Jammu and Kashmir, Madhya Pradesh, Meghalaya, Mizoram, Rajasthan and Uttar Pradesh. The Central team also assisted SCERTs/SIEs of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh in the training programmes for facilitators. Data of about 175 learning centres and facilitators and base line data of learners from 134 centres under the CAPE project were collected.

Learning materials developed under the project have also been supplied to three voluntary organizations for use in the NFE. The Night School Centres are run by these agencies. Requirements of other voluntary organizations are also being met.

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

The Unicef-assisted project 'Developmental Activities in Community Education and Participation (DACEP)' aims at developing programmes for meeting the educational needs of groups that are partially or totally deprived of any access to education and also at testing whether school could extend its activities to community at large and become a real catalytic agent for social change. During the year, the project was implemented in 19 States and one Union Territory. About 82 community education centres functioned under the project. Fifty-seven centres had an enrolment of 6,276 (1,356 in the age-group 3-6 years, 1,677 in the age-group 6-14 years and 3,216 in the age-group 15-35 years). A few villages achieved a hundred per cent literacy while some others did not have any child in the age-group 6-14 years outside the formal school.

*Development and training* : Seventy programmes of orientation, internship training, Workshops, etc. were organized by 14 participating States. More than 40 titles were developed and printed during the year. At the headquarters level three programmes including two Regional Conferences (one each at Udaipur and Madras) were organized. The details of meetings/conferences/programmes organized are given in Table 7.

health education and environmental sanitation continued under the on-going projects.

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

The UNICEF-assisted project "Primary Education Curriculum Renewal (PECR)" was started with the objectives to help States to develop innovative curricula to meet the needs of different groups of children and to make the

**TABLE 7**

S. No.	Title of the Programme	Duration/Dates	Venue	Number of Participants Attended
1.	Meeting at the NCERT to Finalise the Chapters of Internal Evaluation and Tabulation, etc.	27 to 30 May 1986 (4 days)	NIE Campus New Delhi	2
2.	Regional Orientation Course held at Udaipur	15 to 17 July 1986 (3 days)	Udaipur	41
3.	Regional Conference of Project Coordinators etc. at Madras	11 to 13 November 1986 (3 days)	Madras	53
<b>Total :</b>				<b>96</b>

A Status report on the progress of the project (as in June 1985) was also brought out. Project teams from Punjab, Assam, Uttar Pradesh and Jammu visited the headquarters for discussion and finalization of plans. Thirteen States submitted the reports of internal evaluation which are in the process of analysis at the NCERT level.

### **Renewal of Primary Education**

Efforts to improve the quality of curriculum at the primary stage and make it relevant were continued. Further, support activities such as development of curriculum and instructional materials related to nutrition,

existing primary education more meaningful by gradually infusing these innovative ideas, tested under the project, into the primary school curriculum. Activities related to the renewal of curriculum, development of instructional materials and orientation of personnel involved in the project were accorded due priority. The details of meetings/workshops/working group meetings/orientation programmes organized are mentioned in Table 8.

**TABLE 8**

S.No.	Title of the Programme	Dates/Duration	Venue	No. of Participants
1.	Orientation for SIE/SCERT Experts in Pupil Evaluation in Creative Expression	12 to 19 June 1986	Madras	12
2.	Workshop for Development of Maths Kit	7-12 July 1986	Ahmedabad	15
3.	Workshop on Study of Vocabulary in Hindi Textbooks in project Schools	8 August 1986	NIE Campus	15

Sl. No.	Title of the Programme	Dates/Duration	Venue	Number of Participants
4.	Working Group-Meeting held at NIE under PECR	6 to 8 October 1986	NIE Campus	2
5.	Workshop for Reviewing the Textbooks of Social Studies	16 to 25 October 1986 (10 days)	Sikkim	1
6.	Workshop on Study of Vocabulary used in Hindi Textbooks of PECR Project	25 to 29 October 1986 (5 days)	Jaisalmer	28
7.	Project Coordinators Meeting for Plan Finalization	5 to 7 November 1986 (3 days)	NIE Campus	10
8.	Meeting to Study Vocabulary in Hindi Text-book of PECR Project	5 to 9 January 1986 (5 days)	Porbandar	16
Total :				99

Besides monitoring and coordinating the project activities the PECR group provided assistance in developing curricula and instructional materials to the States/Union Territories viz. Sikkim, Rajasthan, Haryana, Jammu and Kashmir, etc. Orientation Programme of Key-persons in the area of pupil evaluation in Creative Expression was also continued. A Workshop was also conducted for preparing the activity book for Creative Expression.

An interim report of study entitled "Study of Enrolment, Retention, Stagnation and Pupil Achievement" was brought out in July 1986 and circulated to the States Union Territories for reference and action. Another interim report of the "Study of Vocabulary Used in Hindi Textbooks Prepared under Project PECR" was prepared which was based on the analysis of 11 textbooks.

The PECR group brought out a mimeographed copy of the brochure entitled "Procedures and Techniques of Pupil Evaluation in Creative Expression—A Guideline". A manual on the use of Mathematics Kit was also developed in collaboration with Vikram Sarabhai Community Science Centre, Ahmedabad for supply to the States of Haryana, Maharashtra, Orissa, Tamil Nadu and Tripura where the kits had been supplied earlier.

#### *Implementation of PECR in States/Union Territories*

The Project PECR is in operation in 24 States and Union Territories. The project was at different stages of progress. Out of the 24 States/Union Territories, the cycle of the activities was completed in 10 States/Union Territories in 1986. The States Continued to take up Orientation

Programme of Teachers and other functionaries involved in the project. As per the reports available, 353 programmes of orientation, workshops and meetings were held in different States/Union Territories. In these programmes, 6,318 participants were involved. The participants included the project school teachers, teacher-educators of Teachers' Training Institutions, supervisory staff, BDO's, etc.

The States also continued to develop instructional materials of various kinds to be used in the project schools. About 130 titles were developed/printed by the States. The materials that were introduced in schools were also tried out in some selected schools.

The States' textbook agencies continued to take steps for wider infusion of the instructional materials in the State system. The State of Rajasthan has adopted the curricula prepared under the project and has introduced textbooks in various subjects in the State school system. Other States like Tamil Nadu, Orissa, Maharashtra, Sikkim, Nagaland, Andaman and Nicobar Islands, Himachal Pradesh, Haryana have already introduced, wholly or partially, materials prepared under the project PECR.

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

The Project on "Nutrition, Health Education and Environmental Sanitation (NHEES)" aims at developing and testing packages of instructional materials for primary school children, developing training materials for teachers and devising strategies for conveying messages related to these areas to the members of community, especially girls



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and women. During the year, the project was implemented in approximately 1,000 schools in 10 States, i.e. Andhra Pradesh, Maharashtra, Assam, Bihar, Karnataka, Madhya Pradesh, Mizoram, Orissa, Rajasthan and Uttar Pradesh

During 1986 the major activities undertaken at the headquarters were as follows :

(a) *Research* : An evaluation research study was initiated as per details mentioned below :

(c) *Implementation in the States/Union Territories*: Major activities undertaken by different States during the period under report were in the area of development of instructional packages for Classes I to V. They were : development of charts; posters and other materials for the Community Contact Programmes; orientation of teachers for introduction of instructional material and other aspects of the project; workshops for Community Contact Programmes in 25 selected villages per State and workshops

Title of the Project	Date of Commencement	Expected Date of Completion	Principal Investigator
Study of Pupil Achievement under Project NHEES	May 1986	May 1986	Mrs Shukla Bhattacharya

(b) *Development* : Under developmental programmes five meetings were organized for the finalization of Plan of Action for 1987, development of test items in nutrition, health education and environmental sanitation and finalization of research proposal mentioned above. The Project Coordinators in States participated in these meetings. The details of meetings are provided in Table 9.

for consolidation of data in respect of the Community Contact Programme.

In all, 42 workshops and training courses were conducted. The total number of participants trained in these workshops/training courses were 2,332. 112 publications, including textbooks, teachers' guides, charts, folders and questionnaires were developed and printed by the

TABLE 9

Sl. No.	Title of the Programme	Duration/Dates	Venue	Number of Participants Attended
1.	Meeting of Project Coordinators of Uttar Pradesh for finalization of Plan of Action, 1987	12 February 1986 (One day)	NIE Campus	1
2.	Meeting with Project coordinators of Assam for finalizing the Plan of Action, 1987	15 February 1986 (One day)	NIE Campus	1
3.	Working Group Meeting for Developing Test items in NHEES for Classes I-V	5 to 9 May 1986 (5 days)	NIE Campus	13
4.	Working Group Meeting for Finalizing the Test items	25 to 29 August 1986 (5 days)	NIE Campus	10
5.	Meeting of Project Coordinators of States for Finalizing Research Proposal for Pupil Evaluation and Tools for Obtaining Pupil Information	13 to 17 September 1986 (5 days)	NIE Campus	21
			Total :	46

States. Door-to-door visits by the teachers to impart messages related to nutrition, health education and environmental sanitation were also undertaken.

Most of the States completed introduction of instructional materials in Classes I to V. Extensive Community Contact Programme in selected villages has also been completed by all States. The States have initiated action for the wider infusion of the experiences of the project into the State system of primary education.

The S.V. University, Tirupati completed evaluation of the project during 1986 and has brought out a comprehensive report entitled "Report on Evaluation of NHEES Curricular Package".

### Other Activities

The Office of Dean Academic continued to function from the Department. Its most important assignment during the year was coordination of the activities of the NCERT relating to the development of Guidelines and Syllabi in various subject areas in the light of NPE, 1986. A meeting of the Academic Committee of the NCERT was especially convened to discuss the draft Guidelines and Syllabi developed by different departments of the NCERT. Curriculum experts from States/Union Territories were invited to participate in the meeting as special invitees. The revised Guidelines and Syllabi were disseminated to the

States/Union Territories for their guidance and reference.

Another meeting of the Academic Committee was organized to discuss and approve the academic programmes of the NCERT for the year 1987-88.

The Office of Dean Academic also attended to all the communications from the MHRD relating to questions raised in the Parliament, implementation of the NPE, miscellaneous queries from within country and abroad.

At the instance of the MHRD the Dean's office prepared the draft questionnaire for conducting survey under Operation Black Board (OB) Scheme.

Another assignment from the MHRD was "An Indepth Analysis of Selected Innovations in Education" under which eight publications on innovative/experimental projects brought out by the NCERT at different times were examined. The write-ups in these publications were examined with a view to finding out the impact of these innovations, their relevance to universalization of elementary education, departure from traditional routine school practices and potential for adoption for a larger population. In the final analysis 25 innovative projects were selected for an indepth study. A detailed report of the study was submitted to the MHRD.

### Publications

The publications brought out by the DPSEE during 1986-87 are mentioned in Table 10.

TABLE 10

S. No.	Title	Month of Publication	Number of Copies
<i>Early Childhood Education</i>			
1.	10 Conversation Charts (on 10 aspects of daily life)	April 1986	3,000 English 2,000 Hindi
2.	Two Booklets on ECE Instructional Material (a) Personal and Social Development (b) Development of Creativity among Young Children	May 1986 May 1986	3,000 3,000
3.	Five Audio tapes	September/October 1986	
<i>Non-Formal Education</i>			
4.	Development of Materials for Orientation of Resource Persons Working in Voluntary Organisations	May 1986 (Cyclostyled)	—

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S.No.	Title	Month of Publication	Number of Copies
5.	Development of Job-oriented Model for Training of NFE Instructors	February 1987 (Cyclostyled)	—
6.	Bhasha Suman-Part II	July 1987	5,000
7.	Nine Reports of Empirical Study of Evaluation in Nine Educationally Backward States	July 1987	—
8.	Nine Reports of Rational Study of Evaluation in Nine Educationally Backward States	July 1987	—
9.	One National Report on Evaluation of Academic aspects of NFE in Nine Educationally Backward States	July 1987	—
10.	Padho Aur Badho-Book III		Under print
11.	Guide to Padho Aur Badho-Book III		Under Print
12.	Padho Aur Badho-Book IV		Ready for Caligraphy
13.	Guide to Padho Aur Badho-Book IV		Ready for Caligraphy
14.	NFE Bulletin Volume 1 Volume 2 Volume 3 Volume 4	June 1986 September 1986 December 1986 March 1987	Ready for Caligraphy Ready for Caligraphy Ready for Caligraphy Ready for Caligraphy
15.	Module 2-10 Kuch Aur Sanuakya Akshar Padhen Aur Seikhain (Hindi)	April 1986	60,000
16.	Module 3-1 Aon Seikhain Nautak ki Sankhya Aur Unke Jor Ghatav  <i>Nutrition, Health Education And Environmental Sanitation</i>	January 1986	30,000
17.	Nutrition, Health Education and Environmental Sanitation Status and Implementation-1975-84	January 1987	3,000

Besides the above-mentioned publications, "Personal and Social Development and Developing Creativity among Young Children" was also published and distributed to the teacher-educators and teachers, respectively, under the ECE.

#### Consultancy

The Department provided consultancy in the area of

ECE to the following institutes/agencies:

1. College of Home Science, Pune—Incorporation of ECE components in the Postgraduate Diploma Course.
2. NIPCCD—pre-school education
3. ICMR—research study in growth
4. Delegation from Kampuchea—acquainted the team with the ECE programmes in India.

## FOUR

## EDUCATION IN SOCIAL SCIENCES AND HUMANITIES

**R**ESearch and experimental studies related to formulation and implementation of the curriculum at the school stage, development of syllabi, textbooks and other instructional materials in different subject areas related to social sciences and humanities, training of teacher-educators, teachers and other personnel engaged in the implementation of curriculum at the school stage and organization of extension and dissemination activities in collaboration with State/Union Territory level agencies and institutions have been some of the major activities of the Department of Education in Social Sciences and Humanities (DESSH). The Department directed its efforts towards development of new curricula, syllabi and instructional materials in pursuance of the National Policy on Education and Programme of Action (1986). The Department has also been engaged in the implementation of certain special projects and has been acting as the central technical coordinating and monitoring agency for the implementation of the National Population Education Project.

A significant achievement during the year under report has been the completion of a UNESCO project, the report of which has been brought out under the title "Education for International Understanding and Human Rights: Sample Curriculum and Teaching Units".

Another important contribution of the Department has been the development of guidelines for developing syllabi, detailed syllabi at the upper primary, secondary and + 2 stages, resource material for massive teacher orientation programme, exemplar material in core curricular areas and the experimental edition of "Resource Book of Physical Education".

### Development of Syllabi

The NCERT developed the guidelines for developing syllabi and detailed syllabi for the upper primary and secondary stages in the following areas :

1. Languages which include Hindi as mother tongue (primary), Hindi as mother tongue (upper primary and secondary), Hindi as the second language, English and Sanskrit
2. Social sciences which include History, Geography, Civics and Economics
3. Arts
4. Health and Physical Education.

Syllabi for the +2 stage in the area of History, Political Science, Geography, Economics and Sociology were also developed.

### Development of Instructional Materials

(a) *Resource Material for the National Scheme of In-Service Training of School Teachers*

The NCERT brought out three volumes, namely, Resource Material Part I (General), Resource Material Part-II (Primary), and Resource Material Part-II (Secondary), for distribution among the participant teachers in the National Scheme of Inservice Training of School Teachers. The DESSH contributed modules to these volumes in the following areas :

1. Promotion of National Integration
2. Value Education
3. Health and Physical Education
4. Art Education
5. Population Education
6. Environmental Studies (Primary)
7. Teaching and Learning of English (Primary)
8. Prathmik Kakshaon Men Matra Bhasha (Pratham Bhasha) Shikshan
9. Population Education (Secondary)
10. Teaching of Social Sciences (Secondary)
11. Teaching and Learning of English (Secondary)

12. Dwitiya Bhasha Ke Roop Men Hindi Ka Shikshan (Secondary)

(b) Exemplar Material on Core Curricular Areas

The Programme of Action, 1986 entrusted the NCERT with the responsibility of bringing out exemplar instructional packages on ten core curricular areas. Eleven instructional packages on the following core areas were :

1. Beautiful Things Around Us
2. Our Struggle for Freedom
3. Respecting Our National Symbols
4. Celebrating Our National Festivals
5. Understanding Our National Goals

6. Natural Resources and Their Conservation
7. Saving the Environment from Pollution
8. Women's Role in Indian Struggle for Independence
9. Removal of Sexist Bias
10. Value, Beliefs and the Family
11. Marriage and Family

These packages are being brought out by the NCERT in one volume for distribution to various State agencies. It is proposed that the packages will be subsequently brought out in separate booklets with illustrations.

**Development of Textbooks and Supplementary Readers**  
Textual Material developed during 1986-87 is given below.

Sl.No.	Title	Class	Remarks
1.	Social Sciences Environmental Studies Part-I (Hindi and English versions)	III	
2.	History Textbook in History (Hindi and English versions)	VI	
3.	Civics Textbook in Civics (Hindi and English versions)	VI	
4.	Geography Textbook in Geography (Hindi and English versions)	VI	
5.	Sociology Indian Society	XII	
6.	Economics 1. National Income Accountancy 2. An Introduction to Economic Theory	XII XII	
7.	Hindi (as the mother tongue) Kishore Bharati-Part I Sankshipt Ramayan	VI Revised (in press)	
8.	English Reading is Fun Textbook-I Reading is Fun Work Book-I Reading is Fun Supplementary Reader-I Reading is Fun Textbook-II The Web of Our Life (Core Course)	VI VI VI VI XI	For Navodaya Vidyalayas
	Reading to Learn (a) Mr Muggler and Mr Stripes (b) Everest Where the Snow Never Melts (c) Where is My Hump? (d) The Ship of the Desert		

Sl. No.	Title	Class	Remarks
	New Dawn Readers Textbooks II and III New Dawn Supplementary Reader II New Dawn Work Book II		Sent to press
9.	Sanskrit Textbooks	V and VI	Revised according to NPE, 1986
10.	Urdu Textbooks	VI, IX and XII	Prescribed by Jamia Millia Islamia, New Delhi
	Urdu Textbook Other Urdu Textbooks	IX and XI I, II, III and XII	Prescribed by the CBSE In Press

In addition to the above-mentioned material, Rainbow Series, a new textual material for Class-VI is being developed. The Council has also undertaken the work of the development of Sanskrit Sahitya Sandarbh Kosh, Bal Sanskrit Kosh and Sukti Saurabham. An audio material of Shlokas with their definitions for Class XII was prepared and released. Urdu textbooks for Classes IV, V, VII, X and XII have been finalized for printing.

### Teaching of India's Freedom Movement in Schools

The Ministry of Education and Culture, Government of India, had set up a working group to develop guidelines for the teaching of India's Freedom Movement in schools. The NCERT brought out its report titled "Report of the Working Group on Teaching of India's Freedom Movement in Schools". The DESSH has incorporated the relevant recommendations in their curricular and textual programmes.

### Resource Book of Physical Education and Handbook for Teachers on Health Education

In pursuance of Programme of Action (POA) 1986, an experimental edition of Resource book of Physical Education was developed in a workshop attended by physical education teachers, coaches, physical education directors and teacher-educators. The manuscript of an experimental edition of Handbook on Health Education was prepared in the DESSH.

### Curriculum Coordination : National Curriculum Framework for Higher Secondary Education

The NCERT had brought out a document entitled "National Curriculum Framework for Primary and Secondary Education in Early 1986". The need for developing National Curriculum Framework for Higher Secondary Education was expressed in NPE and POA 1986 so as to complete the cycle of curriculum regeneration. The background paper developed in the NCERT was discussed in a national seminar held at NIE, New Delhi from 16 to 17 February 1987. The NCERT has constituted a working group of experts to review the 'discussion paper' developed in the national seminar and to develop an 'approach paper' to be finally discussed at a national level meeting comprising experts from various interest groups.

### Training of Teachers and Orientation Programmes

#### (a) Orientation Courses/Workshops in Hindi

Two orientation courses in Hindi were organized at SIE, Jammu and Dakshin Bharat Hindi Prachar Sabha. 116 participating teachers were acquainted with the new techniques of teaching Hindi language and literature. Two workshops—one for Vidyarthi Sahitya Kosh and the other for developing a teachers' guide for upper primary classes were also organized.

#### (b) Training Programmes for teachers in English

The training programmes for teachers in English were organized separately for teachers of Navodaya Vidyalayas, teachers of Kendriya Vidyalaya Sangathan, teachers from Arunachal Pradesh and teachers in and around Delhi.

(c) *Workshop in Urdu*

Four workshops for finalizing the manuscripts were organized at Central university, Hyderabad, University of Rajasthan, Jaipur, Allahabad University and CIIL, Mysore.

(d) *Art Education Centre and Art Teachers' Camp*

An Art Education Centre for developing various art education programmes of the NCERT was established in the NIE. It is equipped for programmes of art like sculpture/clay modelling and ceramic work, painting and printing creativity, puppetry and creative drama, creative photography, dance and music. A creative week-end club for students, teachers and parents was also resumed on Sundays during February and March 1987.

An art teachers' camp was organized at Bangalore from 20 to 29 December 1986, basically for the teachers of Karnataka State in which some experienced teachers from different parts of the country also participated.

(e) *Orientation Programme for Key Persons in Moral Education*

An orientation programme for key persons in Moral Education was organized at Nainital from 1 to 9 June 1986. It was attended by 35 participants.

(f) *Orientation Programmes for the Supervisors of Adult Education*

The DESSH organized one orientation programme for Project Officers and Assistant Project Officers of Haryana State with regard to 'Anmol Gahna' prepared by the NCERT for the rural women of Haryana. The DESSH also assisted the States of Haryana and Madhya Pradesh in preparing instructional materials to be used in Adult Education programmes. A programme 'Vidyadan Abhiyan' was also launched in Bilaspur division of Madhya Pradesh.

### Special Projects

The Department has also been engaged in the implementation of certain special projects in the areas of Social Sciences and Humanities. Several activities under the following projects were carried out during 1986-87.

1. *National Population Education Project*

(a) *Curriculum Development* : Under the National Population Education Project, the NCERT developed the curriculum at the plus-two stage which was finalized in a National Workshop held from 16 to 22 February 1987 at Puri. The curriculum details out major and specific objectives

subject-wise and contents identified in all the six major areas of population education, viz., (a) population dynamics, (b) economic development and population, (c) social development and population, (d) health nutrition and population, (e) family life, biological factors and population, and (f) environment and population.

A National Workshop at Shimla was also organized from 8 to 13 August 1986 to develop curriculum for elementary teachers' training level.

(b) *Tripartite Review Committee Meeting* : Tripartite Review Committee was organized on 30 October 1986. In this meeting representatives from UNESCO Regional Office, Bangkok, Local UNFPA Office, New Delhi and Ministry of Human Resource Development, Government of India, New Delhi reviewed the NPEP and provided guidelines and new thrusts for future plan of work.

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

The NCERT continued to coordinate and monitor the programme during 1986-87. It published the brochure entitled, "Evaluation of Textbooks from the Standpoint of National Integration—Guidelines". The NCERT undertook the programme of sample evaluation of State textbooks. The textbooks in Hindi were evaluated during 1986. One orientation programme for Authors and Reviewers of textbooks in Hindi was also organized. In August 1986, the NCERT organized Eighth National Conference on School Textbooks. About 70 delegates from various textbook agencies attended the conference. The issue of writing textbooks vis-a-vis the National Policy on Education was discussed in the Conference.

During 1986-87 States of Maharashtra, Gujarat, Tamil Nadu, Mizoram, Haryana and Andhra Pradesh completed the work in the second phase of the programme. Some States have deferred or have not taken up the programme due to impending changes in view of the National Policy on Education, 1986.

### Seminar Readings—Innovations in Schools

The NCERT continued its Seminar Readings—Innovations in Schools programme. During the year 1986-87, 37 teachers were selected for the award from 13 States and Union Territories of India. These teachers were invited to the NCERT for a three-day workshop organized from 8 to 10

April 1987 where the papers submitted by the teachers were discussed. The opportunity was also utilized for distributing cash prizes of Rs. 1000 each and a certificate of merit to them.

### **XXIV National Prize Competition for Children's Literature**

The competition is organized every two years. The XXIV National Prize Competition for Children's Literature was organized in the year 1986-87. Entries were invited in 17 languages of the country for two age-groups 5-8 and 9-15 years.

About four hundred entries were received in 16 languages; no entry was received in Kashmiri language. The result is yet to be declared for 36 awards.

### **Padhen Aur Seekhen : Reading to Learn—Hindi Project**

To inculcate interest towards reading books and to provide new information to the children, especially, in the age-group 11 to 14 years, the project 'Reading to Learn' has been initiated. Under this project the Department has undertaken the preparation of books on the following topics :

1. Children Books
2. Fiction, Folklore, etc.
3. Biographies
4. Know Your Country and the World
5. Value Orientation
6. Science Books
7. Social Science Books

So far, 50 books have been sent for publication. The Department proposes to bring out 200 books in the coming two years. Of these, one-third will be on science subjects.

### **National Seminar on Mind, Brain and Consciousness**

The National Policy on Education (1986) places a great emphasis on teaching of Yoga to all school children in order to provide for an integrated development of body and mind. The Department organized a three-day National Seminar on Mind, Brain and Consciousness from 25 to 27 February 1987. Scientists and scholars from NIMHANS, Bangalore, Indian Institute of Science, Bangalore, All India Institute of Medical Sciences, New Delhi, Krishnamurthi Foundation, India and JNU, New Delhi besides many faculty members of the NCERT participated. A report of the seminar would be published shortly.

### **Other Publications**

During 1986-87, besides publishing two issues of curriculum Bulletin, the first issue of the half-yearly 'Population Education Newsletter' was published in June 1986.

### **Consultancy**

Assistance was provided to CBSE, Open School and Indira Gandhi National Open University in designing courses and developing materials.



## FIVE

## EDUCATION IN SCIENCE AND MATHEMATICS

**Q**UALITATIVE improvement of science and mathematics education at the school stage is one of the major concerns of the Department of Education in Science and Mathematics (DESM). The DESM has been continuously engaged in various activities: development of curricular materials; training teachers/teacher-educators; research and extension activities related to science and mathematics education. It acts as the national-level coordinating and monitoring agency for the implementation of the project, Computer Literacy and Studies in Schools (CLASS), as a nodal agency for the All India Science Education Project (AISEP) and the All India Mathematics Education Project (AIMEP). The Department has also been assisting different States in the revision of syllabi and preparation of textual materials in science and mathematics and has been assisting institutions and organizations to train teachers and teacher-educators on different aspects of science and mathematics education. The DESM has been providing consultancy to various national and international organizations. It is playing an active and vital role in the implementation of New Education Policy. The important activities carried out during 1986-87 are as follows.

### Developmental Programmes

The Department of Education in Science and Mathe-

matics organized a number of workshops to develop and finalize the new syllabi in Integrated Science, Physics, Chemistry, Biology and Mathematics for upper primary, secondary and senior secondary classes and new textbooks in Science and Mathematics for Class VI. Keeping in view the National Policy on Education, 1986 and the curriculum framework developed by the NCERT, teachers' guide in Science and problem book in Mathematics for Class VI were also developed.

To develop the instructional materials in Science and Mathematics a committee under the Chairmanship of Prof. C.N.R. Rao, Chairman, Prime Minister Science Advising Committee, was set up by the Council in this year. Prof. C.N.R. Rao further set up five sub-committees—one each in Integrated Science (VII-X), Mathematics (VI-XII), Physics (XI-XII), Chemistry (XI-XII), and Biology (XI-XII). The committee on integrated science was entrusted with the task of developing instructional material in Science (VII-X) and on Mathematics (VII to XII). The committees in Physics, Chemistry and Biology were assigned to develop textbooks and other related materials for Classes XI and XII. Various subject committees held many meetings to finalize the syllabi, plan the writing and develop draft materials. The composition of these committees is mentioned in Table 1.

TABLE 1

<i>Subject</i>	<i>Chairman</i>	<i>Classes for which Material will be developed</i>
Integrated Science	Dr. D. Bala Subramanian, Joint Director Centre for Cellular Micro-Biology, Hyderabad	VII-X
Mathematics	Prof. J.N. Kapoor	VII-VIII

<i>Subject</i>	<i>Chairman</i>	<i>Classes for which Material will be developed</i>
Chemistry	Prof. U.N. Singh Prof. Izhar Hussain (Overall Chairman, Prof. U.N. Singh)	IX-X XI-XII
	Prof. C.N.R. Rao, Director Indian Institute of Science, Bangalore	XI-XII
Physics	Prof. V.G. Bhide, Vice Chancellor University of Pune	XI-XII
Biology	Prof. Mohan Ram University of Delhi, Delhi	XI-XII

The Department also collaborated with the Department of Teacher Education to develop modules for Massive Teacher Training Programme and with the Department of Pre-School and Elementary Education to develop syllabus in Science and Mathematics for Primary Schools. Video-

tape programmes were developed under the computer Literacy Series (CLASS Project). A manual for teacher training was also started. Details of the above-mentioned activities are provided in Table 2

**TABLE 2**  
**WORKSHOPS/SEMINARS**

<i>Title of the Programme</i>	<i>Duration</i>	<i>Venue</i>	<i>Number of Participants</i>
Workshop to Develop Self-learning Modules in Science for Class VI for Navodaya Vidyalayas	28 April to 7 May 1986	Oasis School, Hyderabad	27
Workshop to Develop Self Learning Modules in Science for Class VII for Navodaya Vidyalayas	18 to 27 June 1986	Science Centre, Directorate of Education, Karol Bagh, New Delhi	33
Workshop to Develop Self Learning Modules in Mathematics for Class VI for Navodaya Vidyalayas	20 to 29 May 1986	Atomic Energy, Central School, Narora (U.P.)	14
Workshop to Develop the Manuscript for Class VI Mathematics Textbook	17 to 23 September 1986	NIE	14
Workshop to Review the Manuscript for Class VI Mathematics Textbook	17 to 21 November 1986	NIE	14
Workshop on +2 Stage Physics Syllabus	7 to 8 January 1987	University of Pune	7
Workshop to Develop the Manuscript for Class VI Science Textbook	25 August to 8 September 1986	Vikram Sarabhai Community Science Centre Ahmedabad	7
Workshop to Develop Concrete Materials and Sequencing of Instruction in Chemistry for Class IX	9 to 13 March 1987	NIE	5
Workshop to Develop Syllabus for Classes IX-X in Science	15 to 24 September 1986	RCE, Mysore	21

# 1986-87

<i>Title of the Programme</i>	<i>Duration</i>	<i>Venue</i>	<i>Number of Participants</i>
Workshop for the Finalization of the Syllabus in Maths for Classes VI to X in the light of NEP	27 to 31 October 1986	NIE	14
Workshop on Finalization of Syllabus in Maths for Classes XI and XII	27 to 31 October 1986	NIE	23
National Workshop to Finalize Manuscript for Class VI Science Textbook	11 to 14 November 1986	Delhi Public School, Delhi	25
Workshop to Write Chemistry Textbook for Class XI	10 to 17 November 1986	Indian Institute of Science Bangalore	8
Workshop to Develop Teachers' Handbook for Class VI Science Textbook	2 to 11 January 1987	NIE	20
Physics Writing Team Meeting for the Planning and Preparation of Instructional Package for +2 Stage	29 to 31 January 1987	NIE	14
Physics Writing Team Meeting for the Planning and Preparation of Instructional Package	21 to 22 February 1987	Indian Institute of Science Bangalore	7
Workshop to Review the Manuscript for New Maths Textbook for Class VI	29 January to 4 February 1987	Calcutta University	14
Development of Instructional Package in Maths for Class VI	6 to 10 January 1987	Vikram Sarabhai Community Science Centre, Ahmedabad	14
Workshop to Develop Problem book in Maths for Class VI	6 to 10 January 1987	Vikram Sarabhai Community Science Centre Ahmedabad	13
Workshop to Develop Hindi Version of Maths Textbook for Class VI	26 to 30 November 1986	NIE	10
Workshop to Develop Chemistry Syllabus for Senior Secondary Stage	27 September to 10 October 1986	Banaras Hindu University Varanasi	27
Development of Integrated Science Textbook in Science for Class VI (second phase)	27 to 30 October 1986	NIE	5
Preparation of Science and Maths Books under the Chairmanship of Prof. C.N.R. Rao	23 August 1986	Indian Institute of Science, Bangalore	—
Second Meeting of General Advisory Board in Science, Maths Education	18 October 1986	NGRI, Hyderabad	10
Meeting of Writing Team for Integrated Science Textbooks for Classes VII to X	24 to 25 November 1986	NGRI, Hyderabad	8
Meeting of Writing Team in Biology for Class XI Textbook	10 to 11 January 1987	Delhi University	10
Workshop to Finalize Teachers' Guide in Science for Class VI	25 to 30 March 1987	NIE	6
<b>Total</b>			<b>370</b>

Besides the above-mentioned workshops/meetings, a workshop was held on "Development of Exemplar Materials for Classes IX and X in Physics (Astronomy) According to the New Syllabus".

### Training Programmes

The Council undertook massive teacher training programmes to orient teachers in the National Policy on

Colleges of Education in conducting training programmes. The Department also assisted the States of Haryana, Punjab and Arunachal Pradesh in organizing the training programmes for its teachers of +2 classes. Various courses for Science/Mathematics teachers and teacher-educators organized by the DESM are mentioned in Table 3.

Besides the training programmes mentioned in Table 3 the DESM provided assistance in the training programmes organized by the State and National-level agencies,

**TABLE 3**  
**Training/Orientation Courses**

<i>Course</i>	<i>Duration</i>	<i>Venue</i>	<i>Number of Participants</i>
Training Programme for Teachers and NCERT Staff on CLASS Project	2-13 June 1986	NIE	10
Orientation Programme for Resource Persons from Centres under CLASS Project	21 to 25 April 1986	NIE	40
Orientation Programme for Resource Persons from Centres under CLASS Project	28 April to 2 May 1986	NIE	40
Training Programme for Teachers under CLASS Project	16 June to 4 July 1986	NIE	24
Training Programme for Teachers under CLASS Project	4 to 13 July 1986	Welham Boys School Dehradun	20
National Training Workshop for Preapration of Teaching Learning Material under APEID Programme	2 to 11 September 1986	NIE	14
Teachers Training Programme for New Schools in CLASS Project	15 December 1986 to 6 January 1987	NIE	33
Training Programme for Library Faculty Members of NCERT	9 to 13 February 1987	NIE	8
Training-Extension Programme for Teachers on Why Computers in the Classroom Anyway	29-31 March 1987	NIE	17
Workshop on Computer-assisted Language Learning (In Collaboration with British Council)	17-19 February 1987	NIE	20
Training of Teachers of Schools Attached to Indian High Commission in Dhaka, Bangladesh	26-31 July 1986	Indian High Commission Bangladesh	8
<b>Total :</b>			<b>234</b>

Education, 1986. The DESM developed Modules for the training of teachers in its programmes of Science and Mathematics Education and collaborated with the Department of Teacher Education and the Regional

International organizations, Departments of NIE and the Field Offices of the NCERT. These programmes are given in Table 4.

**TABLE 4**

<i>Programme</i>	<i>Venue</i>
<i>A. Programmes of States</i>	
1. Uses of NEC-1000 System and Applications	National Information Centre, New Delhi
2. Orientation of Chemistry Teachers	Steel Authority School Rourkela
3. Orientation of Physics Teachers at +2 Level	Government In-Service Teachers' Training Centre Jullundhar
4. Orientation of Higher Secondary Teachers	SIE, Gurgaon, Haryana
5. Training Programme for Maths Teachers at +2 Level	SIE, Delhi
6. Orientation of +2 Level Teachers in Physics, Chemistry, Maths and Biology	Nabha (H.P.)
7. Teachers' Orientation in Science Education	Vivekanand Kendra Shiksha Prasar Vidyalaya, Jai Rampur Arunachal Pradesh
8. Orientation of Science and Maths Teachers on Improvisation of Equipment and Aids for School Teachers	Aligarh Muslim University, Aligarh
9. Two Workshops for Operating APPLE-2 Computers	Raba Contel
10. Workshop for Operating To 7 French Computer	Associated Electronics Resource Development
<i>B. International Agencies</i>	
11. Planning Meeting for Post-Training Workshop under AISEP Project	AISEP
12. AISEP Post-training Workshop at Presidency College, Calcutta	AISEP
13. UNESCO-assisted Advanced Level on Workshop Continuing Education of Science Teachers and Teacher-educators in developing Open Competence	UNESCO
<i>C. Programmes of Other Departments of the NCERT</i>	
14. Orientation Programme on Simple Methods of Use and Maintenance of Biology Laboratory Equipment	F:A., Calcutta
15. National Scheme for In-Service Training of Teachers at SIE, Arunachal Pradesh	DTESEES, NIE
16. National Teachers' Orientation Camps at Nahar, Ambala, Rohtak, Chandigarh and Bihar	DTESEES, NIE
17. Training of Key Persons in NEP, 1986 and Massive Teacher Training Programmes at RCEs, Ajmer, Bhopal, Bhubaneswar and SCERT, Shillong	DTESEES, NIE

### Extension Activities

The Department organized the Fifteenth National Science Exhibition at Guwahati (Assam). It was inaugurated

by Giani Zail Singh, President of India. About 20,000 people visited the exhibition everyday. The Department organized three Workshops—two international and one national—

with the assistance of UNESCO-APEID concerned with out-of-school Science activities, open competence and laboratory technique and maintenance of Biology teaching equipment. The Department also organized a seminar for the implementation of Science and

Mathematics Education programmes under the New Policy of Education involving non-governmental voluntary organizations and governmental organizations. The details of extension activities are given in Table 5.

**TABLE 5**  
**Extension Activities of DESM during 1986-87**

<i>Title of Programme</i>	<i>Date (s)</i>	<i>Venue</i>
Planning Meeting	25 April 1986	Children Resource Centre, R.K. Puram, New Delhi
Standardization of Some Scientific Instruments Including Multipurpose Barometer Developed by DESM	24 to 25 April 1986	CSIO, Chandigarh and ISI, Delhi
Second IAPT Convention Presented Paper on Cost Effective Equipment Developed at NCERT	4-6 May 1986	Alagappa University
Out-of-School Science Activities	27 May 1986	David Hare Training College, Calcutta
National Seminar on Educational Innovations	1 to 5 July 1986	RCE, Bhopal
Workshop on Implementation of Science Education Programme with the Help of Involvement of Non-governmental and Governmental Agencies	25 to 28 July 1986	DESM, NCERT
State Science Exhibition, Judgment of Exhibits	23 November 1986	Directorate of Education, Delhi
Workshop on Learning Resource Materials in the Training of Health Professionals	24 to 25 November 1986	National Academy of Medical Science New Delhi
Developing Syllabus for ETV in Biology	2 March 1987	Directorate of Education, Delhi
Annual Meeting of the Astronomical Society of India	7 to 9 December 1986	Indian Institute of Astrophysics, Bangalore
National Science Exhibition for Children	17 to 24 November 1986	Guwahati
Meeting of Astronomers Interested in School Education	10 December 1986	Indian Institute of Astrophysics, Bangalore
Planning Meeting of Writers for lessons for +2 Stage in Physics for Open Schools	10 to 12 December 1986	Physics Department, University of Delhi
Workshop on Innovation in Teaching Aids and Demonstrations Experiments in Maths	September 1986	Aligarh Muslim University
Meeting for the Adoption/Adaptation of NCERT Class VI Maths and Science Books by Gujarat State Textbook Board, Gandhi Nagar	March 1986	Gujarat State Textbook Board, Gandhi Nagar, Gujarat
Preparation of Primary Classes Textbook in Maths by SIE, Kohima, Nagaland	August 1986	SIE, Kohima

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## Consultancy

Details of Consultancy provided by DESM are provided in Table 6.

TABLE 6

Consultancy Provided by DESM during 1986-87

APEID, UNESCO, Bangkok	26 November to 3 December 1986	National Workshop on Continuing Education of Science Teachers and Teacher-educators to Develop Open Competence
APEID, UNESCO, Bangkok	15-24 October 1986	Regional Workshop for Key Personnel Concerned with Out-of-school Science Activities and Extension Work for Young People
APEID, UNESCO, Bangkok	15-24 December 1986	Regional Seminar-cum-Workshop on Laboratory Techniques and Maintenance of Biology Teaching Equipment
APEID	20-23 January 1987	Sub-Regional Meet of South-Asian Countries in the Context of Work Plan of APEID
Aligarh Muslim University	2-12 September 1986	Orientation of Science and Maths Teachers on Improvisation of equipment and aids for Secondary School Teachers

## Publications

TABLE 7

Publications Brought Out by DESM during 1986-87

Title	Month of Publication
Science Education for the First Ten Years of Schooling : Guidelines for Upper Primary and Secondary Classes	June 1986
Report of the Workshop on Implementation of Science Education Programme	June 1986
Report of Regional Workshop for Key Personnel Concerned with Out-of-school Science Activities and Extension Work for Young people	October 1986
Report of Advanced Level National Workshop on Continuing Education of Science Teachers and Teacher-educators to Develop Open Competence	December 1986
Report of Regional Seminar-cum-Workshop on Laboratory Techniques and Maintenance of Biology Teaching Equipment	December 1986
Science Education including Science for All. Paper presented by Prof. B. Ganguly in Sub-Regional Meet of South-Asian countries in the context of Work Plan of APEID	January 1987

Besides the above-mentioned publications, the journal, *School Science* was also brought out during the year under report.

## Science Equipment for Schools

The Workshop Department (WD) has been engaged in developing science kits, electronics kits and tool kits for various levels of education. The Department has technical sections like design and development section, machine shop, fitting and sheet metal, hot metal section, painting, electroplating, carpentry, press tools, electrical and electronics and assembly and despatch. Besides, there are stores and purchase sections. The Department also handles the purchase and maintenance of hot and cold weather equipment and a fleet of Council vehicles. The Department has won the recognition of international agencies such as UNESCO, UNICEF, etc. for training in design, development and production of science and electronic kits. The Department has been training apprentices, personnel from international agencies, other countries, States and Union Territories in the above-mentioned areas. It conducts teacher training programmes in science club and makes available its expertise to the States/Union Territories. The Department is engaged in the establishment of workshops at Allahabad and Bhopal with an objective to improve science education at primary and middle school level in Uttar Pradesh and Madhya Pradesh, respectively, under an INDO-FRG project.

## Activities Undertaken during 1986-87

### R and D Activities

Research and Development activities of the Workshop Department included :

- Refinements in earlier version of the kits.
- A new primary science kit is under development so as to suit the changes in curriculum.
- An exhibition set-up has been developed so as to reflect the NCERT activities at one place.
- A Mini Tool Kit and a book on this have been brought out as per requirement of 'Operation Blackboard'.

### Training

The Department is regularly training UNESCO-sponsored trainees in the area of development and

production of low cost science and electronic kits. Also imparting training to apprentices under Apprentice Act 1961 is a regular activity of the Department.

### Developmental Seminars

Under the INDO-FRG project the following seminars were conducted:-

1. ZOPP Seminar for implementation strategy for INDO-FRG Project—November 1986
2. Development of Primary Science Kit—December 1986.

### Extension

The Department has been organizing the NCERT activities/exhibitions in the campus and outside campus. The Department arranged to exhibit the NCERT materials in the National Science Exhibition for children besides actively participating in the organization of the exhibition.

### Consultancy

Under the INDO-FRG Project the Department is helping in identifying the machines, tools and instruments for the establishment of Workshops for Science and Educational Kits at Bhopal and Allahabad.

### Production And Dissemination

The numbers of kits produced and despatched to various consignee States during 1986-87 were as follows :

1. Primary Science Kits	1,383
2. Integrated Science Kits	76
3. Science Club Kits	102

### Publications

The following articles and papers were circulated during 1986-87 to the academic communities in the areas :

1. Information Technology
2. Development of Science Education Equipment
3. Systems Approach
4. Technical Education Awareness in Schools
5. Electronic Education Awareness in Schools.



## VOCATIONALIZATION OF EDUCATION

**T**HE Department of Vocationalization of Education (DVE) is engaged in the task of upgrading the quality of work education in the country offered through two important schemes, viz. (a) Vocational Education at the higher secondary stage, (b) Work Experience as an integral part of general education. This mission has to take into consideration the various facts of work education having a definite bearing on the educational process at large.

### Extension

The Department organized nine orientation programmes of three to five days' duration. Six orientation programmes were organized on vocationalization of education for key functionaries of the States already offering vocational education at the +2 level. This benefitted 220 key persons from Madhya Pradesh, Manipur, Goa, Daman and Diu, Uttar Pradesh and Andhra

**TABLE 1**  
**Training Programmes Conducted during 1986-87**

Course	Duration	Venue	Number of Participants
Short-term Training Course in Pedagogy for Untrained teachers of Vocational Courses in Technology (Repair and Maintenance of Electrical Appliances)	15 May to 4 June 1986	Regional College of Education, Mysore	45
Short term Teachers Training Programme in Banking	16 to 30 May 1986	M.E.S. College of Science Malleswaram, Bangalore	27
Short-term Teachers' Training Programme in Commerce Subject Office Secretaryship	2 to 29 June 1986	Government Junior College for Girls, Nampally, Hyderabad (A.P.)	25
Short-term Teacher's Training Programme in Electronic Services	10 to 25 June 1986	Ruperal College, Bombay	15
Short-term Teachers' Training Programme in Fisheries	12 June to 1 July 1986	(CIFE) EFWFF, Balbhadrapuram (A.P.)	10
Short-term Teachers' Training Programme in Mechanical Maintenance	21 to 30 June 1986	ITI, Aundh, Pune	26

Various programmes of DVE involving development, extension, training, research and consultancy works undertaken during 1986-87 are reported below.

### Training

The Department organized training programmes in Business and Commerce (two), Technology (two), Agriculture (one) and Pedagogy (one). These are given in Table 1.

Pradesh. An orientation programme was organized to orient about 40 key persons from Madhya Pradesh, Uttar Pradesh, Orissa and Bihar in conducting District Vocational Surveys. Further, two orientation programmes for key persons in the area of Work Experience were organized; 120 key persons from Rajasthan and Meghalaya attended the programmes. Details of extension programmes are provided in Table 2.

**TABLE 2**  
**Details of the Extension Programmes**

Course	Duration	Venue	No. of Participants
Orientation Programme in SUPW and Community Services for Key Persons of Rajasthan	18 to 22 April 1986	Summer Higher Secondary School, Mondor Pd. Jodhpur (Raj.)	30
Orientation Programme for Key Functionaries of MP on Vocationalization of Education	6 to 9 September 1986	Government College of Khandwa (MP)	49
Orientation Programme on Vocationalization of Education for Key Persons of Goa	26 to 29 September 1986	Government Polytechnic, Panaji (Goa)	41
Orientation Programme in Vocationalization of Education for Principals of AP	16 to 18 December 1986	A.P. Board of Intermediate Education, Hyderabad	50
Orientation Programme in Vocationalization of Education for Key Persons of Manipur	9 to 11 January 1987	Board of Secondary Education, Manipur Imphal	21
Orientation Course for Principals of Schools Running Home Science-based Vocational Course at +2 Stage in U.P.	3 to 6 February 1987	Regional Board of Secondary Education, Varanasi	40
Orientation Course for Principals Key Functionaries in Vocationalization of Education at +2 Stage in U.P.	17 to 20 February 1987	Madhyamik Parishad Allahabad	44
Orientation Course in Work Experience (SUPW) for Key Persons of Meghalaya	23 to 27 February 1987	State Library, Directorate of Meghalaya	74
Orientation Programme for Key Persons for Conducting Vocational Survey	18 to 20 March 1987	SCERT, Patna	39

### Development

The POA entrusts the NCERT with the responsibility of developing model curricula, guidelines and other curricular materials. The DVE has adopted a systematic approach for the development of curricular materials involving the best available experts and experienced hands in various areas. The quality of instructional materials is ensured in terms of uniformity, scope, standard and other parameters. Various programmes of DVE conducted during 1986-87 were designed to develop the following curricular materials in the area of vocational education:

1. Minimum vocational competency-based curricula for six vocational courses
2. Instructional materials for two vocational courses
3. Comprehensive guidelines for curriculum evaluation
4. Revised edition of the handbook for vocational

survey workers.

5. Guidelines for establishing school industry linkages

Similarly the DVE undertook to develop curricular materials for Work Experience (WE) for which 13 workshops were conducted to develop the curricular materials listed below :

1. Exemplar instructional materials covering 15 pre-vocational courses under WE
2. Revised instructional materials in five courses under WE for upper primary stage
3. Guidelines for pupils' evaluation in WE in the Navodaya Vidyalayas
4. Scheme for integration of productive work in secondary education involving voluntary organizations

The details of the developmental programmes are given in Table 3.

**TABLE 3**  
**Developmental Programmes of DVE during 1986-87**

Course	Duration	Venue	Number of Participants
Workshop of Development of Instructional Materials for Work Experience in Two Phases	<i>Phase I</i> 8 to 12 September 1986	NCERT Campus	96
	<i>Phase II</i> 15 to 19 September 1986		
Development of Minimum Competency-based Curriculum in Photography	22 to 26 September 1986	Bal Bhawan Society New Delhi	11
Workshop for Development and Revision of Instructional Materials in Work Experience (Higher Secondary Stage)	22 to 26 October 1986	RCE, Bhopal	10
Workshop for Development of Minimum Competency-based Curricula in Textile and Designing	24 to 28 November 1986	NCERT Campus	10
Workshop for Development of Guidelines for Curriculum Evaluation	2 to 5 December 1986	NCERT Campus	18
Workshop for Development of Minimum Competency-based Curriculum in Accountancy and Costing	8 to 12 December 1986	NCERT Campus	11
National Workshop for Integration of Productive Work in Secondary Education in Collaboration with Voluntary Organization	8 to 11 December 1986	Mitraniketan, Trivandrum	24
Workshop for Development of Minimum Competency-based Curriculum in High Yielding Varieties and Seed Production	12 to 17 December 1986	Jawahar Lal Nehru Krishi Vishwa Vidyalay, Jabalpur	16
Workshop for Preparation of Guidelines for Developing School/Industry Community Linkages	26 February to 1 March 1987	ITI, Pune	29
Review of Guidelines for Curriculum Evaluation	9 to 10 March 1987	NCERT Campus	2
Workshop for Developing Minimum Competency-based Curriculum in House-keeping	23 to 27 March 1987	Institute of Home Economics, South Extension I, New Delhi	10
Workshop for Development of Instructional Material in Photography	30 March to 3 April 1987	NCERT Campus	11
Working Group Testing for the Development of Techniques, Tools, Procedures and Scheme for Pupil Evaluation in Work Experience/SUPW for Navodaya Vidyalayas	23 to 27 March 1987	RCE, Ajmer	15

### Consultancy Services

As one of the on-going functions, the DVE also offers consultancy services to various State Governments and other agencies in the form of discussion, meetings,

participation in seminars and conferences, etc. During the period under report the Department extended consultancy services to various organizations as given in Table 4.

TABLE 4

S.No.	Organizations	Period	Nature of Consultancy
1.	R.L.S. College of Education, Sidhrawati	23, 24 and 27 June 1986	Massive Teacher Orientation Programme
2.	CBSE, New Delhi	27 June 1986	Committee on Nursery Teacher Training Course
3.	Delegation from Bangladesh	3 July 1986	Appraisal about Activities of NCERT with Particular Referenceto VE
4.	Ministry of HRD	4 July 1986	Meeting of the Task Force II: A Content and Process of School Education
5.	Anna University, Madras	5 July 1986	Meeting of Task Force-II
6.	CBSE, New Delhi	—	Meeting of National Curriculum
7.	Ministry of HRD	10 July 1986	Meeting of Task Force-II
8.	Army Public School, Delhi	17 July 1986	Selection of PGTs in Commerce
9.	CBSE, New Delhi	19 July 1986	Meeting of the Committee on Vocational Commerce Subjects
10.	Ministry of HRD	20 July 1986	Conference of Education Secretaries held at Vigyan Bhawan
11.	Ministry of HRD	25-26 July 1986	Meeting on the Subject of Finalization of Task Force Report on Vocationalization of Education
12.	NIEPA, New Delhi	29 July 1986	Orientation Programme for the District Education Officers at NIEPA
13.	Central Institute of Research and Training in Employment Services, Pusa Road, New Delhi	30 July 1986	Six-Week Integrated Training Course in Employment Exchange Procedures and Polices
14.	NIEPA, New Delhi	31 July 1986	Training Programme for IAS Officers
15.	NIEPA, New Delhi	5 August 1986	Programmes on Ashram Schools on the Subject of Vocationalization of Education
16.	Mitra Niketan, Trivandrum (Kerala)	6-9 August 1986	Discussions with State Level Officials regarding Work Experience and Vocationalization of Education Programme

# 1986-87

<i>S.No.</i>	<i>Organizations</i>	<i>Period</i>	<i>Nature of Consultancy</i>
17.	Open School (CBSE), New Delhi	8-12 and 16 August 1986	Subject Committee Meeting on Syllabus in Typewriting, Shorthand, Accountancy and Principles of Commerce for +2 Stage
18.	CBSE, New Delhi	20 August 1986	Finalization of Sample Question Papers in Vocational Banking Course
19.	Further Education Unit, London	22 August 1986	The Visiting Team from London was apprised of the programmes being conducted by the Department and the NCERT
20.	TTTI, Chandigarh	25 August 1986	Development of Filmstrips on Vocationalization of Education
21.	Director, Mitraniketan, Trivandrum (Kerala)	26 August 1986	The Department received the Director of Mitra-Niketan and apprised him of the activities of the Department
22.	Bal Sahyog, New Delhi	28 August 1986	Evaluation of Education and Vocational Programme
23.	NIPCD, New Delhi	28 August 1986	National Seminar on Ragplucking Children
24.	CBSE, New Delhi	28 August 1986	Committee of courses in Agriculture-based Vocational Course
25.	University of Delhi	28 August 1986	Preparation of Instructional Materials for the Pre-vocational Courses in Commerce
26.	COBSE, Jaipur	28-30 August 1986	Conference—A paper on Vocationalization of Education was presented
27.	Department of Commerce and Business Administration, University of Allahabad	29-31 August 1986	Development of Model Curriculum for Graduate and Post-graduate Courses in Commerce
28.	College of Education, University of Philippine	9-11 September 1986	UNESCO, Regional Workshop of Educational Personnel Engaged in Operational Project with Focus on the Development of Training Materials
29.	Experts Working on Life Skills Project in Sri Lanka	10-12 September 1986	A team of three experts working on the curriculum in life skills in collaboration with UNDP and UNESCO visited the NCERT. They were acquainted with the work being done in the Department
30.	Open School, Delhi	20 September 1986	Meeting of Course Committee for Finalization of Syllabi in Typewriting and Stenography (+2 Stage)

# 1986-87

S.No.	Organizations	Period	Nature of Consultancy
31.	DESSH, NCERT	25 September 1986	Meeting regarding Development of Curriculum Framework for + 2 Stage
32.	Navodaya Vidyalaya Cell	26 September 1986	Observation of Test Administration for selection of students
33.	Navodaya Vidyalaya, Arrah, Bhajipur Distt.	21 September 1986	Orientation Programme for District Education Officers, KVS Observers and Superintendents for the Selection Test for Admission
34.	Navodaya Vidyalaya, Arrah, Bhajipur Distt.	28 September 1986	Orientation Programme for District Education Officers, KVS Observers and Superintendents for the Selection Test for Admission
35.	Minister of Education and DPI, Meghalaya State	3 October 1986	Implementation of the New Education Policy
36.	SCERT, Patna, Bihar	6-8 October 1986	Orientation Programme for Principals and State Officials in Vocationalization of Education
37.	Open School, CBSE, New Delhi	8-14 October 1986	Workshop for Identification of Learning Outcomes in the Area of Typewriting and Shorthand
38.	Ministry of Health	22-25 October 1986	The Head, DVE accompanied the visiting team on Para-medical Courses as part of Manpower Committee headed by Prof. J.S. Bajaj, AIIMS
39.	Bombay University	8-12 November 1986	Meetings of All India University, Council of Commerce and Research and Indian Association for Management Development
40.	Institute of Bank of Pune	11-14 November 1986	Programme for covering various aspects of banking operation
41.	CBSE, New Delhi	12 November 1986	Meeting to discuss the matter relating to Work Experience Curriculum Development
42.	University of Allahabad	15-17 November 1986	Meeting of the UGC Curriculum Development in Commerce
43.	CBSE, New Delhi	17 November 1986	Working Group Meeting on Vocationalization of Education
44.	State Government of Gujarat, Ahmedabad	19-21 November 1986	Meeting on Vocationalization of Education
45.	Open School, CBSE, New Delhi	28 November and 6 December 1986	Meeting on Lesson Writing for Commerce Course of Senior Secondary Level

# 1986-87

<i>S.No.</i>	<i>Organizations</i>	<i>Period</i>	<i>Nature of Consultancy</i>
46.	Chinese Delegation	1 December 1986	Meeting to discuss educational aspects in India and China
47.	Central Institute for Research and Training in Employment Services, New Delhi	24 September 1986	Discussion on Vocational Education in the VII Plan in Refresher Course for Employment Officers from States
48.	Institute of Home Economics, New Delhi	17 December 1986	Inter-college Flower Arrangement Competition on the occasion of Silver Jubilee Celebration
49.	All India Indo-GDR Friend Association, New Delhi	19 December 1986	Indo-GDR Seminar on Education
50.	National Institute of Public Cooperation and Child Development, New Delhi	15 January 1987	Vocational Training for Deprived Children in Residential Institutions
51.	Open School, CBSE, New Delhi	17 January 1987	Review Meeting to Examine the Learning Outcomes in Home Science Syllabus for Senior Secondary Stage with Particular Reference to Vocational Education
52.	All India Radio, New Delhi	19 January 1987	Discussion on the Subject of Vocationalization of Education
53.	CBSE, New Delhi	19 January 1987	Meeting of the Committee of Courses in Ophthalmic Techniques
54.	Ministry of HRD	February 1987	The Departmental Faculty worked on the Development of draft country report for the Education Ministers' Conference
55.	Directorate of Tourism	February 1987	Development of Implementation Strategy for the Course on Tourism and Travel Techniques
56.	Ministry of HRD	13 February 1987	The Head, DVE represented the Council on Conference of Education Secretaries on the implementation of Vocationalization of Education at the Higher Secondary Stage
57.	Board of Secondary Education, Goa	February 1987	Introduction of Vocational Courses in the School Systems and Development of Suitable Instructional Materials for Work Experience and Vocationalization
58.	USIS, New Delhi	25 February 1987	Seminar on Vocationalization of Education
59.	Parana Bhavan, Faridabad	2 March 1987	The DVE extended guidance to the representative of the organization in the field of Vocational Education

S.No.	Organizations	Period	Nature of Consultancy
60.	Council of Board of Secondary Education New Delhi	6-8 February 1987	The Head, DVE acted as a Resource Person in their Annual Conference at Bhubaneswar
61.	International Bureau of Education UNESCO, Geneva	9-12 March 1987	The Head attended the international consultation meeting of experts preparatory to Education Ministers' Conference
62.	CBSE, New Delhi	18 March 1987	Finalization of Vocational syllabus of General Insurance
63.	Ministry of Tourism	25 March 1987	The faculty members of DVE provided academic guidance in the one-day seminar on finalizing the programme of implementation of Tourism and Travel Techniques as a Vocational course at +2 stage
64.	Directorate of Vocational Education and Training Maharashtra	26-27 March 1987	Shri K.M. Gedam, Director and Shri Pimple Khote, Deputy Director of the organization visited the Department and various aspects of vocationalization programme of Maharashtra were discussed

### Publications

Intensive efforts made by the DVE through its various developmental and other activities during April 1986 to March 1987 have resulted in a number of publications immensely useful not only to vocational students and teachers but also to educational planners and administrators. Some of the publications developed during the period under report are mentioned below :

1. Exemplar Instructional Materials for Work Experience in 23 vocational areas
2. Minimum Competency-based Curriculum in Photography
3. Minimum Competency-based Curriculum in Textile and Designing
4. Guidelines for Curriculum Evaluation
5. Minimum Competency-based Curriculum in Accountancy and Costing
6. Minimum Competency-based Curriculum in High Yielding Varieties and Seed Production
7. Guidelines for Developing School/Industry/Community Linkages
8. Minimum Competency-based Curriculum in House Keeping
9. Instructional Materials in Photography.



SEVEN

**TEACHER EDUCATION,  
SPECIAL EDUCATION AND  
EXTENSION SERVICES**

**T**HE Department of Teacher Education, Special Education and Extension Services (DTESEES), besides serving as Secretariat of the National Council for Teacher Education (NCTE), is concerned with qualitative improvement of preservice and inservice training of school teachers as well as faculty improvement programme for teacher-educators. Special efforts are made to equip teachers to extend the benefit of expanded educational facilities to the deprived sections of society comprising such special groups as girls and women, scheduled castes, scheduled tribes and the handicapped. The focus of research, development, training and extension programmes of the Department during the year under report, has been on the implementation of National Policy on Education (NPE) 1986 and Programme of Action (POA). In relevant areas, preparatory work was initiated. In some areas like inservice training of school teachers and development of instructional materials considerable progress has been made.

The major activities of the Department refer to research and experimentation; teacher education curriculum renewal and development of instructional material for teacher-educators and student-teachers; orientation and training of teacher-educators; training of key persons in education of the handicapped; development of media support to teacher training; information exchange through dissemination of innovations in teacher education; and the development of data base on teacher education.

**Research and Experimentation**

Four research studies were completed during the year under report : (i) The research project on effectiveness of value clarifying strategies in value orientation of B.Ed. students revealed that the value clarifying approach is more effective than conventional teaching of such values as dedication to teaching profession, cooperation and nationalism among student-teachers; (ii) The study on

Status of Teachers in India revealed that about 25 per cent of teachers in primary schools are non-matric. An encouraging trend was also noticed that 54.22 per cent of the elementary school teachers improved their qualifications during teaching career. The percentage of trained teachers at primary, middle, high and higher secondary school levels was 86.9, 85.9, 89.3 and 89.6 per cent, respectively; (iii) A case study of the Integrated Education of the Disabled (IED) programme in Maharashtra revealed that hearing impaired and visually impaired children can be successfully integrated in general schools. Sociometric choices among the handicapped and non-handicapped students in these schools indicated that it is not only that handicapped students but the non-handicapped children also who choose the handicapped children for small group work, both academic and non-academic. It needs to be developed as a mass implementation programme to universalize education of the handicapped in conformity with the recommendations in the NPE-POA, following area approach; (iv) The study of methods, process, and practice of non-formal education (NFE) programmes for tribal students revealed that the enrolment of tribal children in the NFE centres in Andhra Pradesh, Madhya Pradesh and West Bengal was 52, 272. The NFE centres function in the evening or at night in all the States except those run by the Government of West Bengal which runs them during the day.

The on-going research projects are listed in Table 1.

*Training-cum-research on Models of Teaching*

The project aims at cooperative research on effectiveness of different models of teaching through the Colleges of Education. A workshop was organized at Indore, which was attended by teacher-educators from the States of Gujarat, Maharashtra, Tamil Nadu, Madhya Pradesh, Haryana, Uttar Pradesh, West Bengal and

TABLE 1

S.No.	Title of the Project	Principal Investigator
1.	Futurology of Teacher Education : Pilot Study	Dr. J.C. Goyal Dr. L.C. Singh
2.	Development of Tools of Student Teaching and Practical Work in Colleges of Education	Dr. C.S. Subbarao
3.	A Study of Conditions of Affiliation of Colleges of Education	Dr. T.N.S. Bhatnagar
4.	Status of Teachers in India	Dr. (Smt.) R.K. Chopra
5.	A Study of Relationship of Self-concept, Attitude and Adjustment with Achievement of SC/ST and non-SC/ST Student-teachers	Dr. (Smt.) R.K. Chopra
6.	Identification of Areas of Sex Bias in Textbooks and Supplementary Readers	Dr. I. Kulshrestha
7.	A Comparative Study of Educational Achievement of SC and Non-SC Students of Class X of Uttar Pradesh	Dr. B.S. Gupta
8.	Subject-wise Performance of Tribal students of Primary Level to Determine their weak and Strong Points	Dr. B.S. Gupta
9.	Comparative Study of Physical Facilities between Tribal and non-Tribal Primary Schools	Dr. L.R.N. Srivastava
10.	Evaluative Study of Pre-matric Scholarship Scheme	Dr. L.R.N. Srivastava
11.	Case Studies of IED Programmes in Selected States and Union Territories	Dr. N.K. Jangira
12.	A Study to Explore Linguistic Competencies of Hearing Impaired Children from Integrated and Special Schools	Dr. (Smt.) P.L. Sharma

Rajasthan. Teacher-educators developed capabilities to implement the models besides conducting practice-oriented research.

#### *XII All India Seminar Readings for Secondary Teacher-Educators*

Under this scheme an All India competition is organized wherein teacher-educators submit papers on research and innovation carried out by them. Cash award of Rs. 1000 each and a certificate is awarded to winning candidates. The DTESEES organized the National Meet of the award winners under the XII All India Seminar Readings Programme for Secondary Teacher-educators this year.

#### *Promotion of Research in Education*

Two workshops on planning and designing of research

projects in education for teachers from southern and northern regions were organized. During these workshops the teacher-educators were oriented to the problems of education in general and teacher education in particular. They were assisted in developing designs of research projects to be funded by relevant agencies.

#### **Developmental Programmes**

The focus of development activities has been on the examination of issues relating to the development of teacher education curriculum in the context of NPE and POA. The development of instructional materials for teacher-educators and student-teachers is another area of developmental activities. The development of media support for inservice education of school teachers and the

training of personnel for education of the handicapped, development of guidelines for evaluation of textual material from the point of view of equality of opportunity for women, scheduled castes and scheduled tribes were also undertaken. The specific progress in different projects are as follows.

*Development of Elementary Teacher Education Curriculum*

The national workshop for the development of elementary teacher education curriculum was held from 16-21 February 1987 to work out guidelines for reorienting the teacher education curriculum in the light of NPE recommendations. The guidelines will be utilized for developing the elementary teacher education curriculum framework.

*Source Book on Teacher Education*

The process of development of Source Book on Teacher Education initiated last year got completed this year. The manuscript has been prepared and is being processed for publication. The source book will be helpful to teacher-educators.

*Hindi Version of the Textbook : Teacher and Education in Emerging Indian Society*

The textbook "Teacher and Education in Emerging Indian Society" meant for elementary teacher training institutions has been translated in Hindi. It is being processed for publication.

*Development of Tools for Evaluation of Student Teaching and other Practical Work in Colleges of Education*

A set of tools for the assessment of practical work in student teaching was developed. The tools cover (i) Teacher Education Comprehensive Assessment Record; (ii) Evaluation Records of School visit; (iii) Lesson Plan; (iv) Assessment of Teaching Practice Lesson; (v) Teaching Aids and Audio-visual Lessons; (vi) Observation/Criticism Records; (vii) Evaluation of Investigational Reports; (viii) Evaluation of Term Papers/Critical Studies; (ix) Book Review Record; and (x) Case Study Record.

*Development of Source Book on Non-Formal Education*

A national workshop was organized to develop a source book on NFE for the teacher education. The contents have

been identified and guidelines for the authors have been developed.

*School-based Inservice Education and Training of Teachers*

Three workshops were organized at Jammu, Solan and Chandigarh for the development of guidelines for school-based inservice education and training of teachers. In the process, the participant principals were also oriented to the concept and practice of school-based inservice education and training (SBINSET). Institutional Programmes for stall development were developed. Programme following distance learning modality was also developed for the participating States of Jammu and Kashmir, Uttar Pradesh and Union Territory of Delhi.

*Development of Curriculum and Adaptation of Instructional Methods and Material for Visually Impaired Children in Integrated Setting*

Having developed a framework for adjustment of curriculum and instructional methods and material for visually impaired children studying along with others in general schools last year, one workshop involving practitioners in this area was organized in the current year to validate the framework. The curriculum specific NPE recommendations developed by the NCERT were analysed in a workshop involving experts and practitioners working with education of the visually handicapped as well as general teachers. The curriculum transaction modes to be used for teaching visually impaired children in integrated setting were examined. It identified the additional instructional material and aids and the experience which have to be provided to the visually impaired children outside general classrooms in the resource room. For providing learning experiences to the visually impaired children, essential instructional materials for their education were identified. A prototype kit comprising 30 essential instructional aids was designed. The experimental try-out of the kit has been planned for the ensuing year.

*Adjustment of Language Textual Material to the Needs of Hearing Impaired Children in Integrated Setting*

Language development is a priority input in the case of hearing impaired children. Strengthening the teaching of the first language which is also the medium of instruction, was examined from the view-point of adaptation and adjustment of instructional material and methods to the

needs of hearing impaired children in integrated setting. Guidelines for general teachers were developed last year. This year a guidebook for teaching language to the hearing impaired children under IED programme for Classes I and II was developed. The strategies suggested in the guidebook will also be helpful in remedial programmes for other children having problems of language learning.

*Development of Handbook for Primary School Teachers Teaching Disabled Children in Integrated Setting*

The NPE, 1986 has covered education of the handicapped in the section on Equal Educational Opportunity. The POA also envisages universalization of primary education in the group of children with locomotor and other mild handicaps along with other children. To achieve this objective, increasing number of disabled children will be taught in common with others. A handbook for primary school teachers has been developed to enable them to adequately respond to their special education needs.

*Development of Modular Instructional Material for the Training of Teachers of the Disabled*

The modular instructional material developed last year was sent to the press for printing. The Source Book on Training of Teachers of Hearing Impaired containing 23 capsules comprising 10 modules has been published. The book has been disseminated to the SCERTs/ SIEs, National Institutes for Handicapped, University Departments of Special Education and other agencies involved in the training of preservice and inservice training of teachers. The book is also being disseminated by the UNESCO and UNICEF to member countries for use as training material. To support this source book a video film entitled 'Kahate Sunte Swar' was also developed which was also telecast on Doordarshan. The Source Book on Training of Teachers of Visually Impaired was also sent to press for publication. This source book is also accompanied by a video film entitled 'Alok Path Par'.

*Development of Video Films*

Development of a series of video films under the general title 'Dishayen' was undertaken in response to the implementation of the NPE suggestion regarding the use of technology in special education. The first video film 'Dishayen' provides an over-view of Integrated Education

for the Disabled in the four major disability areas, namely, Orthopaedic, Visual, Hearing and Mental Handicap. The second video film 'Kahate Sunte Swar' deals with education of the hearing impaired with particular reference to integrated setting. The third video film 'Alok Path Par' provides guidelines for integrating visually impaired children in general classrooms. Another video film 'Khel Mein Mel' demonstrating integration of hearing impaired children through games, dance and music has been completed. The first three video films were telecast by Doordarshan and received very encouraging media review. These films support the print material for teachers of the handicapped.

*Development of Awareness Modules for General Teachers on Education of the Handicapped*

As suggested in the POA an awareness module 'Meeting Educational Needs of Children with Hearing Problems' was developed for the Massive Teacher Training Programme under the National Scheme of Inservice Training of School Teachers. This module reached over four lakh teachers working in general schools.

*Development of a Handbook for Administrators in Planning and Management of IED Programmes*

The NPE-POA has suggested strengthening of implementation of the Scheme of Integrated Education for Disabled Children and Orientation of administrators. A handbook for the planning and management of IED programme was prepared for the administrators. The handbook contains NPE imperatives for education of the handicapped, educational implications of the definitions of handicaps, planning framework, implementing strategies and modalities for monitoring and evaluation. The handbook is being processed for publication.

*Development of Unicef-assisted Project Integrated Education for the Disabled (PIED)*

To strengthen implementation of the scheme of IEDC project "Integrated Education for the Disabled" has been planned. The project aims to develop service delivery modalities for educating the disabled children in general schools following area approach in the context of rural areas with scattered population. It will also provide the model of interlinkages among the departments and agencies working in this area. The project document was

finalized.

### *Development of Textbooks for Tribal Children*

A working group meeting for the preparation of textbooks for tribal children of Andhra Pradesh in Gond tribe dialect and Telugu script was organized. The manuscript was developed in the working group meeting. The Saora Primer Part II for Class II was disseminated through the District Officers of the States and Union Territories for use in 120 experimental schools.

### *Instructional Materials for the Preparation of Non-Formal Instructions (Female)*

Materials developed last year were tried out and finalized with the addition of the requisite components for generation of awareness among women in general and empowerment of female instructors as active workers for education in particular.

### *Development of Indicators for Educational Backward Pockets for Girls*

Quantitative and qualitative indicators for the identification of educational backward pockets in terms of girls' education were finalized during the year under report. The report is being disseminated to the State Governments for utilization.

### *Image of Women in Curriculum in English*

The book has been designed to demonstrate the values

commensurate with status of women in textual material for learners of English as a second language. The tool will be useful for curriculum planners and writers of textual materials. The book was published and is being disseminated.

### *Evaluation of Books from the Point of View of Sex Discrimination*

Last year 400 books were reviewed. This year another 270 books were reviewed from the view-point of values related to sex discrimination. Based on the findings of the book and its implications for writers, the manuscript of the publication entitled "Orchestral Harmony" has been prepared.

### *Meeting of the Standing Committee on Women's Education*

The third meeting of the standing committee on women's education was held to take stock of the action on its recommendations made in the earlier two meetings. The committee also examined implications of the NPE, 1986 and worked out its implications for equal educational opportunity and empowerment of women.

Participation of educational personnel from all over the country in the developmental programmes stated above has been shown in Table 2.

### **Training and Extension**

The NPE has stressed the need for continuous inservice

**TABLE 2**

**Development Programmes and Projects Undertaken By DTESEES**

<i>Title of the Programme</i>	<i>Number of Participants</i>
National Workshop for Development of Elementary Teacher Education Curriculum	62
Workshop on Planning and Designing Research Projects for Colleges of the Southern Region	55
Workshop on Planning and Designing Research Projects for Colleges in the Northern Region	70
Conference of Deans of Education and Chairmen, Boards of Education from Universities situated in Northern Region held at Education Department, Kashmir University, Srinagar	33

<i>Title of the Programme</i>	<i>Number of Participants</i>
National Workshop for the Development of Elementary Teacher Education Curriculum	62
Analysis of Textbooks to Find out Objectionable Material from the Point of View of Scheduled Castes	16
Working Group Meeting for Preparation of Textbooks in Tribal Dialects of Gond Tribal Children of Andhra Pradesh	18
Evaluation of Children's Books-I	7
Evaluation of children's Books-II	11
Evaluation of Children's Books-II	3
Development of Supplementary Reader on the Theme Towards Equality	10
Image of Women and Curriculum in Mother Tongue—I	4
Image of Women and Curriculum in Mother Tongue—II	10
Identification of Educationally Backward Pockets for girls	10
Review Group Meeting on Materials for Instructor Preparation for Non-formal Education of Girls	21
Identification of Values and Process for the Empowerment of Women through Education	40
Development of Curriculum and Adaptation of Instructional Methods and Materials for Visually Handicapped	10
Development of Curriculum and Adaptation of Instructional Material and Methods for Visually Impaired Children in Integrated Setting-II	30
Development of Curriculum and Adaptation of Instructional Methods and Materials for Visually Impaired Children in Integrated Setting	13
Development of Handbook for Primary School Teachers Teaching Disabled Children in Integrated Setting	13
Development of Modular Instructional Material for the Training of Teachers of the Disabled	—
Development of Video Films	12

training of school teachers. Massive teacher training Programme under the National Scheme of Inservice Training of School Teachers was organized during the current year. Besides this, major training of key persons in Integrated Education of the Handicapped, orientation of elementary and secondary teacher-educators to tribal life and culture, and problems of education of the tribal

children and orientation of teacher-educators in innovative education programmes were undertaken. Details of specific training and extension programmes are given below.

#### *Massive Teacher Training Programme 1986-87*

The Ministry of Human Resource Development



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(MHRD) planned to stimulate immediate implementation of the NPE, 1986. The first activity sponsored through the NCERT refers to training of about five lakh primary and secondary school teachers throughout the country under the National Scheme of Inservice Training of School Teachers. The purpose of the training has been to discuss the NPE Programme of Action, 1986 and highlight the specific role of the teachers in its implementation. The NCERT developed modular instructional materials for the training programme supported by TV.

The training programme was organized at three levels. Key persons were trained at the NCERT while about 10,000 Resource Persons were trained at the State level. At the State level, 2,500 training centres spread all over the country were established. 9,000 camps of 10 days' duration each were organized.

The inprocess evaluation was carried out by the SCERTs which were the nodal agencies for implementing the programme at the State and Union Territory level. Besides, the NCERT also collected feedback through its own faculty and the faculty from the Regional Colleges of Education (RCEs). The report based on the feedback was prepared and discussed in the Review Meeting involving persons from the nodal agencies at the State level, the NCERT and the RCEs. Based on the Review Meeting, refinement of the modules to be used for 1987-88 was undertaken.

Media support for the ensuing programme was also reviewed. New video films were developed. The preparations for the year 1987-88 programme were completed.

## *Training of Key Persons in Integrated Education for the Disabled*

NPE-POA indicated that at least three persons from each SCERT/SIE should be trained in Integrated Education for the Disabled. The course for key persons from the States and Union Territories as well as voluntary agencies was organized during September-November 1986 at the NIE. Nineteen participants from Bihar, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu and Uttar Pradesh attended the programme. The training course involved training in planning and management of four areas of disability, namely, Orthopaedic, Visual, Hearing and Mental handicaps.

## *Evaluation of Language Materials with a View to Eliminating Sex-bias*

Four programmes of five days each were organized, one each for the States of Andhra Pradesh, Mizoram, Rajasthan and Uttar Pradesh. The purpose of the training programme was to develop the capabilities to analyse language material to identify sex discrimination and develop action guidelines for eliminating sex-bias.

## *Orientation of Teacher-educators in Tribal Life and Culture and Problems of Education of the Tribal Children*

Three programmes of seven days' duration each were organized for training elementary teacher-educators located in tribal areas while two programmes were organized for secondary teacher-educators.

## *Orientation Course for Key Persons of Non-formal Education Programme in Tribal Areas*

Three programmes of seven days' duration and three orientation courses of seven days' duration each for key persons on non-formal education in tribal areas were organized. The purpose of the training programme was to orient key persons to the cultural life of the tribal and specific educational needs emerging from their life and culture. Implications for the curriculum and its transaction were also discussed.

## *Orientation Course on Models of Teaching*

A six-day orientation course for teacher-educators was organized. In this course teacher-educators were exposed to the selected models of teaching and were provided simulated training in their use so that they can incorporate the same in practice teaching programme. The models of teaching covered concept attainment model, inquiry training model, synatics model and jurisprudence models of teaching. Teacher-educators from western region from the States of Madhya Pradesh, Maharashtra and Gujarat attended the Programme.

## *Orientation Course in Microteaching for Elementary Teacher-educators*

An orientation course for elementary teacher-educators from the States of Rajasthan, Uttar Pradesh, Haryana, Himachal Pradesh, Jammu and Kashmir, Maharashtra and Punjab was organized. They were provided training in the

use of five teaching skills, namely, narration, recitation, dramatization, encouraging pupil participation and classroom management. The participants developed micro lessons and practised the skills in stimulated situation.

*Conference of Deans of Education and Chairmen, Boards of Under-Graduate Studies in Education*

The NPE-POA stipulates value orientation in education. Two conferences of the Deans and Chairmen, Boards of Under-graduate Studies in Education in northern and southern regions were organized to develop a programme of value-oriented teacher education.

*Centres for Continuing Education of Teachers*

The Centres for Continuing Education (CCEs) of Teachers continued with their programmes for inservice education of the teachers. Sixty-four CCEs carried out their programmes. During the year under report additional three CCEs in Punjab and three in Himachal Pradesh were started.

*National Council for Teacher Education*

The Department acts as the secretariat of the National Council for Teacher Education (NCTE). Meetings of the

various committees of the NCTE were organized as specified in Table 3.

**Dissemination**

Besides dissemination of the research reports and other textual material, the Department brings out a quarterly Bulletin on 'Integrated Education for the Disabled', 'Communication : Equal Educational Opportunity for the Disabled' and 'NCTE Newsletter'. The IED Bulletin is meant for key persons and teacher-educators while Communication is also meant for teachers. The following is the Specific information about the dissemination activities:

Title	Issues
IED Bulletin (Mimeo) Communication : Equal Educational Opportunity for the Disabled	Quarterly Bi-monthly
NCTE News Bulletin (Mimeo)	Quarterly
Directory of University Departments of Education and Postgraduate Teacher Institutes in India	Yearly
Secondary Teacher Education in India in 1986	
Universities, Deemed Universities, Institutions of National Importance and Special Institutions in India in 1986	

**TABLE 3**  
**Meeting of the NCTE Committees**

S.No.	Nature of the Committee	Number of Participants
1.	VII Meeting of the NCTE Committee on Special Education	15
2.	IX Meeting of the Secondary and College Teacher Education Committee	17
3.	VIII Meeting of the NCTE Committee on Teacher Preparation for Special Education	13
4.	IX Meeting of the NCTE Committee on Pre-School and Elementary Teacher Education	15
5.	X Meeting of the NCTE Committee on Secondary and College Teacher Education	12
6.	XII Meeting of the Steering Committee of the NCTE	13
7.	IX Meeting of the General Body of the NCTE	100

## Publications

The Department brought out publications of training material for inservice education of teachers, training of resource teachers for education of the handicapped, textual material for education of the scheduled castes and scheduled tribes, instructional materials for teacher-

educators and student-teachers and guidelines for curriculum and textbook developers. Research reports were also published. Details of both printed and mimeographed publications of the Department are provided in Table 4.

**TABLE 4**  
**Publications**

S.No.	Title.	Date of Publication	Number of Copies
1.	Implications of POA for Teachers (Module)	March 1987	65,000
2.	Teacher and Education in Emerging Indian Society for Elementary TEIS	In Press	—
3.	Saora Primer for Class II (Part II)	June 1986	5,000
4.	A Study of Methods of Non-formal Education Programmes for Tribal Students	April 1986	1,000
5.	Non-formal Education Programmes in India	January 1986	1,000
6.	Source Book for the Teachers of Hearing Impaired	February 1986	3,000, 2,000 loose modules
7.	Syllabus-cum-Information Guide for Three Months' Training Programme for Key Persons in IED	August 1986	200
8.	Adjustment of Language Textual material : Report on Adjustment in Language Textual Material	June 1986	400
9.	VIC Material Adaptation Series 2 : Material Adaptation in Environmental Studies—I (Social Studies) for Visually Impaired under the Scheme of IED	August 1986	150
10.	VIC Material Adaptation Series 3 : Material Adaptation in Environmental Studies—I (Social Studies) for VIC under the Scheme of IED	November 1986	150
11.	Minimum Resource Kit for VIC for Teaching Social Studies in Integrated Classrooms : An Information Guide	March 1987	100
12.	Image of Women and Curriculum in English	September 1986	2,000
13.	Selected Reading Material in English Vol. I, Part 2	June 1987	2,000
14.	Selected Reading Material in English Vol. II, Part 2	June 1987	2,000
15.	Selected Reading Material in English Vol. III, Part 2	June 1987	2,000
16.	Orchestral Harmony	Under process	3,000

### Consultancy

The Department provided consultancy to the States and Union Territories; National Institute for the Handicapped; University Departments of Education; MHRD and other

Ministries associated with training personnel; and international agencies like UNESCO and UNICEF. Specific areas in which consultancy was provided by the Department during the year are summarized in Table 5.

**TABLE 5**  
**Consultancy Provided by DTESEES**

<i>S.No.</i>	<i>Name of Organization</i>	<i>Nature of Consultancy</i>
1.	SCERT, Haryana	Development of Elementary Teacher Training Curriculum
2.	IFTO, Bangalore	Resource Person in Seminar on NPE
3.	CIET	ETC Working Group Member Meeting
4.	Workshop Department	Pedagogy Team Member on UNESCO Project for Science Kit
5.	Science Department and UNESCO	Resource Person for Open Competence Workshop
6.	Two Ph.D. Students	Provided Guidance
7.	SCERT, Haryana	Resource Person in Workshop for Development of Elementary Teacher Education Curriculum of Haryana State
8.	MHRD	Developing a Research-based paper on Empowerment of Women through Education
9.	Mother Teresa University, Kodaikanal	A Plan of Action for the Next Five Years
10.	State Institute of Education, Bhopal	Developing Phase-wise Programme for the Newly Developed Women Cell
11.	NIVH, Dehradun	Development of Correspondence Modules for Training of Teachers of Visually Handicapped Training of Teachers
12.	NIMH, Hyderabad	Development of Manuals for the Training of Professionals in Education and Rehabilitation of Mentally and Handicapped Persons and Training of Teachers
13.	Rehabilitation Council of India	Development of Training Curricula for professionals working with (a) Mentally Handicapped (b) Visually Handicapped (c) Hearing Impaired and (d) Orthopaedically Handicapped
14.	Institute for Physically Handicapped, New Delhi	Teaching Students of Occupational Physiotherapy for Specialization in Mental Retardation
15.	NIEPA, New Delhi	Input on Training and Education of the Handicapped and Equal Educational Opportunity for the Programme for Administrators
16.	University Grants Commission	Committee on Teacher Education Establishment : Development of Special Education in Universities
17.	Arunachal Pradesh, A and N Islands, Bihar, Madhya Pradesh, Nagaland, Tamil Nadu,	For Development of State Plans for IED Training State Level Personnel

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<i>S.No</i>	<i>Name of Organization</i>	<i>Nature of Consultancy</i>
	SIE, Delhi.	UNESCO Project on Improving Achievement of Primary School Children
18.	National Association for the Blind Federation for the Welfare of the Mentally Retarded Sri Kanchi Kamkoti Sewa Charitable Trust Haridwar Guru Nanak Fifth Centenary Public School All India Association for Educational Technology	Resource Persons for Various Programmes. Members on their Academic and Management Committee Convenors of Seminars on Education of the Disabled
19.	Ministry of Welfare, USAID Project	Development of Information and Documentation in Education and Rehabilitation of the Disabled

## EIGHTH

## REGIONAL COLLEGES OF EDUCATION

**D**EVELOPMENT 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 the formulation and implementation of research and experimental studies related to curriculum, methodology of instruction, educational evaluation and educational administration at the school stage. Development of instructional materials for the use of teacher-educators and teacher-trainees and training and extension activities related to different aspects of school education and teacher education constitute the other activities of the Colleges.

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

### Regional College of Education, Ajmer

The College offers a four-year Integrated course in Science Education leading to the B.Sc. (Hons/Pass) B.Ed. Degree, a one-year B.Ed. Course with specialization in Science/Agriculture/Commerce/Language (English/Hindi/Urdu), a one-year M.Ed. Course with specialization in Science/Commerce/Languages and a Summer School-Cum-Correspondence Course leading to the B.Ed. Degree. It has also the facility to register candidates for Ph. D. in

Education and Science.

### Enrolment

The enrolment of different courses during the year, 1986-87 was as follows :

#### (A) Pre-Service Courses

First year B.Sc. (H/P) B.Ed.	71
Second Year B.Sc. (H/P) B.Ed.	41
Third Year B.Sc. (H/P) B.Ed.	49
Fourth Year B.Sc. (H/P) B.Ed.	45
B.Ed. (Science)	60
B.Ed. (Agriculture)	22
B.Ed. (Commerce)	25
B.Ed. (Hindi)	35
B.Ed. (English)	27
B.Ed. (Urdu)	21
M.Ed. (Science/Commerce/Language)	14
<b>Total</b>	<b>410</b>

#### (B) In-service Course

B.Ed. (SSCC) I Summer	102
B.Ed. (SSCC) II Summer	90
<b>Total</b>	<b>192</b>

### Results

The results of the year 1986 of the students enrolled during 1985-86 in different courses are given in Table 1.

### Extension Services

The Extension Services Department of the College organized Workshops/Seminars on different aspects of school education keeping in view the needs and demands of the States/Union Territories covered by the College.

**TABLE 1**

S.No.	Name of the Course	Total Appeared	Total Passed	Pass Percentage
1.	B.Ed. (Science)	60	59	98.33
2.	B.Ed. (Agriculture)	33	32	96.96
3.	B.Ed. (Commerce)	30	30	100.00
4.	B.Ed. (English)	40	40	100.00
5.	B.Ed. (Hindi)	46	45	97.82
6.	B.Ed. (Urdu)	32	31	96.87
7.	B.Ed. SSCC	90	85	94.44
8.	M.Ed.	16	16	100.00
9.	First Year B.Sc. (H/P) B.Ed.	79	41	51.89
10.	Second Year B.Sc. (H/P) B.Ed.	54	49	90.74
11.	Third Year B.Sc. (H/P) B.Ed.	48	47	97.91
12.	Fourth Year B.Sc. (H/P) B.Ed.	68	67	98.52

During the Year 1986-87 the following programmes were organized.

S.No.	Title of the Programme	Number of Participants
1.	Workshop of Science club sponsors	36
2.	Workshop on Institutional Planning and New Education Policy	36
3.	Workshop on Identification of Vocational Courses Based on Plant Resources for Rural Development	19
4.	Conference of Hony. Directors and Coordinators of ESD.	21
5.	Workshop on Philosophical, Sociological and Humanistic of SC, Education	26
6.	Conference of Principals Headmasters and Teachers of Co-operative Schools?	21
7.	Orientation Programme for Teacher-educators towards Integrated Education of the Disabled	32
8.	Workshop of English Teachers of Rural Areas of Ajmer District	21
9.	Agriculture Workshop-SUPW	14
10.	Meeting of Principals of STCs School	27
11.	Workshop on Development of Instructional Material in Vocational Courses for Rural Areas	25
12.	Workshop for the Preparation of Special Papers for M.Ed.	17
<b>TOTAL</b>		<b>305</b>

In the above-mentioned programmes, the State-wise distribution of participants was : Rajasthan-239, Uttar Pradesh-45, Punjab-Nil, Himachal Pradesh-4, Haryana-5, Chandigarh-2, Jammu and Kashmir-4 and Delhi-6

#### Other Activities and Publications

Other significant activities carried out by RCE, Ajmer include special programmes organized for Navodaya

Vidyalayas in the region, training/orientation of teachers with regard to National Policy on Education 1986, training in the use of computer systems, training programmes in fruit preservation, ornamental gardening and crop cultivation and organizing Silver Jubilee Week comprising exhibitions, sports, lectures, cultural and literacy activities and literacy activities and Van Mahotsava.

During the year under report the College brought out a special issue of 'School Science Resource Letters' in the field of computer education, 'Rajasthan Mein Janjati Shiksha' (Hindi) and a Silver Jubilee Brochure highlighting, in general, the contribution of the NCERT in the field of school education and the efforts of RCE, Ajmer in the region in this direction.

### 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 with English as a special subject leading to the B.A., B.Ed. Degree; a one-year B.Ed. Course with specialization in Commerce/Science; a one-year B.Ed. Course in Elementary Education; a one-year M.Ed. Course with specialization in Science Education/Teacher Education/Educational Administration/Guidance and a Summer School-cum-Correspondence Course leading to the B.Ed. Degree.

#### Enrolment

The enrolment in different courses during 1986-87 was as follows :

#### (A) Pre-service Courses

1. B.Sc. B.Ed. I Year	73
2. B.Sc. B.Ed. II Year	63
3. B.Sc. B.Ed. III Year	74
4. B.Sc. B.Ed. IV year	63
5. B.A. B.Ed. I year	29
6. B.A. B.Ed. II year	24
7. B.A. B.Ed. III year	31
8. B.A. B.Ed. IV year	23
9. B.Ed. (Science)	49.

10. B.Ed. (Commerce)	41
11. B.Ed. (Elementary)	26
12. M.Ed.	10

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Total	506
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#### (B) In-Service Courses

1. B.Ed. (SSCC) I summer	166
2. B.Ed. (SSCC) II Summer	150

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Total	316
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#### Results

The results of the year 1986 of the students enrolled at the Regional College of Education, Bhopal during the session 1985-86 in various courses are given in Table 2.

#### Extension Services

The College organized several Orientation/Training Programmes and Workshops for training teacher-educators, teachers and educational administrators in different aspects of school education and teacher education. The programmes organized by the College during 1986-87 are given in Table 3.

#### National Policy on Education

1. Orientation Programme for Key Persons (Primary)	70
2. Orientation Programme for Key Persons (Secondary)	36

#### Navodaya Vidyalayas

1. Orientation Programme for Teachers of Navodaya Vidyalayas	76
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**TABLE 2**

S.No.	Name of the Course	Total Appeared	Total Passed	Pass Percentage
1.	B.A. B.Ed. I	28	26	92.86
2.	B.A. B.Ed. II	31	25	80.64
3.	B.A. B.Ed. III	23	19	82.60
4.	B.A. B.Ed. IV	29	24	82.76
5.	B.Sc. B.Ed. I	79	60	76.00
6.	B.Sc. B.Ed. II	76	73	96.05
7.	B.Sc. B.Ed. III	64	63	98.60
8.	B.Sc. B.Ed. IV	55	49	89.10
9.	B.Ed. (Commerce)	40	38	95.00
10.	B.Ed. (Science)	44	38	86.36
11.	B.Ed. (Elementary Education)	36	31	86.10
12.	M.Ed.	9	7	77.77



**TABLE 3**

S.No.	Programmes	Number of Participants
1.	Workshop-cum-Seminar of Teacher-educators on Common Mistakes Committed by Students in Mathematics at +2 level	14
2.	Orientation Programme for Elementary Teacher-educators of Tribal Areas of MP on Piagetian Methods	14
3.	Orientation Programme for the Resource Persons/Coordinators of Maharashtra and Gujarat in the Models of Teaching with Special Reference to Teaching of Physical Science	16
4.	Workshop to Develop Instructional Material in NFE for Resource Persons in tribal Areas	22
5.	Seminar-cum-Workshop in Physics for Method Masters and Senior Secondary Teachers of Gujarat	2
6.	Workshop on Preparation of Research Proposals in the Area of Integrated Education for Visually Handicapped (IEVH) children	6
7.	Development of Modules of Training Learning on +2 Level Topics of Chemistry	6
8.	Workshop of Teachers and Teacher-educators on Common Mistakes Committed by H.S. Students	12
9.	Workshop on Modern Teaching Trends and Techniques in Gujarati Prose and Grammar	28
10.	Orientation Programme for Elementary Teacher-Educators of Tribal Areas of Gujarat on Piagetian Methods	28
11.	Orientation Programme for Resource Persons/Coordinators of Gujarat and Maharashtra in the Models of Teaching with Special Reference to Teaching	12
12.	In-service Teachers Course for Vocational Teachers of Accountancy	6
13.	Workshop of Curriculum Developers and Teacher-educators for "Science for All" for Western Region	18
14.	Orientation Programme for the NFG Resource Persons of Tribal Areas of Madhya Pradesh for Developing Scientific Literacy	25
15.	Seminar-cum-workshop in commerce for Development of Commerce Content and Commerce Education Course of B.Ed./Sr. Sec. Level	10
16.	Orientation Programme for Teacher-Educators in Content and Methods in Chemistry at +2 level	29
17.	Orientation programme for Teachers and Teacher-Educators of Madhya Pradesh in Content and Methods of Teaching Biology at IX and X Level	26
18.	Orientation Course for the Teachers and Teacher-educators in Education of the disabled with special Reference to IEVH	3
19.	Orientation programme for Resource Teachers of Visually Handicapped Students	13

S. No.	Programmes	Number of Participants
20.	Orientation Course for Chemistry Teachers of Secondary Schools of Madhya Pradesh	33
21.	Orientation Programme for Teachers and Teacher Educators of Madhya Pradesh in Content and Methodology of Biology Teaching at +2 level	36
22.	Seminar on Gifted Child Identification and Nurture of Talent	16
23.	Seminar on the Nature of Science for Teacher-educators of Elementary level of Raipur Region	27
24.	Meeting of Higher Sec School Principals and Teachers on Developing Strategies for Implementation and Evaluation of Work Experience	49
25.	Meeting of SC/ST Teachers	—
26.	Meeting of Teachers	36
27.	Meeting of Teachers	35
28.	Meeting of Teachers	25
29.	Meeting of Teachers	34
30.	Meeting of Teachers	12
31.	Meeting of Teachers	10
32.	Meeting of Teachers	36
33.	Meeting of Teachers	26

#### Population Education

1. Workshop on Janasankhya Ke Kathputli Natak 3
2. Workshop on Population Education 28

In all, 273 persons benefitted from the extension programmes. The State-wise distribution of participants was : Madhya Pradesh—383; Maharashtra and Goa—120; Gujarat and Dadra and Nagar Haveli-115 and 105 from other parts of the country.

Under the research project titled, "A Study of Flora of Bhopal to Produce Resource Material for the Biology Teachers of Madhya Pradesh" over 250 Angiospermis-plants included in the 10+2 system have been collected from different localities of Bhopal. These plants are terrestrial or aquatic in nature. Herbarium entitled "Flora of Bhopal" was prepared. Plants were identified and categorized in groups and detailed diagrams of plants illustrating distinguishing structures were prepared. Botanical description of the plants collected was made.

#### Developmental Programmes

##### (a) SC/ST Education

In consultation with the State Departments of Tribal Welfare of the Region, special provision for admitting the candidates from the weaker sections was made. Accordingly, 22 students deputed by Maharashtra State Tribal Welfare Department were admitted. The College also organized orientation programmes for the SC/ST students and also an In-service course in Non-formal Education for the tribal school lecturers.

##### (b) Population Education

Three in-service programmes have been planned and organized.

##### (c) Continuing Centres of Education

The College oriented Resource Persons from Maharashtra and Gujarat States and necessary assistance was

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extended to the centres of the region.

*(d) New Education Policy*

The College staff helped the States in conducting Massive Teachers' Orientation Programmes and also in the selection of students for Navodaya Vidyalayas.

*(e) Vocationalization of Education at +2 Stage*

The Vocational Courses in (i) English Stenography in the area of Typing and (ii) Basic Electronic Technology continued in the +2 admission in Demonstration School will be run on the CBSE pattern.

*(f) Computer Science Cell*

Two members of the staff have been trained in the U.K. in the area of Computer Literacy. The Computer Science Cell is being set up.

**Regional College of Education, Bhubaneswar**

The Regional College of Education, Bhubaneswar, offers a four-year Integrated Course leading to B.Sc. (Hons) and B.A. (Hons) B.Ed. Degrees, a one-year B.Ed. (Secondary) Course, a one year B.Ed. (Elementary) course, a one-year M.Ed Course, a two-year M.Sc. Ed. (Life Science) Course and a Summer School-cum-Correspondence Course leading to the B.Ed. Degree. The M.Sc. (Life Science) Ed. Course is on all India-Basis; all other courses are meant for the students of eastern region only. The facility for registering candidates for Ph. D. in Education and Science also exists in the College. Admission to all the courses are made on merit and state-wise quota basis with mandatory reservation of seats for Scheduled Caste, Scheduled Tribe and physically handicapped candidates.

*Enrolment*

The enrolment in different courses during 1986-87 was as follows :

*(a) Pre-service Coursés*

Name of the Course	Enrolment
B.A. B.Ed. Part I	62
B.A., B.Ed Part II	57
B.A. B.Ed. III	55
B.A. B.Ed. IV	46

B.Sc. B.Ed. Part I	81
B.Sc. B.Ed. Part II	75
B.Sc. B.Ed. Part III	79
B.Sc. B.Ed. Part IV	69
One-year B.Ed.	106
(Science) Secondary	
One-Year B.Ed. (Arts) (Secondary)	58
One year B.Ed. (Commerce)	14
One-year B.Ed. (Science) Elementary	13
One-year B.Ed. (Arts) Elementary	8
M.Ed.	19
M.Sc. (Life Science) Ed. Part I	22
M.Sc. (Life Science) Ed. Part-II	19

**Total 783\***

*(B) In-Service Course*

B.Ed. (SSCC) 1st Year	100
Secondary 2nd year	142
B.Ed. (SSCC) 1st Year (Elementary) 2nd Year	53
	60

**Total 355\*\***

\*Includes a physically handicapped.

\*\*Includes two physically handicapped

The College has also established a sub-centre in Manipur to clear the backlog of untrained teachers of the State through B.Ed. Summer School-cum-Correspondence Course. The staff members of this college have been deputed to Manipur during summer vacations to conduct this course besides enlisting the co-operation of other resource persons.

*Results*

The Course-wise results of the University examinations, 1986, enrolled at the Regional College of Education, Bhubaneswar, during 1985-86 were as follows :

S.No.	Name of the Course	Total Appeared	Total Passed	Pass Percentage
1.	B.A. B.Ed. Part I	57	54	94.74
2.	B.A. B.Ed. Part II	55	52	94.54
3.	B.A. B.Ed. Part III	45	45	100
4.	B.A. B.Ed Part IV	29	29	100
5.	B.Sc. B.Ed. Part I	78	64	82
6.	B.Sc. B.Ed. Part II	78	74	95
7.	B.Sc. B.Ed. Part III	73	59	81
8.	B.Sc. B.Ed. Part IV	61	58	95
9.	One-Year B.Ed.	206*	165	80
10.	M.Ed.	23	19	82.60
11.	M.Sc. (Life Science) Ed. Part II	21*	19	90.50
12.	M.Sc. (Life Science) Ed. Part II	20*	20	100
13.	B.Ed. (SS/CC) Secondary	154*	89+24 (withheld)	73.37
14.	(B.Ed. (SS/CC) Elementary	67*	55	82

\* includes ex-regulars

### Extension Services

The College organized various in-service teachers' training programmes as a part of its extension activities catering to the needs of the different States and Union Territories of the eastern region. The details of the in-service programmes organized during 1986-87 together with the number of participants are given below :

S.No.	Programmes	Number of Participants
1.	New Trends in the Teaching of Educational Psychology	17
2.	Emerging Trends and Issues in Teacher Education in Indian Society.	14
3.	Workshop for School Supervisors and Administrators for Integrated Education	14
4.	Development of Strategies for Helping a Dumb Teacher to Become an Effective Physics Teacher	7

5.	Workshop for teachers working in Integrated Schools	16
6.	Preparation of Laboratory Work Manual in Basic Electronic Technology	10
7.	Teaching English as a Second Language for Secondary School Teachers of Sikkim	29
8.	Content Enrichment Course in Life Sciences for Secondary School Teachers of Manipur.	22
9.	Content-cum-Method Enrichment in Social Sciences for Teachers of A and N Islands	30
10.	Orientation Programme in English for Secondary School Teachers of Manipur	31
11.	Workshop for S.T. Teachers of Elementary Schools of Orissa	17
12.	Workshop for S.C. Teachers of Elementary Schools of Orissa	21
13.	Workshop for ST Teachers Working in Elementary Schools of Manipur	30

Total 258

# 1986-87

In all 258 persons participated in the extension programmes. The State-wise distribution of participants was: Orissa-76; West Bengal—14; Bihar—9 and Assam and other North Eastern States including Andaman and Nicobar Islands—159.

## Other Activities

The faculty of this college, besides attending to regular teaching and extension programmes, attended seminars, workshops, conferences at State, Regional and National Levels.

The faculty members contributed research papers and articles to State, National and International Journals of repute.

The faculty members were also offered guidance for research leading to doctoral degrees in Education, Humanities and Science. During the year under report, five research scholars under the guidance of the faculty members of this college have been awarded Ph. D. Degrees by the Utkal University.

This College has been recognized as one of the Resource Centres for CLASSProject and offer short-term courses to teachers in computers.

During Silver Jubilee Celebrations of the NCERT various activities were undertaken which include : screening of NCERT films; organizing an exhibition; a panel discussion on "The Role of NCERT and RCE in the Implementation of National Policy on Education" (AIR, Cuttack); fine arts competition, enacting dramas in Oriya, Bengali, Hindi and English; Lecture Series by eminent educationists on topics like "Excellence in Education", Swami Vivakananda's Vision of Education" and "Current Trends in New Education Policy-Prospect and Retrospect" and publication of a brochure.

## Regional College of Education, Mysore

The Regional College of Education, Mysore, offers Pre-service Courses, namely, eight-semester Integrated Courses leading to B.Sc. Ed. and B.A. Ed. Degrees, a two-

semester Course in B.Ed. (both Elementary and Secondary), four-semester M.Sc. Ed. Courses in Chemistry, Physics and Mathematics and a two-semester M.Ed. Course. It also offers the facility to candidates to register themselves for the Ph.D. Degrees in Science and Education.

The enrolment in different courses during the year 1986-87 was as follows.

### Pre-Service Courses

B.Sc. Ed. 1st Year	76
B.Sc. Ed. 2nd Year	55
B.Sc. Ed. 3rd Year	57
B.Sc. Ed. 4th Year	47
B.A.Ed. 1st Year	30
B.A. Ed. 2nd Year	29
B.A.Ed. 3rd Year	26
B.A.Ed. 4th Year	29
B.Ed. (Elementary)	10
B.Ed. (Secondary)	80
M.Sc. Ed. (Physics) 1st Year	18
M.Sc. Ed. (Physics) 2nd Year	21
M.Sc. Ed. (Chemistry) 1st Year	23
M.Sc. Ed. (Chemistry) 2nd Year	16
M.Sc. Ed. (Maths) 1st Year	18
M.Sc. Ed. (Maths) 2nd Year	10
M.Ed.	26

**Total : 580**

### Results

The results of the year 1986 of the students enrolled/on roll during the academic session 1985-86 in different courses were as follows

S.No.	Course	Total Appeared	Total Passed	Total Percentage
1.	M.Sc. Ed. (Chemistry) Fourth Semester	12	12	100
2.	M.Sc. Ed. (Mathematics) Fourth Semester	12	13	86.66
3.	M.Sc. Ed. (Physics) Fourth Semester	14	12	85.71

S.No.	Course	Total Appeared	Total Passed	Total Percentage
4.	M.Ed. Second Semester	19	17	89.47
5.	B.Ed. (Secondary) Second Semester	71	66	92.95
6.	B.Sc. Ed. Eighth Semester	52	47	90.38
7.	B.A. Ed. Eighth Semester	29	23	79.31

### *In-service Programmes and Extension*

During the year under review 603 teachers/teacher-

educators were given orientation/training through the following workshops/seminars.

S. No.	Title of the Programme	Dates	Number of Participants
1.	Workshop for the Follow-up of 3 Orientation Programmes on Vocationalization of Education	21 to 24 April 1986	1
2.	Orientation Course for the Preparation of IPUC English Text for Karnataka	9 to 12 July 1986	40
3.	Pre-Internship conference for Four-Year Students	10 to 11 July 1986	36
4.	Orientation Programmes on Population Education for Teacher Education of Kerala	26 August 1986	35
5.	Week-end Programme for Eight Adopted School Teachers of SC/ST Schools	12 to 14 and 19 to 21 September 1986	39
6.	Orientation Course for Teacher-Educators in the Area of Integrated Education	22 to 26 September 1986	41
7.	Training Course for Vocational Teachers in Commerce for Tamil Nadu	13 to 22 October 1986	26
8.	Orientation Course for Teacher-educators/Teachers Teaching Malayalam	14 to 18 October 1986	20
9.	Pre-Internship conference for B.Ed. Students	29 October 1986	26
10.	Workshop for the Development of Evaluation Techniques in Vocational Courses	3 to 8 November 1986	12
11.	Orientation Course for Teacher-educators Teaching Telugu	17 to 21 November 1986	30
12.	Orientation Course for Central Tibetan School Teachers	17 to 22 November 1986	24
13.	Orientation Course for Teacher-educators Teaching Malayalam	17 to 21 November 1986	33

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S.No.	Title of the Programme	Dates	Number of Participants
14.	Workshop for the Development of Resource Material in Biology	18 to 27 November 1986	20
15.	Orientation Programme for Wardens of SC/ST Hostels of Mysore District	24 to 26 November 1986	45
16.	Orientation Course for Teacher-educators of AP Teaching English	24 to 27 November 1986	8
17.	Content Enrichment Course for Teacher-Educators of TTIS of Karnataka	8 to 13 December 1986	52
18.	Workshop for the Development of Resource Materials in Mathematics for A.P.	15 to 19 December 1986	25
19.	Workshop for the Development of Resource Materials in Mathematics of Kerala	15 to 19 December 1986	51
20.	Week-end Courses for Eight Adopted School teachers of SC/ST Schools of Mysore District.	23 to 25 January 1986 and 30 January to 1 February 1986	46
21.	Workshop for the Development of Audio Tapes on Co-curricular Areas.	9 to 14 February 1986	23
22.	Workshop for the Development of Audio Tape for the Slides Prepared under Population Education Project	9 to 11 March 1986	5
23.	Workshop for the Development of Training Packages for Non-Formal Education teachers of Karnataka	16 to 25 March 1986	45

**Total : 683**

The State-wise distribution of the participants of in-service/extension programmes was: Andhra Pradesh—91; Karnataka-388; Kerala-162; Tamil Nadu-30; and others-12.

### Research Activities

The College has undertaken the following research study during the year under report.

Research Project	Investigators Incharge
"Improving the Kannada reading-performance of educably, mentally retarded" (ERIC Sponsored Project)	Dr. M.A. Khander Dr. S. Rama

### Publications

The following are a few publications brought out by

the College :

1. *Population Education—A Manual for Teacher-Educators*  
Edited by C. Seshadri and U.S. Madhyastha
2. *Number Bases (in Kannada)—A Self-instructional Module for primary School Teachers* C. Seshadri
3. *Multidimensional Role of Teachers* —a paper commissioned by the National Commission on Teachers

## Demonstration Multipurpose Schools

The Demonstration Multipurpose Schools attached to the Regional Colleges of Education function as practising schools of the teacher-trainees enrolled in various teacher education courses offered by the Colleges. These schools are used as a laboratory for trying out innovative practises in school education and teacher education.

### Enrolment

The enrolment in different Demonstration Schools during the year 1986-87 was as follows.

S.No.	Class	DMS, Aimer	DMS, Bhopal	DMS, Bhubaneswar	DMS, Mysore
1.	I	33	70	71	81
2.	II	41	70	81	90
3.	III	34	81	82	88
4.	IV	37	84	84	94
5.	V	32	86	113	91
6.	VI	104	80	116	86
7.	VII	99	75	113	80
8.	VIII	84	76	103	78
9.	IX	118	80	111	76
10.	X	82	67	112	74
11.	XI	98	85	89	73
12.	XII	92	54	89	57
<b>Total</b>		<b>854</b>	<b>908</b>	<b>1164</b>	<b>1968</b>



# 1986-87

## Results

The results of the Board Examinations conducted during March-April 1986 were as follows.

<i>School</i>	<i>Class</i>	<i>Number of Students Appeared</i>	<i>Number of Students Passed</i>	<i>Pass Percentage</i>
DMS, Ajmer	XII	93	81	87
	X	84	83	99
DMS, Bhopal	XII	54	45	83.3
	X	67	(Result Awaited)	(R.A.)
DMS, Bhubaneswar	XII	82	54	65.85
	X	84	(Comp. 22) 82	97.6
DMS, Mysore	XII	47	35	74.47
	X	70	67	94.3

## EDUCATIONAL TECHNOLOGY

**T**HE Central Institute of Educational Technology (CIET), headed by Joint Director, functions as one of the constituent units of the NCERT with a good measure of autonomy. Its main objective is to promote the use 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. The CIET develops software materials relevant to the educational needs, creates competencies and trained manpower through training, conducts research and evaluation of systems, programmes and materials in educational technology. It also documents and disseminates information about hardware and software available in the country in the area of educational media and technology. The CIET is also being funded through UNDP/UNESCO/UNICEF towards Equipment, Consultancy and Training. The Institute has four different locations and its building is under construction.

The CIET functions through seven Divisions: (i) Distance Education, Planning, Coordination, Research and Evaluation Division is mainly concerned with the work of Distance Education, Programme Planning and Coordination of the activities; (ii) Educational Television Division is at present mainly concerned with development and production of educational TV programmes for feeding INSAT-1B to reach in and out-of-school rural children and teachers; (iii) Educational Radio Division produces audio programmes for the children of primary and secondary classes; (iv) Photo and Film Division produces educational films (16 mm) for the benefit of the primary and secondary classes besides producing educational film-strips and photo-

graphs; (v) Graphics, Exhibition and Printing Division is primarily concerned with the production of low-cost teaching aids and tape-slide programmes, arranges exhibitions and undertakes printing work for the CIET-NCERT using its multilith offset printing machine. Training the teachers in various aspects of educational technology has been one of the important activities of this Division; (vi) Information, Documentation and Central Film Library Division has a stock of more than 8,000 (16 mm) educational films in the Central Film Library, which are loaned free of cost to about 4,250 member institutions throughout the country. Besides conducting in-service training/courses/seminars on Media documentation and arranging festivals of Educational Films in various parts of the country, the Division acts as a clearing house of information on Educational Technology; and (vii) Technical Planning, Operations and Maintenance Division provides technical support to various Divisions of the CIET. The Division is maintaining an ETV Studio, a Radio Studio and an OB video van. It is responsible for operation and maintenance of the equipment installed in the above studios. The Division coordinates the job of equipping the studios for six SIETs, one each in Uttar Pradesh, Maharashtra, Gujarat, Andhra Pradesh, Bihar and Orissa.

### Research

The CIET undertook five new research studies besides continuing one on-going project during the year under report. Report writing is under way in respect of two studies. The details of these projects are as follows:

<i>Title of the Project</i>	<i>Date of Commencement</i>	<i>Principal Investigator</i>	<i>Progress Made</i>
An Exploratory Study on the Use of Teaching Aids for Developing Concepts among Handicapped Children (Deaf and Dumb) (ERIC Project)	March 1983	Dr. M.C. Sharma	Two meetings of the working group were held. Tools prepared in respect of different concepts were tested and finalized. Statistical analysis and report writing is in progress.

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<i>Title of the Project</i>	<i>Date of Commencement</i>	<i>Principal Investigator</i>	<i>Progress Made</i>
Pre-telecast Testing of ETV Programmes	1 April 1986	Dr. H.M. Kanade	<p>15 educational television programmes were tested in the rural school of Delhi.</p> <p>Eight programmes in the newly produced series of teachers' programmes were tested.</p> <p>A similar exercise was undertaken at the Non-formal Education Centre at Tilonia to test programmes in series on Mathematics low-cost teaching aids and for integration of handicapped children with normal children.</p> <p>A follow-up of the ETV component in the Massive Teacher Training Programme was undertaken in six districts of Orissa. The report was submitted.</p> <p>Feedback was obtained in the selected villages of Maharashtra from the actual TV users for a comparative study of the ETV programmes produced by CIET and SIET.</p>
Evaluation Studies in Respect of ETV Programmes of INSAT for the Children and Teachers of Primary Schools	1 April 1986	Dr. Jagdish Singh	<p>A three-day orientation of selected TV user teachers of Orissa and Maharashtra in the techniques of collecting feedback and reactions of the children to the ETV programmes was organized in June 1986. Based on the feedback, reports were prepared for the benefit of the programme received from teachers, producers/script-writers.</p> <p>Feed-forward data were collected for developing a programme series on 'Health and Hygiene' in a systematic manner.</p> <p>A three-day seminar-cum-workshop on communication research in ETV for rural children at the primary level</p>

<i>Title of the Project</i>	<i>Date of Commencement</i>	<i>Principal Investigator</i>	<i>Progress Made</i>
Monitoring the Utilization of the ETV Service of INSAT-I	1 April 1986	Dr. Jagdish Singh	<p>was organized in March 1987, with a view to work-out future strategy of research in ETV in the CIET. Writing of the report is in progress.</p> <p>ETV utilization reports were invited from the TV user teachers of Orissa and Maharashtra during 1986-87. A write-up was then prepared in respect of each State for the benefit of the policy planners, administrators and project managers at the Central and the State levels.</p> <p>Data from the five INSAT districts of Bihar were personally collected about ETV utilization. A report suggesting corrective measures to improve utilization was sent to all concerned.</p>
To Study Organizational Structure and Managerial Practices of the Distance Education Institutes at Secondary Education Level	July 1986	Prof. O.S. Dewal	Organizational structure and Managerial practices were studied with regard to Institute of Correspondence Studies, Board of Secondary Education, Ajmer and Institute of Correspondence Education (U.P.), Allahabad.
Evaluation of Audio Radio Programmes Produced by the CIET	1 April 1986	Dr. R.L. Phutela	Seven audio programmes in the series on Hindi poetry were evaluated in a workshop of Hindi teachers of the schools of Delhi to obtain their feedback.

### Developmental Activities

#### Workshops/Seminars/Conferences

<i>Title of the Programme</i>	<i>Duration Dates</i>	<i>Venue</i>	<i>Number of Participants Invited</i>	<i>Remarks</i>
Conference of SIET/Educational Technology Cell Officers	25 to 27 February 1987	ET Cell, Bangalore	30	The work of the ET Cells was reviewed, and the future plan of action was worked out keeping the NPE, 1986 in view.

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<i>Title of the Programme</i>	<i>Duration Dates</i>	<i>Venue</i>	<i>Number of Participants Invited</i>	<i>Remarks</i>
Workshop in writing of Distance Education Lessons (at Higher Education level)	14 to 26 July 1986	Institute of Correspondence and Continuing Education, University of Madras	20	
Workshop in writing of Distance Education lessons (at Secondary Education level)	9 to 18 December 1986	Board of Secondary Education, Cuttack	30	Model lessons were prepared by the participants using the latest techniques of writing lessons for Distance Education.
Seminar on Information and Documentation System in Educational Media	8 to 9 September 1986	CIET	20	Standardized a proforma for documentation of educational software in different media. The state of art in the documentation of educational media was also brought out.
Expert Group meeting for production of Tape slides on 'Valency'	December 1986 and February 1987	CIET	70	Two meetings of experts were held to prepare the scripts.
Production of Photographic Tape-slides/A.V. Materials for the constituent units of the NCERT	18 to 20 March 1987	CIET	21	Under this programme the tape-slide series on "Introduction of Organic compound" was prepared. The three different workshops were held for subject experts for revision of tape-slide programme.
Development of Physics Charts	—	CIET	54	Three meetings each of three days of six experts each time were held to finalize the layout of the charts, during the year.
National workshop on the development of themes, series and topics for ETV programmes.	19 to 25 May 1986	CIET	41	Briefs of the topics on the selected ETV programmes were prepared.
AIBD-CIET Integrated Training Course for Script Writing and Production of Audio/Radio programmes for educational purposes.	17 November to 12 December 1986	CIET	18	About eight programmes based on scripts developed in the workshop were produced.
Orientation Course in Educational Technology for Teacher-educators	7 to 18 July 1986	CIET	20	Teacher-educators were trained in the different areas of educational technology, viz. Programme Instruction, Microteaching, Distance Education, Systems Approach and AV Methods, etc.

<i>Title of the Programme</i>	<i>Duration Dates</i>	<i>Venue</i>	<i>Number of Participants Invited</i>	<i>Remarks</i>
Training Course in ET and its applications in the production of charts	22 september to 3 October 1986	CIET	20	Primary Teacher-educators from the State of Uttar Pradesh and Haryana were trained in Theoretical Aspects of Educational Technology and practicals in preparation of graphic aids, particularly charts and silk screen printing materials.
Training Course in Photography	8 to 19 December 1986	CIET	13	Participants from all over the country were given both theoretical and practical knowledge in the field of skill photography, colour as well as black and white. The participants developed scripts and prepared photographs for clarification of certain concepts relevant for elementary teachers.
Training course in ET and application of principles in production of AV materials particularly tape slide programmes	28 July to 8 August 1986	CIET	19	Secondary level teacher-educators from all over India were trained in theory as well as preparation of tape-slides for qualitative improvement of instruction.
Thomson Foundation Technical Operation Training Course-I	6 to 7 October 1986	CIET	16	Participants from SIETs and CIET attended. Training was imparted in special techniques of studio lighting, sound recording and camera operations. Cameramen training was also organized in collaboration with AIBD.
Thomson Foundation Technical Operation Training Course-II	20 to 21 October 1986	CIET	24	
Thomson Foundation Technical Operations Training Course-III	3 to 19 November 1986	CIET	14	
Training Course in ETV Production and Technical Operations	7 April to 16 May 1986	CIET	43	Organized in collaboration with AIBD, Kuala Lumpur. Participants from SIETs and CIET attended.
Management Training Course of Radio and Television Production Centres	1st stage 26 May to 6 June 1986 2nd stage 16 to 26 September 1986 3rd stage 8 to 19 December 1986	CIET	19	The third stage of the course included a study tour of the participants from SIETs, TTTIs, EMRCs and CIET to Thailand, Singapore, Sri Lanka and Malaysia. A draft Management Manual for SIETs was produced. (Expenses met out by UNDP)

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Title of the Programme	Duration Dates	Venue	Number of Participants Invited	Remarks
Training Course in Production of ETV Programmes and Technical Operations	13 October to 21 November 1986	SIET Lucknow	40	Organized in collaboration with AIBD, Kuala Lumpur. Participants from SIETs and CIET attended. A magazine format of the programmes was developed.
			Total 246	

*Development of Instructional Materials Preparation of Software of Audio-Radio Tapes:* In all, 119 programmes were produced for the children under the project. The programmes were on music education, freedom movement, folk tales and humour. This also included programmes produced for educable mentally retarded children and visually handicapped children.

*Production of Educational Films :* A film on Non-formal education titled 'Gopal Padhne Laga' (Hindi) was shot from Delhi, Rajasthan and Madras. It has been completed. Another film on 'Solar Eclipse' was completed from Delhi and Madras. Three films on 'Land and People' series and three films on west coast were also started during 1986-87. Out of these, a film titled 'Desert Gold' had been completed and others are nearing completion.

*Dubbing of Films in Hindi :* Two films, namely, the 'Eternal Sounds' and the 'Desert Gold' were dubbed in Hindi.

*Duplication of Films for Sale and Supply :* The project was completed : 6 tape slide programmes and 11 films were sold.

*Extension of Radio Pilot Project for Teaching Hindi as the First Language Using Radio :* The project was extended to Madhya Pradesh; 500 two-in-one sets were given in the selected schools of Hoshangabad district. Five hundred copies of 77 sets of audio tapes each containing 308 programmes, are under duplication for distribution.

*Development of Portraits on National Leaders :* The project continued during the year under report.

*Production of ETV Programmes for Children and the Teachers at the Elementary Level :* 139 ETV programmes were produced. The break-up is as under :

5-8 years old children	22
9-11 years old children	28
Teachers	66
Miscellaneous	23
	139

This includes 39 programmes produced for the Massive Teacher Training Programme.

### Extension Programmes

Extension programmes organized during 1986-87 are mentioned below.

Two UNESCO workshops on (i) Strategies and procedures for educational and developmental radio for disadvantaged and out-of-school population, (ii) media material development for disadvantaged and out-of-school population were organized at CIET, New Delhi from 4 to 8 August 1986 and 11 to 13 August 1986, respectively. Fifty experts on media and education were invited to participate in these workshops.

Educational film festivals were organized in Manipur in collaboration with SCERT in May 1986 and in Delhi in September 1986. About 18,500 students and teachers benefitted.

## Consultancy

The details of consultancy provided by CIET are mentioned below :

<i>Organizations Seeking Consultancy</i>	<i>Purpose of Consultancy</i>
Department of Educational Psychology, Counselling and Guidance, NCERT, New Delhi	To give ideas about radio script-writing
Vikram Sarabhai Science Centre, Ahmedabad	To explore the feasibility of production of audio-radio programmes for science teaching in rural areas
Technical Teachers' Training Institute, Chandigarh.	Selection of Technical staff for recruitment
Centre for Cultural Resources and Training, Bhagalpur House, Bhagwandas Road, New Delhi	Technical Evaluation of Audio Cassette Recorders, Slide-cum-Filmstrip Projector and Audio Cassette Tapes
Department of Field Services, Extension and Coordination	Technical evaluation of Audio Cassette recorders
State Institute of Education, Delhi	To explore the feasibility of conducting Joint Innovative Project for raising of academic achievement of children studying in schools in backward areas
Department of Educational Psychology, Counselling and Guidance, NCERT, New Delhi	To involve professional Counsellors and Experts in Script Development for Primary Teachers in video script-writing. Eight scripts were written in draft form

## Publications

The following are the details of publications brought out by the CIET during 1986-87.

<i>S.No.</i>	<i>Title</i>	<i>Month of Publication</i>	<i>Number of Copies Published</i>
1.	A Report on ETV Utilization in Maharashtra for 1985-86 (Mimeo)	June 1986	50
2.	Magnitude of ETV Programme Repetition—An Analysis	June 1986	25
3.	ETV Programme Production during 1985-86 and in the First Half of 1986-87 : A Quantitative Analysis	June 1986	75
4.	A Report on ETV Utilization in Gujarat for 1985-86 (Mimeo)	July 1986	50
5.	Massive Teacher Training Programme : Feedback on ETV Component	September 1986	25
6.	A Study Report on ETV Utilization in the INSAT Districts of Bihar (Mimeo)	December 1986	25
7.	Feedback on ETV Programme : A Report (Mimeo)	February 1987	25
8.	Analysis of Viewers' Mail—Some Observations (Mimeo)	March 1987	25



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<i>S.No.</i>	<i>Title</i>	<i>Month of Publication</i>	<i>Number of Copies Published</i>
9.	ETV Feedback Strategies—Some Observations	March 1987	50
10.	Recommendation of the Committee on Art Education set up by the Director, NCERT	January 1987	under print
11.	Report on UNESCO-CIET Workshops on (i) strategies and procedure for educational and developmental radio for disadvantaged and out-of-school population, (ii) media material development for disadvantaged and out-of-school population	February 1987	under print
12.	Training Programmes in Educational Technology	June 1986	100
13.	Bibliography of Books on Educational Technology	August 1987	200
14.	Report on Workshop on Low-cost Teaching Aids	May 1986	100
15.	Titles of films to be used as :		
	Media Support to Exemplar Instruction Packages in Core Curricular Areas, as envisaged under the National Policy on Education :		
	Series—I National Identity	December 1986	100
	Series-II Constitutional Obligations	January 1987	100
	Series-III Freedom Struggle.		100
	Series-IV Small Family Norms		100
	Series-V Scientific Temper		100
	Series-VI Egalitarian		100
	Second Supplementary of the Catalogue of the Film of Central Film Library procured during 1981-84		1000

T E N

## MEASUREMENT, EVALUATION, SURVEY AND DATA PROCESSING

**D**EVELOPMENT of innovative approaches and strategies for educational evaluation, research and developmental activities directed at examination reform at all stages of school education, conducting educational surveys to provide data base for educational planning, organization of the National Talent Search Examination, the training of key personnel and resource persons, and processing data rela-

ted to various educational surveys and research projects are some of the major functions of the Department of Measurement, Evaluation, Survey and Data Processing (DMESDP). The Department has been carrying out its activities in close collaboration with the Departments/Directorates of Education and Boards of School/Secondary Education in the States and the Union Territories.

### Research

**TABLE 1**  
**Research Projects of DMESDP**

S.No.	Title of Project	Duration	Date of Commencement	Principal Investigator	Remarks
1.	Fifth All India Educational Survey	1½ Years	November 1986	Prof. H.S. Srivastava Prof. K.N. Hiriyanniah	Schedules have been designed and sent for Printing.
2.	Sample Study of Library Facilities and their Utilization in High and Higher Secondary Schools of four Selected States.	2 Years	April 1985	1. Dr. C.L. Kaul 2. Shri J.K. Gupta	Collection of data has been completed in Gujarat, Haryana and Tamil Nadu. The work is in progress in Assam.
3.	Intensive Study of Science Laboratories at the Secondary and Higher Secondary Levels.	2 Years	August 1985	1. Dr. K.N. Rao 2. Sh. M.K. Gupta	First Phase of the project is nearing completion in Andhra Pradesh, Maharashtra, West Bengal and Rajasthan.
4.	An Intensive Study of Secondary and Higher Secondary School Building in Four Selected States	1½ Years	January 1986	1. Shri Pushpendra Kumar 2. Shri S.C. Mittal	Collection of data from the selected States is in progress.
5.	An Intensive Study of Teaching Aids in Middle and Secondary Schools	2 Years	April 1986	1. Dr. Satvir Singh 2. Shri J.P. Arora 3. Smt. Manju Trehan	The Project was launched in the States of Karnataka, Bihar, Madhya Pradesh and Himachal Pradesh.

S.No.	Title of Project	Duration	Date of Commencement	Principal Investigator	Remarks
6.	Development of Criterion Referenced Tests for Class III to V	3 Years	December 1983	Dr. Pritam Singh	Nearly 20 tests on all the Units of the Class III Environmental Studies (Science) textbook were constructed and tried out in 31 Schools of Delhi. Material developed has been disseminated to the Project Schools. Further analysis of data is under way.
7.	Survey of Educational Facilities for Weaker Sections of Society, viz. the Scheduled Tribes in Orissa	15 months	July 1985	Shri S.M. Bhargava	Data have been collected and analysed. The report is under preparation.

### Training in Educational Evaluation

With a view to developing objective-based, comprehensive and scientific evaluation procedures, the DMESDP has been engaged in conducting programmes for the improvement of External examinations of various Boards of

Secondary/Higher Secondary Education in the States and organizing training courses in Educational Evaluation for the training of item writers. During 1986-87, 333 persons were trained. The details of pre-service/in-service courses conducted by DMESDP are provided in Table 2.

**TABLE 2**  
Details of Pre-service/In-service Courses Conducted by DMESDP

S.No.	Course	Duration (Dates)	Venue	Course Coordinator	Number of Participants
1.	Training Course in Educational Evaluation	3 to 16 June 1986 (14 days)	Shimla	Shri J.P. Agarwal	35
2.	Improvement of External Examination of the Board of High School and Intermediate Education, Uttar Pradesh	25 to 30 June 1986 (6 days)	Nainital	Prof. H.S. Srivastava	33
3.	Improvement of External Examination of Haryana Board of School Education	4 to 8 August 1986 (6 days)	Bhiwani	Shri J.P. Agarwal	53
4.	Improvement of External Examination of Haryana Board of School Education	3 to 6 September 1986 (4 days)	Bhiwani	Shri J.P. Agarwal	57
5.	Training Course for Item Writers in History for +2 Stage	1 to 5 December 1986 (5 days)	Delhi	Dr. Qamaruddin	23

S. No.	Course	Duration (Dates)	Venue	Course Coordinator	Number of Participants
6.	Improvement of External Examination of West Bengal Board of Secondary Education	10 to 17 December 1986 (8 days)	Calcutta	Prof. H.S. Srivastava	50
7.	Item Writers Training Course for X and XII of Pondichery (Union Territory)	18 to 21 February 1987 (4 days)	Pondicherry	Shri J.P. Agarwal	21
8.	Item Writers Training Course for X to XII of Tamil Nadu	23 to 26 February 1987 (4 days)	Madras	Shri J.P. Agarwal	37
9.	Improvement of External Examination of Manipur Board of Secondary Education	21 to 28 March 1987 (8 days)	Imphal	Shri J.P. Agarwal	35
Total :					333

### Developmental Programmes

The DMESDP undertook various developmental programmes during 1986-87, which are detailed in Table 3. The outcomes of these programmes are listed below :

1. Test items were developed in Physics, Chemistry, Biology, Mathematics, History, Economics, Geography and Civics for the use of teachers in their day-to-day teaching for diagnosis and remediation.
2. A format for evaluating practical work in Geography for different school stages was developed.
3. Items to be used for General Mental Ability Tests were constructed.
4. Unit Tests in Physics, Chemistry and Biology based on the NCERT Textbook *Learning Science Part V* were developed for the use of teachers.
5. Unit Tests in Biology for Class IX were developed for the use of teachers.
6. Unit Tests in Mathematics for Class X based on the NCERT Textbook were developed for the use of teachers.
7. Unit Tests in Mathematics for Class X based on the NCERT Textbook were developed for the use of teachers.
8. A brochure entitled "Open Book Examination-Questions in Economics" has been brought out and circulated among Boards/SIEs/SCERTs/Training Colleges/Experts for vetting the test items and content of the brochure. Test items are based on NCERT textbooks.
9. Glossary of Technical Terms in Educational Evaluation was finalized.

**TABLE 3**

**Meetings/Seminars/Workshops/Conferences/ Working Groups/Development Programmes Conducted during 1986-87**

S.No.	Title of the Programme	Duration (Dates)	Venue	Number of Participants
1.	Development of Glossary of Technical Terms in Educational Evaluation	16 to 20 July 1986 (5 days)	Delhi	6

S.No.	Title of the Programme	Duration (Dates)	venue	Number of Participants
2.	Development of Questions/ Test Items for Open Book Examination in Economics	22 to 26 September 1986 (5 days)	Delhi	22
3.	Development of Unit Tests in Biology for Class IX	22 to 24 October 1986 (5 days)	Delhi	23
4.	First Meeting of the State Survey Officers	10 to 12 November 1986 (3 days)	Delhi	31
5.	Development of Unit Tests in Maths for Class X	26 November to 2 December 1986 (7 days)	Ajmer	25
6.	Development of Unit Tests in Science for Class VI	26 November to 2 December 1986 (7 days)	Ajmer	24
7.	Development of Test Items in School Subjects for Class X	26 to 31 December 1986 (6 days)	Gwalior	57
8.	Second Meeting of the State Survey Officers	28 January to 4 February 1987 (8 days)	Delhi	31
9.	Development of Unit Tests in Maths for Class IX	25 February to 3 March 1987 (7 days)	Ahmedabad	28
10.	Development of Unit Tests in Geography for Class XI	2 to 11 March 1987 (6 days)	Delhi	11
11.	Development of Items for Mental Ability Test for Class X	9 to 13 March 1987 (5 days)	Delhi	11
12.	Seminar on CRT	30 March to 1 April 1987	Delhi	12

**National Talent Search**

The National Talent Search Scheme was decentralized with effect from 1984-85. The selection for the award under the revised NTS Scheme is done at the end of Class X, in two stages. The first stage of selection is done by the States through a written examination during October-November on the basis of which a stipulated number of candidates are

recommended to the NCERT for the Second Level Test. The Second Level Examination was conducted by the NCERT on 11 May 1986 to select the requisite number of awardees. The National Level Test was conducted by the NCERT at 30 centres all over India. Some Indian citizens presently studying in Class X abroad has also appeared in the Test. The details are given below.

**Number of NTS Scholarships Awarded during 1986**

Class	No. of Students Appeared in Second Level Test	No of Awarded Scholarships (General)	Reserved Scholarships Awarded to SC and ST
	3047	680	70 (including SC and ST)

**Total No. of Scholars on the Rolls  
(Including the awardees of 1986)**

	General	SC/ST	Total
1. +2 stage	1360	140	1500
2. U.G.	206	17	223
3. P.G.	277	—	227
4. Ph.D.	50	—	50
5. 1st Degree in medicine	627	37	664
6. 2nd Degree in medicine	235	—	235
7. 1st Degree in Engg.	1242	80	1322
8. 11nd Degree in Engg.	240	—	240
<b>Total</b>	<b>4237</b>	<b>274</b>	<b>4511</b>

During the year under report, scholarships amounting to Rs. 72, 32, 295.53 and Rs. 3.83 700.00 have been released for NTS awardees under general and SC/ST categories, respectively.

### Data Processing Wing

The Data Processing Wing of the Department is engaged in providing computer services to the different Departments/Units of the Council. The Wing is equipped with one mini-computer terminal of National Informatic Centre, Department of Electronics and Data Preparation equipments. The important tasks which were computerized during the year 1986-87 are categorized into the following major categories :

1. Computer processing of data pertaining to the research projects
2. Computer processing of data pertaining to sample survey studies.
3. (a) Automated scoring of answer-sheets of candidates appeared in National Talent Search Examination, 1986.  
(b) Evaluation of performance, scaling of marks and preparation of NTS final results (1986)
4. Provision of computer facilities to the faculty members working for their Ph. D. projects.

In addition to the above-mentioned computer facilities a new computer system—OMEGA SUPERSTAR—along with five terminals is being installed as a central facility which will be utilized by all concerned.

### Newer Initiatives

(i) In the light of the recommendations of the National Policy on Education, 1986, the annual course in educational evaluation was converted to the theme of Comprehensive Continuous Evaluation. The Examination Reform Programmes envisaged development and training programmes on the use of non-traditional and so far not fully explored and exploited techniques and procedures of evaluation undertaken during this period.

(ii) The Review Committee of the National Talent Search chaired by Prof. Rais Ahmed, also submitted its report during this period. Its recommendations were studied by the senior faculty of the NCERT and NCERT's observations were forwarded to the Ministry. These are under consideration at the MHRD.

(iii) A significant programme of the year was the launching of the Fifth All India Educational Survey with 30 September 1986 as the base date. The outcome of this survey will be useful to the Ministry of Human Resource Development and Planning Commission not only for a mid-term review but also for other policy decisions regarding future educational plan at the Centre and State levels.

(iv) The new computer OMEGA SUPERSTAR is expected to be available for use by the end of July 1987. The programmes of the Council will then be monitored not only with greater efficiency and precision but also with great speed for obtaining continuous feedback for further improvement of the NCERT's programmes.

(v) Another major responsibility shouldered by the Department during the period was the conduct of the Selection Tests for admission to 83 Navodaya Vidyalayas.

## Activities of Navodaya Vidyalaya Cell (NVC)

The Navodaya Vidyalaya Scheme was envisaged by the Ministry of Human Resource Development to identify talent at the primary stage and nurture them by providing good education through its schools called Navodaya Vidyalayas. The Ministry decided to have one Vidyalaya at each district level during the Seventh Five Year Plan. The students who have passed Class V examination are eligible to apply for admission to Class VI of these Vidyalayas. The students selected for these Vidyalayas which are residential and co-educational are provided free education including free board, lodging and other facilities. To begin with, two such schools were opened during 1985, one at Jhajjar (Haryana) and the other at Amrawat (Maharashtra). During the year 1986, besides these two, 81 more schools were opened in 19 States/Union Territories. About 110 to 120 more Navodaya Vidyalayas are expected to be opened in different parts of the country during the year 1987-88.

With a view to deal with the work of Navodaya Vidyalayas, a Navodaya Vidyalaya Cell has been established in the NCERT. The main functions of the Navodaya Vidyalaya Cell (NVC) are to conduct admission test, organize orientation courses for teachers of Navodaya Vidyalayas, development of conceptual material, research support, coordination and liaison work and bring out relevant publications. The NCERT was entrusted with the responsibility of conducting the admission test for the Navodaya Vidyalayas. During 1986-87 three such tests were organized. The first examination was conducted in June 1986 exclusively for Jhajjar (Haryana) and Amrawati (Maharashtra). The second examination was conducted in September 1986 for 81 Navodaya Vidyalayas opened during 1986-87. This test was taken by 1,21,151 candidates at 1,172 centres located in 1,078 of 81 districts covering 19 States/Union Territories. A third one was organized as Special Examination for only one centre at Baghaha-II district Champaran of Bihar on 18 January 1987 as a sequel to Patna High Court Judgement.

## Selection Test For Admission to Navodaya Vidyalayas

The main selection test for admission to 81 Navodaya Vidyalayas was held on 28 September 1986. The test was aimed at selecting 80 students per school out of which 75 per cent from rural and 25 per cent urban areas and the number of Scheduled Castes and Scheduled Tribes students was to be determined on the basis of their

population in the district subject to a minimum of the national norm.

The selection test consisted of verbal test in language and arithmetic carrying a weightage of 20 per cent each and non-verbal test of General Mental Ability carrying a weightage of 60 per cent. This predominant proportion of the non-verbal component of the admission test was deliberately kept with a view to ensuring cultural neutrality of the test. All the test items were of the multiple choice type with students required to answer in the question booklets, themselves.

The languages in which the tests were prepared were :

1. Assamese
2. Bengali
3. English
4. Garo
5. Gujarati
6. Hindi
7. Kannada
8. Khasi
9. Konkani
10. Malayalam
11. Manipuri
12. Marathi
13. Mizo
14. Oriya
15. Punjabi
16. Sindhi (a) Arabic Script (b) Devenagari Script
17. Tamil
18. Telugu
19. Urdu

There was atleast one centre in each block of every district.

Prior to the administration of the test, a very comprehensive preparatory exercise was undertaken. The NCERT nominated one observer to each district headquarters and the Kendriya Vidyalaya Sangathan deputed one observer at each Centre of Examination. The NCERT observers were first given a detailed orientation with the help of a manual of instructions which was specially developed for them. The NCERT observers in turn conducted another orientation programme at the district headquarters for the Superintendents of Examination Centres, the Block Education Officers and the KVS Observers. The KVS Observers then proceeded to the Centres of Examination along with their respective Centre Superintendents and the examination was conducted.

Evaluation of answer-scripts was done region-wise at the four Regional Colleges of Education. Finally, the tabulated results were screened at the Headquarters and were passed on to the Navodaya Vidyalaya Samiti for onward transmission to individual schools. The details of the admission tests are given below :

Total Number of Navodaya Vidyalayas	81
Total Number of approved Centres for the admission test	1172
Total Number of candidates appeared in the admission test	121151
<b>Students Selected</b>	
1. General	4459
2. SC	1129
3. ST	639
	Total : 6227
1. Boys	5119
2. Girls	1108
	Total : 6227
1. Rural	4810
2. Urban	1417
	Total : 6227

### Other Significant Activities Carried out by the NVC

Besides conducting the admission test for Navodaya Vidyalayas, some of the significant activities carried out by the NVC during the period under report are listed below.

### Publications

Publications brought out by DMES DP and NVS are listed in the Table.

**TABLE**  
Publication Brought Out during 1986-87

S.No.	Title	Month of Publication	No. of Copies Published
1.	Seminar Report on Open Book Examination	May 1986	300

(i) *Orientation Programmes* : Four orientation programmes for the teachers of Navodaya Vidyalayas established in 1986-87 were organized from 29 December 1986 to 3 January 1987, simultaneously, one each at all the four Regional Colleges.

(ii) *Test Manual* : A test manual has been brought out with a view to familiarizing the test personnel with the test and testing procedures. This manual contained detailed instructions for the Invigilators, Centre Superintendents and Centre Observers, besides activity schedule and the composition of tests.

(iii) *Development of Framework for Admission Test* : The Director, NCERT, set up an Advisory Committee for testing programme for the Navodaya Vidyalaya under the Chairmanship of the Joint Director. The Committee took important decisions regarding nature and forms of the tests. Subsequently, the framework for each of the three tests were finalized.

(iv) *Development of the Format of Application Form* : Keeping in view the requirement of computerization of results the manuscript of the application form was finalized in consultation with the NVS. It was subsequently translated into 19 regional languages and passed on to all the Field Advisers for printing in different languages and distributing the same through District Education Officers (DEOs).

(v) *Collection of District Data* : Relevant data are being collected from those districts where Navodaya Vidyalayas are already working or are being opened during 1987. This is being done with a view to making necessary arrangements for the conduct of admission test scheduled to be held on 23 August 1987. In the coming year, the conduct of the Navodaya Vidyalaya Admission Test is going to be a very gigantic task. It is expected that more than five lakh candidates from more than 2,500 blocks may be competing at more than 3,000 centres for about 200 Navodaya Vidyalayas.



# 1986-87

<i>S.No.</i>	<i>Title</i>	<i>Month of Publication</i>	<i>No. of Copies Published</i>
2.	Manual of Instructions for Navodaya Vidyalayas admission test. (for two schools)	May 1986	100
3.	Manual of Instructions for Navodaya Vidyalayas admission test (for 81 schools)	September 1986	5,000
4.	Guidelines for the Evaluation of Scripts and preparation of results of Navodaya Vidyalayas	September 1986	50
5.	Criterion Referenced Tests for Class III	January 1986 (i) English version (ii) Hindi Version	170 150
6.	Open Book Examination Questions in Economics	January 1987	300

## ELEVEN

### POLICY RESEARCH, PLANNING AND PROGRAMMING

**T**HE Department of Policy Research, Planning and Programming (DPRPP) of the NCERT undertakes, aids, promotes and coordinates research and innovations in all branches of education and acts as a clearing-house for ideas and information on research. The major activities undertaken by the DPRPP during 1986-87 are summarized below.

#### Research and Innovations

The Educational Research and Innovations Committee (ERIC), which was set up in 1974 is the principal mechanism for supporting research. Eminent researchers in education, representatives from the SIEs and SCERTs and all the Heads of Departments/Units of the NIE and the RCEs comprise the

Committee. The Professors of the NIE Departments and RCEs are permanent invitees.

The ERIC helps to identify priority areas in research and sanctions funds for research projects undertaken by the departments of the NIE, the RCEs, the Field Units, the CIET, and other research institutions in the States and also individual scholars. The ERIC also offers fellowships for doctoral work within the Council and publication grants for doctoral work done elsewhere in the country.

#### NIE Lecture Series

Under the NIE Lecture Series three eminent educationists were invited to give talks as given in Table 1.

TABLE 1

Speaker	Topic	Date
Dr. Valeri M. Pivovarov, Institute of General Pedagogics, USSR	Recent Development in Soviet Education	1 April 1986
Dr. Prabhjot, Director, Capsule Psychological Courses, Capsul Publishers, New Delhi	Significance of Reading in the National Policy on Education	16 October 1986
Prof. A.K. Jalaluddin, Joint Director, NCERT	Education in China vis-a-vis Education in India	5 November 1986

#### Completed Projects

Six outside and three Departmental research projects were completed during the year under report. The research projects completed during 1986-87 are mentioned

in Table 2. Brief accounts of completed projects are published by the Department in ERIC Bulletins, which can be obtained on request from the Head, DPRPP, NCERT, New Delhi.

TABLE 2

Title	Duration	Date of Completion	Principal Investigator
<b>(A) Outside Projects</b>			
Learning Disabilities of Primary School Children	2 years	April 1986	Dr. K.G. Desai, Ahmedabad
A Study of the Effectiveness of Non-formal Education Programmes	20 months	July 1986	Dr. N.Venkatiiah, Tirupati

Title	Duration	Date of Completion	Principal Investigator
The Construction and Standardization of two sets of Diagnostic Tests, one in Mother Tongue (Bengali) and other in Mathematics for the use with backward children of Grades III, IV, in West Bengal Schools, 1984	2 years	April 1987	Dr. S. Acharya, Calcutta
Developing Strategies for Compensatory Language Programme of Pre-school Children Having Socio-economic and Cultural Deprivation	15 months	May 1986	Dr. G. Pankajam, Madras
Experiment of Continuing Education for Working Children in Rural Areas	2 years	April 1987	Dr. M.G. Mali, Gargoti Maharashtra
Inter-caste Difference among the Scheduled Castes in Achievement at Secondary Stage of Education	8 months	October 1986	Dr. R.P. Singh, Patna
<b>(B) Departmental Projects</b>			
Improving Cognitive Functions and Classroom Behaviour of Elementary Students by Contingency Management	2 years and 6 months	May 1987	Dr. R.K. Sharma
A Study of Psychological Characteristics vis-a-vis Educational and Vocational Planning of S.C. High School Boys	3 years	March 1987-	Dr. J.S. Gaur
Acceptance, Awareness and Impact of Regional College of Education Programmes—RCE, Mysore	22 months	January 1987	Dr. D.S. Babu

### On-going Projects

Thirty-two Departmental and thirteen outside research

projects were on-going during the year under report. The projects are mentioned below.

Title of the Project	Principal Investigator
<b>Departmental Projects</b>	
Comparative Study of Educational Achievement of Scheduled Caste and Non-Scheduled Caste Students of Class X of Uttar Pradesh	Dr. B.S. Gupta
A Study of Subject-wise Performance of Tribal Students of Primary to Determine their Weak and Strong Points	Dr. B.S. Gupta
A Study of the Interrelationship between Education of Students and their Socio-Economic Mobility	Dr. B.P. Awasthi
Curriculum Evaluation at 10+2 Stage in the Light of Instructional Development and Social Objective of Education—A Preliminary Study	Dr. B. Mehdi
Need-based Ecologically Determined and Change-oriented System of Education for a Community—Nomadic Tribe	Dr. (Km.) S. Bisaria
Identification of Local-regional Need-based Vocations of Girls and Women for Vocationalization of Education	Dr. S. Kumari
A Comparative Study of the Physical Facilities between Tribal and Non-tribal Primary Schools	Dr. L.R.N. Srivastava

<i>Title of the Project</i>	<i>Principal Investigator</i>
Identification of Regional-local Need-based Vocation for Girls and Women for Vocationalization of Education Studying Problems of Indian School Education in a Historical Perspective	Dr. (Km.) S. Bisaria Dr. G.L. Adhya
Madhyamik Vidyalaoon, Gurukul tatha Prasharik Sanskrit Pathshalaon ke Chhatron ki Sanskrit Vidya ki Samprapti (Achievement) ke Mulyankan	Dr. K.K. Mishra
Printing of Teachers handbook "Know the Plants around You"	Dr. (Smt.) G.R. Ghosh
Determinants of Under-achievement in Mathematics for Girls (including socially handicapped girls)	Dr. Surja Kumari
Analysis of Conceptional Common Errors in Teaching Mathematics at the +2 Stage of Innovations of Easy Methods and Techniques as a Remedial Measure	Dr. S.C. Dash
A Comparative Study of the Private Costs of Teachers' Preparation in Teachers' Training Institutes under Different Management in the Union Territory of Delhi —A Study in Economics of Education	Dr. S.L. Gupta
Evaluation of Instructional Materials in Non-formal Education	Dr. (Smt.) N. Shukla
Identification of Various Approaches Practices of Non-formal Education	Dr. H.L. Sharma
A Study of Educational Vocational Planning, Academic Achievement and Selected Psychological and Home Background Variables of Tribal High School Students in and around Shillong (Meghalaya)	Dr. (Smt.) P.H. Mehta
A Programme of Research to Study Vocational Behaviour and Vocational Adjustment of Students in Academic and Vocational Streams	Dr. Swadesh Mohan and Dr. Nirmala Gupta
Development of Criteria Referenced Tests in Environmental Students at the Primary Stage (for Class III to V)	Dr. Pritam Singh
Sample Survey of Educational Facilities for SCs and STs in Rajasthan	Dr. S.M. Bhargava
Sample Study of Stagnation and Dropouts at Primary Stage in the Nine Educational Backward States	Dr. R.R. Saxena
Identification of Instructional Skills and Development of Related Instructional Material of the NFE Centre	Shri S.N.L. Bhargava and Dr. J.S. Grewal
A Research Study for Identification of Teaching Skills and Training Strategy for Implementing Environmental Approach at Primary Level	Dr. J.S. Rajput
A Study of the Flora of Bhopal to Produce Resource Material for the Biology Teachers of Madhya Pradesh	Dr. P.K. Khanna
Know the Life in Fresh Waters (A Teachers' Handbook of Fresh Water Biology)	Dr. (Smt.) Chandralekha Raghuvanshi
Developing, Validating and Testing the Efficacy of Self-learning Process-based Material for the Development of Hypothesis Making and Hypothesis Testing Abilities in Science	Dr. A Grewal
The Determination and Development of Schemes of Thought in Science during Adolescence	Dr. N. Vaidya
Survey and Cultivation of Edible Mushrooms and a Work Experience/Vocational Programme for the High/Higher Secondary Schools	Dr. G.B. Kanungo
Conservation of Aquatic Eco-system in Orissa	Dr. P.K. Durani

<i>Title of the Project</i>	<i>Principal Investigator</i>
Identifying Teachers' Competencies Specifically for the Integrated Education of the Disabled	Smt. S. Mukhopadhyaya
A Study of Administration Structure of NFE and the Scheme of Monitoring and Supervision	Dr. (Smt.) S.R. Arora
Effectiveness of Concrete Materials to Enhance Learning in Physical Sc. A Pilot study	Dr. B. Prakash
<b>Outside Projects</b>	
A Study of the Feasibility of Involvement of Female health Personnel in Women Education Programme in Rural Community	Prof. P. Mathur, New Delhi
Identification of Local Regional Need-based Vocations for Girls and Women and Location of these Schools in Medak District	Dr. Dollie Shenoy, Hyderabad
Construction and Standardization of Silent Reading Comprehensive Tests in Gujarati for Pupils of Classes V, VI and VII to Study the Effect of Reading Improvement Programme	Dr. B.V. Patel, Vallabh Vidyanagar
Evaluation Tools and Teaching Methods of Hindi Short Story at +2 and Undergraduate Level	Dr. R.S. Sharma, Dr. (Km.) Shashi Kanta Vohra New Delhi
An Evaluative Survey of Special Education Programme Schools and Services for the Mentally Retarded in Andhra Pradesh	Dr. (Smt.) Dollie Shenoy, Hyderabad
A Comparative Study of the Relative Effectiveness of the Teaching Methods Based on Motivation due to Competition and Motivation due to Initiative	Prof. S.B. Malhara, Jalgaon
Rural Enrichment Education Project Featuring Development of Alternate Model and Strategies of Self-learning for the Rural Youth on Topics Relevant to Their Life	Dr N.K. Upasani, Pune
Interaction of Structure in Instructional Material with Creative Training	Dr (Smt.) Sudesh Gakhar, Chandigarh
A Follow-up Study of Creatively Talented College Students	Dr Girjesh Kumar, Moradabad
Impact of Education on the Socio-psychology of Tribal School Students in Orissa	Dr Girish Patel, Phulbani
Identification of Learning Disabled Indian Children and Development of an Effective Intervention Programme	Dr L.B. Tripathi, Gorakhpur
Development of Tools for Identifying Creative Thinking Abilities among Pre-school Children for their Education and Personality Patterns	Shri Bhoodev Singh, Sultanpur
A Study of Public Perception of Science and Scientists and its Implications on Non-formal Education	Dr. A. Vasantha Associate Professor, JNU, New Delhi

### Recommended Projects during 1986-87

In the 12th Sub-Committee Meeting of ERIC held on 28 – 29 August 1986, the following projects were recommended :

<i>Title of the Project</i>	<i>Principal Investigator</i>
Effect of Jurisprudential Strategy of Teaching on the Development of Social Consciousness and Ability to Solve Value Conflicts	Dr. S.K. Pal, Allahabad Dr. K.S. Misra

<i>Title of the Project</i>	<i>Principal Investigator</i>
A Cross-sectional Study of Logical Reasoning among Socially Disadvantaged Groups Children of 9 to 14 Years	Dr. V.K. Jain, DTESES
A Comparative Study of Adjustment Patterns and Language Competency of Hearing Impaired Children from Integrated and Special Schools	Dr. Smt. P.L. Sharma, DTESES

**The 13th Meeting of ERIC held on 23 and 24 March 1987, recommended the following nine projects :**

<i>Title of the Project</i>	<i>Principal Investigator</i>
Attributional Analysis of Teacher Education in Secondary Schools	Dr. Shivganesh Bhargava Bhopal
Feasibility Study for Introducing Book Examination in Selected Subjects at the Secondary Stage in Schools of Uttar Pradesh	Dr. Pritam Singh, NCERT
A Cross-sectional Study of Logical Reasoning among Socially Disadvantaged Groups of Children of 9 to 14 years	Dr. V.D. Bhatt, DTESES
A Cross-sectional Study of Vocational Behaviour of Creative Girls	Dr. (Smt.) Asha Bhatnagar, DTESES
A Study of Effectiveness of Mastery Learning Approach in Teaching Mathematics at the Secondary Level of Education in West Bengal	Prof. K.C. Mandal, F.C. College
A Study of 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, Bhubaneswar
An Evaluative Study of the Roles and Functions of Training Career Teachers in the Secondary Schools of Karnataka	Dr. B. Phalachandra, DEPCG
Anusuchit Jati avam Janjati ke Chatron ki Uchcha Prathmik Vidyalaya Ster per di Janen wali Atirikta Suvidhaon kay Samadhan par Prabhav	
A Preliminary Survey of Primary Teachers on Some Practices of Behavioural Management of Students in the School and Classroom Setting	Dr. S.P. Sinha

### **New Projects Commenced during 1986-87**

Three departmental and three outside research projects commenced with the Council's financial support during the year under report. The projects are mentioned below.

<i>S.No.</i>	<i>Name of Project</i>	<i>Duration</i>	<i>Date of Commencement</i>	<i>Principal Investigator</i>	<i>Approved Budget</i>
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#### **Departmental Projects**

1.	Identifying Teacher Competencies Specifically for the Integrated Education of the Disabled	18 months	28 August 1986	Dr. (Smt.) S. Mukhopadhyaya DTESES	Rs. 48,900
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S.No.	Name of Project	Duration	Date of Commencement	Principal Investigator	Approved Budget
2.	A Study of Administration Structure of NFE and the Scheme of Monitoring and Supervision	1 year	10 April 1986	Dr. Smt. S.R. Arora DPSEE	Rs. 47,390
3.	Effectiveness of Concrete Materials to Enhance Learning in Physical Science—A Pilot Study	6 months	June 1986	Dr. B. Prakash	Rs. 5,000
<b>Outside Projects</b>					
1.	Identification of Learning Disabled Indian Children and Development of an Effective Intervention Programme	2 years	10 April 1986	Dr. L.B. Tripathi Gorakhpur	Rs. 71,820
2.	Development of Tools for Identifying Creative Thinking Abilities among Pre-School Children for their Education and Personality Patterns	9 months	April 1986	Shri Bhoodev Singh Sultanpur	Rs. 9,975
3.	A Study of Public Perception of Science and Scientists and Its Implementation for Non-formal Education	6 months	December 1986	Dr. A. Vasantha JNU, New Delhi	Rs. 8,000

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

The following Ph. D. Theses/Monographs were published with the assistance of the ERIC :

Title	Name of the Author
Learning Difficulties Diagnosis and Programme	Dr. Prerana Mohite, Baroda
Secondary Education in Tamil Nadu : A Growth Study Using Mathematical Models	Dr. S. Packiam, Tuticorin
Non-verbal Classroom Interaction in Teacher Education	Dr. Rakesh Jain, Sagar, MP
Job Satisfaction and the Teacher Development of Prejudice in Children	Dr. S.P. Gupta, Allahabad, Dr. Neerja Sharma, Bhopal
Effects of Home and School Environments on Scientific Creativity	Dr. Karuna Shankar Misra, Allahabad
Poverty Level and Educational Achievement : A Psychological Study	Dr. Jagdish Singh Ghwagipur
Education and Modernization : A Study of Hindu and Muslim Women	Dr. Mamta Agarwal, DME (NCERT)
Teacher Personality and School Climate	Dr. Y.K. Gupta, Moradabad
Biochemicals and Academic Behaviour	Dr. Arunima Vats, NCERT
Adhunik Hindi Me Bal Sahitya Ka Vikas	Dr. (Smt) Vijaya Laxmi Sinha, Jabalpur, M.P.
Communication Technology and Classroom Ethos	Dr. Ummed Singh, Surat
Educational Philosophy of Gandhiji	Dr. Kamla Dwivedi, Kanpur
Work Adjustment and Job Satisfaction of Teachers	Dr. S. Narayana Rao, Tirupati
Study of the Psychological Foundation of the "Free Progress System" as Evolved in Sri Aurobindo International Centre of Education	Dr. C. K. Patel, Porbandar, Gujarat

## Approval for Assistance of the Council for the Publication of Ph. D. Theses/Monographs

<i>Title of the Thesis</i>	<i>Name of the Author</i>
Physical Education and its Influence on the Adjustment of Adolescent Girls in the Secondary Schools of Manipur	Dr. Jamini Devi, Imphal
Higher Education among Women	Hemlata Talesara, Udaipur
Hindi ke Kriya Vishashan Padbandh Sanrachna Aur Pranali	Dr. S.K. Sharma, NCERT
A Psycho-Social Enquiry into the House Background of Failures in Secondary Schools	Dr. A.J. Wadkar, Pune
Humans in the Indian Classroom : A Study of Classroom Situations and Materials	Dr. K.S. Bhardwaj, New Delhi
A Study of Hypothesis-making and Hypothesis-testing Abilities in Science in Relation to Intelligence, Creativity and Socio-economic Status	Dr. (Smt.) Avinash Grewal
Comparative Study of Different Strategies of Integration of Teaching Skills	Dr. Gita Singh, Varanasi
An Empirical Study of Education of Tribals of Orissa	Dr. S.C. Panda, Mysore
A Study of Value Orientation in the Educational Institutions Run by Sathya Sai Organization	Dr. Kashi Ram, M. Patel Gandhi Nagar, Gujarat
Centre Relations in the Field of Education in India	Dr. Narsingh Rai, Bhubaneswar

## Training for Research

During 1986-87 four Research Methodology Courses were organized as per details mentioned below.

<i>Name of the Course</i>	<i>Purpose</i>	<i>Duration</i>	<i>No. of Participants</i>
RMC Level-I	Preparation of synopsis for investigation	15 to 24 July 1986	18
RMC Level-II	Selection and preparation of tools and sampling	21 to 28 October 1986	16
RMC Level-III	Analysis of data	19 to 23 January 1987	13
RMC Level-IV	Discussion of results and preparation of research reports	31 March to 3 April 1987	10
Total :			57

The faculty included two to three external guest lecturers and two to seven NIE staff members in each of the above-mentioned courses.

## Eric Bulletin

Recognizing the importance of dissemination of research findings, the ERIC has started publishing a

quarterly research bulletin since 1984. In order to provide basic information and data for Curriculum Research, Dr. A. Sharma prepared a "Bulletin on Curriculum Research in India: A Retrospect and Prospect". Dr. A. Sharma and Shri Hema Shankar Sharma in a subsequent Bulletin gave abstracts of researches in the area of Curriculum Research extracted from three Surveys of Research in Education



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edited by Dr M.B. Buch and other sources available in the NIE Library and thus covered almost all the research studies completed in the Indian Universities up to 1985. The abstracts were placed in three sections, viz. (i) Researches up to 1972, (ii) Researches during 1972-78 and (iii) Researches in 1978 onwards. The Bibliography of

Researches was prepared under the following heads :

1. Curriculum Planning and Development
2. Curriculum for Different Levels
3. Curriculum for Different Subjects.

The details of three ERIC Bulletins brought out during the year 1986-87 are mentioned below.

<i>Title</i>	<i>Author</i>	<i>Month of Publication</i>	<i>No. of Copies</i>
Research Bulletin (ERIC) Vol. III, No. 1 covers projects completed during the year 1980-81	Shri S.K. Batra	April-June 1986	300
Research bulletin (ERIC) Vol. III, No. 2 Curriculum Research in India : A Retrospect and Prospect	Dr A. Sharma	July-September 1986	300
Research Bulletin (ERIC) Vol. III, No. 3 Curriculum Research	Dr A. Sharma Shri H.S. Sharma	October-December 1986	300

## Developmental Activities

The following two activities were undertaken during 1986-87.

### I. A Case Study of the Success Story of Kerala in the Field of Education

At the instance of the President, NCERT, a case study of Kerala in the field of Education had been planned. A workshop for developing research design for the case study was held in January 1987 at Kerala University, Trivandrum. The expert resource persons and participants were drawn from national institutions such as National Institute for Educational Planning and Administration, Institute of Applied Manpower Planning and the NCERT. State-level experts included the Commissioner for Educational Development and Research, Kerala State, Director, State Institute of Kerala State, and the Field Adviser (NCERT) in Kerala. The work on the Phase I of the Case Study has been started.

### II. Vocationalization of Education at +2 Stage

In pursuance of the National Policy on Education, 1986 the Programme of Action (POA) approved by the

Parliament and continuance of NCERT and ERIC decisions to commission researches of national character in priority areas such as (i) Vocationalization of Education at +2 Stage and (ii) Universalization of Primary Education in the country in order to provide research base for policy decisions in the context of the Five Year Plans.

A series of meetings with Secretaries of Vocational Education, Directors of Education and Vocational Education and Training, Secretaries and Chairmen of Boards holding Annual Examination, Managements of Vocational Education Institutions/Centres, working teachers, teacher-trainees, students and parents/guardians were held at Hyderabad, Bangalore, Bombay and Pune. These meetings/seminars helped in on-the-spot appraisal of problems/difficulties coming in the way of vocationalization of education in Andhra Pradesh, Karnataka and Maharashtra States from different standpoints, such as, State policy and administration, managements, teachers, students and parents, curriculum transactions, learning materials, etc. Expenditure on participants was met by the State Governments.

The details of the programmes conducted as follows.

<i>Title of the Programme</i>	<i>Duration</i>	<i>Man days</i>	<i>Venue</i>	<i>No. of Participants</i>
Vocationalization of Education at +2 stage in Andhra Pradesh (Meeting/Seminar)	3 days	150	Hyderabad	150

<i>Title of the Programme</i>	<i>Duration</i>	<i>Man days</i>	<i>Venue</i>	<i>No. of Participants</i>
Vocationalization of Education at +2 stage in Karnataka (Meeting/Seminar)	3 days	200	Bangalore	200
Vocationalization of Education at +2 stage in Maharashtra (Meeting/Seminar)	3 day	200	Bombay	200
Vocationalization of Education at +2 stage in Maharashtra (Meeting/Seminar)	1 day	60	Pune	60
				Total : 610

The meetings held at different levels concerning several vocational courses has provided a rich data/information for holding the National level seminar-cum-workshop for the

identification of thrust areas, problems and issues on priority basis for developing research designs for undertaking national character researches.

T W E L V E

## EDUCATIONAL PSYCHOLOGY, COUNSELLING AND GUIDANCE

**Q**UALITATIVE improvement of education, particularly at the elementary, secondary and senior secondary levels, through the application of the disciplines of educational psychology and of counselling and guidance, is one of the major concerns of the Department of Educational Psychology, Counselling and Guidance. The Department has been engaged in research, development and training activities related to counselling and guidance, identification and development of talent, behaviour technology and development of syllabi and instructional materials. The major foci of the projects/programmes carried out are on the optimal development and self-actualization of the learner, in all aspects of his/her potentialities and functioning.

The Department is taking steps towards implementing the recommendations contained in the National Policy on Education (NPE) and Programme of Action (POA), particularly those having bearing on educational psychology, counselling and guidance.

### Research

The following research studies were completed during the year under report and are being evaluated by the ERIC.

1. A Study of Psychological Characteristics *vis-a-vis* Educational and Vocational Planning of Scheduled Caste High School Boys.
2. Improving Cognitive Functions and Classroom Behaviour of Elementary Students by Contingency Management.

Besides the above-mentioned comprehensive research studies, two ERIC projects mentioned below are nearing completion :

1. A Study of the Educational and Vocational Planning, Academic Achievement and Selected Psychological and Home Background Variables of Tribal High School Students in and around Shillong (Meghalaya)

2. A Study of Vocational Behaviour and Adjustment of Students in Academic and Vocational Streams at +2 Stage.

Details of Research Projects are given in Table 1.

### Training and Extension Programmes

The Department of Educational Psychology, Counselling and Guidance organized the following Training/Extension Programmes.

#### A. Diploma Course in Educational and Vocational Guidance

The course is designed to train counsellors for guidance bureaus and secondary and senior secondary school teachers of guidance who will work in colleges and universities. Candidates are admitted to this full time nine months course on the basis of an all India selection test. During 1986-87, 33 persons including three SC/ST trainees were imparted this training. Of the 33 trainees, 11 were deputed by nine State Governments/Union Territories, viz. Andhra Pradesh, Punjab, Andaman and Nicobar Islands, Bihar, Kerala, Karnataka, Meghalaya, Nagaland and Tamil Nadu. The remaining 22 trainees were from Andhra Pradesh, Delhi, Haryana, Karnataka, Orissa, Punjab and Uttar Pradesh. Twenty-five trainees (including SC/ST) were given a stipend of Rs. 325 per month. Special coaching classes in English were arranged for SC/ST trainees. Many guest lectures by various experts were arranged.

The Diploma Course was reviewed by a Review Committee under the Chairmanship of Dr. Shib K. Mitra, Director, Council for Social Development, New Delhi. The Committee submitted its report to the Director, NCERT in March 1987 for follow-up action.

#### B. Seminars/Workshops/Training Courses/Orientation Courses

The Department organized three Seminar-cum-Work-

**TABLE 1**  
**Research Projects**

S.No.	Name of Project	Duration of Project	Date of Commencement	Date of Completion	Principal Investigator
1.	A Research Study of Psychological Characteristics vis-a-vis Educational and Vocational Planning of Scheduled Caste High School Boys	3 years and 8 months	8 March 1983	31 March 1987	Dr J.S. Gaur
2.	Improving Cognitive Functions and Classroom Behaviour of Elementary Students by Contingency Management	2 years and 3 months	April 1982	July 1986	Shri R.K. Sharma
3.	A Study of the Educational and Vocational Planning, Academic Achievement and Selected Psychological and Home Background Variables of Tribal High School Students in and around Shillong (Meghalaya)	3 years	April 1982	Not completed	Shri R.K. Sharma Dr (Smt.) P.H. Mehta and Dr (Smt.) Asha Bhatnagar
4.	A Study of Vocational Behaviour and Adjustment of Students in Academic and Vocational Streams at +2 Stage	3 years	August 1985	Continuing	Dr. (Smt) Swadesh Mohan and Dr. Nirmala Gupta

shops and a training course for the benefit of Managers/Principals and Career Teachers of Minority-managed schools. It also organized training courses, enrichment courses, refresher courses and orientation programmes for guidance and counselling workers and the heads of institutions. Workshops on the application of Behaviour Modification techniques in schools and training course for teacher-educators on identifying and encouraging creative

potential in elementary grades were also organized. The training/extension programmes organized by DEPCO during 1986-87 are summarized in Table 2.

#### Developmental Programmes

The Department organized a national symposium on different aspects of child-centred approach including behaviour implications. Four Modules on (a) Growing

**TABLE 2**  
**Pre-service/In-service/Training/Extension Programmes**

S.No.	Course	Duration Dates	Days	Venue	No. of Participants
1.	Diploma Course in Educational and Vocational Guidance	1 August 1986 to 30 April 1987 (9 months)	157	NIE Campus	33
2.	Seminar-cum-Workshop on Guidance Services for Managers and Principals of Minority-managed Schools	18 to 20 February 1987	3	NIE Campus	19
3.	Seminar-cum-Workshop on Guidance services for Managers and Principals of Minority-managed Schools	25 to 27 February 1987	3	NIE Campus	10

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S.No.	Course	Duration Dates	Days	Venue	No. of Participants
4.	Seminar-cum-Workshop on Guidance Services for Managers and Principals of Minority-managed Schools	2 to 4 March 1987	3	NIE Campus	22
5.	Training Course for Career Teachers of Educationally Backward Minority-managed Schools	30 March to 24 April 1987	26	NIE Campus	40
6.	Seminar-cum-Workshop of Resource Persons for Orienting Vocational Teachers in Guidance	11 to 13 March 1987	3	NIE Campus	5
7.	Refresher Course-cum-Production Workshop on Research in Guidance and Counselling	23 to 27 March 1987	5	NIE Campus	14
8.	Orientation Programme on Guidance and Counselling for Principals/Heads of High/Higher Secondary Schools of Pondicherry (Financed by U.T. Pondicherry)	28 to 29 November 1986	2	Pondicherry	24
9.	Enrichment Course on Learning and Development for Primary/Elementary Teacher-Educators and SIE/SCERT personnel	20 to 29 January 1987	10	University College of Education Dharwad	23
10.	Enrichment Course on Learning and Development for Teacher-Educators and SIE/SCERT Personnel	25 August to 5 September 1986	10	Central School for Tibetans Kalimpong	21
11.	Workshop on the Application of Behaviour Modification Techniques in School/Classroom Setting for Elementary Teacher-Educators	16 to 25 September 1986	10	C.R. College of Education Hissar	14
12.	Workshop on the Application of Behaviour Modification Techniques in School/Classroom Setting for Elementary Teacher-Educators	20 to 29 November 1986	10	DSERT Bangalore	27
13.	Training Course for Teacher-Educators on Identifying and Encouraging Creative Potential in Elementary Grades	11 to 20 February 1987	10	NIE Campus	28

Child's Needs and Problems, and (b) Learner-centred Approach to Education for teacher training at Primary and Secondary level, under the scheme of Massive In-service Training of School Teachers were developed. The Department developed a multi-media training package comprising 8 video and 24 audio scripts on developmental and career guidance. Development of an Item Bank in Psychology was undertaken for senior secondary classes besides developing a guidance programme to promote self-employment. A handbook on identification and development of talent was published. Development of a

Manual of Instructions on Behaviour Modification Techniques in School Settings, revision of Psychology textbook for Class XI and development of new textbook of Psychology for Class XII are in progress. Developmental Programmes undertaken by the Department are summarized below:

1. The third meeting of the editorial board to develop a Manual of Instructions on Behaviour Modification Techniques in School Setting for Elementary Teacher-Educators was organized at the NIE from 2

to 4 March 1987. It was attended by eight subject experts.

2. A three-day meeting for revision of Textbook of Psychology for Class XI entitled "Psychology: An Introduction to Human Behaviour—Part I" was organized at the NIE from 22 to 24 October 1986.
3. A five-day workshop for developing the first draft of the new textbook for Psychology for Class XII entitled "Psychology: An Introduction to Human Behaviour Part-II" was organized at the NIE from 22 to 26 December 1986.
4. Three workshops of total eighteen days for developing Multi-media Training Package on Deve-

lopmental and Career Guidance were organized at the NIE (from 1 to 5 September 1986 and from 5 to 7 November 1986) and at Bombay University (from 23 March to 1 April 1987). Fifty-five persons participated.

### *Development of CBL Packages in Some Selected Topics in Statistics*

A micro-computer EPSON H-20 was used for developing CBL packages on some selected topics in sampling and statistical inference for the use of trainees of Diploma Course in Educational and Vocational Guidance. Besides these, some computer programmes were also developed for important statistical sub-routines and utilized for analysing the data of a number of research projects in and outside the Department.

### **Consultancy**

The details of consultancy provided by the Department are given below.

**TABLE 3**

S. No.	Consultancy Sought by	Purpose	Person(s) Associated
1.	Police Training School, Delhi Administration Delhi	Lectures in behavioural sciences and correctional administration	Prof. K.N. Saxena
2.	UGC sponsored course on behaviour modification held under the aegis of Madras University, Madras	(a) Lectures on behaviour modification in educational setting (b) Child rearing practices and behaviour modification	Prof. V.K. Singh Prof. V.K. Singh
3.	University College of Education, Dharwad	Lectures on adolescent behaviour, personality development and organization of behaviour	Prof. V.K. Singh
4.	National Institute of Public Cooperation and Child Development, New Delhi	Lecture on vocational guidance and vocational training programme	Prof. (Smt.) C. Dhar
5.	National Institute of Educational Planning and Administration, New Delhi.	Lecture on vocational guidance and vocational training programme	Prof. (Smt.) C. Dhar
6.	Annual Session of the International Association for Mass Communication Research, New Delhi	Lecture on impact of satellite television experiment on primary school children	Prof. Kuldeep Kumar
7.	74th Session of Indian Science Congress	Lecture on management of educational and vocational guidance services in schools to achieve the objective of the National Policy on Education, 1986	Prof. Kuldeep Kumar
8.	National Institute of Public Cooperation and Child Development, New Delhi	Lectures on design of large-scale sample surveys and control non-sampling errors	Prof. R.K. Mathur
9.	Board of Secondary Education, Bhiwani Haryana	Lectures on grading and re-scaling of marks in Public Examinations	Prof. R.K. Mathur

S. No.	Consultancy Sought by	Purpose	Person (s) Associated
10.	Gargi College, University of Delhi, Delhi	Lecture on "How to select your career" for college students?"	Dr (Smt.) A. Bhatnagar
11.	L.S.R. College, University of Delhi, Delhi	Lecture on careers in psychology	Dr (Smt.) A. Bhatnagar
12.	Apeejay Public School, Sheikh Sarai New Delhi	Provided consultancy regarding arrangement of career conferences-cum-exhibitions and guidance corner	Dr B. Phalachandra
13.	Army Public School, Dhaua Kuan, Delhi	Lecture on recruitment of personnel for establishing and running the school guidance unit	Prof. J.S. Gaur

## Publications

Research papers published during 1986-87 by faculty members are mentioned below.

S. No.	Author	Title	Publication
1.	Bhatnagar, A. and Gulati, S.	Vocational Maturity of Creative Adolescents: A Proposed Framework for Research	Sent for publication in <i>Indian Educational Review</i>
2.	Dhar, C.	Counselling Girls for Career and Education	To be published in "Proceedings of the Refresher Course-cum-Production Workshop on Research in Guidance and Counselling"
3.	Gaur, J.S.	Guidance for Self-Employment	Sent for publication in <i>Journal of Indian Education</i>
4.	Gaur, J.S.	Vocational Guidance for Self-Employment with Special Reference to Children at +2 Stage in Vocational Schools	To be published in the special number of CBSE Quarterly Bulletin <i>CENBOSEC</i>
5.	Mathur, R.K.	Decision Theoretic Approach to Criterion-referenced Testing	To be published in the "Proceedings of the Workshop on Criterion-referenced Testing" held at NIE Campus, New Delhi in March 1987
6.	Mehta, Perin H. and Mathur, R.K.	Some Cognitive Abilities and Academic Achievement of First Generation Learners and Non-First Generation Learners	<i>Indian Jr. of Psychometry and Education</i> , Vol. 17, No. 1 and 2, 1986
7.	Saraswat, R.K.	Adjustment of Adolescents	<i>Indian Educational Review</i> , Vol. XXI, No. 4, October 1986
8.	Sinha, S.P.	Importance of Behaviour Modification Techniques in Classroom Setting and School Situations	Sent for publication in <i>Journal of Indian Education</i>

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<i>S. No.</i>	<i>Author</i>	<i>Title</i>	<i>Publication</i>
9.	Bhatnagar, A.and Gupta,N.	Vocational Guidance in Schools	Sent for publication in <i>CENBOSEC</i>
10.	Bhatnagar, A.and Gupta,N.	The Effect of a Guidance Intervention Programme on Career Maturity of Secondary Students of India	Sent for publication in <i>Indian Educational Review</i>

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THIRTEEN

FIELD SERVICES  
AND COORDINATION

**T**HE Department of Field Services and Coordination (DFSC) coordinates the activities of the Regional Colleges of Education and the Council's Field Offices located in different States/Union Territories. It maintains continuous liaison with the Education Departments and other institutions in the States and the Union Territories through the Council's Field Offices and helps in the implementation of the policies and programmes of the NCERT relating to different aspects of school education and teacher education.

During the year 1986-87, the Department organized four meets of District Education Officers of West Bengal, Andaman and Nicobar Islands, Gujarat and Dadra and Nagar Haveli under the "Interaction with the States/Union Territories" programme for identifying the needs and problems as well as the progress achieved in respect of certain programmes in the priority areas related to school education and for collecting information about the strategies/approaches adopted by the States/Union Territories to overcome these problems.

**National Integration Project—Community Singing**

Under the scheme of development of Community Singing as a national movement launched by the Ministry of Human Resource Development, Government of India, the NCERT has been organizing community singing camps for music and musically inclined teachers drawn from different States of the country. During the year 1986-87, as a part of the efforts to institutionalize community singing in the school system and to promote National Integration, the Department in collaboration with various agencies and institutions at the State level organized 27 State/Regional camps and four National camps for training teachers in the art and techniques of community singing. About 850 teachers from 16 States were trained through these camps. Each teacher who has received training in the camp has been directed to teach these songs to about 1,000 children of his/her school and the neighbouring schools. The

NCERT has also trained about 175 teacher-trainees from different States of the country.

The NCERT has been distributing the book *Let's Sing Together*, recorded cassettes containing 15 songs in different languages and tape-recorders to all the camp participants so that they may train school children in accordance with the notation as given in the book. According to the Eighth Schedule of the Constitution, three more songs in Oriya, Kashmiri and Punjabi have been added in the revised edition of the book *Let's Sing Together*.

Community Singing by school children has become a regular feature in the Republic Day Parade since 1985. This year the NCERT organized the Community Singing item presented by 10,000 children drawn from 76 schools of Delhi on the Republic Day Parade 1987. The children sung the famous NCC song "Hum Sub Bhartiya Hain" in unison as a grand finale of the Parade.

The NCERT has developed an evaluation proforma for the evaluation of teacher participants and a questionnaire to get feedback from the trained teachers in order to ascertain whether the scheme is really gaining momentum as envisaged under the scheme. The NCERT has now constituted an Advisory Committee on Community Singing in order to put the scheme on a more sound footing. The Committee had its first meeting on 27 November 1986. Certain recommendations have been made to augment the scheme on which action is being taken.

**Field Offices**

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. They provide necessary information to the State Education Departments about the activities and programmes of 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 organize in-service training programmes at the request of the State Education Departments.

During the year 1986-87 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 necessary guidance and assistance to the State Departments/Boards of Education in conducting the National Talent Search Examination at the State/Union Territory level. An activity common to all the Field Offices was organization of the meeting of the Programme Advisory Committees at which proposals for the programmes for the year 1986-87 were finalized. Besides these activities, the Field Offices shared the responsibility of the implementation of the National Policy on Education, 1986 including smooth conduct of the Massive Inservice Teacher Training Programmes, admission tests for Navodaya Vidyalayas and opening of new Navodaya Vidyalayas in the States and Union Territories.

### *Field Office at Ahmedabad*

The Field Office located at Ahmedabad carried out the following activities during the period 1986-87.

An educational toy-making competition and exhibition was organized for primary school teachers of Gujarat and the Union Territory of Dadra and Nagar Haveli. One hundred teachers participated and about 37 toys were received.

A teacher training programme in preparing teaching aids was organized at Surat from 27 January to 1 February 1987. Twenty-four teachers of Municipal School Board and 10 resource persons participated.

A workshop on vocationalization of education with special reference to preparation of instructional material in technical subjects, viz. electricity, electronics and computer was organized from 19 to 31 March 1987.

A seminar on vocational guidance was organized at the VTC College of Education, Surat on 13 October 1986. It was attended by 50 teachers and Principals of Surat and rural areas.

A seminar on motivating teachers for better and effective classroom teaching was organized on 20 February 1987. Over 25 leading educationists, Principals of teacher training institutions and teachers presented their papers. It was attended by 100 academicians.

A research project on providing vocational guidance to the SC/ST students of Class X of Pardi Taluka was undertaken by the Field Office. The following activities were carried out under this project :

1. A seminar was organized at N.V. Patil Vidya Mandir High School, Naroda on 6 August 1986. Forty participating teachers focussed on providing vocational guidance facilities and setting up vocational guidance corners in the schools for the benefit of the SC/ST students and the students of rural areas.
2. Three training programmes for school Principals and teachers of Pardi Taluka were organized from 15 to 17 December 1986, 24 to 25 February 1987 and from 23 to 24 March 1987. Four hundred Principals and teachers from ten schools of Pardi Taluka participated.
3. A workshop to develop special instructional material and teaching aids such as use of Abacus, etc. was organized at VTC Sarvajanik College of Education, Surat. Forty teachers of rural and slum schools participated.

In addition to these activities, the Field Officer continued to implement the Experimental Project Scheme. Nineteen projects were financed during 1986-87. The schools have done innovative work in developing improved methods of teaching languages, mathematics, science and other subjects.

### *Field Office at Allahabad*

The major activities carried out by the Field Office at Allahabad were as follows.

A four-day orientation programme on Environmental Cleanliness was organized by the Field Office. It was attended by 17 participants.

A four-day workshop to review and modify the Home Science Curriculum at +2 stage was organized from 19 to 22 January 1987. It was attended by 56 participants. Vocational areas covered were : (i) Food Preservation, (ii) Laundry and Dyeing, (iii) Cookery and (iv) Dress-making and Decoration.

Another four-day workshop held from 23 to 26 February 1987 was attended by 18 Principals/Lecturers of Intermediate Colleges. Nineteen Experimental Projects were developed in this workshop.

A three-day seminar to identify problems of women's education in SC/ST communities was organized from 2 to 4 March 1987. Six participants attended the programme.

Besides the above-mentioned programmes, a film on the NCERT was shown to more than 550 teachers of Allahabad district and lectures on the topics like "Impact of NCERT Programmes on School Education" and "Impact of Educational Innovation on the Programmes of School Education in Uttar Pradesh" were arranged under the auspices of Silver Jubilee Celebration of the NCERT.

#### *Field Office at Bangalore*

The following activities were conducted by the Field Office at Bangalore :

- A workshop on preparing evaluation items in school subjects at elementary level for the benefit of subject inspectors, AEOs and teachers was organized at Bangalore from 10 to 13 February 1987.
- An annual toy-making competition was organized at Dharwar under decentralization policy of the NCERT.

Besides the above-mentioned programmes the Field Office extended its cooperation in the establishment of Navodaya Vidyalayas in Karnataka, Massive Teachers' Training Programme under the National Policy on Education, 1986, National Integration Camps and Silver Jubilee Celebration of the NCERT.

#### *Field Office at Bhopal*

The following activities were carried out by the Field Office at Bhopal during 1986-87.

A workshop to develop instructional material for talented students was organized at Devi Ahilya University, Indore, from 5 to 14 February 1987.

An orientation programme for teachers of tribal areas was organized at M.H. Higher Secondary School, Gwalior from 19 to 25 February 1987. Fifty teachers were oriented for effective classroom teaching.

In addition to these, 11 programmes, most of them focussed on tribal education, were organized by RCE, Bhopal, SIE, Bhopal, SILT, Bhopal, SISE, Jabalpur and Tribal Welfare Department, Government of Madhya Pradesh. In all

640 teachers were oriented. Important publications by the Field Office include 'Non-verbal Test Items and Teaching-Testing Capsules in Science and Maths for Class X and XI.

#### *Field Office at Bhubaneswar*

The major activities carried out by the Field Office at Bhubaneswar were as follows.

A five-day workshop on Universal Enrolment and Retention in Tribal Sevashrams (I-V) in the context of NPE was organized from 16 to 20 December 1986 at Phulbani. Twenty-nine persons participated in the workshop.

A five-day workshop on Experimental Project for primary school teachers on Universal Enrolment and Retention towards Universalization of Education in the context of NPE was organized from 13 to 17 January 1987. It was attended by 30 participants.

A five-day workshop on Experimental Project in Science and Mathematics for secondary school teachers was organized from 17 to 21 February 1987 at Rourkela. Twenty-nine teachers participated.

Besides organizing the National and State-level toy-making competitions the Field Office assisted in the programmes of national importance like Navodaya Vidyalayas, National Science Essay Competition and Operation Blackboard. The Assistant Field Adviser visited 11 Childhood Education Centres.

#### *Field Office at Calcutta*

The major activities carried out by the Field Office at Calcutta during the year under report were as follows :

- An Annual toy-making competition for the primary level school teacher was organized in which nine teachers participated.
- An orientation programme on simple methods of better Biology laboratory management and maintenance in secondary schools was organized from 12 to 16 January 1987. Twenty-four persons participated.
- An orientation programme on Integrated Exposition of the Creative Potential among primary school-going children was organized from 16 to 20 February 1987. Twenty-eight persons participated.
- A one-day seminar on 'Tagore on Creative Education' was organized on 2 February 1987. Two hundred persons attended the programme.

- A workshop to develop a common Curriculum Framework for the ECE Centres run by the Voluntary organizations of West Bengal was organized from 25 to 28 March 1987. Twenty-seven persons participated.

Under the experimental project scheme seven projects were given financial assistance. Besides, the National Science Day was observed at the SCERT, Calcutta. One hundred fifty persons participated.

### *Field Office at Chandigarh*

The following activities were carried out by the Field Office at Chandigarh during 1985-86.

A five-day content-cum-method enrichment programme in general science for the SC teachers of Punjab and Haryana was organized at SCERT, Gurgaon from 9 to 14 March 1987. Twenty Scheduled Caste teachers attended the programme.

A three-day orientation programme in designing experimental projects for the secondary school teachers was organized at Shivalik Public School, Mohali.

Toy-making competition for the States of Punjab, Haryana and Union Territory of Chandigarh was organized.

Under the experimental project scheme 27 projects were received by the Field Office out of which 16 projects were approved and financed. The Field Office also published a report on working group meeting on 'Vocational Aspirations of Scheduled Caste Students of Punjab and Haryana', a 'Directory of Resource Persons for the State of Punjab' and 'Educational Profile of Haryana'.

### *Field Office at Guwahati*

The Field Office at Guwahati caters to the needs of the States of Arunachal Pradesh, Assam, Manipur and Nagaland. The major activities carried out by the Field Office at Guwahati during the period under report were as follows:

- A seminar on Value Education was organized at SIE, Changlang (Arunachal Pradesh) from 17 to 21 February 1987. Twenty-one teachers participated.
- A prize-giving ceremony for the winning teachers of Assam in the toy-making competition, 1987 was organized at the Field Office on 20 January 1987. It was covered by the Doordarshan.

Besides, the Field Office at Guwahati kept engaged in

the programmes connected with the implementation of the National Policy on Education, 1986, especially, the organization of Massive Inservice Training Programmes for teachers, conducting of the admission test for Navodaya Vidyalayas and opening of new Navodaya Vidyalayas in the States.

### *Field Office at Hyderabad*

The Field Office at Hyderabad provided worth-while assistance in the establishment of Navodaya Vidyalayas in Andhra Pradesh and conducting Massive Teacher Training of school teachers, wherein 29,647 teachers were oriented towards National Policy on Education and Programme of Action, 1986 vis-a-vis the role of teachers.

### *Field Office at Jaipur*

Besides assisting the establishment of Navodaya Vidyalayas in the State of Rajasthan, the Field Office at Jaipur organized a State-level toy-making competition.

### *Field Office at Madras*

The Field Office at Madras covers the State of Tamil Nadu and the Union Territory of Pondicherry. The following were the major activities carried out by the Field Office during 1986-87 :

- A workshop on Environmental Studies Approach for Elementary School Teachers was organized at Chidambaram from 2 to 6 February 1987. Forty-one teachers from Adi-Dravidar and Tribal Welfare SC/ST schools of Tamil Nadu participated.
- A seminar on Role of Head of High/Higher Secondary Schools for Human Resource Development was conducted at Trichy from 25 to 26 February, 1987. Sixty three Heads of the institutions from Adi-Dravidar and Tribal Welfare (SC/ST) schools of Government of Tamil Nadu participated.
- Three workshops on Environmental Studies Approach for elementary school teachers of non-PECR schools were organized at Pondicherry from 2 to 6 March 1987, Nagercoil from 9 to 13 March 1987 and Ooty from 24 to 28 March 1987. One hundred fifteen teachers got exposed to the new approach and developed materials for classroom use.

## *Field Office at Patna*

The significant activities undertaken by the Field Office at Patna during 1986-87 are as follows :

- A workshop on preparation of educational toys for pre-primary and primary school children was organized at Government Teacher Training College, Bhagalpur from 3 to 5 March 1987. Twenty-eight primary and middle school teachers participated.
- An orientation workshop of selected SC/ST teachers of Ranchi district in Teaching Science through Environment was organized at Government Teachers' Training College, Ranchi from 9 to 12 March 1987. Nineteen persons participated.
- A State-level toy-making competition was organized and cash prizes and certificates were distributed on 31 March 1987.

In addition to these, the Field Office continued to implement the experimental projects scheme. Out of 13 project proposals received, two were selected for financial support.

## *Field Office at Pune*

The significant activities carried out by the Field Office at Pune were as follows:

- A workshop on training course on Food Craft and Food Preservation for teachers teaching SUPW and Home Science was organized from 12 to 24 March 1987. Thirty-seven teachers participated.
- An orientation programme for teachers of tribal area towards New Education Policy was organized from 27 February to 2 March 1987. Forty-five persons attended.
- A seminar on development of Educational Design for the promotion of girls' education specially suited to rural areas was organized from 14 to 15 March 1987. One hundred teachers attended the seminar.

In addition to the above, the Field Office helped in establishing Navodaya Vidyalayas in the States/Union Territory in its jurisdiction and organized a State-level toy-making competition.

## *Field Office at Shillong*

The Field Office at Shillong covers the States of

Meghalaya and Tripura and the Union Territory of Mizoram. The major activities carried out during the year under report were as follows :

- An orientation programme on Educational Research Methodology was organized for teacher-educators, SCERT/SIE personnel and Board personnel at Shillong from 19 to 24 January 1987. Eighteen persons participated.
- An orientation programme for secondary school teachers in SUPW/art and expression was organized at Shillong from 17 to 21 February 1987. Twenty-five teachers attended the programme.
- An orientation course in work experience for key persons of Meghalaya was organized in collaboration with the Department of Vocationalization of Education (NIE) at Shillong from 23 to 27 February 1987. Seventy-three persons participated.
- An intensive course for SC/ST secondary level school teachers on teaching-learning in English in tribal areas was organized from 23 to 28 March 1987. Twenty-two teachers participated.

In addition to the above-mentioned programmes the Field Office played a key role in organizing massive orientation of teachers for the implementation of National Policy on Education (1986) and establishment of Navodaya Vidyalayas in the States in the jurisdiction of the Field Office.

## *Field Office at Trivandrum*

The Field Office at Trivandrum caters to the needs of the State of Kerala and the Union Territory of Lakshadweep. The major activities undertaken by the Field Office were as follows :

- A training course for teachers in the preparation of Improvised teaching aids was organized from 12 to 15 November 1986. Twenty teachers participated.
- A training course for teachers in Experimental Projects was organized from 19 to 21 February 1987. Thirty-five teachers participated.
- A training course for SC/ST teachers in New Education Policy was organized from 23 to 26 February 1987. Twenty-one teachers attended the course.

- A training course for Resource Persons in Value Education was organized from 10 to 13 March 1987. Fifty-two persons participated.

#### *Field Office at Shimla*

The Field Office at Shimla organized a four-day programme on developing enrichment material for the classroom teaching from the newspapers and conducted a five-day orientation of key persons in Mathematics. These were attended by 15 and 10 participants, respectively. As an outcome of the first programme two illustrated booklets, one each in Geography and Hindi, were prepared. The Field Office also assisted in the Massive Teacher Training Programme and establishment of Navodaya Vidyalayas in the State.

#### *Field Office for Jammu and Kashmir*

The major activities undertaken by the Field Office for Jammu and Kashmir during the year 1986-87 were as follows.

A five-day workshop on the educational problems of SC and ST students of Jammu and Kashmir State was organized at Government College of Education, Jammu from 10 to 14 February 1987. Problems of SC/ST students were discussed in the areas of elementary education, secondary education, vocational education and teacher education.

A five-day workshop on core curriculum was organized at SIE, Jammu from 16 to 20 February 1987. It was attended by forty-five teacher-educators.

A three-day workshop on experimental projects for the secondary teachers was organized at DIE, Jammu from 12 to 14 March 1987 in which eighteen experimental projects in Science, Mathematics and Social Sciences were developed.

A three-day workshop on vocationalization was organized at Government College of Education, Srinagar from 31 March to 2 April 1987. Course outlines for various need-based courses for vocationalization of education in Jammu and Kashmir were developed.

Besides associating with various programmes of national importance, the Field Office helped in the establishment of seven Navodaya Vidyalayas in the State.

## FOURTEEN

## PUBLICATION AND DOCUMENTATION

**A** VERY important activity of the Council is the publication of school-level textbooks, workbooks, teachers' guides and other instructional materials for teachers, research monographs, journals, etc. The Publication Department and Journals Cell of the NCERT look after the publication programmes in the Council. The Council's publications broadly fall into the following major categories :

1. School textbooks, workbooks, prescribed supplementary readers
2. Supplementary reading materials for the age-group 14-17 years
3. Teachers' guides, teachers' handbooks and other instructional materials
4. Research studies and monographs
5. Reports of the educational conferences, proceedings of seminars, pamphlets, booklets, brochures, folders, etc.
6. Educational journals.

During the year, 298 publications of all categories were brought out. The break-up is given below :

Category of Publication	No. of Titles
First edition textbooks/workbooks/prescribed supplementary readers	17
Reprints of textbooks/workbooks/prescribed supplementary readers	199
Textbooks/workbooks for other government agencies	9
Research monographs/reports and other publications	47
Periodicals (issues)	26
<b>Total : 298</b>	

The Department of Library, Documentation and Information looks after the documentation services, besides providing the usual library services. A list of these publications excluding the periodicals is given at the end of this chapter.

### New Textbooks for the School Session 1987-88

Following the decision to introduce new textbook revision cycle, the NCERT collaborated with the Central Board of Secondary Education (CBSE) to develop new science and mathematics textbooks for Classes IX-X and the NCERT faculty members developed new textbooks in language and social science subjects for Classes XI-XII. While during the previous year a number of new textbooks for Class X and XII were brought out (as reported in the last Annual Report) during the year under review, the remaining books for Classes X and XII were brought out as per details given below :

#### Class X

1. Physics Part II
2. Bhautiki Bhag II
3. Chemistry Part II
4. Rasayan Vigyan Bhag II
5. Basic Biology Part II
6. Adharik Jeev Vigyan Bhag II
7. Ganit Bhag II

#### Class XII

8. Hindi Sahitya Ka Sankshipt Itihas
9. The Web of Our Life
10. Sanskrit Gadya Mandakini
11. Bhartiya Samvidhan Aur Shashan
12. National Income Accounting
13. Rashtriya Aay Lekha Paddhati
14. An Introduction to Economic Theory
15. Arthik Siddhant Ka Parichay

### **NPE, 1986 and New Textbooks for the School Session 1987-88**

In conformity with the guidelines of the New Education Policy, the NCERT has taken up the responsibility of producing new textbooks for Classes I to XII. In the first phase of its programme, the NCERT will be producing new textbooks/workbooks/teachers' manuals for Classes I, III and VI for the academic session 1987-88. For the first time, the NCERT had decided to publish alternate textbooks in Hindi language for Classes I and III and a model textbook for Social Studies for Class III for the States. About 45 new books under the first phase of its implementation are under production.

#### **Exemplar Instructional Materials**

The NCERT has developed a set of 20 Exemplar Instructional Materials on major areas of work experience in school education. Six titles have been brought out during the year under report.

#### **Reading to Learn Series**

The NCERT has launched a new series of books in English for different school stages under the 'Reading to Learn Project.' The books being brought out under this series aim to grooming the students to become adept at reading, to make him love books and to make him aware of the world of wonder and beauty around him and within him. The project is primarily designed to rejuvenate the learner, to sharpen his curiosity and to develop in him the enquiring mind. The thematic content of the books ranges from stories, poems and novelettes to popular science, games and sports.

#### **Padhen Aur Seekhein**

Under this series the NCERT has decided to bring out about 50 books in Hindi for different age-groups covering interesting and informative topics for the children. Learned professors, scientists, doctors and experienced teachers have been engaged in developing these materials. The main aim of the series is to create love of books in the child and to make him aware of the environment around him and within him.

#### **Education in Values**

In order to inculcate right values in children, the NCERT has decided to embark upon a project entitled 'Education

in Values'. Under this project the NCERT plans to develop materials from teachers and students that will help in the awakening of perception and inculcation of values.

#### **Lotus Series**

The NCERT has launched a new series of popular books called the 'Lotus Series'. The series aims at introducing the young readers in 11-16 years of age group to the world of knowledge by making available to them low-priced books on a variety of subjects such as history, science, culture, problems of contemporary India and the world and the lives of great men and women of the world. The media has called this as NCERT's "one-rupee book revolution".

The books under this series will be in two editions—the one rupee paperback edition and a higher priced hard-bound library edition. The English and Hindi editions of the books will be published by the NCERT and copyright will be given to States to translate these books into regional languages.

The NCERT contemplates to bring out about 100 titles in this series and eminent authors like Dr Mulk Raj Anand and Prof. D.S. Kothari have been invited to develop the material.

#### **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, whose Sales Emporia are situated at New Delhi, Calcutta, Bombay Madras, Patna, Lucknow and Hyderabad catering to the needs of the entire country.

The Council's Journals, however, were distributed and sold by the Council directly, as in the past years.

Besides the sale and distribution arrangements mentioned above, orders for the supply of the Council's textbooks were also entertained directly from schools and other educational institutions in response to the Council's advertisement in leading newspapers all over India. During the year, a total number of 1,174 direct orders including 635 from Kendriya Vidyalayas, 25 from Sainik Schools, 58 from the Central Schools for Tibetans, 81 from Navodaya Vidyalayas, 346 from other schools and 29 from the schools and District Education Officers of Arunachal Pradesh were received and complied with. Textbooks were also supplied



direct by the Council to the Directorate of Education, Sikkim, for the session 1987-88. Further, textbooks for Classes XI and XII were supplied direct to the Board of School Education, Haryana.

Selected textbooks for Classes XI and XII were also supplied to the Board of School Education, Himachal Pradesh.

In addition, textbooks for Classes XI and XII for the Jammu and Kashmir Board of School Education were printed and made available by the Council through its national distributors.

Supplies have also been made of Mathematics textbooks for the +2 stage to the Council of Higher Secondary Education, Orissa.

At the request of the Rajasthan University, the Council printed and made available English Reader II (Core) through selected book-sellers in Rajasthan. The book was prescribed for B.A. First Year of the Rajasthan University.

### Participation in Book Fairs/Exhibitions

The NCERT exhibited its publications at the following book fairs/exhibitions :

- Book Exhibition at Parliament Annexe, organized by the Publication Department in May 1986
- Book Exhibition on the occasion of the Teachers' Day at Vigyan Bhawan, organized by the Publication Department on 5 September 1986
- Science Exhibition, Guwahati, organized by the NCERT in November 1986.

Besides the above-mentioned exhibitions, the NCERT also participated in Book Exhibition at Teen Murti Bhavan, New Delhi.

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

- Bangladesh Book Fair, Dhaka, January 1987
- Festival of India, USSR, March 1987
- Seventeenth International Book Fair, Sofia, May 1986
- Exhibition of Children Books, Ghana, July 1986
- India Trade Exhibition, Rangoon, December 1986

- India Exhibition, Port Louis, Mauritius, October 1986
- Beijing International Book Fair, China, September 1986

### Awards

The standard of production of the NCERT's publications has been constantly improving. This is the cumulative effect of the use of modern technology, sophisticated designing and typography. All these efforts resulted in the following NCERT books winning 'Awards for Excellence in Book Production' in an all India competition organized by the Federation of Indian Publishers :

- |                                  |                      |
|----------------------------------|----------------------|
| 1. Gadhya Sanchayan (Hindi)      | First Prize          |
| 2. Gautam Buddha (Urdu)          | First Prize          |
| 3. Abhinav-Katha Bharati (Hindi) | First Prize          |
| 4. Study Guide for CLASS         | Second Prize         |
| 5. Arun Bharati Bhag 3 (Hindi)   | Certificate of Merit |

### Release of Books by the Prime Minister

The Prime Minister released the following supplementary readers and congratulated the NCERT for their good production :

1. **Thinking Together**
2. **Contours of Courage**
3. **The Ship of the Desert**
4. **Mr Muggler and Mr Stripes**
5. **Where is My Hump?**
6. **Everest : Where the Snow Never Melts**
7. **Penguin Ke Desh Mein**
8. **Chikitsa Vigyan Ki Kahaniyan**
9. **Vishwa Ki Prasiddha Lok Kathayen**

The Prime Minister was highly impressed with the new paper-back series (Lotus Series), the first book of which "The Historic Trial of Mahatma Gandhi" was released by him on 30 January 1987.

### Expenditure

The number of copies of books printed during the year crossed the 1.50 crore mark. The total expenditure on paper

was Rs. 1,56,33,150.10 and the total expenditure on printing was Rs. 95,60,533.61.

### Sale

During the year under review receipts from the sale of the NCERT publications amounted to Rs. 5,13,55,838.00.

### Copyright Permission

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

Director  
School Education, Haryana  
State Resource Centre, Chandigarh

Copyright permission was granted for publication and distribution of NCERT textbook *Trividha* for Class VIII

Secretary  
Haryana School Education Board, Bhiwani (Haryana)

Copyright permission for adoption/adaptation and reprinting of the following NCERT textbooks for Class X were granted :

1. Nagrik Aur Shashan
2. Fifth Step to English Reader ('B' Course)
3. Workbook for Fifth Step to English Reader ('B' Course)
4. Fifth Step to English Supplementary Reader ('B' Course)
5. Ganit Bhag II
6. Rasayan Vigyan Bhag II
7. Adharik Jeev Vigyan Bhag II
8. Bhautiki Bhag II
9. Sabhyata ,Ki Kahani Bhag II
10. Bharat Vikas Ki Oar

Secretary  
H.P. Board of School  
Education, Dharamsala (H.P.)

Copyright permission for adoption and reprinting of the following NCERT textbooks for Classes XI-XII was granted :

1. Prambhik Sankhyaki
2. Bhartiya Arthvyavastha Ka Vikas
3. Prachin Bharat
4. Rajnitik Vigyan Ke Adhar
5. Rajnitik Vyavastha
6. Chemistry Part I
7. Physics for Classes XI-XII
8. Sahitya Ka Swaroop
9. Kavya Sanchayan Bhag I
10. Gadya Sanchayan Bhag I
11. Kahani Sanchayan Bhag I
12. I-The People
13. Stories, Plays and Tales of Adventure
14. A Course in Written English

Secretary  
Board of Secondary Education  
Bhopal (M.P.)

Copyright permission was granted for adoption of the following NCERT textbooks :

1. I-The People for Class XI
2. Five One-Act Plays for Class XI
3. Dear to All the Muses for Class XII
4. On Top of the World for Class XII

Director of School and  
Physical Education, Kohima, Nagaland

Copyright permission was granted for adoption/  
adaptation of the following NCERT textbooks :

1. Let's Learn English Book I (SS)
2. Let's Learn English Book II (SS)
3. Let's Learn English Book III (SS)
4. English Reader Book I (SS)
5. English Reader Book II (SS)
6. English Reader Book III (SS)
7. English Reader Book IV (SS)
8. English Reader Book V (SS)
9. Bal Bharati Bhag I
10. Bal Bharati Bhag II
11. Bal Bharati Bhag III
12. Bal Bharati Bhag IV
13. Social Studies (India and World) for Class V
14. Social Studies Class VI
15. Social Studies Class VII
16. Social Studies Class VIII
17. Read for Pleasure Book I
18. Read for Pleasure Book II
19. Read for Pleasure Book III
20. Read for Pleasure Book IV
21. Read for Pleasure Book V

Coordinator, Senior Secondary Education  
Punjab School Education Board, Mohali, Punjab

Permission for the adoption of the following  
NCERT textbooks was granted :

1. English Reader Book VI (SS)
2. Dear to All the Muses for Class XII

## Publication of Journals

The major function of the Journals Cell is to produce six target-oriented journals of the Council. The Journals Cell also undertakes some academic programmes and research activities. The journals brought out by the Journals Cell are mentioned below.

*Indian Educational Review* (a quarterly), is a research journal catering to the needs of educational research workers and scholars. It disseminates information regarding educational research conducted in India and abroad in the form of research articles, abstracts of doctoral and post-doctoral research in education and allied disciplines, research notes and reviews of books on educational research. Institutional research carried out by educational research institutions is also carried and disseminated through this journal.

*Journal of Indian Education* (a bi-monthly) is directly addressed to secondary/senior secondary school

teachers to help them improve their classroom teaching, in particular, and the school climate, in general. The main stress of this journal is on disseminating innovations in school education and on encouraging schools to take up innovative practices to augment the possibility of better schooling. Special thematic issues of this journal are also brought out from time to time to give pin-pointed attention to a particular theme.

*Bhartiya Adhunik Shiksha* (a quarterly in Hindi) is directly addressed to research workers as also secondary/senior secondary school teachers. Its emphasis is on solving classroom problems and on disseminating innovations in education, enabling them to initiate research in school education.

*School Science* (a quarterly) aims at improving the quality of science teaching in secondary/senior secondary schools and highlights the findings of the latest experimentation carried out in different schools with the purpose of wider dissemination. Articles on popular science to keep the community abreast with

the latest developments in the field of science are also carried.

*The Primary Teacher* (a quarterly) is addressed to primary school teachers to help them solve their school problems and improve classroom teaching. Information about innovations in education at the primary level is disseminated through articles written by school teachers themselves and through educational news and views, which is a permanent feature of this journal.

*Primary Shikshak* (a quarterly in Hindi) is primarily a Hindi version of *The Primary Teacher*. It is addressed to primary school teachers and focuses on improving the nature of schooling at the primary level.

Obviously, the basic purpose of these target-oriented journals is to improve the quality of school education at different levels besides disseminating the latest information in relevant areas/stages of school education. During the year under review the following issues of these journals were brought out :

*Indian Educational Review*  
January 1986 to October 1986 (Four issues)

*Journal of Indian Education*  
January 1986 to November 1986 (Six issues)

*Bhartiya Adhunik Shiksha*  
January 1986 to October 1986 (Four issues)

*School Science*  
March 1986 to December 1986 (Four issues)

*The Primary Teacher*  
April 1986 to January 1987 (Four issues)

*Primary Shikshak*  
April 1986 to January 1987 (Four issues)

#### Academic Programmes (Developmental)

The Journals Cell undertook the following programmes during the year under review :

(i) *Developing a Handbook on Educational Journalism* : Organized three workshops for collecting papers in connection with developing a Handbook on Educational Journalism. These workshops were organized at Udaipur (11 to 13 August 1986), Shimla (23 to 25 September 1986) and Pune (1 to 3 December 1986). This handbook would be

basically skill-oriented and would go a long way in developing positive attitudes and skills for disseminating educational news and information.

(ii) *Developing a Yearbook of Educational Journalism* : Organized three workshops for developing papers for an International Yearbook on Educational Journalism. The workshops were organized at Puri (20 to 22 January 1987), Trivandrum (25 to 27 March 1987) and Ooty (30 to 31 March 1987). The yearbook would be purely research-based and being a reference material, it may provide an understanding about the status and place of educational journalism in a global perspective.

(iii) *Developing a Scheme of National Awards in Educational Journalism* : Organized one workshop, to develop a scheme of National Awards in Educational Journalism/ school and college magazines.

#### Research Activities

*National Survey of Educational Journals* : Part of information in connection with the survey has been collected. Collection of information from the remaining institutions is in progress.

#### DOCUMENTATION

The Department of Library, Documentation and Information (DLDI) functions as Information Resource Centre of the Council. Its main functions are to collect, organize and disseminate reading materials with the following objectives in view :

1. To cater to the needs of faculty members of the National Institute of Education and Central Institute of Educational Technology and scholars in the field of education from all over the country;
2. To act as a clearing house for educational information;
3. To promote research and study; and
4. To improve quality of education through improved quality of library services in school and teacher training college libraries by providing In-service Orientation Programmes to the professional staff of these institutions.

A separate unit—The International Educational Resource and Documentation Centre has been set up in the

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Department to collect and disseminate information on comparative and international aspects of education. The Centre also collects documents on Population Education Programme in India and other countries.

## Collection

Books as on 31 March 1986	1,18,352
Books added during 1986-87'	
(a) by purchase	1,321
(b) by gift	254
(c) bound periodicals accessioned	646
(d) total added (a + b + c)	2,221
(e) books withdrawn	357
(f) total collection as on 31 March 1987	1,20,216

## Periodicals and Magazines

Subscribed or gratis	402
Newspapers subscribed	16

## Press Clippings

During the year, 16 newspapers were regularly scanned for news items and editorials relating to education and 1250 press clippings were clipped and preserved for future reference.

## Publications

The following publications were brought out during 1986-87

1. Accession Lists	2 issues
2. Current Contents	11 issues
3. Index to articles in periodicals received in the the library	2 issues

## Bibliographies

- (a) Books on Computer in NIE Library
- (b) Education Abstracts : A Select List of IIEP-UNESCO Documents in IERDOC
- (c) List of Documents Exhibited on Sub-regional Meet of South Asian Countries on APEID (20-23 January 1987 )
- (d) Select list of books for the Navodya School Library

(e) Population Education : A Select List of Documents in IERDOC

(f) Role of Education in Rural Development—A Select Bibliography

(g) A Bibliography of Researches on Curriculum Development Prepared for Research Bulletin of Educational Research and Innovations Committee, Vol. II, No. 2, July-September 1986.

## Pamphlet Collection

The Department has built up a collection of more than 5,000 pamphlets relating to education and allied disciplines.

## Circulation

Membership during 1986-87	2697
Consultation facilities availed of by visiting scholars during the year	524

## Photocopying Services

1,15,000 photo copies of documents were provided to readers and the administration on demand.

## Working Hours

In order to meet the demand of users, the Library observed extended working hours from 8.00 A.M. to 8.00 P.M. on all working days.

## Training Programmes

The following programmes were organized :

1. An In-service Training Programme for School Librarians of Jammu and Kashmir at Srinagar from 17 to 22 April 1986
2. A Workshop of Librarians of Teacher Training Colleges (Elementary Level) of Eastern Zone, Mirza, Guwahati from 3 to 7 March 1987.
3. An In-service Training Programme for School Librarians and Incharge Libraries of Orissa at Bhubaneswar from 2 to 11 June 1986 in collaboration with the Directorate of Secondary Education, Orissa.
4. The NCERT provided resource persons for an In-service Training Programme for Librarians of

Kendriya Vidyalayas at New Delhi in July 1986 on the request of the Kendriya Vidyalaya Sangathan.

try of Education, Mauritius, attended an Attachment Programme of three weeks from 19 March to 3 April 1987 organized by DLDI. She was given orientation in working of all aspects of librarianship and documentation. In addition, she was also initiated into the use of computers for retrieval of information with the help of DESM.

## Attachment Programme

Miss Mokshda Gopee, Documentation Officer, Minis-

### Publications Brought out by the Publication Department of the NCERT during 1986-87

S.No.	Title	Date of Publication	No. of Copies Printed
<b>TEXTBOOKS, WORKBOOKS AND PRESCRIBED SUPPLEMENTARY READERS</b>			
<b>CLASS I</b>			
<i>Textbook</i>			
1.	Let's Learn English, Book I (SS) (RP)	December 1986	2,70,000
<i>Workbook</i>			
2.	Workbook for Let's Learn English, Book I (SS) (RP)	November 1986	2,36,000
<b>CLASS II</b>			
<i>Textbooks</i>			
3.	Bal Bharati, Bhag II (RP)	January 1987	2,30,000
4.	Let's Learn English, Book II (SS) (RP)	January 1987	2,40,000
5.	Mathematics for Primary Schools, Book II (RP)	February 1987	1,85,000
<i>Workbooks</i>			
6.	Abhyas Pustika Bal Bharati, Bhag II (RP)	January 1987	1,75,000
7.	Workbook for Let's Learn English, Book II (SS) (RP)	November 1986	2,35,000
<b>CLASS III</b>			
<i>Textbook</i>			
8.	Let's Learn English, Book, III (SS) (RP)	November 1986	2,35,000
<i>Workbook</i>			
9.	Workbook for Let's Learn English, Book III (SS) (RP)	November 1986	1,60,000
<b>CLASS IV</b>			
<i>Textbooks</i>			
10.	Bal Bharati, Bhag IV (RP)	November 1986	1,80,000
11.	English Reader, Book I (SS) (RP)	November 1986	2,05,000
12.	Mathematics for Primary Schools, Book IV (RP)	January 1987	1,50,000
13.	Environmental Studies for Class IV, Part I (RP)	November 1986	65,000
14.	Paryavaran Adhyayan for Class IV, Bhag I (RP)	February 1987	37,000
15.	Environmental Studies for Class IV, Part II (RP)	November 1986	90,000
16.	Paryavaran Adhyayan for Class IV, Bhag II (RP)	November 1986	6,000

(SS) indicates Special Series and (RP) Reprints

# 1986-87

S.No.	Title	Date of Publication	No. of Copies Printed
<i>Workbooks</i>			
17.	Abhyas Pustika Bal Bharati, Bhag IV (RP)	November 1986	1,40,000
18.	Workbook for English Reader, Book I (SS) (RP)	November 1986	2,00,000
<i>Prescribed Supplementary Reader</i>			
19.	Read for Pleasrue, Book I (RP)	November 1986	90,000
<b>CLASS V</b>			
<i>Textbooks</i>			
20.	Bal Bharati, Bhag V (RP)	November 1986	2,16,000
21.	Swasti, Bhag I (RP)	November 1986	70,000
22.	English Reader Book II (SS) (RP)	January 1987	1,85,000
23.	Mathematics for Primary Schools, Book V (RP)	January 1987	1,20,000
24.	Social Studies, Book III—India and the World (RP)	November 1986	75,000
25.	Samajik Adhyayan, Pustak III Bharat Aur Sansar (RP)	January 1987	35,000
26.	Learning Science through Environment (RP)	November 1986	1,10,000
<i>Workbooks</i>			
27.	Abhyas Pustika Bal Bharati, Bhag V (RP)	November 1986	1,50,000
28.	Abhyas Pustika Swasti, Bhag I (RP)	November 1986	50,000
29.	Workbook for English Reader, Book II (SS) (RP)	November 1986	1,95,000
<i>Prescribed Supplementary Reader</i>			
30.	Read for pleasure, Book II (RP)	November 1986	80,000
<b>CLASS VI</b>			
<i>Textbooks</i>			
31.	Swasti, Bhag II (RP)	January 1987	46,000
32.	English Reader, Book III (SS) (RP)	November 1986	1,35,000
33.	Desh Aur Unke Niwasi, Bhag I (RP)	October 1986	3,000
34.	History and Civics, Part I (RP)	October 1986	5,000
35.	Abhyas Pustika Swasti, Bhag II (RP)	January 1987	36,000
36.	Workbook of English Reader, Book III (SS) (RP)	November 1986	1,30,000
<i>Prescribed Supplementary Reader</i>			
37.	Read for Pleasure, Book III (RP)	November 1986	60,000
<b>CLASS VII</b>			
<i>Textbooks</i>			
38.	Bharati, Bhag II (RP)	January 1987	80,000
39.	Swasti, Bhag III (RP)	February 1987	42,000
40.	English Reader, Book IV (RP) (SS)	November 1986	75,000
41.	Mathematics for Middle Schools, Book II, Part I (RP)	November 1986	87,000
42.	Ganit Madhyamik Schoolon Ke Liye, Pustak II, Bhag I (RP)	January 1987	5,000
43.	Mathematics for Middle Schools, Book II, Part II (RP)	November 1986	70,000
44.	Ganit Madhyamik Schoolon Ke Liye, Pustak II, Bhag II (RP)	January 1987	5,000
45.	History and Civics, Part II (RP)	November 1986	60,000
46.	Itihas Aur Nagrik Shastra, Bhag II (RP)	November 1986	32,000
47.	Lands and People, Part II (RP)	November 1986	58,000
48.	Desh Aur Unke Niwasi, Bhag II (RP)	November 1986	33,000
49.	Learning Science, Part II (RP)	January 1987	90,000

S.No.	Title	Date of Publication	No. of Copies Printed
<b>Workbook</b>			
50.	Abhyas Pustika Swasti, Bhag III (RP)	February 1987	27,000
<b>Prescribed Supplementary Readers</b>			
51.	Naya Jeevan (RP)	February 1987	28,000
52.	Read for Pleasure, Book IV (RP)	November 1987	46,000
<b>CLASS VIII</b>			
<b>Textbooks</b>			
53.	Bharati, Bhag III (RP)	January 1987	90,000
54.	Swasti, Bhag IV (RP)	January 1987	55,000
55.	English Reader, Book V (SS) (RP)	January 1987	80,000
56.	Mathematics for Middle Schools, Book III, Part I (RP)	January 1987	1,05,000
57.	Mathematics for Middle Schools, Book III, Part II (RP)	December 1986	1,00,000
58.	History and Civics, Part III (RP)	November 1986	66,000
59.	Itihas Aur Nagrik Shastra, Bhag III (RP)	February 1987	40,000
60.	Lands and People, Part, III (RP)	November 1986	65,000
61.	Desh Aur Unke Niwasi, Bhag III (RP)	March 1987	30,000
62.	Learning Science, Part III (RP)	November 1986	1,00,000
<b>Workbook</b>			
63.	Abhyas Pustika Swasti, Bhag IV (RP)	February 1987	30,000
<b>Prescribed Supplementary Readers</b>			
64.	Trividha (RP)	January 1987	55,000
65.	Jeevan Aur Vigyan (RP)	February 1987	27,000
66.	Read for Pleasure Book V (RP)	November 1986	45,000
<b>CLASS IX</b>			
<b>Textbooks</b>			
67.	Fourth Step to English Reader ('B' Course) (RP)	December 1986	25,000
68.	Physics, Part I (RP)	December 1986	1,25,000
69.	Bhautiki, Bhag I (RP)	April 1986	50,000
70.	Bhautiki, Bhag I (RP)	December 1986	85,000
71.	Chemistry, Part I (RP)	April 1986	1,39,000
72.	Chemistry, Part I (RP)	March 1987	1,18,000
73.	Rasayan Vigyan, Bhag I, (RP)	December 1986	85,000
74.	Basic Biology, Part I, Vol. I (RP)	December 1986	1,00,000
75.	Basic Biology, Part I, Vol. II (RP)	April 1986	1,33,000
76.	Basic Biology, Part I, Vol II (RP)	December 1986	90,000
77.	Adharik Jeev Vigyan, Bhag I, Khand I (RP)	April 1986	77,000
78.	Adharik Jeev Vigyan, Bhag I, Khand II (RP)	December 1986	67,000
79.	Mathematics, Part I (RP)	June 1986	38,000
80.	Mathematics, Part I (RP)	December 1986	1,40,000
81.	Ganit, Bhag I, Khand I, (RP)	December 1986	60,000
82.	Ganit, Bhag I, Khand II (RP)	May 1986	1,30,000
83.	Ganit, Bhag I, Khand II (RP)	May 1986	32,000
84.	The Story of Civilization, Vol I (RP)	December 1986	70,000
85.	Sabhayata Ki Kahani, Bhag I (RP)	December 1986	45,000
86.	Man and Environment (RP)	December 1986	70,000
87.	Manushya Aur Vatavaran (RP)	December 1986	30,000



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S.No.	Title	Date of Publication	No. of Copies Printed
<i>Workbooks</i>			
88.	Workbook for Fourth Step to English Reader ('B' Course) (RP)	April 1986	26,000
89.	Workbook for Fourth Step to English Reader ('B' Course) (RP)	January 1987	40,000
<i>Prescribed Supplementary Reader</i>			
90.	Fourth Step to English Supplementary Reader ('B' Course) (RP)	January 1987	29,000
<b>CLASSES IX-X</b>			
<i>Textbooks</i>			
91.	Citizen and the Government (RP)	April 1986	95,000
92.	Citizen and the Government (RP)	March 1987	1,00,000
93.	Nagrik Aur Shasan (RP)	December 1986	85,000
<b>CLASS X</b>			
<i>Textbooks</i>			
94.	Fifth Step to English Reader ('B' Course)	November 1986	40,000
95.	Physics, Part II (First Edition)	May 1986	2,00,000
96.	Physics, Part II (RP)	December 1986	1,70,000
97.	Bhautiki, Bhag II (First Edition)	July 1986	1,30,000
98.	Chemistry, Part II (First Edition)	April 1986	2,00,000
99.	Chemistry, Part II (RP)	December 1986	1,70,000
100.	Rasayan Vigyan, Bhag II (First Edition)	May 1986	1,30,000
101.	Rasayan Vigyan, Bhag II (RP)	December 1986	1,00,000
102.	Basic Biology, Part II (First Edition)	April 1986	2,00,000
103.	Basic Biology, Part II (RP)	December 1986	1,70,000
104.	Adharik Jeev Vigyan, Bhag II (First Edition)	June 1986	1,30,000
105.	Adharik Jeev Vigyan, Bhag II (RP)	November 1986	1,25,000
106.	Mathematics, Part II (RP)	November 1986	1,70,000
107.	Ganit, Bhag II (First Edition)	May 1986	1,30,000
108.	Ganit, Bhag II (RP)	December 1986	1,16,000
109.	The Story of Civilization, Vol. II (RP)	December 1986	1,10,000
110.	Sabhyata Ki Kahani, Bhag II (RP)	December 1986	78,000
111.	India on the Move (RP)	June 1986	45,000
112.	India on the Move (RP)	November 1986	80,000
113.	Bharat Vikas Ki Oar (RP)	December 1986	1,30,000
<i>Workbook</i>			
114.	Workbook for Fifth Step to English Reader ('B' Course) (RP)	November 1986	40,000
<i>Prescribed Supplementary Reader</i>			
115.	Fifth Step to English Supplementary Reader ('B' Course) (RP)	October 1986	40,000
<b>CLASS XI</b>			
<i>Textbooks</i>			
116.	Abhinav Kavya Bharati, Bhag I (RP)	December 1986	15,000
117.	Abhinav Gadya Bharati, Bhag I (RP)	December 1986	17,000
118.	Abhinav Katha Bharati, Bhag I (RP)	December 1986	16,000

S.No.	Title	Date of Publication	No. of Copies Printed
119.	Sahitya Ka Swaroop (RP)	December 1986	10,000
120.	Gadya Sanchayan, Bhag I (RP)	December 1986	25,000
121.	Kahani Sanchayan, Bhag I (RP)	April 1986	65,000
122.	I-The People (English Reader Core) (RP)	December 1986	80,000
123.	Stories, Plays and Tales of Adventure (English Supplementary Reader) Core (RP)	March 1986	1,45,000
124.	Stories, Plays and Tales of Adventure (English Supplementary Reader) Core (RP)	December 1986	1,70,000
125.	Sanskrit Sahitya Parichay (RP)	December 1986	4,000
126.	Chemistry, Part I (RP)	April 1986	25,000
127.	Chemistry, Part I (RP)	December 1986	27,000
128.	Rasayan Vigyan, Bhag I (RP)	December 1986	1,500
129.	Biology, Part I (RP)	October 1986	40,000
130.	Mathematics, Book I (RP)	December 1986	38,000
131.	Mathematics, Book II (RP)	August 1986	5,000
132.	Mathematics, Book II (RP)	December 1986	35,000
133.	Ancient India (RP)	December 1986	14,000
134.	Medieval India, Part I (RP)	December 1986	23,000
135.	Madhyakalin Bharat, Bhag I (RP)	December 1986	5,000
136.	Foundations of Political Science (RP)	December 1986	12,000
137.	Political System (RP)	December 1986	15,000
138.	Elementary Statistics (RP)	February 1986	17,000
139.	Elementary Statistics (RP)	December 1986	10,000
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141.	Physical Geography (RP)	April 1986	9,000
142.	Physical Geography (RP)	December 1986	7,000
143.	Field Work and Laboratory Techniques in Geography (RP)	December 1986	4,000
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145.	Bharat Ka Samanya Bhugol, Bhag I (RP)	May 1986	8,000
146.	Bharat Ka Samanya Bhugol, Bhag I (RP)	December 1986	8,000
147.	Psychology—An Introduction to Human Behaviour (RP)	May 1986	25,500
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148.	Vyakaran Saurbham (RP)	April 1986	20,000
149.	Vyakaran Saurbham (RP)	December 1986	1,500
	(a) Physics (RP)	July 1986	5,000
	(b) Physics (RP)	December 1986	40,000
<b>Textbooks</b>			
150.	Abhinav Kavya Bharati, Bhag II (RP)	December 1986	45,000
151.	Abhinav Gadya Bharati, Bhag II (RP)	December 1986	45,000
152.	Kavya Sanchayan, Bhag II (RP)	October 1986	1,12,000
153.	Gadya Sanchayan, Bhag II (RP)	October 1986	1,12,000
154.	Hindi Sahitya Ka Sankshipt Itihas (First Edition)	April 1986	15,000
155.	Hindi Sahitya Ka Sankshipt Itihas (RP)	December 1986	38,000
156.	A Course in Written English (RP)	May 1986	20,000
157.	A Course in Written English (RP)	October 1986	65,000
158.	The Web of Our Life (First Edition)	April 1986	1,55,000
159.	The Web of Our Life (RP)	October 1986	2,50,000
160.	Sanskrit Gadya Mandakini (First Edition)	May 1986	4,000
161.	Sanskrit Gadya Mandakini (RP)	March 1987	12,000
162.	Sanskrit Kavya Tarangini (RP)	March 1987	7,000
163.	Chemistry, Part II (RP)	July 1986	30,000
164.	Chemistry, Part II (RP)	December 1986	53,000

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S.No.	Title	Date of Publication	No. of Copies Printed
165.	Biology, Part II, Vol. I (RP)	May 1986	12,000
166.	Biology, Part II, Vol. I (RP)	August 1986	5,000
167.	Biology, Part II, Vol. I (RP)	November 1986	50,000
168.	Biology, Part II, Vol. II (RP)	April 1986	18,000
169.	Biology, Part II, Vol. II (RP)	March 1987	50,000
170.	Jeev Vigyan, Bhag II, Khand II, Anubhag II (RP)	April 1986	1,500
171.	Mathematics, Book III (RP)	July 1986	15,000
172.	Mathematics, Book III (RP)	December 1986	65,000
173.	Mathematics, Book IV (RP)	December 1986	65,000
174.	Mathematics, Book V (RP)	July 1986	25,000
175.	Mathematics, Book V (RP)	December 1986	65,000
176.	Ganit, Bhag V (RP)	February 1986	18,000
177.	Medieval India, Part II (RP)	April 1986	12,000
178.	Medieval India, Part II (RP)	October 1986	65,000
179.	Madhyakalin Bharat, Bhag II (RP)	December 1986	30,000
180.	Modern India (RP)	March 1986	15,000
181.	Modern India (RP)	December 1986	55,000
182.	Adhunik Bharat (RP)	December 1986	28,000
183.	Bhartiya Samvidhan Aur Shasan (First Edition)	January 1987	27,000
184.	Indian Democracy at Work (RP)	March 1987	15,000
185.	Bharat Mein Loktantra (RP)	October 1986	15,000
186.	National Income Accounting (First Edition)	July 1986	26,000
187.	Rashtriya Aya Leka Paddhati (First Edition)	September 1986	32,000
188.	Rashtriya Aay Lekha Paddhati (RP)	March 1987	13,000
189.	An Introduction to Economic Theory	July 1986	18,000
190.	Arthik Siddhant Ka Parichay (First Edition)	August 1986	35,000
191.	Arthik Siddhant Ka Parichay (RP)	March 1986	13,000
192.	Human and Economic Geography (RP)	March 1986	5,000
193.	Human and Economic Geography (RP)	December 1986	12,000
194.	Manav Evam Arthik Bhugol (RP)	December 1986	11,000
195.	Geography of India, Part II (RP)	March 1986	14,000
196.	Geography of India, Part II (RP)	December 1986	30,000
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199.	Social Change (RP)	March 1987	4,000

## URDU TEXTBOOKS

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200.	Riyazee (Mathematics) Book I (RP)	May 1986	9,000
201.	Riyazee (Mathematics) Book II (RP)	March 1987	6,000

### CLASS IV

202.	Hisab (Mathematics), Part I (RP)	September 1986	4,000
203.	Science Seekhna (Learning Science) Part I (RP)	June 1986	2,500
204.	Tareekh Aur Ilme-e-Shahriyat (History and Civics), Part I (RP)	May 1986	3,000
205.	Mumalik Aur Unke Bashinde (Lands and People), Part I (RP)	May 1986	2,000

### CLASS VII

206.	Hisab (Mathematics), Book II, Part II (RP)	October 1986	2,000
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S.No.	Title	Date of Publication	No. of Copies Printed
207.	Mumalik Aur Unke Bashinde (Lands and People), Part II (RP)	June 1986	2,000
208.	Mumalik Aur Unke Bashinde (Lands and People), Part II (RP)	March, 1987	1,000
<b>CLASS VIII</b>			
209.	Science Seekhna (Learning Science), Part III (RP)	October 1986	1,200
210.	Mumalik Aur Unke Bashinde (Lands and People) Part III (RP)	June 1986	1,200
<b>CLASS IX</b>			
211.	Urdu Ki Nai Kitab (First Edition)	April 1986	5,000
<b>CLASS X</b>			
212.	Hindustan Taraqqi Ki Rah Par (India on the Move) (RP)	October 1986	1,500
213.	Tahzeeb Ki Kahani (Story of Civilization), Vol. II (RP)	June 1986	1,500
<b>CLASS XI</b>			
214.	Urdu Ki Nai Kitab (First Edition)	April 1986	5,000
<b>TEXTBOOKS/WORKBOOKS FOR OTHER STATES/ORGANIZATIONS</b>			
215.	Arun Bharati, Bhag-I (RP)	March 1986	28,000
216.	New Dawn Reader-I for Class I (RP)	February 1986	27,000
217.	Workbook for New Dawn Reader-I for Class I (RP)	February 1986	23,000
218.	Supplementary Reader for New Dawn Reader-I for Class I (RP)	February 1986	31,000
<b>TEXTBOOKS/WORKBOOKS/SUPPLEMENTARY READERS FOR MODEL SCHOOLS</b>			
219.	My Family and Friends-English Textbook	October 1986	10,000
220.	My Family and Friends-English Workbook	October 1986	10,000
221.	My Family and Friends-English Supplementary Reader	January 1987	14,000
<b>CLASS VII</b>			
222.	My Small World English Textbook	January 1987	14,000
<b>CLASSES IX-X</b>			
223.	An Introduction to Our Economy	April 1986	5,000
<b>EXEMPLAR INSTRUCTIONAL MATERIAL FOR WORK EXPERIENCE</b>			
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<b>SUPPLEMENTARY READERS</b>			
230.	Thinking Together	July 1986	10,000
231.	Contours of Courage	January 1987	10,000

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S.No.	Title	Date of Publication	No. of Copies Printed
<i>Reading to Learn Series</i>			
232.	The Ship of the Desert	December 1986	10,000
233.	Mr Mugger and Mr Stripes	January 1987	10,000
234.	Where is My Hump?	January 1987	10,000
235.	Why is Fatty Happy?	January 1987	10,000
236.	Everest : Where the Snow Never Melts	January 1987	10,000
<i>Lotus Series</i>			
237.	The Historic Trial of Mahatma Gandhi	January 1987	8,000
<i>Padhen Aur Seekhen Mala</i>			
238.	Penguin Ke Desh Mein	February 1987	10,000
239.	Chikitsa Vigyan Ki Kahaniyan	February 1987	10,000
240.	Vishva Ki Prasiddha Lok Kathayen	February 1987	15,000
241.	Baba Amte	January 1987	15,000
<b>RESEARCH MONOGRAPHS AND OTHER PUBLICATIONS</b>			
242.	Lekha Pariksha Report 1984-85	April 1986	500
243.	Evaluation of Textbooks from the Standpoint of National Integration : Guidelines	April 1986	2,000
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245.	National Talent Search Scheme (Rules and Regulations)	June 1986	50,000
246.	Effectiveness of Microteaching Components Studies at the Elementary Level	July 1986	1,000
247.	NCERT Annual Report 1985-86 (Hindi)	December 1986	1,000
248.	Directory of Secondary Schools in India	June 1986	2,000
249.	NCERT Annual Report 1985-86 (English)	December 1986	1,600
250.	Audit Report 1985-86	February 1987	400
251.	Non-formal Education Programmes for Tribal Students	April 1986	1,000
252.	Hindi Shabd Bhandar Ka Aaklan Tatha Vishleshan	January 1987	1,000
253.	Third Survey of Research in Education 1978-1983	March 1987	3,000
254.	NCERT Word Processor	March 1987	3,000
255.	Role of a Teacher in the Development of the Child	April 1986	20,000
256.	Bachhe Ke Vikas Mein Adhyapak Ki Bhumika (Hindi)	April 1986	2,30,000
257.	Bachhe Ke Vikas Mein Adhyapak Ki Bhumika (Assamese)	April 1986	20,000
258.	Bachhe Ke Vikas Mein Adhyapak Ki Bhumika (Oriya)	April 1986	30,000
259.	Bachhe Ke Vikas Mein Adhyapak Ki Bhumika (Gurmukhi)	April 1986	25,000
260.	Bachhe Ke Vikas Mein Adhyapak Ki Bhumika (Marathi)	April 1986	63,000
261.	Bachhe Ke Vikas Mein Adhyapak Ki Bhumika (Gujarati)	April 1986	34,000
262.	Bachhe Ke Vikas Mein Adhyapak Ki Bhumika (Bengali)	April 1986	50,000
263.	Bachhe Ke Vikas Mein Adhyapak Ki Bhumika (Urdu)	April 1986	15,000
264.	Bachhe Ke Vikas Mein Adhyapak Ki Bhumika (Tamil)	April 1986	45,000
265.	Bachhe Ke Vikas Mein Adhyapak Ki Bhumika (Telugu)	April 1986	36,000
266.	Bachhe Ke Vikas Mein Adhyapak Ki Bhumika (Malayalam)	April 1986	39,000
267.	Bachhe Ke Vikas Mein Adhyapak Ki Bhumika (Kannada)	April 1986	31,000
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269.	Bharat Mein Vidyalayi Shiksha	September 1986	5,000
270.	25 Years of NCERT	September 1986	5,000

## INTERNATIONAL RELATIONS AND ASSISTANCE

**T**HE International Relations Unit (IRU) at the NCERT is responsible for the coordination of the collaborative activities/programmes with the international organizations and acts as a clearing-house agency for furnishing information on school education in India to different countries and international agencies.

### Bilateral Cultural Exchange Programmes

- During the year 1986-87, the Council exchanged educational materials with the various countries under the Cultural Exchange Programmes. Educational materials were sent to Indian Embassies at Aman (Jordan), Kuwait and Lisbon and to the High Commission of India at Suva (Fiji). Besides, the Council supplied information and material, such as science kits to Mauritius, educational material to Sweden and Maldives. Information and material were also supplied to UNESCO, Bangkok. The following cultural exchanges took place during the year 1986-87.

A four-member Kenyan delegation led by Mr J.A. Lijembe, Deputy Secretary, Planning and Development, Ministry of Education, Science and Technology, Kenya visited the NCERT from 2 to 5 April 1986 to study programmes related to textbook production, educational survey and production of low-cost teaching aids and kits, etc. under the Indo-Kenyan Cultural Exchange Programme. The UGC was also associated for hosting the visit of one member of the above-mentioned delegation.

A team of two Mauritian Officers, Mr Rajeshwar Goorah, Inspector of School, Ministry of Education, Art and Culture and Mr Narainduth Bhowon, Assistant Supervisor, Pre-primary Schools visited the NCERT from 1 to 21 August 1986 to study the Pre-primary education programmes under the Indo-Mauritius Cultural Exchange Programme.

A Mexican expert, Dr Educardo Almeda Acosta of the Psychology Department of National Autonomous

University, Mexico visited the NCERT from 13 to 14 August 1986, to exchange experiences in the areas of Social Psychology, particularly Research Methodology of the Social Science, Peasants and Ethnic Groups, Rural Development, Social Economy, Education and Social Movement under the Indo-Mexican Cultural Exchange Programme.

Mr. P.J. Paivansalo, a Finnish Expert visited the NCERT from 28 October to 8 November 1986 to study the educational system of India under the Indo-Finnish Cultural Exchange Programme.

A Six-member Chinese delegation led by Mr Liu Zhongde, Vice-Minister, State Education Commission, State Council of People's Republic of China visited the NCERT from 29 November to 12 December 1986 for exchange of experiences in the field of education under the Indo-Chinese Cultural Exchange Programme. The other members of the delegation were Mr Li Jinei, Deputy Director, Office of Teaching Material for Humanity Courses for Higher Educational Institutions, SEDC, Mr Li Changzheng, Deputy Editor of China's Higher Education, Mr Chen Bingheng, Vice President, Shanghai Medical University, Mr Ye Quping, Deputy Division Chief, Foreign Affairs Bureau, SEDC and Mr Zhang Jianzong.

Km. Indu Seth, Reader, National Integration Project, Department of Field Services and Coordination, NCERT visited the Republic of Korea from 29 June to 12 July 1986 to study the educational broadcasting system under the Indo-Republic of Korea Cultural Exchange Programme.

Prof. A.K. Jalaluddin, Joint Director, NCERT visited China for a period of two weeks with effect from 4 October 1986 to get acquainted with the educational system of China in the field of universalization of school education, and non-formal education under the bilateral Programme of Cultural Exchange

between India and China. He visited China as a member of a five-member Indian delegation led by Shri Anil Bordia, Additional Secretary, Government of India, Department of Education, Ministry of Human Resource Development.

## Foreign Visitors to the NCERT

Besides the visits under the Cultural Exchange Programme, the NCERT received educationists from different countries and deputed its faculty members to other countries under study visits and other programmes; as a result, the following visits took place during the year under report :

Ms Joann P. Digennaro, Executive Director of Rickover Foundation visited the NCERT on 1 April 1986 to discuss matters of mutual interest with the Director/Joint Director, NCERT and the faculty of the Department of Education in Science and Mathematics, the Department of Measurement and Evaluation Survey and Data Processing and Computer Centre.

Mr. Sayed Ibrahim Abdali, a UNESCO fellow from Afghanistan was placed for the training programme in the Department of Pre-school and Elementary Education in the Field of Introduction of Literacy Teaching to Primary Schools for 15 days from 23 April to 7 May 1986.

Mr Tran Van Ba of the Hanoi Teachers Training College came to the NCERT on a study visit in the area of Biology Education at school level and was placed in the Department of Education in Science and Mathematics, NCERT from 5 to 8 May 1986.

A 10-member Bangladesh Delegation from National Academy of Primary Education visited the NCERT from 25 May to 5 June 1986 for studying the development of Staff Training Plans in the context of Universal Primary Education, and exchange of experiences in project management, monitoring and evaluation, staff development training of teachers, administrators and supervisors and curriculum development.

A team of students and lecturers from Bangladesh visited the NCERT on 3 July 1986 in order to acquaint themselves with the programmes/activities of the NCERT

Participants attending NIEPA's Workshop for Social Studies Curriculum Supervisors from the U.S.A, in collaboration with USEFI, visited the NCERT on 16 July 1986. They specially discussed the programmes and activities of the Department of Education in Social Sciences and Humanities, NCERT.

Mr Mayanja Nkangi, Education Minister, Uganda visited the NCERT on 16 October 1986 to appraise himself of the facilities available in the area of school education, particularly the production and distribution of school textbooks, production of school science equipments, computer literacy programme, and the educational television programme.

A three-member Zambian delegation visited the NCERT on 6 November 1986. The delegation discussed the activities and programmes of the Central Institute of Educational Technology, and the Department of Education in Science and Mathematics, NCERT.

A seven-member Presidential Working Party on Education and Manpower Training from Kenya visited the NCERT on 11 November 1986 and discussed the programmes and activities of the Council.

Mr Uttam Bisoondoyal, Director, Mahatma Gandhi Institute, Mauritius visited the NCERT on 17 November 1986, to discuss programmes and activities of the NCERT with the faculty of the Department of Education in Social Sciences and Humanities, and the Department of Vocationalization of Education. They showed particular interest in identification of materials related to Indian languages, the Indian Cultural Civilization and SUPW Programme.

Mr Louis Honig, Superintendent of Public Instruction of the State of California, addressed the faculty of the NCERT on "Educational Planning for the 21st Century" on 24 November 1986.

Dr Raul Avila, Professor in Linguistics from Mexico visited the NCERT on 8 December 1986 and exchanged ideas and experiences related to educational system with particular emphasis on linguistics.

Mr Andri Isaksson, UNESCO Executive Board member visited the NCERT on 9 January 1987 to discuss programmes and activities in the area of Literacy Programme

A seven-member Chinese Delegation consisting of Foreign language press and copyright experts visited the NCERT on 14 January 1987 and had a discussion with the Head, Publication Department of the Council.

Mr G.K. Arap Koech, Senior Education Officer, Ministry of Education, Science and Technology, Nairobi (Kenya) visited the NCERT on 5 February 1987 and exchanged experiences with the faculty of the Department of Education in Science and Mathematics, the Publication Department, The Central Institute of Educational Technology and the Computer Cell.

Mr. Ghulam Nabi and Mr. Mohammed Ariff, Members of the National Science and Audio-Visual Centre, Kabul, Afghanistan underwent a three-week attachment programme in the Workshop Department from 9 to 27 February 1987.

Mr Kawnobo, Director of the External Service Department and Mr N. Sagara, Co-ordinator of Research and Planning, Senior Staff of NIER, Japan visited the NCERT on 2 March 1987 and discussed programmes and activities of the Council with the Joint Director, Dean (Academic), faculty of the Department of Education in Science and Mathematics, and the Central Institute of Educational Technology.

Mr Premadasa Kumarasiri, Sri Lanka Staff College for Educational Administration, National Institute of Education, Maharagama, Sri Lanka visited the NCERT on 19 March 1987 and discussed research and innovative activities of the Educational Research and Innovations Committee, the Central Institute of Educational Technology, and Non-formal Education Programme.

### Deputation of NCERT Faculty Members Abroad

Shri K. Ramachandran, Lecturer, Department of Pre-School and Elementary Education, NCERT was deputed on consultancy assignment to the National Curriculum and Textbook Board, Bangladesh and the UNICEF, Bangladesh from 10 May 1986 to 8 June 1986.

Prof. Smt. Adarsh Khanna of the Department of Teacher Education and Special Education, NCERT undertook a consultancy assignment at the UNICEF, Bangladesh and the National Curriculum and

Textbook Board from 3 April 1986 for a period of one month.

Prof. A.K. Jalaluddin, Joint Director, NCERT participated in the Eleventh Biennial Workshop of the CASTME in Singapore from 7 to 11 April 1986.

Prof. O.S. Dewal, Central Institute of Educational Technology, NCERT participated in the Study Group Meeting on Evaluation of Distance Learning Projects under APEID from 16 to 25 August 1986 at Nanjing, China.

Shri G. Guru, Reader, Department of Vocationalization of Education, NCERT attended a Regional Workshop of Educational Personnel engaged in Operational Projects in Teacher Training with focus on the Development of Training Materials at the College of Education, University of Philippines, Quezon City from 9 to 18 September 1986.

Shri G.N. Vyas, Librarian, Regional College of Education, Bhopal attended an attachment programme in Documentation and Information Services for Population Education in Bangkok from 1 to 30 October 1986.

Prof. M.M. Chaudhri, Joint Director, Central Institute of Educational Technology, NCERT attended a Seminar on Educational Technology (Third Programming Cycle of APEID) in Tokyo from 15 to 24 September 1986).

Prof. Arjun Dev, Department of Education in Social Sciences and Humanities, NCERT participated in the First Regional Workshop on the Study of Secondary Education in Asia and the Pacific from 17 June to 10 July 1986 at Tokyo, Japan.

Prof. P.N. Dave, Head, Department of Pre-school and Elementary Education, NCERT participated in the Technical Working Group Meeting for Development of Materials for training of Primary Education Personnel in Chinangmai, Thailand from 26 August to 4 September 1986.

Prof. N.K. Ambasht, Department of Pre-School and Elementary Education, NCERT participated in the Regional Workshop on Non-formal Education Programmes in Asia and the Pacific at Tokyo, Japan from 11 to 28 November 1986.



Prof. B. Ganguly, Head, Department of Education in Science and Mathematics, NCERT participated as a Resource Person in the Regional Workshop on Development of Materials and Training of Key Personnel in Integrated Science at Penang, Malaysia from 27 November to 6 December 1986. In continuation of this visit, Prof. Ganguly also attended an attachment programme in Science Education in Australia from 7 to 13 December 1986.

Shri N.N. Swamy, Reader, Regional College of Education, Mysore participated in an APEID Regional Workshop on Training of Physics Teachers held at Manila from 18 to 28 November 1986.

Dr. R.L. Phutela, Lecturer, Central Institute of Educational Technology, NCERT participated in the Regional Seminar on Distance Education in Bangkok from 26 November to 3 December 1986 organized by the Asian Development Bank in Cooperation with an Open University and UNESCO Regional Office.

Dr V.P. Goel, Lecturer, Department of Education in Science and Mathematics, NCERT participated in a five-day Conference on a Project on Primary Science Teachers' Training using the Process Approach from 1 to 5 December 1986 at Liverpool, UK.

Prof. P.L. Malhotra, Director, NCERT visited Mauritius from 19 to 26 June 1986 in connection with follow-up action to the visit of Hon'ble Minister of Education, Government of India to that country in February 1986.

A team of five-member curriculum experts from the NCERT comprising Mrs S. Ludhra, Reader, Department of Education in Social Sciences and Humanities, Smt. Jameela Begum, Reader, Regional College of Education, Ajmer, Dr P. Veerappan, Lecturer, Regional College of Education, Mysore, Dr P.V. Satyanarayan Murthy, Reader, Regional College of Education, Mysore and Dr P.V. Naladkar, Editor, Maharashtra State Council of Educational Research and Training, Pune visited Mauritius from 26 September to 8 October 1986.

Dr (Smt.) S. Shukla, Head, Department of Teacher Education, Special Education and Extension Services,

NCERT attended the Regional Conference on Teacher Education at Hobart, Australia from 4 to 10 December 1986.

Prof. H.S. Srivastava, Head, Department of Measurement and Evaluation, Survey and Data Processing, NCERT attended a Study Group Meeting on Identification and Nurturing of Scientific and Technological Talent held at Kaifeng, China from 19 to 26 November 1986.

Dr D. Lahiri, Reader, Department of Education in Science and Mathematics visited Bangladesh from 21 to 31 July 1986 in connection with the training of teachers of schools attached to Indian High Commission.

Prof. J.S. Rajput, Principal, Regional College of Education, Bhopal participated as a Resource Person in the Seminar on Educational Innovations Development organized by the NDG, NCERT, New Delhi, which was held at the Regional College of Education, Bhopal from 1 to 5 July 1986.

Prof. J.S. Rajput, Principal, Regional College of Education, Bhopal participated in the "UNESCO/ ASPEN/ICTP Regional Workshop on Indigenous Development of Low-Cost Equipment for Physics Education Organized at Dhaka (Bangladesh) from 2 to 8 November 1986.

## UNESCO/APEID Projects

A significant mechanism for multilateral cooperation among various countries in Asia and the Pacific is APEID (Asia and the Pacific Programme of Educational Innovation for Development)

APEID's primary goal is to contribute to the building of national capabilities for undertaking educational innovations linked with the problems of national development, thereby improving the quality of life of the people in the member countries. In the context of UNESCO/APEID programmes, the NCERT signed contracts with UNESCO during the year 1986-87 for undertaking the following projects/studies :

S.No.	Title	Location within NCERT
1.	Survey of Teacher Education	Department of Teacher Education, Special Education and Extension Services
2.	Pilot Project on Teaching of Science and Technology in Rural Areas	Regional College of Education, Mysore and International Relations Unit
3.	Regional Workshop for Key Personnel Concerned with Out-of-School Scientific Activities by Young People	Department of Education in Science and Mathematics
4.	Production of Teaching Guidelines on World Health Day	International Relations Unit, NCERT
5.	Advanced Level National Workshop on Continuing Education of Science Teachers and Teacher Educators for Developing Open-Competence	Department of Education in Science and Mathematics
6.	Regional Seminar-cum-Workshop on Laboratory Techniques and the Maintenance of Biology Teaching Equipment	Department of Education in Science and Mathematics
7.	Preparation of Methodological Guides for Multi Class Teaching Single Class Schools in Rural Areas	Department of Teacher Education, Special Education and Extension Services
8.	Consultation Meeting on the Teaching of Science and Technology in Rural Areas	Regional College of Education, Mysore and IR Unit
9.	Regional Training Workshop for Science Curriculum Developers and Teacher Educators	Regional College of Education, Bhopal
10.	National Case Study on Distribution and Balance of Content of General Education at 5th, 6th, 9th and 10th Levels and Analysis of Reflection of this Distribution in Examination and Evaluation at Primary and Secondary Levels	Department of Education in Social Science and Humanities
11.	APEID Follow-up National Workshop on Coordination and Complementary between Formal and Non-formal Education	Regional College of Education, Bhopal
12.	Sub-Regional Training Seminar on the Incorporation of Environmental Education into Technical and Vocational Education into Industrial Education for Asia	Department of Vocational Education

### Activities under the National Development Group (NDG)

The Government of India has set up a National Development Group (NDG) for Educational Innovations in the context of APEID. Twenty-five countries of Asia and the Pacific have joined APEID. Six National-level organizations, two institutions have been recognized as Associated Centres of APEID in India.

The Secretariat of the NDG is located in the International Relations Unit, NCERT.

The Associated Centres of APEID in India are located only in six States and two Union Territories. The National Development Group (NDG) for Educational Innovations in its meeting held on 31 January 1986 decided that the States

and the Union Territories may be advised to set up SDGs (State Development Groups for Educational Innovations) on similar pattern in order to make NDG broad-based. SDGs have been set up in the States of Uttar Pradesh, Maharashtra, Haryana, Karnataka, Himachal Pradesh and the Union Territory of Chandigarh. Other States and Union Territories are also planning to establish SDGs.

### National Seminar on Educational Innovations for Development

The NDG Secretariat, NCERT has started organizing regional and national seminars on Educational Innovations for development as a modest beginning to stimulate inter-

sectoral cooperation and coordination in the field of educational innovations for development. In this series, a National Seminar on Educational Innovations for Development was held at the Regional College of Education, Bhopal from 1 to 5 July 1986. It was attended by 23 persons from different development sectors like general education, non-formal education, adult education, agricultural education, technical education, health and family welfare education, agricultural education and rural development. The highlights of the seminar have been reported in July-December 1986 issues of the NDG newsletter, titled "Educational Innovations"

#### *Sub-regional Meet of South Asian Countries on APEID*

The NDG Secretariat, in collaboration with the Indian National Commission (INC) for Cooperation with UNESCO, organized a UNESCO-sponsored Sub-Regional Meet of South Asian Countries on APEID from 20 to 23 January 1987.

Fifty persons comprising delegations from Afghanistan, Pakistan, India, Sri Lanka, attended the meet.

The Sub-regional Meet made an indepth study of the Work Plan of APEID (1987-1991) and identified actions for sub-regional cooperation. The recommendations of the Sub-Regional meet included various programmes and projects in certain vital areas like eradication of illiteracy; universalization of primary education; making education relevant to social needs; and supporting activities and infrastructural common to all educational levels and systems, that could be undertaken jointly by the countries in the South Asian region within the framework of APEID.

#### *NDG Newsletter*

The NDG secretariat, NCERT continued publication of the six-monthly newsletter "Educational Innovations". The newsletter *inter alia* provides precise information on significant innovations in different development sectors.

## ADMINISTRATIVE AND WELFARE ACTIVITIES AND FINANCE

**T**HE NCERT Secretariat continued to perform its functions of house-keeping in accordance with rules, regulations and procedures of the Council.

### Administrative and Welfare Activities

As a measure of staff welfare, the Council continued to provide facilities for sports and games to its employees.

The Sixth Inter-Regional College of Education and NIE Staff Tournament was organized at the Regional College of Education, Bhopal from 26 December 1986. More than 200 players took part in Volleyball, Basketball, Badminton, Table Tennis, Football, Hockey and Chess for which the competition was held.

After inviting options from the employees working at the headquarters, the RCs and the FA Offices, the LIC Group Savings Linked Insurance Scheme on the pattern of the Central Government Employees Group Insurance Scheme was introduced for the benefit of the employees with effect from 20 January 1987.

- Keeping in view the pressing demand of the Council employees at Delhi the construction work of 104 more staff quarters of different types has been started. A shopping complex with a provision for 24 shops and a Community Hall is proposed to be constructed on the NIE campus for the benefit of the residents and the staff. The CPWD is being pursued for early completion of the work. The construction work of 10 more rooms in the NIE Guest House has been completed by the CPWD. The work of providing a lift is in progress. The construction work of the CIET building is in full progress.

More pumps have been installed by the CPWD on the NIE campus for the supply of unfiltered water for developing parks, lawns, etc.

The Internal Work Study Unit (IWSU) undertook and completed the following studies during 1986-87

1. Work Study Report in connection with the continuation of the post of Officer on Special Duty on a regular basis.
2. Massive Scheme of Inservice Training of Teachers at the National level, 1987 : Assessment of requirements of additional staff for implementation.

The following studies were in progress during the period:

1. Conducting of selection tests for admission to the Navodaya Vidyalayas by the NCERT : Assessment of staff requirements
2. Staff requirements of the Test Library in DPRPP.

The following studies were undertaken as supplementary to the studies already conducted in respect of Regional Colleges of Education, in collaboration with the Ministry of Human Resource Development.

1. Assessment of Library Staff for the Regional College of Education, Mysore
2. Assessment of Chowkidars for the Regional College of Education, Bhopal
3. Assessment of Chowkidars for the Regional College of Education, Ajmer.

In addition to the above, the IWSU also engaged itself in the follow-up work of the studies conducted in previous years particularly those of the Publication Department and requirement of Hindi posts at the Council headquarters. The Unit also collected/compiled information for submission to the IFD of the Ministry of Human Resource Development relating to studies concerned with additional posts of Chowkidars and of Daftries at the Council headquarters, submitted to them for approval.

## Activities of the Hindi Cell

The Hindi Cell of the NCERT accomplished the following tasks for progressive use of Hindi for official purposes.

### *Official Language Implementation Committee*

The Official Language Implementation Committee was established in the NCERT in 1980. On the same pattern, Sub-Committees on Official Language have been formed in the four Regional Colleges of Education as well. The Hindi Cell convened a quarterly meeting of the Official Language Implementation Committee on 4 November 1986. The first Sub-Committee of Parliamentary Official Language Committee inspected the NCERT on 14 October 1986. The Hindi Cell provided the desired information.

### *Distribution of Material*

Four sets of 'Manak Hindi Kosh' were distributed to four Regional Colleges of Education during the year under report.

### *Training*

Eight employees of the Council were trained in Hindi typing during 1986-87.

### *Translation*

The following translation work was accomplished by the Hindi Cell during 1986-87 :

1. 156 English forms, available in the Council headquarters
2. Letters, circulars, forms, rules, etc. pertaining to administration

3. The introduction given in the Annual Diary of the Council
4. 103 forms/circulars of Regional College of Education, Ajmer, pertaining to administration were translated and another 85 forms of the Regional College of Education, Bhopal are being translated.

## Creation of Hindi Posts

A post of Assistant Public Relations Officer (Hindi) at the Council's headquarters has been filled up. There is a proposal to bring out Council's newsletter in Hindi as well.

Efforts with regard to the appointment of a Hindi Officer and a Hindi Assistant for the Hindi Cell are still in progress.

### *Hindi Week*

In September 1986, a Hindi week was celebrated in the Council. The following competitions were organized on this occasion :

1. Noting and drafting in Hindi
2. Speech and poetry Recitation in Hindi.
3. Hindi typing
4. Hindi Stenography
5. Translation

In all, 27 prizes were awarded to Hindi and Non-Hindi speaking employees. 5,000 copies of 'Parishad Bharati Vivarinka' were published and distributed to employees and officers of each constituent of the Council. Shields were also awarded to the winners. From amongst the administrative sections, CIET, RCE, Bhopal and Establishment IV sections won the shields for the year 1983, 1984 and 1985, respectively. RCE, Bhopal won the shield for the year 1985 for academic departments.



Receipts		Payments	Amount (Rs)
<b>Recoveries and Payments of Loans and Advances to Staff of NCERT</b>			
Scooter/Car Advance	3,40,810	Scooter/Car Advance	13,96,864
Cycle Advance	79,872	Cycle Advance	70,800
Fan Advance	42,123	Fan Advance	35,920
House Building Advance	19,81,176	House Building Advance	21,97,076
Festival Advance	5,71,678	Festival Advance	5,44,930
Flood Advance	54,780	Advance of Pay/on Transfer/TA	80,769
Advance of Pay/on Transfer/TA	14,243	Permanent Advance	6,600
Permanent Advance	6,700		
<b>Funds</b>			
GPF	1,57,22,957	GPF	
		Current A/c	30,78,484
		T/39 A/c	48,91,078
CPF	(-) 10,80,962	CPF	79,69,562
		Current A/c	4,10,877
		T/39 A/c	3,19,364
Arrears of Pay GPF A/c	54,563		7,30,241
<b>Deposits</b>			
Earnest Money and Security Deposit	3,09,743	Earnest Money and Security Deposit	1,58,431
Caution Money Deposit	1,09,043	Caution Money Deposit	1,29,819
Other Deposits	(-) 6,737	Other Deposits	19,13,173
Group Insurance Scheme	5,54,643	Group Insurance Scheme	11,11,229
GPF/CPF Investment		GPF/CPF Investment	
Current A/c		Current A/c	2,47,566
T 39 A/c (Matured)	14,50,000	T 39 A/c	2,34,587
Transfer of Funds to T/39 A/c	1,13,64,150	Transfer of Funds to T/39 A/c	14,82,153
Suspense	6,27,138	Suspense	1,13,64,150
Short-term Investments	6,63,00,000	Short-term Investments	6,62,064
			6,63,00,000
<b>Remittance Heads</b>			
GPF/CPF Remittance	1,61,946	GPF/CPF Remittance	1,67,327
PLI/LIC Remittance	82,837	PLI/LIC Remittance	94,598
Miscellaneous Remittance	42,573	Miscellaneous Remittance	45,856
Sub-Office Remittance	45,26,399	Sub-Office Remittance	49,05,766
Income Tax Remittance	4,40,358	Income Tax Remittance	4,40,043
Death Relief Scheme	3,33,595	Death Relief Scheme	12,362
TCS Remittance	3,36,186	TCS Remittance	3,29,028
Periodical Remittance		Periodical Remittance	
15,11,30,000		14,92,30,000	
25,40,000	14,85,90,000	6,40,000	14,85,90,000
<b>Closing Balance</b>			
		Cash in Hand and Bank	11,24,74,767
		Funds in Transit	6,40,000
		Balance in T/39 A/c	85,88,722
Grand Total :	74,43,89,465	Grand Total :	12,17,03,489
			74,43,89,465

## APPENDIX A

### Scheme of Assistance to Professional Educational Organizations

**T**HE National Council of Educational Research and Training has always recognized the importance of voluntary effort both in the field of education and educational innovations. The intimate contact of professional educational organizations with institutions and teachers/educators is a good catalyst for educational transformation in the country. Keeping this in view, the

NCERT has been operating a scheme of financial assistance to professional educational organizations for the last few years on the lines of the scheme which was prevalent in the Ministry of Education and Social Welfare. Further details of the scheme and application form for seeking financial assistance may be obtained from Professor (Programmes), NCERT, New Delhi, on request.

#### Grants Given by the NCERT to Professional Educational Organizations during the Year 1986-87 for Publication of Journals

S.No.	Name of the Organization	Title of the Journal	Amount Sanctioned (Rs)
1.	Association of Geography Teachers of India, 601-Main Road, Raja Annamalaipuram, Madras 28	<i>The Geography Teacher (India)</i>	5,000
2.	Indian Association of Physics Teachers 2A/229 Azad Nagar, Kanpur 208002	<i>Physics Teacher</i>	5,000
3.	Society for Educational Research and Development 46, Hari Nagar Gotri Road, Baroda 350007	<i>Perspectives in Education</i>	5,000
4.	Association of Young Researchers in Education Allahabad University, Allahabad	<i>AYRE</i>	1,500
5.	Association for the Promotion of Science Education 3, First Trust Link Street, Mandavelipakkam, Madras 28	<i>Junior Scientist</i>	4,500
6.	English Language Teachers Association of India 3, first Trust Link Street, Mandavelipakkam, Madras 28	<i>The Journal of English Language Teacher</i>	4,000
7.	Indian Physics Association C/o Tata Institute of Fundamental Research, Homi Bhabha Road Bombay 400005	<i>Physics News</i>	5,000
8.	SITU Council of Educational Research 3, First Trust Link Street, Mandavellipakkam Madras-28	<i>Experiments in Education</i>	3,000

#### Grants Given by the NCERT to Professional Educational Organizations for Organizing Annual Conferences/Seminars during the Year 1986-87

S.No.	Name of the Organization	Purpose	Amount Sanctioned
1.	Indian Environmental Society, B.M-150 (WEST) Shalimar Bagh, Delhi 58	International Conference on Environmental Education	5,000



# 1986-87

S.No.	Name of the Organization	Purpose	Amount Sanctioned
2.	Indian Association of Physics Teachers, 2A/229 Azad Nagar, Kanpur 2	Second Convention on Design of Comprehensive Physics Laboratory and Preparation of Text Materials	5,000
3.	Indian Association for Pre-school Education MS University of Baroda, Baroda	21st Conference on Understanding Young Children and their Programmes	5,000
4.	Indian Council for Communication Training and Research, Space Application Centre, P.O. Ahmedabad 380058	15th International Association for Mass Communication Research (IAMCR)	10,000
5.	All India Committee for Eradication of Illiteracy among Women (AICEIW) Bhagwan Das Road New Delhi 110001	Programme for Eradication Women's illiteracy	4,000
6.	Indian Diabetic Association, All India Institute of Medical Sciences, New Delhi 110029	National Convention on Diabetes Mellitus and Infant Feeding	5,000
7.	Indian Academy of Social Sciences Iswar Saran Degree College Campus Allahabad 211004	11th Congress	5,000
8.	All India Science Teachers Association Bhartiya Vidya Bhawan, New Delhi 110001	Annual Conference	10,000
9.	Indian Association of Teacher Educators Faculty of Education, Kurukshetra University. Kurukshetra, Haryana	25th Conference	5,000

## APPENDIX B

## Location of Field Advisers in the States-1986-87

		Telephone No.	
		Office	Residence
1.	Field Adviser (NCERT) 3-6-69/B7, Avanti Nagar Bashir Bagh Hyderabad	Andhra Pradesh 35878	227207
2.	Field Adviser (NCERT) Zoo Narangi Road Saheb Tilla Guwahati	Assam Arunachal Pradesh Manipur Nagaland 87003	—
3.	Field Adviser (NCERT) Kankarbagh Patrakar Nagar Patna	Bihar 53243	53243
4.	Field Adviser (NCERT) Kothi No. 23, Sector-8A. Chandigarh	Chandigarh and Punjab 26923	26923
5.	Field Adviser (NCERT) I-B, Chandra Colony (Behind Law College) Ahmedabad	Gujarat, Dadra and Nagar Haveli 445992	445992
6.	Field Adviser (NCERT) Himrus, Circular Road Shimla	Himachal Pradesh 4548	4548
7.	Field Adviser (NCERT) 57, Rawalpura Srinagar	Jammu and Kashmir 31490	—
8.	Field Adviser (NCERT) 621, Eighty Feet Road, 11 Block Rajajinagar, Bangalore	Karnataka 350006	350006
9.	Field Adviser (NCERT) SIE Building, Pooja Pura Trivandrum	Kerala and Lakshadweep 64389	64948
10.	Field Adviser (NCERT) MIG-161, Saraswati Nagar Jawahar Chowk, Bhopal	Madhya Pradesh 64465	76014
11.	Field Adviser (NCERT) 128/2, Kothrud Karve Road Pune	Maharashtra and Goa, Daman and Diu 447314	4473
12.	Field Adviser (NCERT) Boyce Road, Laitumkhra. Shillong	Meghalaya Mizoram and Tripura 26317	

13.	Field Adviser (NCERT) Homi Bhabha Hostel RCE Campus Bhubaneswar	Orissa	50516	52224
14.	Field Adviser (NCERT) 55-B, Yaspath, Tilak Nagar Jaipur	Rajasthan	40265	40265
15.	Field Adviser (NCERT) 32, Hindi Prachar Sabha Street, T. Nagar, Madras	Tamil Nadu and Pondicherry	443414	72939
16.	Field Adviser (NCERT) 555-E, Mimfordganj. Allahabad	Uttar Pradesh	52212	2131
17.	Field Adviser (NCERT) P-23, CIT Road Scheme-55. Calcutta	West Bengal, Andaman Nicobar Islands and Sikkim	245310	361510

## APPENDIX C

## The NCERT Committees for the Year 1986-87

MEMBERS OF THE NATIONAL COUNCIL OF EDUCATIONAL RESEARCH  
AND TRAINING (GENERAL BODY)  
(Under Rule 3 of the Rules of the Council)

- |   |  |
|---|--|
| (i) The Minister for Education<br>President <i>ex-officio</i>   | 1. Shri P.V. Narasimha Rao<br>Union Minister of Human Resource Development<br>Shastry Bhawan<br>New Delhi  |
| (ii) Chairman of the University<br>Grants Commission <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<br>Education <i>ex-officio</i>   | 3. Shri Anand Sarup.<br>Secretary<br>Ministry of Human Resource Development<br>Shastry Bhawan<br>New Delhi |
| (iv) Four Vice-Chancellors of Universities,<br>one from each region, nominated by the<br>Government of India  | 4. Prof. V.G. Bhide<br>Vice-Chancellor<br>Poona University<br>Poona 411007                                 |
|   | 5. Dr N.S. Bose<br>Vice-Chancellor<br>Vishwa Bharati University<br>Shantiniketan (W.B.)                    |
|   | 6. Dr S.S. Bal<br>Vice-Chancellor<br>Guru Nanak University, Amritsar                                       |
|   | 7. Prof. V.C. Kulandaiswamy<br>Vice-Chancellor<br>Anna University<br>Madras                                |
| (v) One representative of each State Government and<br>Union territory with a legislature, who shall<br>be the Education Minister of the State/Union Territory<br>(or his representative) and in the case of Delhi the<br>Chief Executive Councillor, Delhi (or his representative) | 8. Minister of Education<br>Government of Andhra Pradesh<br>Secretariat Building<br>Hyderabad 500022       |
|   | 9. Minister of Education<br>Government of Assam<br>Secretariat Building<br>Guwahati, Assam                 |

10. Minister of Education  
Government of Bihar  
New Secretariat Building  
Patna
11. Minister of Education  
Government of Gujarat  
Block No. 1, Sachivalaya  
Gandhi Nagar
12. Minister of Education  
Government of Haryana  
Haryana Civil Secretariat 56/4  
Chandigarh
13. Minister of Education  
Government of Himachal Pradesh  
Shimla
14. Minister of Education  
Government of Jammu and Kashmir  
Srinagar
15. Minister of Education  
Government of Kerala  
Trivandrum
16. Minister of Education  
Government of Madhya Pradesh  
Bhopal
17. Minister of Education  
Government of Maharashtra  
Mantralaya Main  
Bombay
18. Minister of Education  
Government of Manipur  
Manipur Secretariat  
Imphal
19. Minister of Education  
Government of Meghalaya  
Meghalaya Secretariat  
Shillong
20. Minister of Education  
Government of Karnataka, Vidhana Soudha  
Bangalore
21. Minister of Education  
Government of Nagaland  
Kohima
22. Minister of Education  
Government of Orissa  
Orissa Secretariat  
Bhubaneswar

23. Minister of Education  
Government of Punjab  
Chandigarh
24. Minister of Education  
Government of Rajasthan  
Government Secretariat  
Jaipur
25. Minister of Education  
Government of Tamil Nadu  
Port St. George  
Madras
26. Minister of Education  
Government of Tripura  
Civil Secretariat  
Agartala
27. Minister of Education  
Government of Sikkim  
Secretariat, Tashilling  
Gangtok
28. Minister of Education  
Government of Uttar Pradesh  
Lucknow
29. Minister of Education  
Government of West Bengal  
Writer's Building  
Calcutta
30. Minister of Education  
Government of Arunachal Pradesh  
Itanagar
31. Shri Jag Pravesh Chandra  
Chief Executive Councillor,  
Delhi Administration  
Old Secretariat, Delhi
32. Minister of Education  
Government of Goa, Daman and Diu  
Secretariat  
Panaji
33. Minister of Education  
Government of Mizoram  
Aizawl
34. Minister of Education  
Assembly Secretariat  
Victor Simonel Street  
Pondicherry

(vi) All members of the Executive Committee  
not included above

35. Smt. Krishna Sahi  
Minister of State  
Ministry of Human Resource  
Development, Shastri Bhawan  
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. Dr C.L. Anand  
Professor of Education  
North-Eastern Hill University  
Lower Lachumore  
Shillong, Meghalaya
39. Shri M.L. Babbar  
Principal  
N.D.M.C. Navayug School  
Sarojini Nagar  
New Delhi.
40. Shri D.P. Singh  
Principal  
Netarhat School  
Netarhat (via Ranchi)
41. Dr. A.K. Jalaluddin  
Joint Director  
NCERT  
New Delhi
42. Prof. (Smt.) S. Shukla  
Head  
Department of Teacher Education  
Special Education and Extension  
Services, NCERT, New Delhi
43. Dr A.K. Sharma  
Principal  
Regional College of Education  
Mysore
44. Dr G.L. Arora  
Reader  
DESSH, NCERT  
New Delhi
45. Shri Y.N. Chaturvedi  
Joint Secretary (S)  
Ministry of Human Resource Development  
Shastri Bhawan  
New Delhi

- (vii) (a) Chairman  
Central Board of Secondary Education  
New Delhi *ex-officio*
- (b) Commissioner  
Kendriya Vidyalaya Sangathan  
New Delhi
- (c) Director,  
Central Health Education Bureau (DGHS)  
New Delhi *ex-officio*
- (d) Deputy Director General  
Incharge of Agricultural Education  
ICAR, Ministry of Agriculture  
New Delhi *ex-officio*
- (e) Director of Training  
Directorate General of Training and Employment  
Ministry of Labour  
New Delhi *ex-officio*
- (f) Representative of Education Division  
Planning Commission  
New Delhi *ex-officio*
- (viii) Such other persons not exceeding six, as the Government of India may nominate. No fewer than four of these shall be school teachers.
46. Shri L.S. Narayanan  
Financial Adviser  
Ministry of Human Resource Development  
Shastri Bhawan  
New Delhi
47. Chairman  
Central Board of Secondary Education  
17-B, Indraprastha Estate  
New Delhi
48. Commissioner  
Kendriya Vidyalaya Sangathan  
Jawaharlal Nehru University  
New Delhi
49. Director  
Central Health Education  
Bureau (DGHS), Nirman Bhawan  
New Delhi
50. Deputy Director-General  
Incharge of Agricultural Education  
ICAR, Ministry of Agriculture  
Dr Rajendra Prasad Road  
New Delhi
51. Director of Training  
Directorate General of Training and Employment  
Ministry of Labour  
Shrama Shakti Bhawan  
New Delhi
52. Educational Adviser  
Planning Commission  
Yojana Bhawan  
Parliament Street  
New Delhi
53. Prof. T. Subbarao  
Principal  
Technical Teachers' Training Institute  
Madras
54. Prof. P.D. Kulkarni  
Principal  
Technical Teachers' Training Institute  
Chandigarh
55. Shri Tushar Kanji Lal  
Headmaster  
Rangebellia High School  
P.O. Rangebellia, 24 Parganas  
West Bengal
56. Shri Mohd. Hussain Abdi  
Government Central Pedagogical Institute  
Allahabad



Special Invitee

57. Shri Demis D. Souza  
Headmaster  
St. Philomena's Boys High School  
Puttur, Distt. D.K.  
Karnataka
58. Smt. Vinodini Shah  
Principal  
Shri R.P. Patadia Girls High School  
Surendranagar, Distt., Surendranagar  
Gujarat
59. Secretary.  
Council of Indian School  
Certificate Examination  
Pragati House, 3rd Floor, 47-Nehru Place  
New Delhi
60. Shri O.P. Kelkar  
Secretary  
National Council of Educational  
Research and Training  
New Delhi

—Secretary

## EXECUTIVE COMMITTEE

- |  |   |
|--|---|
| (i) President of the Council who shall be the <i>ex-officio</i> President of the Executive Committee                                     | 1. Shri P.V. Narasimha Rao<br>Minister of Human Resource Development<br>Shastri Bhawan<br>New Delhi                   |
| (ii) (a) The Minister of State in the Ministry of Education who shall be the <i>ex-officio</i> Vice-President of the Executive Committee | 2. Smt. Krishna Sahi<br>Minister of State for Human Resource Development<br>Shastri Bhawan<br>New Delhi               |
| (b) Deputy Minister in the Ministry of Education, nominated by the President NCERT   | 3.  |
| (c) Director of the Council  | 4. Dr P.L. Malhotra<br>Director<br>NCERT<br>New Delhi   |
| (d) Secretary, Ministry of Education <i>ex-officio</i>   | 5. Shri Anand Sarup<br>Secretary<br>Ministry of Human Resource Development<br>Shastri Bhawan<br>New Delhi             |
| (iii) Chairman of the University Grants Commission, Member <i>ex-officio</i>   | 6. Prof. Yash Pal<br>Chairman<br>University Grants Commission<br>Bahadur Shah Zafar Marg<br>New Delhi                 |
| (iv) Four educationists with known interest in school education (two of whom shall be school teachers) nominated by the President        | 7. Prof. D.S. Kothari<br>Chancellor<br>Jawaharlal Nehru University<br>New Delhi                                       |
|  | 8. Dr. C.L. Anand,<br>Pro-Vice-Chancellor<br>North-Eastern Hill University<br>Lower Lachumiere<br>Shillong, Meghalaya |
|  | 9. Shri M.L. Babbar<br>Principal<br>N.D.M.C. Navayug School<br>Sarajini Nagar<br>New Delhi                            |
|  | 10. Shri D.P. Singh<br>Principal<br>Netarhat School<br>Netarhat via Ranchi  |
| (v) Joint Director of the Council  | 11. Dr A.K. Jalaluddin<br>Joint Director<br>NCERT<br>New Delhi  |

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|---|---|
| <p>(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</p> | <p>12. Prof. (Smt.) S. Shukla<br/>Head<br/>Department of Teacher Education<br/>Special Education and Extension Services<br/>NCERT<br/>New Delhi</p> |
| <p>(vii) One representative of the Ministry</p>   | <p>13. Dr A.K. Sharma<br/>Principal<br/>Regional College of Education<br/>Mysore</p>  |
| <p>(viii) One representative of the Ministry of Finance who shall be the Financial Adviser of the Council</p>   | <p>14. Dr. G.L. Arora<br/>Reader<br/>DESSH<br/>NCERT<br/>New Delhi</p>  |
|   | <p>15. Shri Y.N. Chaturvedi<br/>Joint Secretary (School)<br/>Ministry of Human Resource Development<br/>Shastri Bhawan<br/>New Delhi</p>            |
|   | <p>16. Shri L.S. Narayanan<br/>Financial Adviser, NCERT<br/>Ministry of Human Resource Development<br/>Shastri Bhawan<br/>New Delhi</p>             |
|   | <p>17. Secretary<br/>NCERT<br/>New Delhi</p>  |

**FINANCE COMMITTEE**  
(Under Rule 62 of the Council)

- |  |   |
|--|---|
| <p>1. The Director of NCERT<br/>(<i>ex-officio</i>)</p>                  | <p>1. Dr P.L. Malhotra<br/>Director, NCERT<br/>New Delhi</p>  |
| <p>2. Financial Adviser<br/>(<i>ex-officio</i>)</p>                      | <p>2. Shri L.S. Narayanan<br/>Financial Adviser, NCERT<br/>Ministry of Human Resource Development<br/>Shastri Bhawan<br/>New Delhi</p>                            |
| <p>3. Joint Secretary (S)<br/>Ministry of Human Resource Development</p> | <p>3. Shri Y.N. Chaturvedi.<br/>Joint Secretary (S)<br/>Ministry of Human Resource Development<br/>(Department of Education)<br/>Shastri Bhawan<br/>New Delhi</p> |

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|---|--|
| 4. Secretary, NCERT<br><i>Member Convener</i> | 4. Shri J. Veera Raghavan<br>Former Adviser (Education)<br>Planning Commission<br>Presently Secretary<br>Ministry of Human Resource Development<br>Shastri Bhavan, New Delhi |
|   | 5. Dr V.P. Dutt<br>Head<br>Department of Chinese and Japanese Studies<br>Art Faculty Building<br>University of Delhi<br>Delhi  |
|   | 6. Secretary, NCERT<br>New Delhi   |

## ESTABLISHMENT COMMITTEE

*(Under Regulation 10 of the Council)*

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|--|--|
| (i) The Director, NCERT<br>Chairman  | 1. Dr P.L. Malhotra<br>Director, NCERT<br>New Delhi  |
| (ii) The Joint Director<br>NCERT   | 2. Dr A.K. Jalaluddin<br>Joint Director<br>NCERT, New Delhi  |
| (iii) A nominee of the Ministry of<br>Education to be nominated by the<br>President                  | 3. Shri Y.N. Chaturvedi<br>Joint Secretary (SE)<br>Ministry of Human Resource Development<br>Shastri Bhawan, New Delhi |
| (iv) Four educationists to be nominated<br>by the President of whom<br>at least one is a scientist   | 4. Pof. N.S. Bose<br>Vice-Chancellor<br>Visva-Bharati<br>Shantiniketan (W.B)   |
|  | 5. Dr K. Venkata Subramaniam<br>Vice-Chancellor<br>Central University<br>212, Anna Salai, Pondicherry                  |
|  | 6. Prof. M.M. Puri<br>Department of Political Science<br>G-16, Punjab University<br>Chandigarh                         |
|  | 7. Smt. V.A. Gangoli<br>Principal<br>Food Craft Institute<br>Shivaji Nagar<br>Pune                                     |
| (v) One representative from the Regional<br>College of Education to be nominated<br>by the President | 8. Shri N. Bohere<br>Assistant Programme Coordinator<br>RCE, Bhubaneswar   |

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|--|---|
| <p>(vi) One representative of the National Institute of Education, Delhi to be nominated by the President</p> <p>(vii) Two representatives, one each from the regular academic and non-academic staff of the Council selected from amongst their category in the manner prescribed in Appendix to this Regulation</p> <p>(viii) Financial Adviser<br/>NCERT</p> <p>(ix) Secretary, NCERT</p> | <p>9. Prof. K.N. Saxena<br/>Head, DEPCG<br/>NCERT, New Delhi</p> <p>10. Shri J.S. Saxena<br/>Reader<br/>Regional College of Education<br/>Ajmer</p> <p>11. Shri M.S. Bist<br/>Store-Keeper Grade I<br/>NCERT, New Delhi</p> <p>12. Shri L.S. Narayanan<br/>Financial Adviser, NCERT<br/>Ministry of Human Resource Development<br/>Shastri Bhawan, New Delhi</p> <p>13. Shri O.P. Kelkar<br/>Secretary<br/>NCERT</p> <p style="text-align: right;"><i>Member-Convener</i></p> |
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#### BUILDING AND WORKS COMMITTEE

- |   |                      |   |
|---|----------------------|---|
| 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, NCERT   |
| 3. Chief Engineer, CPWD<br>or his nominee                       | <i>Member</i>        | Dr M.G. Joseph<br>Chief Engineer (Const.)<br>CPWD, R.K. Puram, New Delhi  |
| 4. A representative of the Ministry of<br>Finance (Works)       | <i>Member</i>        | Shri M.R. Rao, A.F.A. (Works)<br>Ministry of Finance (Works)<br>Nirman Bhawan<br>New Delhi  |
| 5. The Consulting<br>Architect of NCERT                         | <i>Member</i>        | Shri I.D. Rustogi<br>Architect, CPWD<br>(NDZ-IV) (Room No. 426)<br>'A' Wing, Nirman Bhawan<br>New Delhi   |
| 6. Financial Adviser of the Council<br>or his nominee           | <i>Member</i>        | Shri L.S. Narayanan, Financial Adviser, NCERT<br>Ministry of Human Resource Development<br>Department of Education<br>Shastri Bhawan, New Delhi |
| 7. A nominee of the Ministry<br>of Education                    | <i>Member</i>        | Shri Y.N. Chaturvedi<br>Joint Secretary (S)<br>Ministry of Human Resource Development<br>Department of Education<br>Shastri Bhawan<br>New Delhi |
| 8. A Civil Engineer of<br>Standing (nominated by the President) | <i>Member</i>        | Shri R.K. Bhandari<br>Chief Engineer, DDA<br>New Delhi  |

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|-----|---|-------------------------|--|
| 9.  | An Electrical Engineer of Standing<br>(nominated by the President)  | <i>Member</i>           | Shri R.D. John<br>Chief Engineer<br>Cauvery Bhawan<br>'F' Block, 9th Floor<br>Kompagowda Road<br>Bangalore |
| 10. | A member of the Executive Committee<br>(nominated by the Committee) | <i>Member</i>           | Prof. J.S. Rajput<br>Principal<br>Regional College of Education<br>Shymala Hills, Bhopal                   |
| 11. | Secretary, NCERT  | <i>Member-Secretary</i> | Shri O.P. Kelkar<br>Secretary<br>NCERT, New Delhi  |

#### PROGRAMME ADVISORY COMMITTEE

- |    |   |                      |     |   |               |
|----|---|----------------------|-----|---|---------------|
| 1. | Director, NCERT   | <i>Chairman</i>      | 10. | Director<br>State Council of Educational<br>Research and Training<br>Meghalaya, Mawkhar Main Road<br>Shillong   | <i>Member</i> |
| 2. | Joint Director, NCERT   | <i>Vice-Chairman</i> | 11. | Director<br>State Institute of Educational<br>Research and Training<br>Udaipur (Rajasthan)                      | <i>Member</i> |
| 3. | Prof. S. Shukla<br>Head<br>Department of Education<br>University of Delhi<br>33, Chhatra Marg | <i>Member</i>        | 12. | Director<br>State Council of Educational<br>Research and Training<br>6, D.P.I. Compound, College Road<br>Madras | <i>Member</i> |
| 4. | Prof. C.L. Kundu<br>Faculty of Education<br>Kurukshetra University<br>Kurukshetra (Haryana)   | <i>Member</i>        | 13. | Principal<br>Regional College of Education<br>Ajmer (Rajasthan)   | <i>Member</i> |
| 5. | Prof. N Malla Reddy<br>Faculty of Education<br>Osmania University<br>Hyderabad                | <i>Member</i>        | 14. | Principal<br>Regional College of Education<br>Bhopal (MP)   | <i>Member</i> |
| 6. | Prof. S. Naryana Rao<br>Department of Psychology<br>Sri Venkateswara University<br>Tirupati   | <i>Member</i>        | 15. | Principal<br>Regional College of Education<br>Bhubaneswar (Orissa)  | <i>Member</i> |
| 7. | Prof. (Smt.) S. Zaidi<br>Faculty of Education<br>Aligarh Muslim University<br>Aligarh         | <i>Member</i>        | 16. | Principal<br>Regional College of Education<br>Mysore (Karnataka)  | <i>Member</i> |
| 8. | Director<br>State Council of Educational<br>Research and Training<br>Mahendru<br>Patna        | <i>Member</i>        | 17. | Prof. A.N. Maheshwari<br>Regional College of Education<br>Mysore  | <i>Member</i> |
| 9. | Director<br>State Institute of Education<br>Solan (H.P.)                                      | <i>Member</i>        | 18. | Prof. K.C. Panda<br>Regional College of Education<br>Bhubaneswar, Orissa  | <i>Member</i> |

19.	Prof. N. Vaidya Regional College of Education Ajmer (Rajasthan)	<i>Member</i>		NCERT New Delhi	
20.	Prof. S.T.V. Govindacharyulu Regional College of Education Shymala Hills, Bhopal (M.P.)	<i>Member</i>	32.	Head Publication Department NCERT New Delhi	<i>Member</i>
21.	Head Department of Education in Social Sciences and Humanities, NCERT New Delhi	<i>Member</i>	33.	Joint Director Central Institute for Educational Technology, NCERT New Delhi	<i>Member</i>
22.	Head Department of Education in Science and Mathematics, NCERT New Delhi	<i>Member</i>	34.	Dr. K.V. Rao Professor Department of Education in Science and Mathematics, NCERT New Delhi	<i>Member</i>
23.	Head Department of Pre-School and Elementary Education, NCERT New Delhi	<i>Member</i>	35.	Dr. (Km.) S.K. Ram Professor Department of Education in Social Sciences and Humanities, NCERT New Delhi	<i>Member</i>
24.	Head Department of Teacher Education, Special Education and Extension Services, NCERT New Delhi	<i>Member</i>	36.	Dr. (Smt.) R. Muralidharan Professor Department of Pre-School and Elementary Education, NCERT New Delhi	<i>Member</i>
25.	Head Department of Vocationalization of Education, NCERT New Delhi	<i>Member</i>	37.	Dr. (Smt.) S.P. Patel Professor Department of Vocationalization of Education, NCERT New Delhi	<i>Member</i>
26.	Head Department of Education Psychology, Counselling and Guidance NCERT New Delhi	<i>Member</i>	38.	Dr. V.K. Singh Professor Department of Educational Psychology Counselling and Guidance, NCERT New Delhi	<i>Member</i>
27.	Head Department of Policy Research, Planning and Programming, NCERT New Delhi	<i>Member</i>	39.	Dr. Pritam Singh Professor Department of Measurement, Evaluation, Survey and Data Processing, NCERT New Delhi	<i>Member</i>
28.	Head Department of Library Documentation and Information NCERT, New Delhi	<i>Member</i>	40.	Dr. P.M. Patel Professor Programme Section, NCERT New Delhi	<i>Member</i>
29.	Head Department of Field Services and Coordination, NCERT, New Delhi	<i>Member</i>	41.	Dr. O.S. Dewal Professor Central Institute for Educational Technology, NCERT New Delhi	<i>Member</i>
30.	Head Department of Measurement, Evaluation, Survey and Data Processing, NCERT, New Delhi	<i>Member</i>			
31.	Head Workshop Department	<i>Member</i>			

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|---|---------------|--|---------------|
| 42. Dr. R.M. Kalra<br>Head, I.R. Unit<br>NCERT<br>New Delhi             | <i>Member</i> | 44. Dr. R.P. Singh<br>Head Journals Cell<br>NCERT<br>New Delhi     | <i>Member</i> |
| 43. Prof. I.S. Chaudhri<br>Professor, P.C.E. Unit<br>NCERT<br>New Delhi | <i>Member</i> | 45. Dr. C.S. Subba Rao<br>Professor<br>DTESEES, NCERT<br>New Delhi | <i>Member</i> |

## MEMBERS OF THE EDUCATIONAL RESEARCH AND INNOVATIONS COMMITTEE

- |   |  |
|---|--|
| 1. Dr. Partha N. Mukherjee<br>Professor<br>Indian Statistical Institute<br>7, Sansanwal Marg<br>New Delhi   | 9. Prof Agha Ashraf Ali<br>Dean and Head<br>Postgraduate Department of Education<br>Kashmir University<br>Hazratbal<br>Srinagar, Jammu and Kashmir |
| 2. Dr (Smt.) T. Thakur<br>Principal<br>State Institute of Education<br>Jorhat, Assam  | 10. Prof. A.L. Nagar<br>Delhi School of Economics<br>Delhi University<br>Delhi<br><br><i>Principals and Professors of RCEs</i>                     |
| 3. Dr. T.B. Naik<br>Director<br>Tribal Research and Training Institute<br>Gujarat Vidyapeeth<br>Ahmedabad, Gujarat  | 11. Dr. N. Vaidya<br>Principal<br>Regional College of Education<br>Ajmer (Rajasthan)   |
| 4. Dr B.K. Roy Burman<br>Senior Professor<br>Centre for Study of Developing Societies<br>29, Rajpur Road<br>Delhi   | 12. Dr G.B. Kanungo<br>Principal<br>Regional College of Education<br>Bhubaneswar (Orissa)  |
| 5. Prof. B.R. Kamble<br>Head, Department of History<br>Shivaji University<br>Kolhapur, Maharashtra  | 13. Dr A.N. Maheshwari<br>Principal<br>Regional College of Education<br>Mysore (Karnataka)   |
| 6. Dr Y. Ravi<br>State Council of Educational Research and Training<br>Aliya Primary School Campus<br>Opposite Andhra Pradesh Sports Council<br>Hyderabad, Andhra Pradesh | 14. Dr J.S. Rajput<br>Principal<br>Regional College of Education<br>Bhopal (Madhya Pradesh)  |
| 7. Dr. R. Srinivasan<br>Professor of Education<br>Luxmi College of Education<br>Gandhigram, Distt. Madurai<br>Tamil Nadu  | 15. Dr (Smt.) Amrit Kaur<br>Professor<br>Regional College of Education<br>Ajmer (Rajasthan)  |
| 8. Prof (Smt.) V. Agrawal<br>Professor and Head<br>Department of Psychology<br>Lucknow University, Lucknow<br>Uttar Pradesh   | 16. Dr K.S. Panda<br>Professor of Education<br>Regional College of Education<br>Bhubaneswar (Orissa)   |
|   | 17. Dr C. Sheshadhri<br>Professor<br>Regional College of Education<br>Mysore (Karnataka)   |



18. Dr S.T. V.G. Acharyulu  
Professor of Education  
Regional College of Education  
Bhopal (Madhya Pradesh)

### ACADEMIC COMMITTEE

- |  |                      |
|--|----------------------|
| 1. Director, NCERT   | <i>Chairman</i>      |
| 2. Joint Director, NCERT   | <i>Vice-Chairman</i> |
| 3. Dean (Academic)   | <i>Convener</i>      |
| 4. Joint Director, CIET  | <i>Member</i>        |
| 5. Dean (Research)   | <i>Member</i>        |
| 6. Dean (Coordination)   | <i>Member</i>        |
| 7. Head, Department of Education in Science and Mathematics  |                      |
| 8. Head, Department of Education in Social Sciences and Humanities                                   |                      |
| 9. Head, Department of Vocationalization of Education  |                      |
| 10. Head, Department of Measurement, Evaluation, Survey and Data Processing                          |                      |
| 11. Head, Department of Pre-School and Elementary Education  |                      |
| 12. Head, Department of Educational Psychology, Counselling and Guidance                             |                      |
| 13. Head, Department of Teacher Education, Special Education and Extension Services                  |                      |
| 14. Head, Department of Policy Research, Planning and Programming                                    |                      |
| 15. Head, Workshop Department  |                      |
| 16. Head, Publication Department   |                      |
| 17. Head, Department of Field Services and Coordination  |                      |
| 18. Head, Department of Library Documentation and Information  |                      |
| 19. Head, International Relations Unit   |                      |
| 20. Head, Planning, Coordination and Evaluation Unit   |                      |
| 21. Professor (Programmes)   |                      |
| 22. Shri R.C. Sexena, Professor, DESM  |                      |
| 23. Dr Arjun Dev, Professor, DESSH   |                      |
| 24. Dr (Smt.) S.P. Patel, Professor, DVE   |                      |
| 25. Km. I. Malani, Professor, DPSEE  |                      |
| 26. Dr R.K. Mathur, Professor, DEPCG   |                      |
| 27. Dr Pritam Singh, Professor Incharge (NVC)  |                      |
| 28. Dr N. Malla Reddy, Professor, Faculty of Education, Osmania University, Hyderabad (A.P.)         |                      |
| 29. Dr Suresh Shukla, Professor in Education, Head of the Department of Education, Delhi University. |                      |

### DEPARTMENTAL ADVISORY BOARDS

1. *Departmental Advisory Board for the Department of Educational Psychology, Counselling and Guidance*
  - (i) Dr. (Smt.) Perin H. Mehta  
Professor and Head *Convener*
  - (ii) Dr (Smt.) C. Dhar, Professor
  - (iii) Dr R.K. Mathur, Professor
  - (iv) Head, Department of Teacher Education, Special Education and Extension Services

- (v) Head, Department of Measurement, Evaluation, Survey and Data Processing
- (vi) Head, Department of Vocationalization of Education
- (vii) Dr (Km) M.D. Bengalee  
Professor and Head  
Department of Education  
University of Bombay  
Kalina Campus  
Bombay
- (viii) Dr. S. Narayana Rao  
Professor and Head  
Department of Psychology  
S.D. University  
Tirupati (A.P.)

### 2. *Departmental Advisory Board for the Department of Teacher Education, Special Education and Extension Services*

- (i) Smt. S. Shukla  
Professor and Head *Convener*
- (ii) Dr (Km) S. Bisaria, Professor
- (iii) Dr L.R.N. Srivastava, Professor
- (iv) Dr. N.K. Jangira, Reader
- (v) Head, Department of Education in Science and Mathematics
- (vi) Head, Department of Education in Social Sciences and Humanities
- (vii) Head, Department of Educational Psychology, Counselling and Guidance
- (viii) Prof. Durganand Sinha  
Director  
A.N. Sinha Institute of Social Sciences  
Patna
- (ix) Dr (Smt.) Yashu Behn Mehta  
Head, Department of Special Education  
S.N.D.T. University  
Bombay

### 3. *Departmental Advisory Board for the Department of Vocationalization of Education*

- (i) Dr A.K. Mishra  
Professor and Head *Convener*
- (ii) Dr. P. Raizada, Reader
- (iii) Shri G. Guru, Reader
- (iv) Head, Department of Education in Science and Mathematics
- (v) Joint Director, CIET
- (vi) Head, Department of Pre-School and Elementary Education
- (vii) Head, Department of Measurement, Evaluation, Survey and Data Processing

- (viii) Dr U.C. Upadhyaya  
Assistant Director-General  
Indian Council of Agricultural Research  
Krishi Bhawan, Dr Rajendra Prasad Road  
New Delhi
- (ix) Prof. Braj Kishore  
Department of Management  
Osmania University  
Hyderabad
- (x) Dr L. Phadnis  
Dean  
Home Science College  
University of Agricultural Sciences  
Dharwar
- (xi) Prof. A.L. Jain  
Technical Teachers' Training Institute  
Chandigarh
- (xii) Prof. V. Ramalingaswamy  
Deputy Director General  
Indian Council of Medical Research  
Ansari Nagar  
New Delhi
4. *Departmental Advisory Board for the Department of Education in Science and Mathematics*
- (i) Dr B. Ganguly  
Professor and Head
- (ii) Dr B.D. Atreya, Professor
- (iii) Dr Chottan Singh, Professor
- (iv) Shri R.C. Saxena, Professor
- (v) Dr J. Mitra, Reader
- (vi) Head, Publication Department
- (vii) Joint Director, CIET
- (viii) Head, Department of Teacher Education, Special Education and Extension Services
- (ix) Head, Department of Pre-School and Elementary Education
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Department of Botany  
M.L.S. University, Udaipur (Rajasthan)
- (xi) Prof. R.C. Mehrotra  
Department of Chemistry  
University of Rajasthan  
Jaipur
- (xii) Prof. S.P. Puri  
Department of Physics  
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Chandigarh
- (xiii) Prof. N.P. Singh  
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Indian Institute of Technology  
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- (ii) Dr K.G. Rastogi, Professor
- (iii) Smt A. Khanna, Professor
- (iv) Km. I. Malani, Professor
- (v) Dr S.D. Roka, Professor
- (vi) Head, Department of Education in Science and Mathematics
- (vii) Head, Department of Education in Social Sciences and Humanities
- (viii) Head, Department of Vocationalization of Education
- (ix) Head, Department of Teacher Education, Special Education and Extension Services
- (x) Joint Director, Central Institute of Educational Technology
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- (v) Head, Department of Education in Science and Mathematics
- (vi) Head, Department of Teacher Education, Special Education and Extension Services
- (vii) Head, Department of Measurement, Evaluation Survey and Data Processing
- \*\* (viii) Prof. K.S. Gill, Professor of Economics  
Guru Nanak Dev University, Amritsar

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| <p>** (ix) Prof. R.N. Ghosh, Central Institute of English and Foreign Languages, Hyderabad</p> <p>** (x) Prof. Namwar Singh, Jawaharlal Nehru University<br/>New Mehrauli Road, New Delhi</p> <p>7. <i>Departmental Advisory Board for the Department of Field Services and Coordination</i></p> <p>(i) Dr. Baqer Mehdi, Professor and Head <span style="float: right;"><i>Convener</i></span></p> <p>(ii) Dr. S. Prasad, Reader</p> <p>** (iii) Dr Melflang, Director, SCERT<br/>Meghalaya, Shillong</p> <p>** (iv) Dr S.C. Dash, Director, SCERT Bhubaneswar</p> <p>8. <i>Departmental Advisory Board for the Workshop Department</i></p> <p>(i) Dr P.K. Bhattacharya, Reader and Head <span style="float: right;"><i>Convener</i></span></p> <p>(ii) Shri Abu Bashar, Technical Officer</p> <p>(iii) Shri R.R. Sharma, Technical Officer</p> <p>(iv) Shri Ved Ratna, Professor, Department of Education in Science and Mathematics</p> <p>(v) Smt S. Bhattacharya, Reader, Department of Pre-School and Elementary Education</p> <p>(vi) Shri S.N. Ray, Lecturer, Department of Vocationalization of Education</p> <p>** (vii) Prof. N.K. Tewari, Mechanical Engineering Department, Indian Institute of Technology New Delhi</p> <p>** (viii) Shri H.N.P. Poddar, Scientist Incharge Workshop, National Physical Laboratory, Hill Side Road, New Delhi</p> <p>9. <i>Departmental Advisory Board for the Department of Measurement, Evaluation, Survey and Data Processing</i></p> <p>(i) Dr H.S. Srivastava, Professor and Head <span style="float: right;"><i>Convener</i></span></p> <p>(ii) Dr A.D. Banerjee, Reader</p> <p>(iii) Shri J.P. Aggarwal, Reader</p> <p>(iv) Dr C.L. Kaul, Lecturer</p> <p>(v) Head, Department of Education in Social Sciences and Humanities</p> <p>(vi) Head, Department of Education in Science and Mathematics</p> <p style="text-align: center;"><b>LIBRARY ADVISORY COMMITTEE</b></p> <p>1. Prof. P.N. Dave, Dean (Academic) Head, DPSEE <span style="float: right;"><i>Chairman</i></span></p> <p>2. Prof. (Smt.) Perin H. Mehta, Head DEPCG <span style="float: right;"><i>Member</i></span></p> | <p>3. Prof. H.S. Srivastava<br/>Head, DMESDP <span style="float: right;"><i>Member</i></span></p> <p>4. Prof. Anil Vidyalkar<br/>Head, DESSH <span style="float: right;"><i>Member</i></span></p> <p>5. Prof. A.K. Mishra<br/>Head, DVE <span style="float: right;"><i>Member</i></span></p> <p>6. Prof. B. Ganguli<br/>Head, DESM <span style="float: right;"><i>Member</i></span></p> <p>7. Shri Jaipal Nangia<br/>Head, Publication Department <span style="float: right;"><i>Member</i></span></p> <p>8. Prof. (Smt.) Adarsh Khanna<br/>Representative of Head<br/>DTESEES <span style="float: right;"><i>Member</i></span></p> <p>9. Dr P.K. Bhattacharya<br/>Head, Workshop Department <span style="float: right;"><i>Member</i></span></p> <p>10. Professional Senior<br/>(Deputy Librarian)<br/>Department of Library Documentation<br/>and Information <span style="float: right;"><i>Member</i></span></p> <p>11. Shri F.C. Katyal<br/>Professional Assistant<br/>Representative of Library<br/>Association <span style="float: right;"><i>Member</i></span></p> <p>12. Head<br/>Department of Library Documentation and<br/>Information <span style="float: right;"><i>Convener</i></span></p> <p style="text-align: center;"><b>DISSEMINATION COMMITTEE</b></p> <p>1. Prof. R.P. Singh, NCERT <span style="float: right;"><i>Chairman</i></span></p> <p>2. Joint Director, CIET <span style="float: right;"><i>Member</i></span></p> <p>3. Dean (Academic) <span style="float: right;"><i>Member</i></span></p> <p>4. Dean (Research) <span style="float: right;"><i>Member</i></span></p> <p>5. Dean (Coordination) <span style="float: right;"><i>Member</i></span></p> <p>6. Head, Workshop Department <span style="float: right;"><i>Member</i></span></p> <p>7. Head, Publication Department <span style="float: right;"><i>Member</i></span></p> <p>8. Head, DESM <span style="float: right;"><i>Member</i></span></p> <p>9. Head, DVE <span style="float: right;"><i>Member</i></span></p> <p>10. Dr. C.L. Kundu, Professor of Education<br/>Kurukshetra University, Kurukshetra <span style="float: right;"><i>Member</i></span></p> <p>11. Dr V.K. Kool<br/>Professor of Psychology, IIT, Powai<br/>Bombay <span style="float: right;"><i>Member</i></span></p> |
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| 10. | Principal, RCE, Mysore   | Member                |
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East of Kailash  
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11. Dr L.G. Sumitra *Member-Secretary*  
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Radio Division, CIET, NCERT  
New Delhi

2. Dr M.M. Chaudhry  
Joint Director, CIET, NCERT  
New Delhi

3. Dean Academic  
NCERT  
New Delhi

4. Prof. Snehlata Shukla  
Head, DTESEES, NCERT  
New Delhi

The following members are special invitees to the Committee in their ex-officio capacity:

1. Dr. A.K. Jalaluddin  
Joint Director, NCERT  
New Delhi

5. Dr. A.K. Mishra  
Head  
Department of Vocationalization of Education  
NCERT, New Delhi

**APPENDIX D****National Fellows of the National Institute of Education**

1. Mr. Amadou Mahtar M'Bow (Director-General, UNESCO)
2. Mr P.V. Narasimha Rao
3. Shri K.L. Shrimali
4. Prof. D.S. Kothari
5. Dr Man Mohan Singh
6. Prof. M.G.K. Menon
7. Prof. Raja Ramanna
8. Prof. Yash Pal
9. Prof. C.N.R. Rao
10. Prof. V.V. John
11. Dr P.N. Kripal
12. Prof. S.V.C. Aiya
13. Prof. Rais Ahmed
14. Prof. Shib K. Mitra
15. Prof. (Smt.) Chitra Naik
16. Prof. (Smt.) Rajamal P. Devadas
17. Mr. A.R. Dawood
18. Prof. V.K. R.V. Rao
19. Prof. D.P. Chattopadhyaya

## APPENDIX E

### National Council of Educational Research and Training

SANCTIONED STAFF STRENGTH AS ON 1 APRIL 1987

S.No.	Placement of Staff	ACADEMIC			NON-ACADEMIC (MINISTERIAL)			NON-ACADEMIC (TECH)				Total
		Group A	Group B	Group C	Group A	Group B	Group C	Group A	Group B	Group C	Group D	
1.	Council Headquarters	296	2	3	25	108	603	80	98	267	385	1867
2.	RCE, Ajmer	66	27	46	1	6	43	4	4	40	82	319
3.	RCE, Bhopal	62	25	47	1	6	43	4	5	38	81	312
4.	RCE, Bhubaneswar	83	32	62	1	6	40	4	5	45	89	367
5.	RCE, Mysore	86	25	50	1	6	48	4	5	39	82	346
6.	FA's Offices	32	—	—	—	—	54	—	—	18	36	140
Total :		625	111	208	29	132	831	96	117	447	755	3351



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