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1985-86



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

December 1986
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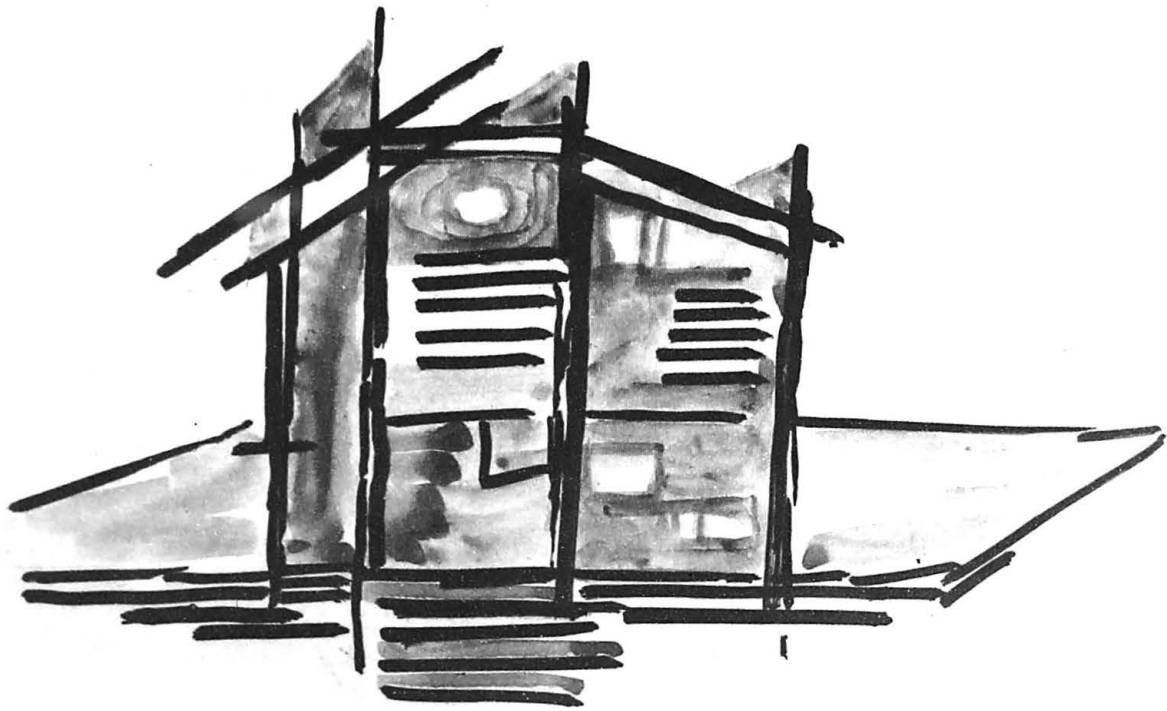
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ONE

NCERT: ROLE AND STRUCTURE

THE 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 (Education) 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 research in all branches of school education;
- Organizes pre-service and in-service training of teachers, mainly at an 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).

Research

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

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

The NCERT supports research by providing financial assistance and academic interaction to individuals and organizations. Assistance is given to scholars for the publication of Ph.D. theses. The Council also awards junior and senior research

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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 providing data on various aspects of education in the country. It has a computer terminal for the storing, retrieval and processing of data. It also collaborates with international agencies in intercountry research projects.

Development

Developmental activities in school education constitute an important function of the Council. Significant among these are the development of curricula and instructional materials at the various levels of school education and relating them to the changing and growing needs of children and society. The development of curricula and instructional materials in the area of non-formal education and vocationalization of education, are among the innovative developmental activities of the Council. Educational technology and population education are other significant activities in this domain.

Training

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 constitutes another important dimension of the Council's activities. 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 the syllabi for teacher education at various levels and the working of the

The correspondence courses for untrained teachers of elementary and secondary schools help in 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 works directly with various agencies and institutes in the States and also works extensively with the extension service departments and centres in teacher training colleges and schools with the purpose of providing assistance to various categories of personnel including teachers, inspectors, administrators, paper-setters, textbook-writers, etc. Conferences, seminars, workshops and competitions are organized as regular on-going programmes. Care is also taken to organize these programmes in rural and backward areas in order to reach the functionaries in these areas where special problems exist and special efforts are needed. The Council has special programmes for the education of the handicapped and the children from disadvantaged sections of the 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 the various school subjects for Classes I-XII and teacher education, workbooks, teachers' guides, supplementary readers, research reports, etc. The instructional materials produced after research and development work serve as models to the various agencies in the States and the Union Territories and 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

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and Hindi, aims at giving meaningful and relevant material to primary school teachers for direct use in the classroom, (ii) *The School Science* serves as an open forum for discussion of various aspects of science education, (iii) *The Journal of Indian Education* provides a forum for encouraging original and critical thinking in education through discussion on current educational issues, (iv) *The Indian Educational Review* contains research articles and provides a forum for research workers, and (v) *Adhunik Bhartiya Shiksha*, published in Hindi, provides a forum for encouraging critical thinking in education on contemporary issues and disseminates ideas on educational problems and practices.

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

Evaluation and Exchange Programmes

Evaluation of textbooks and other materials, specially from the point of view of national integration is undertaken on a continuous basis. Criteria, tools and techniques of evaluation have been developed. Guidelines and procedures for evaluation have been laid down for evaluating the format and content of textbooks. The feedback from schools helps in the revision of textbooks.

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 award of scholarships. 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.

For its efforts at improving 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, symposia, etc. The Council also arranges training for foreign nationals.

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 provisions of 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.

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 State 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 at the level of Professors and Heads of

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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 consists 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. Choudhry, Joint Director (CIET)
4. Shri C. Ramachandran, IAS, Secretary up to 18 February 1986
5. Shri H.K.L. Chugh, Secretary from 19 February 1986

The Director is also assisted in the academic functions by three deans whose names, designations and responsibilities are given below:

<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 1985-86 the Council was running:

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

National Institute of Education

The Departments/Units of NIE were reorganized in May 1984. During 1985-86 the National Institute of Education, New Delhi had the following Departments/Units concerned with 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 (DEPC&G)
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)

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

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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)

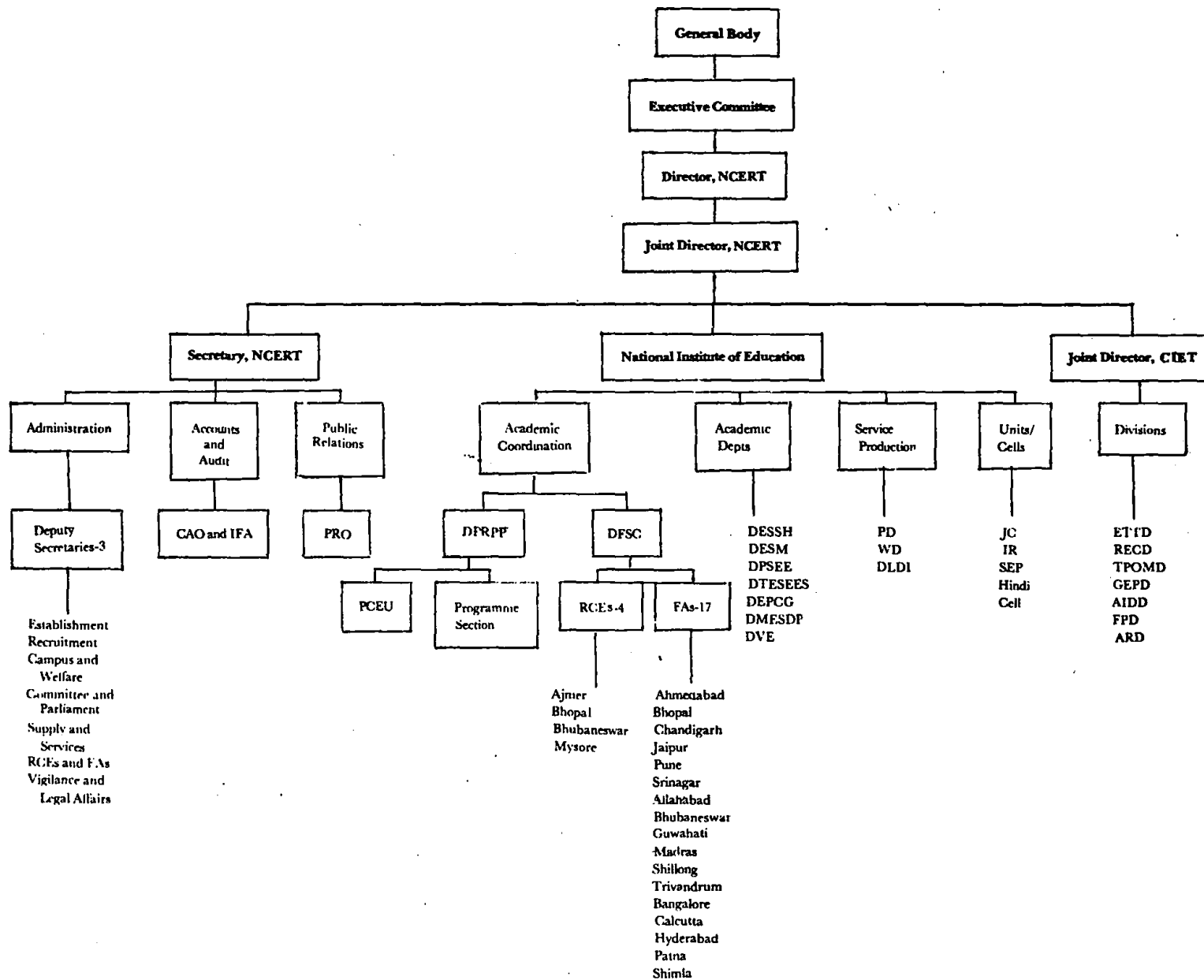
While the College at Ajmer offers only four-year B.Sc. B.Ed. courses, the Colleges at Bhubaneswar and Mysore also offer M.Sc. Ed. programmes, the former in Life Sciences and the latter in Physics, Chemistry and Mathematics. There is provision for Ph.D. programmes as well as one-year B.Ed. and M.Ed. courses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

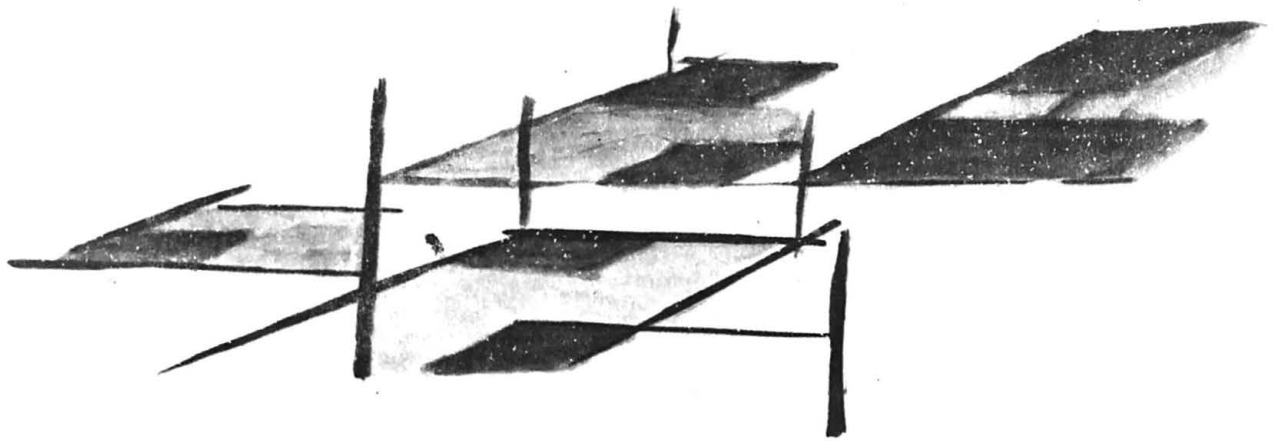
Seventeen Field Offices have been established at the following places to provide effective liaison with the State Education authorities and with the State-level institutions set up for providing academic and training inputs to the school system:

Ahmedabad	Allahabad	Bangalore
Bhopal	Bhubaneswar	Calcutta
Chandigarh	Guwahati	Hyderabad
Jaipur	Madras	Patna
Pune	Shillong	Shimla
Srinagar	Trivandrum	

Organizational Structure of the NCERT



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TWO

AN OVERVIEW OF THE ACTIVITIES DURING 1985-86

THE period under report was marked by the key role played by the Council in activities directed to the formulation of the new National Policy on Education and by the sustained and continuous efforts made by it for improving the quality of school education and teacher education in the country. Activities aimed at the development of a national curriculum framework for primary and secondary education, development of instructional/ training packages for early childhood education and non-formal education programmes in the context of the programme of universalization of elementary education, preparation of textual and other instructional materials for different stages of school education, promotion of ideas focused on national integration, vocationalization of education, improvement of measurement and evaluation procedures in schools, utilization of educational technology and enhancement of the professional competence of teachers and teacher-educators constituted some of the important aspects of the Council's work during the period 1985-86. 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, National Population Education Project and the Computer Literacy and School Studies (CLASS) Project being implemented in different States/Union Territories.

Formulation of National Policy on Education

The Council undertook several activities for providing technical and academic assistance to the Ministry of Human Resource Development, Government of India, in the formulation of the National Policy on Education. About 25 documents were prepared by the Council covering

almost all areas of school education including review of research studies relevant to the formulation of education policy; scores of national seminars and workshops were organized. These documents along with the reports and recommendations of the three national seminars on Elementary Education, Secondary Education and Vocationalization of Education, respectively, helped in evolving a broad framework within which the major thrusts of the new policy could be identified and prioritized. In addition to these, senior faculty members of the Council were deputed to participate in several seminars and meetings organized by various national and State level agencies for arriving at a national consensus in respect of the new National Policy on Education.

National Curriculum Framework

The Council, in close collaboration with the State/Union Territory educational authorities finalized the document, titled "National Curriculum for Primary and Secondary Education—a Framework". The document is the result of concerted efforts spread over three years to arrive at a national consensus through seminars and workshops organized at the State, the regional and the national levels. The curriculum concerns and issues identified by an in-house Steering Group constituted by the Council were deliberated upon at a national seminar and four regional seminars held during 1985. The draft of the national curriculum framework prepared on the basis of the recommendations made at these seminars was further discussed at a national-level meeting held in January 1986 and revised and finalized, keeping in view the suggestions received from the experts who attended this meeting. The finalized document was submitted to

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the President of the Council and to the Ministry of Human Resource Development in January 1986. Subsequently, to work out the details of the programmes to be initiated by the Council for the implementation of the National Curriculum, six working groups were constituted dealing with Elementary Education, Science Education, Teacher Training (Pre-Service and In-service), Vocational Education, Educational Technology, and Teaching of Languages, respectively.

Early Childhood Education

Several activities related to the development of 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 Children's Media Laboratory (CML) and Early Childhood Education (ECE). Picture books, audio/video programmes and slide tape-programmes for early childhood education were developed under the project CML. As part of the work under the project ECE, at the Central level, three booklets for the use of teachers and teacher-educators were published, two booklets were sent for publication and ten booklets were finalized for publication. In addition to these, several instructional materials in regional languages for the use of children enrolled in ECE Centres were developed and published by the States/Union Territories participating in the project ECE.

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 1985-86. A package of instructional materials was developed for the use of learners enrolled in the non-formal education centres at the middle level (equivalent to Classes VI to VIII) established under the Non-Formal Education Programme sponsored by the Government of India. Activities related to the study, jointly undertaken by the NCERT and the

National Institute of Educational Planning and Administration (NIEPA), to evaluate the non-formal education programme implemented in the States were also initiated during the year.

Four modules in Hindi and three modules in mathematics for the use of learners enrolled in the Learning Centres established under the UNICEF-assisted project "Comprehensive Access to Primary Education (CAPE)" were developed by the Council. In addition to these, about 60 modules were finalized for publication by different States/Union Territories participating in the project CAPE. Of these, 30 modules were published. Under the project CAPE, 93 learning centres in Bihar, 70 learning centres in Orissa and 73 learning centres in Tamil Nadu were established during the year 1985-86. Collection of data for the external evaluation of the first phase of the project was completed by the Centre of Advanced Study in Education, M.S. University, Baroda. Similarly, the external evaluation of the UNICEF-assisted project "Developmental Activities in Community Education and Participation (DACEP)" was completed by the A.N. Sinha Institute of Social Studies, Patna, and the report of the evaluation study, titled "DACEP at Work—an Evaluation" was submitted to the Ministry of Human Resource Development.

Preparation of Textual and Other 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 1985-86. Some of these were developed in close collaboration with the Central Board of Secondary Education (CBSE). Prominent among the textbooks finalized for publication included textbooks in Physics, Chemistry, Mathematics and Biology for Class X, a textbook in Geography for Class X, three books on Economics for the use of students in Classes IX and X, two textbooks for Hindi Core Course for Class XII, two textbooks for

Hindi Elective Course for Class XII, a textbook in Sanskrit for Class XII Core Course, a supplementary Reader in English (Core Course) for Class XII, and a textbook in Political Science for Classes XI and XII. Other textual materials finalized for publication included a textbook in Urdu for Class IV, a textbook in Hindi (as a second language) for Class III and textbooks in Hindi for Class VI for use in the Navodaya Vidyalayas.

As part of the Council's activities for creating an awareness among younger generation of India's struggle for independence through preparation of instructional packages, the Council brought out an album consisting of about 80 visual panels with brief write-ups depicting the various events and landmarks related to India's freedom struggle. The publication, titled "India's Struggle for Independence—Visuals and Documents" is the result of a five-year research project and has been acknowledged as a monumental work reflecting the glorious struggle for India's independence. The album which has been produced in three different editions suitable for institutional libraries, school libraries and classroom demonstrations, has been highly acclaimed for its quality of production. The album was released by the Union Minister of Human Resource Development and President of the NCERT, Shri P.V. Narasimha Rao, on 24 December 1985. Activities related to the preparation of reading materials for children under the project "Reading to Learn" continued during the year. By the end of 1985, 31 titles were finalized for the use of small children and children in the age-group 11-14 and sent to the press for publication.

Promotion of National Integration

The Council continued its activities related to the evaluation of school textbooks with a view to removing materials which impede national integration. On the basis of the guidelines evolved by the Council in collaboration with the Education

number of textbooks in different subject areas were reviewed. The Council also conducted evaluation of textbooks on sample basis and organized orientation programmes for authors and reviewers of textbooks. A booklet, which contains guidelines for evaluation of textbooks from the standpoint of national integration, was also brought out. As a result, the programme of evaluation of textbooks from the standpoint of national integration has now been institutionalized as a regular activity covering textbooks in different subject areas such as Languages, History, Geography, Civics and Sociology.

Another programme directed to promote national integration has been the organization of camps to train teachers in the art and techniques of community singing involving songs in 15 regional languages. During 1985-86, the NCERT, in collaboration with various agencies at the State/Union Territory level, organized 29 camps to train teachers in community singing. 1,164 teachers from 19 States/Union Territories had attended these camps. These camps, together with the production and distribution of a book containing these songs in respective language scripts as well as in Roman and Devnagari scripts along with musical notation and audio tapes for use in schools, have helped in institutionalizing community singing in a large number of schools in the country.

Teaching of Indian Freedom Movement in Schools

The NCERT prepared a report on the Teaching of Indian Freedom Movement in Schools and made recommendations concerning the development of general framework and guidelines for a syllabus in freedom movement for graded stages in school education. The Council undertook the responsibility of preparing exemplar materials which would be made available to all States/Union Territories. The study of the Freedom Struggle will be a part of the National Curriculum and will cut across the various subject disciplines. It would be included in the study of

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Languages, History, Social Studies, Civics and Economics. The Report has suggested establishment of a permanent cell on Freedom Movement in the Council with an Advisory Committee to monitor the recommendations of the Working Group chaired by Dr. G.C. Pande, ex-Vice-Chancellor, Allahabad University.

The Council has also decided to bring out a Dictionary of National Biography for School Children. The Report has also recommended that the NCERT's publication, titled "India's Struggle for Independence—Visuals and Documents" should be made available to all schools in the country.

Vocationalization of Education

The Council undertook several activities for providing necessary academic inputs to the States/Union Territories for effective implementation of the curricular area Socially Useful Productive Work (SUPW) at the elementary and secondary stages and for vocationalization of higher secondary education. During the year 1985-86, the Council conducted four short-term teacher training programmes with a view to updating the knowledge and expertise of vocational teachers in their respective vocations. One hundred teachers were trained through these courses which were conducted in specialized institutions utilizing their infrastructural facilities and expertise. Other programmes conducted include five orientation programmes for State-level officials on vocationalization of education and four orientation programmes for key persons at the State/Union Territory level on SUPW. In addition to these, several workshops were organized to develop minimum vocational competency-based curricula related to different vocations, self-instructional-cum-practical manual, question banks in Office Practice, pre-vocational courses for upper primary and secondary stages and action plans for the implementation of SUPW competency-based curricula, and instructional materials related to several vocations were developed and published during the year.

Educational Evaluation

In order to improve the measurement and evaluation procedures in schools, the Council undertook 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 70 comprehension exercises in English for the use of students and teachers of Classes IX and X, question bank in History for Class XI, a scheme of evaluation in vocational subjects at the +2 stage, question bank in Science for Class VI, unit tests and exercises in Practical Geography, sample questions in Biology for senior secondary classes, a scheme for internal assessment of vocational subjects and a scheme for evaluation of non-scholastic traits of pupil growth at the primary stage.

The Council conducted five seven/eight day courses for training test 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 eight courses for training State-level personnel for the improvement of external examinations at the secondary stage, a one-month training course on educational evaluation for Armed Services personnel, a one-month All India Training Course in Educational Evaluation for personnel at the State/Union Territory level, a ten-day course on educational evaluation for the staff of educational institutions run by minority communities and a five-day course on evaluation procedures for the staff of selected public schools.

The second level examination for selection for the award of the National Talent Search Scholarship was conducted by the NCERT on 14 July 1985. 2,849 students in Class X, selected on the basis of the written tests conducted by States/Union Territories in October-November 1984, appeared in the second level test conducted by the NCERT at 29 centres spread all over the country. In all, 680 candidates in the general

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category and 70 candidates in the reserved category for SC/ST children were selected for award of the NTS scholarships.

Educational Survey

The Council continued its activities for improving the data base for evolving appropriate educational programmes. During the year four studies related to the availability of facilities in schools were initiated. These included an intensive study of science laboratories in secondary and higher secondary schools; a sample study of library facilities and their utilization in secondary and higher secondary schools in the States of Assam, Gujarat, Haryana and Tamil Nadu; an intensive study of secondary and higher secondary school buildings in the States of Bihar, Himachal Pradesh, Karnataka and Madhya Pradesh; and a survey of educational facilities for weaker sections of the society such as Scheduled Tribes in Orissa. Four seven-day courses for training State-level personnel on the methodology of conducting sample survey were also organized during 1985-86.

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 access to education were undertaken by the Central Institute of Educational Technology (CIET) in collaboration with the State Institutes of Educational Technology (SIETs). The CIET completed a research study pertaining to educational broadcasts of All India Radio, Bangalore, from the production point of view and continued work on the development of curriculum for educational radio. It also initiated activities related to pre-telecast testing of ETV programmes and evaluation studies in respect of educational programmes transmitted through INSAT for children and teachers of primary schools. The CIET produced 89 ETV programmes for transmission by

utilizing INSAT-1B facilities. These included 33 programmes each for children in the age-group 5-8 years and 9-11 years and 23 programmes for teachers. It also produced 58 audio programmes. They included 25 audio programmes for teaching Hindi as the second language to children in Orissa.

Several training programmes on production of audio and ETV programmes for the benefit of State-level personnel were organized by the CIET in collaboration with the agencies at the State/Union Territory level. The programmes organized during 1985-86 included a one-month integrated training course on script-writing and production of audio/radio programmes for educational purposes, a six-week training course in ETV production and technical operations, a one-month training course on technical operation, script-writing and graphics, and a ten-day in-service training in the ETV programme production. Other courses organized included five two-week training courses in educational technology for teacher-educators in States/Union Territories, training course in photography and two ten-day orientation programmes on writing lessons for distance education.

Teacher Education

In the field of teacher education, the NCERT continued activities on the research projects dealing with value orientation of B.Ed. students, status of teachers in India and study of relationship between self-concept and adjustment of SC/ST teacher-trainees and their achievement. The study pertaining to the status of in-service education of primary teacher-educators and secondary school teachers in States was completed and the activities related to the Fourth National Survey of Secondary Teacher Education in India were carried out during the year 1985-86. Workshops/working group meetings were 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 a source book

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on Teacher Education for M.Ed. students, a textbook on Health and Physical Education for secondary school teachers, a textbook on Content-cum-Methodology related to Environmental Studies for elementary teacher-trainees, a textbook on Content-cum-Methodology in the Teaching of Social Studies for the use of secondary teacher-trainees, a handbook on Value-oriented Education for the use of teacher-trainees, a source book on Non-Formal Education for secondary teacher-educators and a source book on College Teaching.

The NCERT prepared a detailed programme design for training about five lakh teachers during the academic session 1986-87 under a scheme, titled "National Scheme for the Training of In-service School Teachers" sponsored by the Ministry of Human Resource Development, Government of India. About 30 modules on the issues like national integration, centrality of the child in education, modern methodologies of teaching, work experience, continuous and comprehensive evaluation and other areas of immediate concern as reflected in the documents prepared in support of the effort for the formulation of the National Policy on Education were developed by the Council. Media support in the form of telecasts in different Indian languages through the facilities offered by INSAT-1B was also planned.

The Council continued to coordinate the activities of the Centres of Continuing Education set up in different States for improving the professional competence of teachers. During 1985-86, four regional conferences for the Honorary Directors/Coordinators of the Centres of Continuing Education of Teachers were organized to take stock of the activities and progress of CCEs and to evolve strategies for effective utilization of CCEs in future.

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 the B.A.Ed. or B.A. B.Ed. Degree and B.Sc. Ed. or B.Sc. B.Ed.

Degree and the 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 course at Ajmer, Bhopal, Bhubaneswar and Mysore were 236, 379, 489 and 344, respectively, while the total enrolments in the B.Ed. course were 247, 127, 450 and 77, respectively. The enrolment in the M.Ed. course was 20 each in the RCEs at Ajmer and Bhubaneswar while it was 10 and 25, respectively, in the Colleges at Bhopal and Mysore. The enrolment in the M.Sc. (Ed.) Life Science Course at Bhubaneswar was 20 while the total enrolment in M.Sc. Ed. courses in Physics, Chemistry and Mathematics at Mysore was 102. Besides, 195, 582 and 220 candidates were enrolled for the summer school-cum-correspondence course leading to B.Ed. Degree at Ajmer, Bhubaneswar and Bhopal while 185 candidates were enrolled at the sub-centre at Manipur supported by the RCE, Bhubaneswar. The RCEs also organized extension programmes/workshops/seminars on different areas related to school education. The total number of programmes organized by the RCEs at Ajmer, Bhopal, Bhubaneswar and Mysore were 15, 26, 15 and 35, respectively. In addition to these, each RCE also carried out research studies related to school education and teacher education.

Technical Support to Navodaya Vidyalayas

In pursuance of the decision of the Ministry of Human Resource Development, Government of India, to initiate a scheme for setting up Navodaya Vidyalayas in each district, the Council took up the responsibility of setting up two schools, as an interim arrangement, one at Jhajjar (Haryana) and the other at Amaravati (Maharashtra). The Council has also designed the curriculum for Navodaya Vidyalayas and organized courses for reorienting principals and teachers appointed for these schools. The Council also conducted admission tests for selection of students for these schools.

Training of Staff of Schools Maintained by Educationally Backward Minorities

Eleven training/orientation programmes were organized by different constituent units of the Council for the benefit of managers, principals and teachers of the schools maintained by the educationally backward minorities. About 300 persons were trained through these programmes. In addition to these, five universities have been identified as Resource Centres for providing back-up support to the schools maintained by the educationally backward minorities. The Resource Centres are located at Osmania University at Hyderabad, Aurangabad University at Aurangabad, Aligarh Muslim University at Aligarh, Kashmir University at Srinagar and Jamia Millia Islamia at Delhi.

Population Education

Measures were initiated by the Council to intensify the implementation of the National Population Project in the States. Besides training teachers and key persons at the State level, the Council brought out a publication, titled "Tasks and Challenges" and Population Awareness Tests. In addition to these a multi-colour album consisting of children's paintings on the population situation, titled "India: My Children, My Future", was published. The publication has been widely acclaimed for its thematic importance and quality of production both in India and abroad.

Computer Literacy

Several advanced-level training programmes for school teachers were organized by the NCERT and other Resource Centres under the project "Computer Literacy and Studies in School (CLASS)". Ten new indigenous software packages were tested and introduced in the schools selected under the CLASS project.

Educational and Vocational Guidance

The Council continued its activities in the field of Educational and Vocational Guidance.

Research activities undertaken during 1985-86 include studies on "Psychological Characteristics and Educational and Vocational Planning of Scheduled Caste Boys Studying in High School". "Educational and Vocational Planning, Academic Achievement and Psychological Characteristics of Tribal Students" and "Vocational Behaviour and Vocational Adjustment of Students in Academic and Vocational Streams". The Council continued to run its diploma course in Educational and Vocational Guidance and organized a three-day all India conference of the Heads of the State Bureaux of Guidance, a three-day seminar-cum-workshop of Resource Persons for orienting vocational teachers in guidance, a five-day refresher course on applications of educational technology in guidance and counselling in schools, three ten-day enrichment courses on learning and development, two ten-day workshops on application of behaviour modification techniques, a ten-day training course for teacher-educators on identifying and encouraging creative potential in children in elementary grades and a six-day training course on identification and development of creative talent in students at the secondary stage.

Education of the Disabled

The Council undertook several activities related to integrated education of the disabled during the period under report. Review of research in special education, and the designing of case studies of integrated education for the disabled and a cooperative research project on the effects of integrating children with disability on the ecology of classroom and pupil achievement constituted some of the research activities initiated during the year. Other activities carried out included organization of a national conference of Coordinators and Education Secretaries on the IED scheme, a four-day national workshop on the promotion of research in special education, a five-day national workshop on creative arts for the disabled, a five-day workshop on adjustment of instructional materials and methods for visu-

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ally impaired children in regular schools, and a five-day workshop for developing instructional materials and methods suited to the needs of hearing impaired children in regular schools and development of modular instructional materials for the training of resource teachers for integrated education for the disabled and a three-month training course for key personnel on integrated education for the disabled.

Education of the Scheduled Castes/ Scheduled Tribes

The Council continued the activities related to four research studies on education of SC/ST groups. These included "A Study of Interrelationship between Education of the Scheduled Tribe Students and Their Socio-economic Mobility", "A Comparative Study of Educational Achievement of SC and Non-SC Students of Class X in Uttar Pradesh", "A Study of the Subject-wise Performance of Tribal Students at Primary Stage to Determine Their Weak and Strong Points" and "A Comparative Study of Physical Facilities between Tribal and Non-tribal Primary Schools". The Council also organized two one-week training courses for teacher-educators of elementary teacher training institutes located in tribal areas, two one-week training courses for teacher-educators of secondary teacher training institutions in tribal areas, and two one-week orientation courses for key personnel involved in the implementation of non-formal education in tribal areas.

Women's Education

Two studies pertaining to the strategies adopted by the States to augment enrolment of girls in formal and non-formal education programmes were undertaken during 1985-86. Children's literature produced by the NBT and language textbooks and supplementary readers produced by the NCERT and the State of Tamil Nadu were reviewed for eliminating sex bias in these materials on the basis of evaluative criteria and the evaluation tool on elimination of sex bias

developed by the NCERT. The Council also organized two orientation programmes for key personnel on evaluation of textbooks and supplementary reading materials in Indian languages and English from the view-point of elimination of sex bias and another orientation programme on the status of women through curriculum at the elementary stage.

National Science Exhibition for Children

The Fourteenth National Science Exhibition for Children, organized by the NCERT in collaboration with the Government of Rajasthan, was inaugurated by the President, Giani Zail Singh, at Udaipur on 16 November 1985. The theme of the exhibition was "Indigenous Technology in Development". About 400 students from different States/Union Territories participated in the exhibition.

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 1985-86, nine research studies were completed. In order to create a pool of competent researchers in the country, the Council organized two research methodology courses. It also continued its scheme of providing financial support for the publication of Ph.D. theses/monographs. Under this scheme, 18 publications were brought out and another 18 were selected for providing assistance during the year.

International Relations

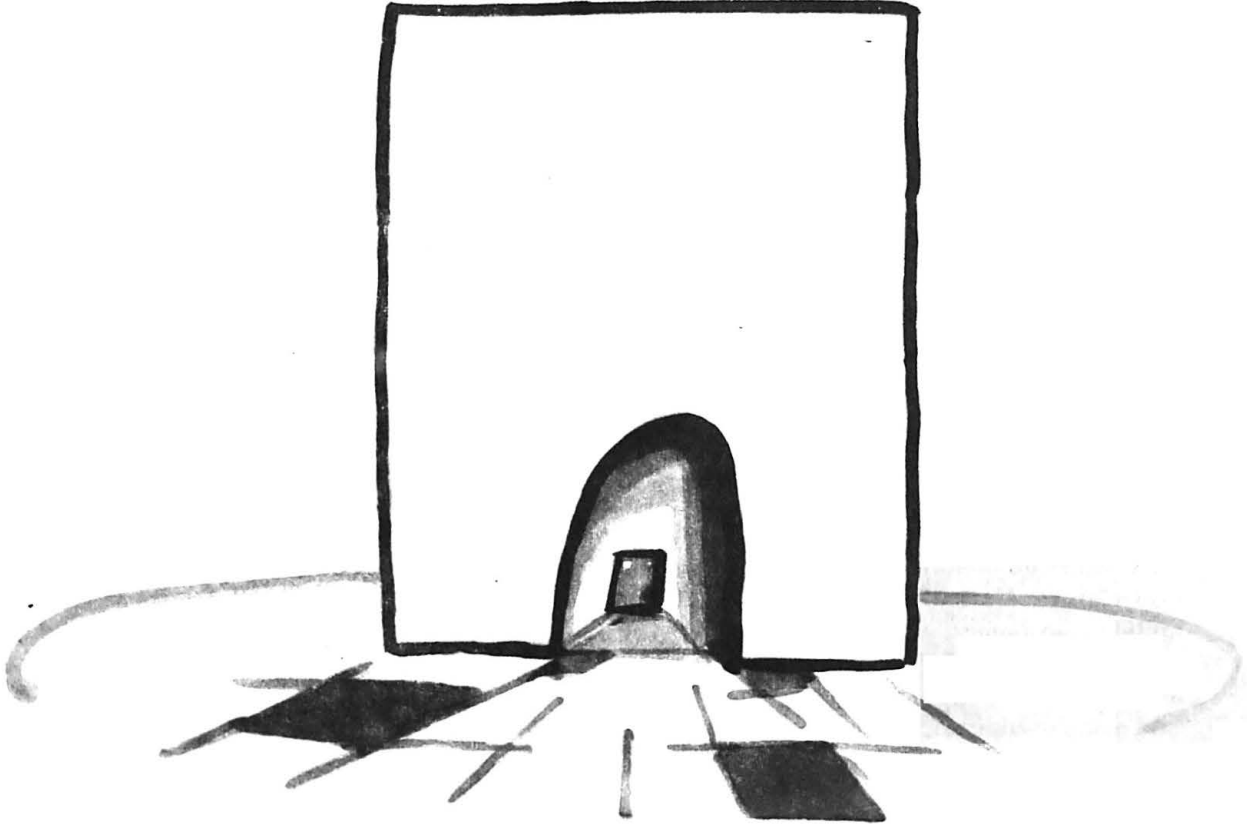
The NCERT continued to play its role as a major agency for implementing the provisions of bilateral cultural exchange programmes in the field of school education. Several delegations and experts from different countries visited the NCERT during 1985-86. The Council undertook several UNESCO-sponsored projects/programmes and played a key role as an associate centre

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of the Asia and the Pacific Programme of Educational Innovations for Development (APEID) and as the Secretariat of the National Development Group (NDG) for educational innovations.

The details of the activities/programmes car-

ried out during 1985-86 by different Departments of the National Institute of Education (NIE) and other constituent units of the NCERT are reported in the subsequent chapters.



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THREE

PRE-SCHOOL AND ELEMENTARY EDUCATION

RESearch, development and training activities related to early childhood education, renewal of primary education curriculum and non-formal education constitute the major activities of the Department of Pre-school and Elementary Education (DPSEE). The Department has been acting as the central, technical and co-ordinating agency for all the UNICEF-assisted projects in the education sector implemented in the context of the Programme of Universalization of Elementary Education in different States and Union Territories.

Early Childhood Education

Development of curriculum and instructional materials for early childhood education, development of instructional materials for the use of pre-school teachers and teacher-educators and training of pre-school teachers, teacher-educators and supervisory personnel involved in the early childhood education programmes, continued during the year. These activities were carried out under the following specific projects and programmes.

Children's Media Laboratory (CML)

Under the UNICEF-assisted project, Children's Media Laboratory (CML), activities related to development of print, audio and audiovisual materials of educational and entertainment value for children in the age-group 3-8 were undertaken. Under the project picture books, audio programmes, video programmes and slide-tape programmes for early childhood education as well as for the training of pre-school teachers and teacher-educators were developed.

Two workshops, each of ten days' duration, were organized for the development of scripts for children's books and for the production of audio programmes. Scripts developed during these workshops were reviewed and were finalized for publication as picture books and audio tapes. Other materials developed included two video programmes on pre-school activities. Certain slide-tape programmes produced earlier were duplicated for dissemination to the States and the Union Territories participating in the Early Childhood Education project.

Early Childhood Education (ECE)

Under the UNICEF-assisted Early Childhood Education (ECE) project, States were assisted in setting up or strengthening early childhood education units, training teacher-educators and pre-school teachers, orienting supervisors and educational administrators to the different aspects of early childhood education and developing basic learning and play materials for the use of children in the age-group 3-8. During the year 1985, the project was implemented in eight States—Bihar, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu and Uttar Pradesh. During the last quarter of the year, Nagaland and Goa also joined the project. In each of the participating States, five teacher training institutes and 65 early childhood education centres were involved in the implementation of the project. During 1985-86, the training of ECE teachers was completed in all the States except Uttar Pradesh. For effective monitoring and evaluation of the project in the participating States appropriate proformas were developed

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and distributed to the States.

Under the project, a large number of instructional/training materials were brought out during the year. Three titles for the use of teacher-educators were published and manuscripts of two booklets were sent to the press for printing. Ten booklets were reviewed and finalized for publication.

All the States participating in the ECE project commenced activities on the development of instructional materials in regional language for the use of children in the age-group 3-8. The materials developed by the States were reviewed at the central level and finalized for publication. Six sets of booklets and cards for the development of language and number skills in pre-school children were developed and printed in Tamil. A set of eleven booklets for teachers, 22 picture books for children and seven sets of posters and cards for the development of cognitive and language skills were developed and printed in Oriya. Eighteen picture books for children, a set of picture cards, a set of teachers' handbooks and progress notebooks for recording performance were developed and published by Maharashtra. A set of guidebooks for teachers, four picture books for children and a set of picture cards were published by Rajasthan. In Karnataka, a set of eight picture books for children were published in Kannada. Other materials developed include a set of cards and a picture book for children developed and published in Bihar, a teachers' guide in Hindi brought out in Madhya Pradesh and a set of five picture books for children and a teachers' guidebook in Hindi in Uttar Pradesh.

Under the ECE project, refresher training courses for the teachers of the ECE centres were conducted in four States. Other activities carried out include orientation programmes for the parents of children attending the ECE centres. The main objective of this programme was to create an awareness of the importance of early childhood education in the development of a child. The programmes were well received by the parents.

Early Childhood Project in Schools of Municipal Corporation of Delhi

The Department has been engaged in the implementation of an Early Childhood Education project in ten schools of the Municipal Corporation of Delhi. During the years, the helpers attached to the project schools were trained in the methodology of early childhood education and introduction of these methods in the early stages of primary education. In addition to this, refresher programmes were organized for administrators, supervisors, heads of schools and teachers. The monitoring of the project was started in April 1985 and as part of activities related to this, monthly meetings with teachers were organized. During these meetings, the teachers were provided with guidance in practising the activity method and child-centred approach to education in the project schools. The activities carried out under the project have brought about improvement in the teaching-learning process in the project schools, particularly in terms of classroom organization, the planning of instructional programmes and interaction between teachers and learners as well as between children.

Child to Child Programme

This programme was implemented in 14 schools of the Municipal Corporation of Delhi. The programme essentially involves working with primary school children so as to make simple rules of healthy living in order to help children not only to improve themselves but also their younger brothers and sisters. Under this programme two workshops were organized for the teachers of participating schools to orient them to the principles and philosophy involved in the programme and to develop activity sheets for use in the classroom situations. In addition to this, an observation schedule was developed for use by teachers. The feedback received from the schools participating in the programme indicated significant improvement in terms of environmental cleanliness, personal hygiene of children, etc.

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National-level Workshop on Toy-making

In order to develop an awareness among teachers about the importance of toys and educational games and playway method of instruction at the pre-school and at the early primary stages, a five-day National Workshop on Toy-making was organized. The activities during the workshop centred around the development of movement toys. The workshop was attended by fifteen pre-school and primary school teachers who were first-prize winners at the State-level toy-making competition organized by the Department in collaboration with the Field-Advisers of the NCERT. During the year, the toy-making competition was organized in seventeen States and Union Territories.

Research Projects

An evaluation study of the different models of pre-school teacher training programmes from the point of view of their impact on children was conducted. The main objective of the project was to examine the differences in the different models of pre-school teacher training, particularly from the point of view of what the teachers trained under different schemes have been able to do with young children and how children gain from them. The research study indicated that there was a positive correlation between the duration of teacher training and the performance of children. However, the difference between the *anganwadi* children and the children from pre-schools taught by teachers with two years' training was not found to be significant.

An intervention study on pre-school children from the urban *anganwadis* of the resettlement colonies of Khanpur, Delhi, based on the materials developed under the Children's Media Laboratory was undertaken and completed during the year. The study indicated that, given careful orientation, the *anganwadi* workers could conduct stimulating pre-school education programme and foster language development and cognitive growth of children.

Non-Formal Education Programme

Research and development activities related to non-formal and community education programmes and training/orientation of personnel involved in these programmes formed an important area of work of the Department. The major activities carried out include the following.

Support to Centrally Sponsored Non-Formal Education Programme Implemented by the Government of India

The Department has been engaged in the development of prototype instructional materials for non-formal education programmes being implemented by the States/Union Territories. Instructional materials for non-formal education programme at the middle level (equivalent to Classes VI-VIII) were developed for use in non-formal education centres. The materials were developed in the form of a package of learning and support materials for the use of learners and teachers at the non-formal education centres. These instructional materials have been developed following the integrated approach to learning. Themes were drawn from various learning areas of the curriculum. The lessons were developed in the form of dialogue, story, poem, narration, travelogue, etc. The package of instructional materials consists of three books in Natural Science, three books in Social Science, three books in Language, three in Mathematics, nine workbooks for the use of learners, two teachers' guides and one training manual. Out of these, 10 titles were finalized along with the draft of the curricula, and four titles—Jeevan Aur Vigyan, Bhag I; Jeevan Aur Vigyan, Bhag II; Bhasha Suman, Bhag III; and Hamari Dharati, Hamara Jeevan—were published. In addition to these, instructional materials in Urdu for the use of non-formal education centres were also developed. These included the second integrated book of Language, Natural Science and Social Science and its guide. In addition to these a set of ten books, teachers' guides, primers and their guides were published earlier during 1984-85.

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The activities under the research project, titled "Preparation of Tools and Techniques for Evaluation of Instructional Materials Used in NFE Centres", continued during the year. Under this project tools to evaluate instructional materials developed by various agencies at the national and State levels for use in non-formal education centres in Hindi-speaking areas were developed. In addition to this, the report of the study, titled "Identification of Various Approaches/Practices of Non-Formal Education", was finalized and brought out in cyclostyled form for dissemination among the agencies involved in non-formal education programme.

The Department organized a few orientation/training programmes for the personnel engaged in the implementation of non-formal education programmes at the State/Union Territory level. The major programmes organized during the year include a five-day orientation programme for the resource persons from States and voluntary organizations. A training course for non-formal education supervisors, a training course for NFE teachers on the methodology of teaching Science, a three-day orientation programme for resource persons from the voluntary organizations in nine educationally backward States were organized. In addition to these, an annual conference on non-formal education was organized to review the NFE programme run by the States and to evolve remedial measures to overcome the difficulties faced by the implementing agencies. The two-day conference was attended by representatives from the States implementing the centrally sponsored non-formal education programmes.

At the request of the Ministry of Human Resource Development, the Department has undertaken an evaluation study of non-formal education programme implemented by the States in collaboration with the National Institute of Educational Planning and Administration. The design of the study and the tools for it were prepared and finalized.

The work on the production of a film on non-

formal education for use in training and orientation courses for the personnel engaged in the implementation of non-formal education programme continued during the year. The shooting of the film produced in collaboration with CIET (NCERT) was completed.

Comprehensive Access to Primary Education (CAPE)

Activities related to the development of non-formal education programme which is decentralized in regard to curricula, learning materials, pattern of instruction and evaluation continued under the UNICEF-assisted project "Comprehensive Access to Primary Education (CAPE)". During 1985-86 the project was implemented in 17 States and two Union Territories. In all the States and the Union Territories, the activities related to the first phase of the project, which involves development of relevance-based learning materials, were undertaken. The major activities carried out include processing of draft learning episodes and publication/production of these learning episodes. About 60 modules were processed and finalized for publication. Out of these, 30 modules were published during the year. In addition to this, four modules in Hindi for the use of beginners were also developed by the Department at the central level.

The second phase of the project, which involves establishment/adoption of learning centres, was started during the year. Ninety-three learning centres were established in Bihar, 70 in Orissa and 73 in Tamil Nadu. Uttar Pradesh and Madhya Pradesh also initiated activities related to the establishment of learning centres. The learning centres in these States are expected to be established during the second half of 1986.

At the central level a series of workshops and courses was organized for reviewing and finalizing learning episodes, and for training RDRC team members in the methodology of training facilitators. Four modules in Hindi for the use of beginners were also developed by the Department at the central level. In all, 25 workshops/courses were organized at the central level and

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about 170 RDRS team members participated in these programmes.

Developmental Activities in Community Education and Participation (DACEP)

Under the UNICEF-assisted project, Developmental Activities in Community Education and Participation, activities related to the development of educational programmes to meet the educational needs of groups that are currently deprived, partially or totally, of access to education were carried out. During the year, the project was implemented in 17 States and two Union Territories. About 80 community education centres functioned under the project. In terms of enrolment, 78 of these centres of which information was available had a total enrolment of 10,299. Each centre had an average of about 132 learners consisting of about 33 for the age-group 0-3, 32 for the age-group 3-6, 33 for the age-group 6-14 and 34 for the age-group 15-35 and above. Besides the regular enrolment, there were also casual learners at each centre, who have been attending specific programmes as per their needs and convenience.

Several learning/guidance and supplementing reading materials were developed by the States/Union Territories participating in the project. Some of these publications have been adopted for wider use in the non-formal and adult education centres run by the States.

One national-level Orientation Course for the project personnel involved in the implementation of the project at different levels was organized. This programme was attended by 41 participants from 13 States and Union Territories. Three Regional Conferences-cum-Orientation Courses for project coordinators, block development officers, headmasters of primary schools and those in charge of community education centres were organized at the zonal level. These programmes were attended by 187 participants from 18 States and Union Territories. In addition to this, three inter-State visits for project personnel were organized. Under this programme the project co-

ordinators from northern and western zones visited the community education centres in Tamil Nadu and Pondicherry; the coordinators from eastern zone visited the community education centres in Uttar Pradesh; and the coordinators from southern zone visited the centres in Himachal Pradesh and Jammu & Kashmir.

The reports of the Internal Evaluation of the project conducted during 1984 were consolidated. Nine States and Union Territories finalized the reports while others initiated activities for the finalization of the report. State-level conference of senior officials of different departments was organized to discuss the findings of the Internal Evaluation and to evolve appropriate strategies for the implementation of the project.

The external evaluation of the project was completed by the A.N. Sinha Institute of Social Studies, Patna. The report of the evaluation study, entitled, "DACEP at Work—an Evaluation" was submitted.

Renewal of Primary Education Curriculum

Renewal of curriculum and instructional materials for improving the relevance and quality of primary education formed an important aspect of the activities of the Department during the year 1985-86. In addition to this, support activities such as development of curriculum and instructional materials related to nutrition, health education and environmental sanitation also continued under the on-going projects.

Primary Education Curriculum Renewal (PECR)

Renewal of primary education curriculum and instructional materials to relate them to the needs of different groups of children continued under the on-going UNICEF-assisted project "Primary Education Curriculum Renewal (PECR)". During the year the project was implemented in 17 States and 6 Union Territories. A majority of the States introduced new instructional materials in Class V, some up to Class IV and the remaining up to Class III. The States which introduced new instructional materials in

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Class V during the year are expected to complete the work by the end of the year 1986 while in some of the States, the project will continue up to 1988-89. A number of States have initiated steps for wider infusion of the curricula and instructional materials developed under the project into the State educational system. Some of the States—Gujarat, Maharashtra, Orissa, Sikkim and Tamil Nadu—and the Union Territories—Lakshadweep and Mizoram—have adopted some of the materials developed under the project PECR in the primary schools. In Himachal Pradesh and Rajasthan, the curricula at the primary stage have been revised on the basis of the curriculum developed under PECR. These States have adopted some of the instructional materials developed under the project. In all the States/Union Territories participating in the project, a large number of teachers, teacher-educators and educational administrators have been trained in the methodology of developing curriculum and instructional materials. At the central level two orientation programmes for the personnel involved in the implementation of the project in the States/Union Territories were organized. Fifty-two project personnel participated in these programmes. In addition to this, the Department also organized about nine workshops/meetings to review the manuscripts of instructional materials developed by the States/Union Territories and finalized them for publication.

In order to assess the impact of PECR in terms of quality of pupils' learning and enrolment and retention, "A Study of Enrolment, Retention, Stagnation and Pupils' Achievement" was carried out in the States participating in the project. Children studying in Classes I-IV were covered by the study. A comparative study of the achievement of the students of project schools and the achievement of those children in the nearby non-project schools was undertaken. The tests prepared for the study were administered to the children in the project schools as well as to the children in the selected non-project schools.

The data collected under the project were processed and analysed during the year. The study is expected to be completed by the end of the year 1986.

Nutrition, Health Education and Environmental Sanitation (NHEES)

Under the on-going UNICEF-assisted project, "Nutrition, Health Education and Environmental Sanitation (NHEES)", activities related to the development of curriculum and instructional materials on nutrition, health education and environmental sanitation for primary school children, for teachers and for out-of-school girls and women continued. During the year 1985-86, the project was implemented in nine States and one Union Territory. One hundred primary schools in each State/Union Territory were involved in the implementation of the project. During 1985-86, a series of training programmes for the teachers of project schools was organized in order to orient them to the NHEES syllabus and instructional materials. Several workshops were organized to develop instructional materials and training packages under the project. In most of the States/Union Territories participating in the project, activities related to the development of instructional materials/training packages for Classes I-V were completed. A common plan for imparting messages related to nutrition, health education and environmental sanitation to the members of the community through door-to-door community contact programme was evolved. The community contact programmes were carried out in some of the States and actions for wider infusion of the curricula and instructional materials developed under NHEES into the State system of primary education were initiated.

Other Activities

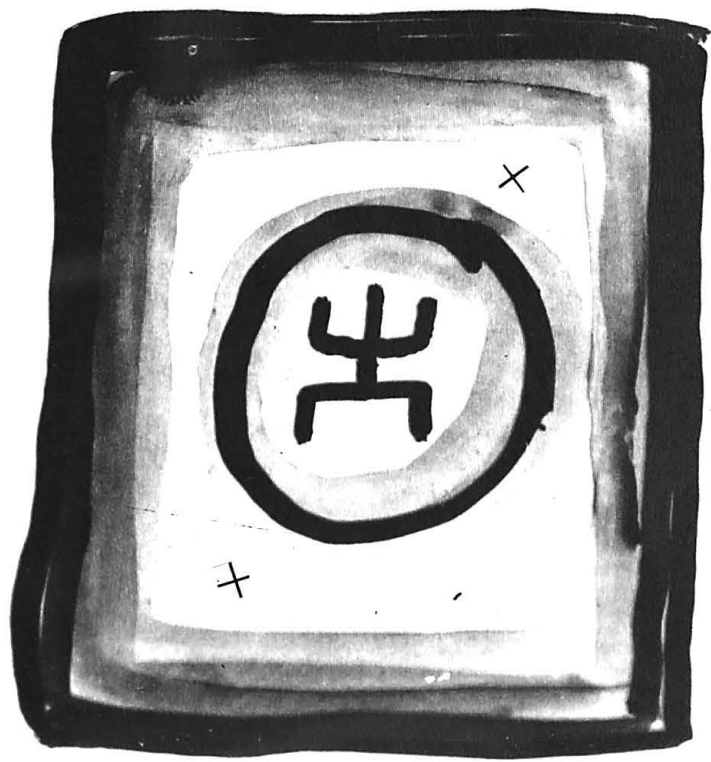
The Department organized a national seminar on Elementary Education in the Context of the Formulation of the New National Policy on Education. The three-day seminar was organized at Shillong, Meghalaya, from 31 October

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to 2 November 1986. The seminar was attended by 66 participants.

The Department also trained a UNESCO fellow from Bhutan under a nine-month attach-

ment programme and two UNESCO fellows from Indonesia under another one-month attachment programme:



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FOUR

EDUCATION IN SOCIAL SCIENCES AND HUMANITIES

RESearch 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 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 project on the preparation and production of an album, consisting of visuals and documents highlighting India's struggle for independence as a part of the Council's effort to promote an awareness of India's freedom struggle among the younger generation.

Another important contribution of the Department has been the development of a National Curriculum Framework for Primary and Secondary Education linked with the National Policy on Education 1986.

Development of National Curriculum Framework

26 With a view to developing a new curriculum framework for school education, an inhouse exer-

cise was initiated in NCERT in the beginning of 1985 which led to identification of a number of issues for discussion at a national seminar (27-30 May 1985) held in Delhi. As an immediate follow-up of the national seminar four regional seminars of Curriculum Concerns were organized at Calcutta, Madras, Pune and Udaipur. Many useful points of view and practical suggestions were collected on various aspects of school education. The draft on National Curriculum was given a final shape in another national seminar.

The specific objective of the seminars was to have a dialogue on Curriculum at national level. Some of the issues which were discussed at various places are:

- Duration of general education.
- Desirability or otherwise of alternative courses.
- Seminar system.
- Year-wise bifurcation of courses.
- Common core curriculum
- Integrated approach to curriculum organization.
- Place and scope of different curriculum areas.
- Curriculum transactions and pupil evaluation.

After detailed discussions consensus was arrived at on various curriculum issues which were utilized for the development of an approach paper for a new curriculum framework.

Development of Syllabi

Parallel to the exercise for the development of National Curriculum, efforts were made to develop revised syllabi in different school subjects. A

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draft syllabus in Yoga for Classes VI to X and a revised syllabus in Sanskrit for Classes V to X were developed.

teaching writing of Hindi, tapes for model recitation of Sanskrit verses, charts for teaching Sanskrit grammar were also developed. The Council has also undertaken the work for the development of

Development of Instructional Materials

Development of textbooks, supplementary

Subject	Title	Class	Remarks
Hindi (as the mother tongue)	Kavya Sanchayan, Part II (Elective Course) Gadya Sanchayan, Part II (Elective Course) Abhinav Kavya Bharati (Core Course) Abhinav Gadya Bharati (Core Course) Hindi Sahitya ka Sankshipta Itihas (Core Course)	XII	To be prescribed by CBSE from 1986-87
Hindi (as a second language)	Arun Bharati, Part III Workbook Arun Bharati, Part III Hindi textbook for Navodaya Vidyalayas	III VI	Draft of Arun Bharati, Part IV has also been developed.
English	Supplementary Reader in English (Core Course) Let's Enrich Our English (two booklets in series)	XII	CBSE Course Manuscripts of 12 more booklets were developed
Sanskrit	Sanskrit Gadya Mandakini Teachers' Guide for Sanskrit textbook <i>Swasti</i>	XII V to VII	CBSE Course
Urdu	Textbook of Urdu for Class IV	IV	
Political Science	Indian Constitution and Government	XI and XII	
Geography	Physical Geography Bhautik Bhoogol	X	
Economics	Evolution of Indian Economy Bharatiya Artha Vyavastha Ka Vikas Prarambhik Sankhyiki Elementary Statistics	IX-X	*An Introduction to Our Economy *National Income Accountancy * An Introduction to Economy Theory (*Sent for publication)
Population Education	Tasks and Challenges Population Awareness Tests India: My Children, My Future		General Reading An album of children's paintings on population situations

readers and other instructional materials continued to be one of the major activities of the Department. Details of textual and instructional materials are given above.

In addition to the above-mentioned instructional materials, a set of three writing books for

Student's Sanskrit Dictionary, a Supplementary Reader in Sanskrit (Collection of Subhasitas) and preparation of brief biographical sketches of political thinkers for the +2 stage (115 political thinkers having been identified).

India's Struggle for Independence: Visuals and Documents

A monumental publication, entitled "India's Struggle for Independence: Visuals and Documents" was brought out in December 1985. The publication comprises eighty-two visual panels covering the entire period and different facets of the freedom struggle along with the process of the British conquest of India as the background. Different kinds of authentic visuals including contemporary newspaper clippings have been used in the visual panels. Each of the visual panels has a corresponding document page for which different contemporary source materials have been used.

Training of Teachers and Orientation Programmes

(a) *Training Programme for English Teachers of Minority Schools*

The Department conducted a week-long training programme for the teachers of English at the high school/higher secondary stage from the educationally backward minority schools from various States. The materials and the methods developed in the Department were explained to the participants and special problems of these schools from the viewpoint of teaching English were discussed.

(b) *Orientation Programmes in Hindi*

An orientation programme in Hindi for the key adivasi teachers of Chhota Nagpur Division was organized at the Teachers' Training College, Ranchi. The teachers of the region participated in the programme.

(c) *Orientation Programme for Key Persons of Arunachal Pradesh*

The English Faculty of the DESSH organized one week's orientation programme for Key Persons of Arunachal Pradesh. Thirty-seven teachers and education officers participated in the programme. The kit in English for Class I prepared by the DESSH for Arunachal Pradesh was

discussed and methods and techniques for handling these materials were explained.

(d) *Orientation Programmes in Moral Education*

An orientation programme in moral education was organized at the SIE, Goa, Panaji, from 24 to 26 October 1985. Thirty-five teachers from the Union Territory of Goa participated in it. The issues discussed concerned the social, mental, moral and emotional development of children.

(e) *Art Teachers' Camp*

In collaboration with the Board of Secondary Education, Orissa, Cuttack, DPI, Orissa, Bhubaneswar, the Department organized an Art Teachers' Camp from 21 to 30 November 1985 at B.K. College of Arts and Crafts, Bhubaneswar. About sixty art teachers from all parts of Orissa and a few experienced art teachers belonging to teacher training organizations and educational institutes participated in various activities such as lectures, discussions, demonstrations on various techniques and forms of arts and practical art activities.

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

The Department organized an orientation programme for the Supervisors of Adult Education working in Madhya Pradesh in Collaboration with the Directorate of Panchayat and Social Welfare, Government of Madhya Pradesh, from 7 to 13 June 1985 at Jabalpur. The programme aimed at orienting the participants to the teaching-learning materials prepared by the NCERT and being used in Madhya Pradesh. Besides the three components of Adult Education—awareness, literacy and functionality—various other aspects were also discussed. Practical work, visit to rural Adult Education Centres and demonstration were also undertaken. In all, 30 supervisors, mostly women, including five resource persons attended the programme.

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(g) *Orientation Programme for Lady Supervisors Working in the Field of Adult Education*

DESSH, in collaboration with the Directorate of Panchayat and Social Welfare (M.P.), organized an orientation programme at Pawar Kheda (Hoshangabad) from 9 to 15 September 1985. The lady supervisors appointed recently were oriented to the Instructional materials prepared by the Council and being used in Madhya Pradesh. The participants prepared teaching aids for effective teaching and tested the same at Rural Adult Education Centres. In all, 30 participants, including three resource persons, attended the programme.

Special Projects

The Department has been engaged in the implementation of certain special projects in the areas of social science and humanities. Several activities under the following projects were carried out during 1985-86.

(a) *XXIII National Prize Competition for Children's Literature*

This competition is organized every two years. The XXIII National Prize Competition for Children's Literature was organized during 1984-85. Entries were invited in seventeen languages of the country for two age-groups—5-8 and 9-15 years. About four hundred and twelve entries were received. There were thirty-six awards but only twenty-one entries could be selected for awards. The awards carrying prizes were distributed at a function on 30 May 1985 by the Union Minister of Education, Shri K.C. Pant. The next competition is to be held during 1986-87.

(b) *Reading to Learn*

Ten books in English and 20 books in Hindi have so far been prepared under this project. These and other books in the series are intended to encourage children to read for pleasure and information.

So far 31 books including books for small children and for the age-group 11-14 have been prepared, finalized and sent to the press.

(c) *Reading in Language and Language Teaching—Content Enrichment Materials in English*

The Department is going to bring out six books in the series. Book I on Reading Comprehension has already been published. These books are addressed to teachers and student-teachers of English and aim at contributing to the professional growth of practising teachers and provide content enrichment for the teacher in the making.

(d) *Content-cum-Methodology Syllabus*

An English Content-cum-Methodology Syllabus for B.Ed. has been developed, which fits into the framework of the NCTE syllabus.

(e) *Evaluation of School Textbooks*

The Department conducts sample surveys of school textbooks from the point of view of national integration, develops improved tools for this purpose, and trains research workers and authors of textbooks in the ways of strengthening the spirit of national integration: The work of evaluation of textbooks in History and Languages from the standpoint of national integration has been completed in most States. The work of evaluation is now being extended to other subjects including Geography, Civics and Political Science and Sociology. For this purpose, criteria and tools of evaluation of textbooks in these subjects have been developed and sent to the States for undertaking the work of evaluation.

(f) *Multi-media Project in English*

The Multi-media Project in English is designed to bridge the gap in the actual attainments in English of students and the expected targets. In the first phase of the programme Bridge Course booklets (8) entitled "Let's Enrich Our English" have been developed for (i)

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entrants to the secondary schools, and (ii) pre-service teachers.

(g) *Applied Research*

The Department has also been conducting applied research keeping in view its needs and the limitations of human resources available for the purpose. These researches mostly take the form of survey of the status of different subjects in schools of different States and Union Territories, and the instructional materials and methods used for teaching.

Consultancy

Consultancy was provided to the authorities in Madhya Pradesh for preparing a new edition of *Nava Jeevan*, a set of instructional materials for teaching basic literary skills to illiterate adults. These materials were originally developed by the staff of DESSH in collaboration with the experts from Madhya Pradesh. These are being used in all the adult education centres of Madhya Pradesh.

Consultancy was also provided to the SIE, Sikkim, in the area of adult education.



1985-86

FIVE

EDUCATION IN SCIENCE AND MATHEMATICS

QUALITATIVE 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). 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 important activities carried out by DESM during the current year are as follows.

Research

A low-cost mercury barometer, developed by DESM, has been approved by ISI. DESM is also continuing with the experiments on the Project, Individually Guided System of Instruction (IGSI); this year it has been extended to all science subjects as well as mathematics at both the secondary and the senior secondary levels. In collaboration with C.M.C., Hyderabad, the Department has taken up the programme of developing indigenous softwares. A project is also being worked out to identify ways and means for the

nurture of talents in mathematics, under the guidance of Prof. D.S. Kothari and other eminent scientists and mathematicians.

Training/Orientation Courses

DESM collaborated with the States of Assam, Haryana, Himachal Pradesh and Jammu & Kashmir regarding the organization of training programmes and the related follow-up action. The Department organized eight courses for science teachers/teacher-educators as detailed in Table 1.

Development of Curriculum and other Related Instructional Materials

DESM organized a number of workshops for giving final shape to the manuscripts of textbooks in Physics, Chemistry, Biology and Mathematics for Classes IX and X prepared by the Central Board of Secondary Education (CBSE). The workshops were also organized for the development of test-items and teachers' guides related to Class IX texts in different subjects.

Some materials so developed have already been printed and are being used in schools throughout the country and some are being processed for printing/cyclostyling for dissemination to the intended target groups.

To these workshops the CBSE subject-conveners and the team of textbooks authors were also invited. Another workshop was also organized in collaboration with the Indian Association of Physics Teachers (IAPT) at Aligarh to review the existing Physics syllabi for Classes IX and X. In this workshop science teachers/teacher-educators from 10 States participated as

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TABLE 1
Training/Orientation Courses

No.	Course	Duration	Venue	Course Coordinator	No. of Participants
1.	Seminar-cum-Interview for selection of teachers/teacher-educators under AISEP—1985-86	13-15 May 1985	NCERT	Prof. Chhotan Singh	49
2.	Post-training Workshops of AISEP	22-31 July 1985 4-14 August 1985	Udaipur Hyderabad	do.	90
3.	Follow-up Workshop for teachers/teacher-educators returning from the UK under AIMEP	12-24 August 1985	Calcutta, Mysore and Delhi	Shri G.S. Baderia	53
4.	Pre-departure briefing of AISEP Fellows	1-3 October 1985	NCERT	Prof. Chhotan Singh	20
5.	Minority Teacher Programme	20-29 May 1985	NCERT	Prof. R.N. Mathur	23
6.	Training Programme for Minority School Teachers	15-24 July 1985	NCERT	do.	44
7.	Orientation of Mathematics and Science Teachers of Himachal Pradesh for + 2 Stage	15 days February-March 1986	Shimla	FA (NCERT) H.P. and Officers of DESM	81
8.	Orientation programme of Physics Teachers using the telescope of DESM	8 January 1986 and 11 January 1986	NCERT	Prof. Ved Ratna	57
				Total	417

members of the Association. Similar workshops were organized to examine the syllabi for other disciplines.

Under the CLASS project several meetings were held to review the software packages deve-

loped by different agencies. A number of selected packages have already been duplicated and sent to schools.

The other details concerning the above activities are shown in Table 2.

TABLE 2
Meetings/Seminars/Workshops/Conferences/Working Group and Development Programmes Conducted during the Year 1985-86

No.	Programme	Duration	Venue	Number of Participants
1.	Individually Guided System of Instruction (IGSI)	25.4.1985 to 27.4.1985	NCERT	25
2.	Chemistry Sub-Committee Meeting	15.4.1985	NCERT	8
3.	Subject Expert Committee Meeting for Development of Class X Mathematics Textbook	29.4.1985	NCERT	3

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No.	Programme	Duration	Venue	Number of Participants
4.	Physics Expert Committee to Develop/ Finalize Chapters of Manuscript	2.5.1985	NCERT	2
5.	Meeting of the Authors for Preparation of Class X Textbook for Mathematics	23.5.1985 to 25.5.1985	NCERT	9
6.	Preparation of Teachers' Guide for Physics Part I Class IX Textbook	12.6.1985 to 21.6.1985	NCERT	13
7.	National Workshop for Refinement of Textual Materials in Chemistry for Class X	27.6.1985 to 29.6.1985	NCERT	26
8.	Development of Syllabi in Physics for Classes I to XII Phase I	24.6.1985 to 29.6.1985	Aligarh	31
9.	National Seminar-cum-Workshop for Finalizing the Draft Manuscript of Class X Maths	28.6.1985 to 1.7.1985	NCERT	39
10.	Development of Class X Textbook in Biology National Workshop for Refinement and Finalization of Textual Material	11.7.1985 to 15.7.1985	NCERT	27
11.	Programme for Development of Manuscript for Physics, Chemistry, Biology and Mathematics	3.7.1985	NCERT	6
12.	Individually Guided System of Instruction	15.7.1985 to 19.7.1985	Ujjain	40
13.	Review of the Draft Manuscript for the Textbook in Physics Part II for Secondary Schools	19.8.1985 to 24.8.1985	NCERT	25
14.	Development of Teachers' Guide for the New Textbook in Biology for Class IX	26.8.1985 to 4.9.1985	NCERT	32
15.	Workshop for Development of NCERT Syllabus in Mathematics for Classes I-XII	10.9.1985 to 13.9.1985	NCERT	24
16.	Preparation of Objective-based Test Items in Mathematics for Class IX	11.9.1985 to 16.9.1985	Darjeeling	32
17.	Workshop to Develop Test Items for Class IX Biology Textbook	11.9.1985 to 16.9.1985	NCERT	23
18.	Mathematics Olympiad	18.9.1985 to 20.9.1985	NCERT	12
19.	Finalization of the Physics Textbook, Part II, Class X	4.10.1985 to 31.10.1985	NCERT	8
20.	Individually Guided System of Instruction (IGSI)	3.10.1985 to 11.10.1985	Springdales School, Delhi	45
21.	Refinement, Editing of the Teachers' Guide for Class IX Biology Textbook	15.10.1985 to 18.10.1985	NCERT	3
22.	Development of Syllabi in Science/ Chemistry for Classes I-XII	28.10.1985 to 1.11.1985	NCERT	36

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<i>No.</i>	<i>Programme</i>	<i>Duration</i>	<i>Venue</i>	<i>Number of Participants</i>
23.	Development of Laboratory Manual and Experimental Sheets on the Basis of the New Experimental Course in Chemistry for Senior Secondary Stage	3.12.1985 to 7.12.1985	Jadavpur	28
24.	Development of Teachers' Guide for Class X New Textbook of Chemistry	19.12.1985 to 24.12.1985	Bombay	27
25.	Workshop on Environmental Education/Ecology	16.12.1985 to 21.12.1985	Udaipur	40
		27.12.1985 to 1.1.1986	NCERT	11
26.	Development of Textbook for Class X Editing of Biology (Hindi version)	14.1.1986 to 18.1.1986	NCERT	1
27.	Textbook of Mathematics for Class X	17.1.1986 to 19.1.1986	NCERT	4
28.	Preparation of Supplementary Material in Mathematics at + 2 Stage	28.1.1986 to 1.2.1986	Jalpaiguri	24
29.	Individually Guided System of Instruction (IGSI)	28.1.1986 to 31.1.1986	Dharwad	85
30.	Development of Teachers' Guide in Mathematics for Class IX	10.2.1986 to 14.2.1986	NCERT	18
31.	Identification of States Needs in respect of Science	10.2.1986 to 12.2.1986	NCERT	40
32.	Development of Test Items for Physics Part I for Class IX	10.2.1986 to 14.2.1986	NCERT	24
33.	Development of Enrichment Material in Algebra for Middle Classes	17.2.1986 to 21.2.1986	Hyderabad	18
34.	Development of Modules of New Topics of Chemistry at Senior Secondary Level	17.2.1986 to 22.2.1986	NCERT	12
35.	Development of Resource and Enrichment Materials in Chemistry	24.2.1986 to 1.3.1986	Gurgaon	28
36.	Working Group Meeting on Science	17.2.1986	NCERT	9
37.	Development of Handbooks in Science for the Massive 10-day Teachers Orientation Programme II	11.3.1986 to 20.3.1986	Delhi	23
38.	Finalization of Syllabi in Maths, Physics, Chemistry and Biology for Classes I to XI	3.3.1986 to 6.3.1986	NCERT	55
39.	Preparation of Application Modules for School Mathematics	17.3.1986 to 21.3.1986	NCERT	12
40.	Improvement on Content and Approach of the School Science, Journal	17.3.1986 to 19.2.1986	NCERT	9
41.	Individually Guided System of Instruction (IGSI)	31.3.1986 to 2.4.1986	NCERT	58

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No.	Programme	Duration	Venue	Number of Participants
42.	Teaching Science to the Handicapped Children	21.3.1986 to 24.3.1986	Aligarh	17
43.	Development of Test Items in Chemistry for Class X (New Textbook)	31.3.1986 to 5.4.1986	Coimbatore	27
			Total	1079

Besides the above-mentioned activities, four workshops, one each for the revision of Class IX textbooks in Physics, Chemistry, Biology and Mathematics, were organized in July 1985 at Aligarh. A Review Committee meeting was also convened for Science and Mathematics books for Class X. Other developmental activities undertaken by the Department included development of three-dimensional models showing atomic and molecular structures in Chemistry, Science Club activities and developing Physics, Chemistry, Biology and Mathematics textbooks for Class X along with finalization of the Hindi manuscript of Mathematics textbooks for Class X.

Extension and Consultancy

The Department organized Seminar-cum-Interview for the selection of fellows from West Bengal, Assam and Jammu & Kashmir for being deputed for training in the UK under the All India Science Education Project (AISEP). In all, 20 fellows were selected, six (two each in Physics, Chemistry and Biology), six each from three States and two (one each in Physical Sciences and Biological Sciences) from Regional Colleges of Education.

The 14th National Science Exhibition for children was held at Udaipur during November 1985. About 400 students from different States participated. Hon'ble Giani Zail Singh, President of India inaugurated the exhibition. The main theme of the exhibition was Indigenous Technology in Development. Students from all the States and Union Territories (except Lakshadweep) of the country brought exhibits for the exhibition. More than 20,000 people visited the

exhibition every day.

The Department organized a number of seminars during the year. Prof. Reter Kelly, College of Education, Southampton University, UK; Dr. Ashok Khosla, Developmental Alternatives, New Delhi; and Dr. M Chakravorty, Maharashtra Academy of Science, Pune, delivered lectures in these seminars. DESM took active part in the regional as well as national seminars connected with the New Education Policy as well as new approach to curriculum. The faculty members of the Department also participated in different national/international conferences. Table 3 gives the details of the consultancy provided by the Department during the year 1985-86.

Publications

The Department has brought out a number of new titles related to science education, the details of which are given in Table 4.

Science Equipment for Schools

The Workshop Department (WD) is engaged in research, development of prototype equipment and batch production of kits for science education, training of apprentices, key personnel from the States and Union Territories, fellows from foreign countries and UNESCO, central repair and maintenance of laboratory equipment, office equipment, automobiles, hot and cold weather equipment, central purchase-storage distribution of equipment and furniture. The members of the staff are deployed in various sections like machine shop development, plastic, welding, fitting and sheet metal, foundry and hot metal, painting, electroplating, optics, carpen-

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TABLE 3

Consultancy Provided by DESM during 1985-86

<i>S. No.</i>	<i>Organization seeking Consultancy</i>	<i>Purpose of Consultancy</i>
1.	UNESCO Regional Office, Bangkok	Regional Workshop for the development of teaching-learning materials for primary-level science education
2.	NIEPA	National Workshop on coordinated planning and complementarity between formal and non-formal education—as a facilitative
3.	Central Board of Secondary Education	Member of the Committee of Courses in Chemistry
4.	AMU, Uttar Pradesh	To organise orientation programme for Educationally Backward Minority Community Schools
5.	SISE, Madhya Pradesh	do.
6.	School working on NCERT-designed curriculum and State Institute of Education	(i) Clarification of certain concept areas (ii) Exposing the school with new-innovative practices (iii) Training of teachers for the + 2 stage

TABLE 4

Publications Brought out by DESM during 1985-86

<i>S. No.</i>	<i>Title</i>	<i>Month of Publication</i>	<i>Number of Copies Published</i>
1.	Chemistry, Part II—a textbook for Secondary Schools	April 1986	...
2.	Environmental Education Module for In-service Training of Teachers and Supervisors for Primary Schools (UNESCO's ED-85/WS/1)	1985	...
3.	Teaching and Training in Environmental Education in India (by N.M. Bhagia and B.D. Atreya)—a paper for seminar organized by NIEPA	1985	...
4.	Environmental Education and Role of Primary Teachers	March 1986	(A paper for primary teachers)
5.	UNESCO Book on Teaching Chemistry (one of the contributing authors)	December 1985	
6.	Six Modules in Various Areas of Chemistry (i) Modular Architecture (ii) The Changes Around—How and Why? (iii) Boundless Crescent (iv) Chemical Warehouse	November 1985	Two experimental copies of each module

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<i>S. No.</i>	<i>Title</i>	<i>Month of Publication</i>	<i>Number of Copies Published</i>
	(v) Visible Life and Invisible Laboratory (vi) Inevitable Lucifer		
7.	Chemistry—a textbook for Class X	March 1986	Two Lakh
8.	Basic Biology, Part I, Vol. 1	February 1985	One Lakh
9.	Basic Biology, Part I, Vol. 2	October 1985	1.4 Lakh
10.	Adharik Jeev Vigyan, Part I, Vol. 1	May 1985	1.6 Lakh
11.	Adharik Jeev Vigyan, Part I, Vol. 2	December 1985	1.4 Lakh
12.	Circular Motion	April 1985	2000 copies
13.	Rigid Body Rotation	May 1985	" "
14.	Kinetic Theory of Gases-I	do.	" "
15.	Kinetic Theory of Gases-II	do.	" "
16.	Thermodynamics-I	April 1985	" "
17.	Electricity-I	May 1985	" "
18.	Electromagnetism	May 1985	" "
19.	Applied Electromagnetism	August 1985	" "

try, assembly and despatch, maintenance, electronics, purchases, stores and office.

Activities

Research and development activities of the Workshop Department included:

- Designing of new equipment
- Refinement of earlier versions with the change in curriculum
- Designing of tools for production
- Prototype production
- Try-out
- Final blue-print
- Development of kit manual illustrating the use of the equipment
- Training programmes and seminars while working with the States

Further refinement in the design of the low-cost overhead projector having all indigenous parts was done to increase its illumination power and facilities of proper handling. An industrial prototype was also developed and exhibited in different national-level exhibitions.

38 Changes suggested by the Review Committee

have been implemented in the design of the Science Club Kit developed two years back. The industrial prototypes of the new design have been brought out. On the lines of the recommendation of the Advisory Committee to the National Science Exhibition, one mini tool kit has been recently developed. It is specially designed for developing skills in light duty work in school children; each kit will cost nearly Rs.90 for a set of 32 mini hand tools and consumables. A display board set fitted with electronic components has been developed primarily to enable the higher secondary level students to identify various electronic components. The Department has been jointly working with DESM in bringing out a low-cost barometer, repairing and adjusting a telescope, giving shape to models showing molecular arrangement in substances.

Dissemination

While updating information in recent developments in Information Technology, two papers were circulated to all senior faculty members. This series will be continued by publishing at

1985-86

least one paper every two or three months. A kit guide to the Integrated Science Kit has been brought out recently. Among others the activities in science at the middle school level and procedure to set up experiments from the kit items have been given in the book. The Department contributed to discussions in various forums on relevant issues contained in the document—Challenge of Education—like National Seminar on Engineering Education Policy, held at IIT, Delhi, National Seminar on Vocationalization of Education, NCERT, International Conference on New Technologies in Higher Education, IIT, Delhi, National Seminar on Computer Assisted Instruction, IIT, Delhi, National Workshop on Identifying the Indicators of Quality of Technical Education, IIT, Delhi, and International Conference on School Building Design held at the University of Roorkee.

The Department prepared and demonstrated exhibits on the activities of the NCERT in the National Science Exhibition for children, Udaipur. Repeat performances were done twice subsequently—one in the NIE Campus and the other at the Vigyan Bhavan. Technical expertise is being given to the two model schools in equipping them with furniture and equipment for teaching science.

Production in Batches

The Department received requests from States/Union Territories to undertake production to meet the demands of schools. In the absence of a commercial set-up, a moderate volume of production has been taken up. The kits are priced moderately on no-profit-no-loss basis.

Production of Primary Science Kits and Science Club Kits continued as in previous years. 3,749 Primary Science Kits were produced and despatched to Madhya Pradesh. With this consignment a total demand for 7,000 kits for the non-formal centres of Madhya Pradesh was met. In addition, the SIERT, Udaipur, and SISE, Jabalpur, were given 40 Science Club Kits for

encouraging Science Club activities.

Training

The Department continued to impart training to six ITI apprentices in different trades. The Department conducted jointly with DESM an orientation programme for resource persons for science club activities in the States. Two members of the staff worked as resource persons in two different training programmes in the States.

As a component of activities of the proposed National Science Centre in the Campus, the Department housed training programmes on the use of tools and setting up experiments for the children of local schools. Eight UNESCO fellows from Afghanistan were trained in various aspects of design and production of science equipment for three weeks.

The Department also conducted a national workshop on Electronics Awareness at the school level in which the representatives and experts from various State Governments and SCERTs besides the faculty of DESM and Vocationalization of Education, participated.

Study Visits

A delegation from USSR visited the Department and studied its activities. A high level four-member delegation from Bangladesh was here for a week to study the activities and to explore the possibility of training their technical personnel in India and sharing expertise in design, development and production of school science equipment. A delegation from Ethiopia visited the Department and studied the development of science equipment.

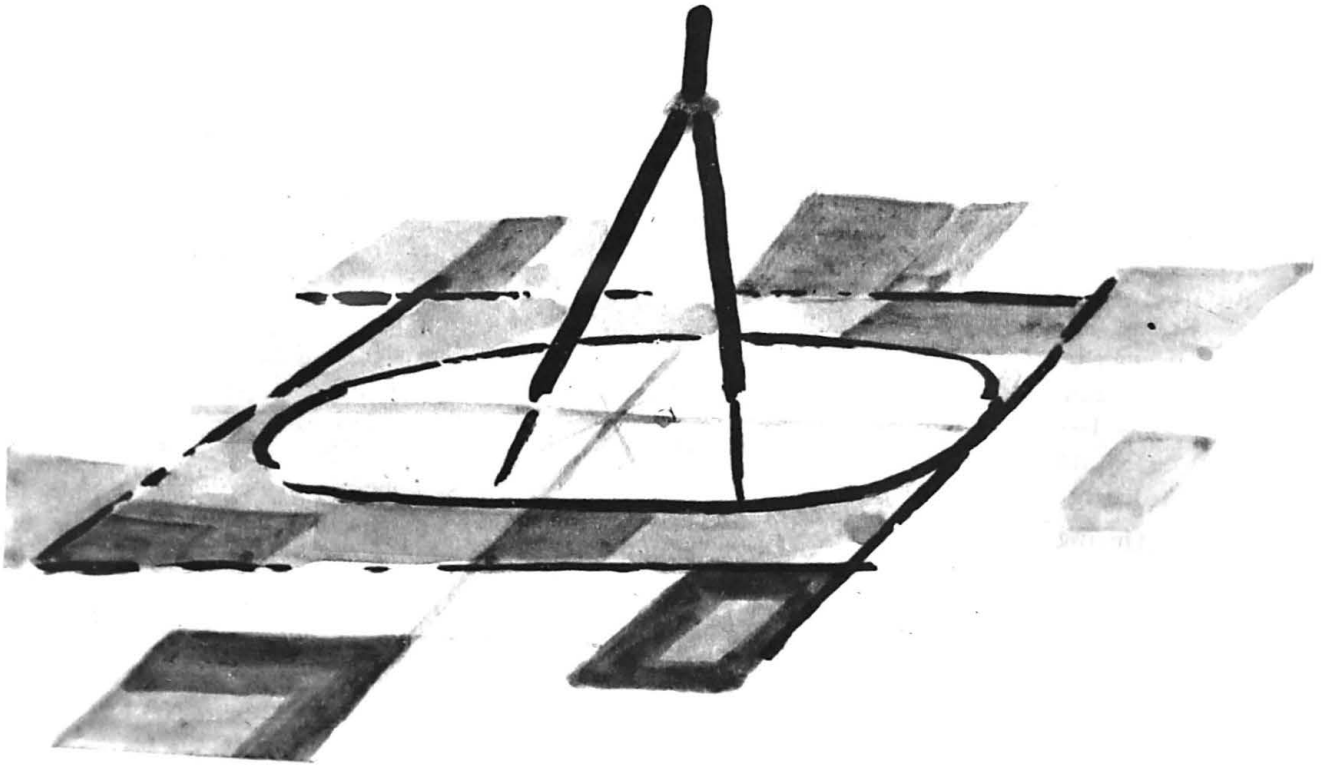
A delegation from the Ministry of Education, Government of Kenya, visited the Workshop Department and a set of school science kits was presented to them. One German Expert, Mr. Volker Weisser, has joined the Department under Indo-ERG-assisted project for design, development and production of primary science kit and middle school science kit.

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Repair, Maintenance, Procurement and Storage Activities

Centralized procurement and storage of furniture and equipment for the Campus departments are being looked after by this Department.

Besides, it is also looking after repair and maintenance of vehicles, hot and cold weather equipment, electric and electronic gadgets, etc., of the Campus. The Department also contributes significantly to the beautification of the Campus.



1985-86

SIX

VOCATIONALIZATION OF EDUCATION

THE Department of Vocationalization of Education (DVE) is charged with a multi-faceted responsibility of providing the States with necessary academic inputs pertaining to the two work-oriented schemes of education, viz., Vocationalization of Higher Secondary Education and Socially Useful Productive Work (SUPW), for primary to secondary and higher secondary levels of school education in the country. As both these schemes are relatively new to the Indian educational scene with the implementing States having little experience, conceptual clarity and necessary preparedness, the academic inputs including guidance provided by the DVE assume a particular significance under the prevailing situation. This calls for a well thought out and cautious approach to each and every activity undertaken by the DVE in accordance with the needs and priorities. The main functions of the Department include:

- Short-term training programmes for vocational teachers;
- Orientation programmes for State officials and key persons;
- Development of instructional curriculum material;
- Consultancy to various organizations; and
- Publication and dissemination.

Training

During the year 1985-86, the Department conducted four short-term Teachers Training Programmes with a view to updating the knowledge and expertise of vocational teachers in their respective vocations. The training programmes were conducted in specialized institu-

tions utilizing their infrastructural facilities and expertise to develop the necessary vocational skills in the teachers. The training programmes were quite useful to participants for besides imparting the required theoretical and practical knowledge to the teachers, they were also provided with reference books in the vocations which were compiled on the basis of lectures/practicals conducted during the training programme.

The details of the training programme are given below:

1. A short-term Teachers Training Programme for Vocational Teachers in Horticulture was organized at Bangalore from 14 May to 10 June 1985. It was attended by 14 participants.
2. A short-term Training Course in Pedagogy for Vocational Commerce Teachers was organized at Pune from 16 May to 30 May 1985. It was attended by 36 participants.
3. A short-term Teachers Training Programme on Electronics Technology was organized at Pune from 10 June to 29 June 1985. It was attended by 20 participants.
4. A short-term Teachers Training Programme for Vocational Commerce Teachers was organized at Hyderabad from 17 June to 30 June 1985. It was attended by 30 participants.

Extension

The Department conducted five orientation programmes for State Officials/Principals/Education Officers/others on Vocationalization of

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Education and four orientation programmes on SUPW were conducted in different parts of the country wherein the participants were trained in the concept, objectives, annual plans prepared on selection of activities and strategies for the implementation of the schemes. Besides these, four orientation programmes were conducted on SUPW. These are detailed below.

Vocationalization of Education

1. Orientation programme for State Officials/Principals/Education Officers/ others of Uttar Pradesh on Vocationalization of Education was organized at Allahabad from 19 April to 21 April 1985.
2. Orientation programme for officials of Uttar Pradesh on Vocationalization of Education was organized at Mussoorie from 31 May to 3 June 1985.
3. Orientation programme for State Officials and Principals of Delhi and 18-member resource team specially invited by the Home Ministry was organized in Delhi from 16 September to 20 September 1985.
4. Orientation programme for State Officers and Key Persons of Pondicherry on Vocationalization of Education was organized at Pondicherry from 14 October to 17 October 1985.
5. Orientation programme on Vocationalization of Education of Key Persons of Andhra Pradesh was organized at Hyderabad from 17 February to 20 February 1986.

SUPW

1. Orientation course on SUPW for Key Persons of Rajasthan was organized at Udaipur from 8 August to 9 August 1985.
2. Orientation programme for Key Persons of Himachal Pradesh on SUPW and Vocationalization of Education was orga-

nized at Shimla from 9 September to 12 September 1985.

3. Orientation programme on SUPW for Key Persons of Manipur was organized at Imphal from 28 February to 3 March 1986.
4. Orientation programme for Key Persons of Madhya Pradesh on SUPW at the secondary level was organized at Jabalpur (M.P.) from 10 March to 14 March 1986.

Seminars/Workshops

1. A national seminar on Vocationalization of Education was organized at the NIE (NCERT), New Delhi, from 6 November 1985 to 8 November 1985.
2. A seminar-cum-workshop on Evaluation of Vocational Courses was organized at the NIE (NCERT), New Delhi, from 21 January to 23 January 1986.
3. A seminar on Vocational Education and Training for the members of Parliamentary Consultative Committee was organized at the NIE (NCERT), New Delhi, on 22 March 1986.

Development

Developmental activities were accorded top priority in the programmes of the DVE during 1985-86 because of the following reasons:

- (i) Vocational students and teachers do not have suitable instructional materials designed specially for catering to their requirements.
- (ii) The syllabi of a majority of the vocational courses in vogue in the States lack due vocational orientation, clarity of objectives and appropriate blending of theory and practice and their sequential arrangement, etc., which call for immediate revision of the existing syllabi and development of competency-based model syllabi of vocational courses.

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Keeping in view the above facts the DVE conducted a series of workshops to develop: (a) minimum vocational competency-based curricula of vocational courses, (b) self-instructional-cum-practical manual, and (c) question bank in Office Practice. The subject specialists, experts, professionals having first-hand field experience, State officials, representatives from employing agencies as well as vocational teachers participated in these workshops. There was a felt need to give pre-vocational bias to SUPW in accordance with the recommendations of the Working Group on SUPW. Hence, the DVE organized a special workshop wherein several SUPW courses with distinct vocational orientation were developed. In another workshop action plan for the implementation of SUPW was chalked out for the benefit of the States. The details of the programmes are given below.

Vocationalization of Education

1. The designing of question bank in Office Practice was organized at Lucknow from 19 August to 25 August 1985.
2. A workshop for the development of Instructional-cum-Practical Manual in Dairying was organized at Hissar from 23 August to 28 August 1985.
3. A workshop for the Development of Minimum Competency-based Curriculum in Plant Protection was organized at Bangalore from 21 November to 25 November 1985.
4. A workshop for the development of Instructional-cum-Practical Manual in Sericulture was organized at Mysore from 28 November to 3 December 1985 (Phase I) and 8 December to 17 December 1985 (Phase II).
5. A workshop for the Development of Minimum Competency-based Curriculum in Plantation Crops and Management (Kerala) from 13 December to 17 December 1985.
6. A workshop for the Development of Minimum Competency-based Curriculum in Electronic Technology was organized at the NIE (NCERT), New Delhi, from 6 January to 10 January 1986.
7. A workshop for the Development of Minimum Competency-based Curriculum in Tourism and Travel Technique was organized at the NIE (NCERT), New Delhi, from 27 January to 31 January 1986.
8. A workshop for the Development of Competency-based Curriculum in Cooperation, Salesmanship and Store-keeping, was organized at Bangalore in two phases from 6 February to 12 February and 9 February to 12 February 1986.
9. A workshop for the Development of Minimum Competency-based Curriculum in Para-Medical X-Ray Technicians was organized at the NIE (NCERT), New Delhi, from 10 February to 15 February 1986.
10. A workshop for Minimum Competency-based Curriculum in Medical Laboratory was organized at Manipal from 24 February to 1 March 1986.
11. A workshop for the Development of Minimum Competency-based Curriculum in Import/Export practices and Documentation was organized at the NIE (NCERT), New Delhi, from 10 March to 15 March 1986.
12. A workshop for the Development of Prototype Electronic Kit was organized at Jawaharlal Nehru University, New Delhi, from 17 March to 21 March 1986.
13. A workshop for Review of the Instructional-cum-Practical Manual in Automobile Servicing was organized at the NIE (NCERT), New Delhi, from 19 March to 24 March 1986.
14. A workshop for the Development of Minimum Competency-based Curri-

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culum in Building Maintenance was organized at the NIE (NCERT), New Delhi, from 29 March to 4 April 1986.

15. A workshop for the Development of Guide Book for conducting Practicals in Auditing was organized at RCE, Bhopal, from 31 March to 6 April 1986.

SUPW

16. A conference-cum-workshop for the Preparation of Action Plans for Implementation of SUPW Programme in Northern States/Union Territories was organized at Chandigarh from 24 February to 28 February 1986.
17. A workshop for the Development of Pre-Vocational Courses for the Upper Primary and Secondary Stage SUPW was or-

ganized at the NIE (NCERT), New Delhi, from 5 March to 8 March 1986.

18. A workshop for the Preparation of Action Plans for Implementation of SUPW Programme in Eastern States/Union Territories was organized in Assam from 18 March to 22 March 1986.

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 April to December 1985 the Department extended consultancy services to various organizations as given below.

<i>S. No.</i>	<i>Organizations</i>	<i>Purpose of Consultancy</i>
1.	SIE, Gangtok	Workshop on SUPW
2.	Ministry of Education, Government of India	(i) Meeting of the National Working Group on Vocationalization (ii) Preparation of Report for the Working Group
3.	National Alliance of Young Entrepreneurs, New Delhi	Education Committee Meeting on Self-employment held on 17 June 1985
4.	Institute of Applied Manpower Research, New Delhi	Training Programme on Concepts, Measurement and Policy Issues relating to Employment and Unemployment held from 13 to 19 June 1985
5.	BITS, Pilani	National Seminar on Vocationalization of Education in relation to Industries, School Linkages
6.	State Council of Vocational Education, Haryana, Chandigarh	Second Annual Meeting of SCVE regarding Vocational Education held on 28 June 1985
7.	National Entrepreneurship Development Board, Delhi	Executive Committee Meeting held on 11 July 1985
8.	CBSE, New Delhi	Course Committees in Commerce and other courses
9.	RCE, Bhopal	Finalization of M. Com. Ed. Syllabus
10.	Government of Bihar	Meeting regarding preparations for introduction of Vocationalization of Education in the State
11.	Ministry of Education, Government of India	Computer Course Committee for introduction of Computer Science as an elective subject at the +2 stage as a logical follow-up of the project, Computer Literacy and Studies in Schools (GLASS)
12.	Ministry of Human Resource Development, Government of India	Formulation of New Education Policy
13.	Ministry of Education, Government of India	Acted as Secretariat for Working Group Meeting of Education Ministers on Vocationalization

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<i>S. No.</i>	<i>Organizations</i>	<i>Purpose of Consultancy</i>
14.	NIEPA	Resource Persons provided on a number of training programmes and seminars
15.	Government of Uttar Pradesh	On introduction of vocational courses at the +2 stage
16.	Government of Madhya Pradesh	High-level Committee for introduction of Vocational Courses at the +2 stage in 1986
17.	TTTI, Chandigarh	A number of seminars organized by TTTI on Vocational/Technical Education
18.	Ministry of Labour (DGET)	Membership on NCVT; National Seminar on Vocational Training
19.	Government of Assam	Vocationalization of Education
20.	Government of Himachal Pradesh	Preparation for implementation of vocationalization of education and SUPW in the State
21.	Delhi Administration	Placement of vocational student after Class XII
22.	Government of Haryana	Orientation of Key Persons on SUPW and Vocational Education
23.	Board of School Education, Haryana	Paper-setting in Commerce courses
24.	IIPA, Delhi	Participation in seminars on Work, Education and Employment
25.	All India Secondary Teachers' Association, Hyderabad	Participation in seminar on National Education Policy
26.	Planning Commission	Seminar on Vocational Education and Training
27.	Institute of Applied Manpower Research	Seminar on Vocationalization Education held on 1 March 1986
28.	Government of Bihar	Preparation for introducing vocational courses

Publications

Intensive efforts made by the DVE through its various developmental and other activities during April 1985 to March 1986 have resulted in a number of publications immensely useful not only to vocational students and teachers but also to educational planners, and administrators. The publications brought out are readily available to the concerned clientele for their use. The instructional materials, question banks, supplementary readers, and other curricular materials are published by the Department. Some of the publications developed during April 1985 to March 1986 are mentioned below.

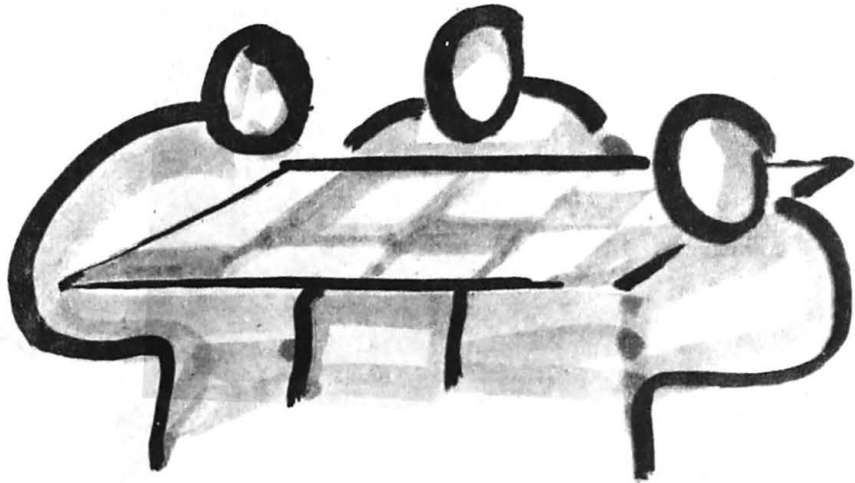
1. Exemplars Pre-vocational Courses under Work Experience for High School Stage (including some VE exemplars for

the Upper Primary Stage).

2. Work Experience in School Education Guidance for Curriculum Development and Implementation.
3. Reference Book—Fruit Culture.
4. Reference Book—Plant Propagation in Horticultural Crops.
5. Instructional-cum-Practical Manual—Dairy Animal Management.
6. Instructional-cum-Practical Manual—Forage Production, Conservation and Recycling of Farm Wastes.
7. Instructional-cum-Practical Manual—Foods and Feeding.
8. Instructional-cum-Practical Manual—Animal Reproduction, Artificial Insemination.

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9. Instructional-cum-Practical Manual—Milk and Milk Products.
10. Instructional-cum-Practical Manual—Dairy Extension and Economics.
11. Instructional-cum-Practical Manual—Moriculture.
12. Instructional-cum-Practical Manual—Silk Worm Biology and Rearing.
13. Instructional-cum-Practical Manual—Mulberry and Silk Worm Crop Protection.
14. Instructional-cum-Practical Manual—Silk Worm Seed Production Technology.
15. Instructional-cum-Practical Manual—Silk Sealing, Testing and Spinning.
16. Instructional-cum-Practical Manual—Sericulture Extension and Management.
17. Practicals in Auditing—1985-86.
18. Methods and Materials of Teaching Steno-Typing.
19. Minimum Vocational Competency-based Curriculum—Poultry Production.
20. Minimum Vocational Competency-based Curriculum—Swine Production.
21. Minimum Vocational Competency-based Curriculum—Farm Mechanic.
22. Minimum Vocational Competency-based Curriculum—Agricultural Chemicals.
23. Minimum Vocational Competency-based Curriculum—Plant Protection.
24. Minimum Vocational Competency-based Curriculum—Plantation Crops and Management.
25. Minimum Vocational Competency-based Curriculum—Electronics Technology.
26. Minimum Vocational Competency-based Curriculum—Tourism and Tourist Guide (under preparation).
27. Minimum Vocational Competency-based Curriculum—Export and Import.



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SEVEN

TEACHER EDUCATION, SPECIAL EDUCATION AND EXTENSION SERVICES

THE Department of Teacher Education, Special Education and Extension Services (DTESEES) has been undertaking research and experimental studies, preparation of instructional materials and training and extension activities in the areas of teacher education, women's education, education of the disadvantaged and special education. The Department also acts as the nodal agency for implementing the activities of the Centres of Continuing Education (CCE) of teachers and as the Secretariat of the National Council for Teacher Education (NCTE).

Qualitative improvement of elementary and secondary teacher education programmes is one of the major concerns of the Department. Research and experimental studies aimed at improving the teaching competence of teacher-trainees and teacher-educators; revision of teacher education curriculum; preparation of textual and other instructional materials for the use of teacher-educators and teacher-trainees; and the training of teacher-educators and others engaged in the implementation of teacher education curriculum constituted some of the major activities of the Department.

Research

Research studies conducted by DTESEES during 1985-86 in the areas of Teacher Education, Special Education, Education of SC/ST and Women Education are reported below.

Teacher Education

Five studies related to the area of Teacher Education dealing with value orientation of B.Ed. students, status of teachers in India, self-concept, adjustment and achievement of SC/ST teacher-trainees, national survey of secondary teacher education and study of in-service education in India were undertaken. One research study pertaining to the status of in-service education of primary teacher-educators and secondary school teachers in various States was completed during the year under report. The study was based on the information obtained from SIEs/SCERTs and Colleges of Education of fourteen States. Data concerning types and the number of programmes organized, clientele and the number of teachers covered in a year's time were collected. The study revealed that at the level of primary teacher education, programmes were mostly organized by the Centres of Continuing Education. The report of the study is under preparation. The other research studies are at various stages of completion. The on-going research projects are mentioned below.

Special Education

In the area of Special Education a review of research in Special Education has been prepared. It covers 150 studies at Diploma, Master's Degree, and Doctoral levels and a few projects undertaken by the voluntary agencies. Studies were obtained mainly from the Depart-

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On-going Research Projects

<i>S.No.</i>	<i>Title of the Project</i>	<i>Principal Investigator</i>
1.	Value-orientation of B.Ed. students	Prof. L.C. Singh
2.	Status of Teachers in India	Dr. (Smt.) R.K. Chopra
3.	Study of Relationship of Self-concept and Adjustment with Achievement of SC/ST Teacher-trainees	Dr. (Smt.) R.K. Chopra
4.	Fourth National Survey of Secondary Teacher Education in India	Prof. L.C. Singh, Smt. N. Sabharwal

ments of Social Work, Psychology and Education and agencies such as Spastic Society of India, B.M. Institute for Mentally Handicapped, National Association for the Blind and Louise Braille Memorial Institute. The review highlighted the need for well-planned cooperative research efforts. As a follow-up action and dissemination activity, a national workshop on promotion of research was organized at NCERT, New Delhi, from 8 January to 11 January 1986. Two major research projects, namely, Case Studies of Integrated Education for the Disabled and Co-operative Research Project on the Effects of Integrating Children with Disability, on Ecology of Classroom and Pupil Achievement, were planned. The findings of the review of research and the recommendations of the workshop were disseminated through IED Bulletin. The second study on the disability status of dropouts was an

exploratory one for planning purposes and is in progress.

Education of SC/ST

Four studies relating to the education of SC/ST groups and tribal children continued during 1985-86. The report of one of the studies regarding interrelationship between education of STs and their socio-economic mobility is being finalized. Reports of two projects relating to comparative study of educational achievement of SC and non-SC students of Class X of Uttar Pradesh and a comparative study of physical facilities between tribal and non-tribal primary schools are under preparation. Another study relating to the performance of tribal students of primary level is under way. The on-going research projects in the area of Education of SC/ST are mentioned here.

<i>S.No.</i>	<i>Title of the Project</i>	<i>Principal Investigator</i>
1.	A study of Interrelationship between Education of the STs and Their Socio-economic Mobility	Shri B.P. Awasthi
2.	A Comparative Study of Educational Achievement of SC and Non-SC Students of Class X of Uttar Pradesh	Dr. B.S. Gupta
3.	Subject-wise Performance of Tribal Students of Primary Level to Determine Their Weak and Strong Points	Dr. B.S. Gupta
4.	Comparative Study of Physical Facilities between Tribal and Non-tribal Primary Schools	Dr. L.R.N. Srivastava

Women Education

Two studies pertaining to the strategies adopted by States to augment enrolment of girls in formal school education, and the methods adopted for non-formal education of girls in States were undertaken. In the former study approaches to achieve the target of universalization of elementary education of girls were identified. Guidelines prepared for this purpose were sent to the States and the Union Territories. In connection with this study, a two-day seminar of the representatives of the selected studies was organized for mutual exchange of ideas and clarification on certain points. The latter project was undertaken to find out the provisional and functional aspects of Non-Formal Education of girls. The methods of training female instructors for the non-formal education centres were also explored to identify the most effective ones which could be adopted/adapted by the States to strengthen the non-formal programme for girls. The information was collected through a questionnaire in the first instance. Thereafter, a two-day seminar was organized to get clarification on certain points and for mutual exchange of ideas. The project reports of both the studies are under preparation.

Developmental Programmes

Teacher Education

- (i) *Development of Resource Book for M.Ed. Paper on Teacher Education:* A four-day meeting of the authors of the resource book on teacher education was organized at the NCERT, New Delhi, during August 1985. Eleven authors attended the meeting.
- (ii) *Development of Textbook on Health, Physical Education and Recreation for Secondary Teachers:* A working group meeting was held at Laxmi Bai College of Physical Education, Gwalior, during September 1985. The material prepared was discussed in the working

group meeting attended by 14 persons.

- (iii) *Development of Textbook on Content-cum-Methodology in the Teaching of Environmental Studies for Elementary Teachers Training Level:* A working group meeting was held at the NIE, NCERT, New Delhi, for four days from 10 to 13 March 1986 to develop the textbook which is intended to upgrade the knowledge of student-teachers and teacher-educators. It was attended by 10 persons.
- (iv) *Development of Textbook on Content-cum-Methodology in the Teaching of Social Studies for Secondary Teacher Training Level:* A working group meeting was organized at the NCERT, New Delhi, for four days (17-20 March 1986) wherein the format of the textbook was discussed and content outline of different chapters was worked out. The meeting was attended by seven subject specialists from University Departments of Education, SIEs/SCERTs and some faculty members from the Department of Social Sciences and Humanities. The purpose of this textbook is to help teacher-educators and student-teachers in developing knowledge and skill for organizing instructions in social studies.
- (v) *Development of Handbook on Value-oriented Education:* A working group meeting of the panel of experts was held for three days (28 to 30 January 1986) to discuss the material prepared for different chapters of the proposed handbook. The major objective of the handbook is to help teacher-educators in imbuing value education among teacher-trainees through various programmes and activities of the teacher education curriculum. Four experts attended the meeting.

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- (vi) *Development of Source Book of Non-Formal Education for Secondary Teacher-Educators*: A working group meeting was held in January 1986 to prepare a detailed format of the proposed source book. The proposed book is intended to help secondary teacher-trainees in understanding the various strategies of Non-Formal Education for arresting the problem of universalization of elementary education in the country.
- (vii) *Development of Source Book on College Teaching*: A three-day working group meeting was held in New Delhi from 19 to 21 February 1986 to develop a source book on College Teaching. The members discussed the material prepared for the proposed source book which intends to prepare college teachers in certain aspects of pedagogy and classroom management.
- (viii) *Seminar Readings Programme*: A two-day meet of experts was organized at the NCERT, New Delhi, on 14-15 March 1986 to evaluate the entry papers of secondary teacher-educators received from different SIEs/SCERTs. Ten best innovative practices were selected for the purpose of the National Award. A three-day national meet of the Award Winners (secondary teacher-educators) was also held at the NCERT, New Delhi, from 28 April to 30 April 1986. The national awardees presented their innovations and discussed them with senior faculty members of different departments/units of the NIE who acted as resource persons in this programme. The innovations are closely related to the quality improvement of teacher education. Each national awardee was given a cash prize of Rs. 1,000 and a certificate of merit. These innovations will be

got printed under the title "Thoughts and Experiments in Teacher Education" for wider dissemination in the country.

- (ix) *National Conference of the State Boards of Teacher Education*: A national conference of the representatives of the State Boards of Teacher Education from different States was held at Hyderabad for two days from 3 to 4 March 1986. The reports on the functions and activities of the respective boards during the year 1985-86 were presented and discussed. Very vital recommendations for the improvement of quality of teacher education in the country were given. The conference also recommended statutory status for the National Council for Teacher Education.

Proforma for the collection of innovative practices from teacher training institutions (both elementary and secondary) was got printed and mailed to all the teacher training institutions. Information from a few institutions was received.

Special Education

- (i) *National Conferences of Coordinators and Educational Secretaries on IED Scheme*: A national conference of the coordinators of the IED scheme was held at the NCERT, New Delhi, for five days from 7 to 11 October 1985. The national conference of Educational Secretaries on IED was also held at the NCERT for one day on 1 February 1986. Both these conferences were attended by 17 persons each. Both the programmes were related to advocacy for IED. Project proposals for the implementation of the scheme for the States were pre-

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pared. The States were being approached through the Ministry of Human Resource Development for signing the contract for UNICEF-assisted project on integrated education for the disabled.

- (ii) *National Workshop on Promotion of Research in Special Education*: This workshop was organized at the NCERT, New Delhi, for four days from 8 January to 11 January 1986. Thirty-one representatives from SIEs/SCE-RTs, University Departments supported by the UGC for special education, National Institutes for the Handicapped and three leading voluntary organizations attended the workshop. Concern over extremely limited research in special education was shared in the workshop. Cooperative research project on the effects of integrating children with disability on the ecology of classroom and pupil achievement and case studies of IED programmes were planned.
- (iii) *National Workshop on Creative Arts for the Disabled*: This workshop was organized at Coimbatore for five days from 31 March to 4 April 1986, and was attended by 22 participants. Spade work on creative arts for the disabled was undertaken under this programme.
- (iv) *Adjustment of Instructional Materials and Methods to the Needs of Visually Impaired Children in Regular Schools*: A five-day workshop on adjustment of instructional materials and methods for visually impaired children in regular schools was organized at Coimbatore from 14 October to 18 October 1985. Thirteen persons comprising experts from universities and institutions working for integrated education of visually impaired children attended the meeting. A framework for adjusting instruc-

tional materials and methods to develop guidelines for regular teachers was evolved.

- (v) *Adjustment of Instructional Materials and Methods to the Needs of Hearing Impaired Children in Regular Schools*: A five-day working group meeting was organized at Madras from 14 October to 18 October 1985 with a view to develop instructional materials and methods suited to the needs of hearing impaired children in regular schools. Guidelines to teach first language to the hearing impaired children in regular schools were developed. Ten experts from various institutions participated in the programme.
- (vi) *Development of Modular Instructional Material*: Modular instructional material for the training of resource teachers was developed and processed for publication by the faculty of DTESEES. Also tools for Psycho-educational Centre are being procured.

Education of the SCs/STs

- (i) *Planning Group Meetings for Preparation of Instructional Material*: Two planning group meetings were organized—one for the preparation of instructional material for Lepeha tribal children of Non-Formal Education Centres in Sikkim and the other for the preparation of textbooks for Irula tribal children of Tamil Nadu. Both the meetings were organized at New Delhi for two and three days, respectively, during March 1986. These were attended by 13 persons in all.
- (ii) *Planning Group Meeting for Evaluation of Textbooks*: This group meeting was organized to evaluate the textbooks written in tribal dialects—Halbi, Kudukh, Godhi, Korkhu and Bhill (M.P.). The meeting was organized at the NCERT, New Delhi, for two days on 26 and 27

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February 1986, and was attended by eight persons.

- (iii) *Working Group Meetings to Finalize the Syllabus for Orientation Course:* Two working group meetings (one at the elementary teacher education level and the other at the secondary teacher education level) were organized to finalize the syllabus for orientation course for teacher-educators to overcome problems that hinder educational development of the Scheduled Castes. These programmes were held for two and three days in December 1985 and March 1986, respectively. The former meeting was attended by seven persons and the latter by six persons. Another working group meeting to finalize the syllabus for orientation course for key personnel of Non-Formal Education Programme to overcome the problems that hinder educational development of the Scheduled Castes was organized for three days from 18 to 20 March 1986. Nine participants attended the programme. The purpose of another working group meeting was to analyse the textbooks to find out objectionable materials from the view-point of the Scheduled Castes. Another meeting was held for five days during 17 to 21 March 1986 and was attended by nine participants. All these four working group meetings were held at the NCERT, New Delhi.

- (iv) *Preparation of Modules for NFE and School Students:* Preparation of modules for Non-Formal Education and school students on various themes for eradication of caste feelings amongst them was also undertaken. In this connection a five-day meeting from 31 March 1986 to 4 April 1986 was organized at the NCERT, New Delhi, and was attended by nine persons.

Women's Education

A seminar on the development of methods and materials for NFE instructors for girls was organized at Rohtak for two days on 28 and 29 January 1986. The areas for developing appropriate methods and materials for the said purpose were identified in the seminar. It was attended by 10 participants.

A meeting with the voluntary organizations involved in women's education at the national level, was convened for three days from 23 September to 25 September 1985 to seek their collaboration. The areas for collaboration in the development of programmes for non-formal education of girls were identified.

Two meetings of the Standing Committee set up by the Director on women's education of one-day duration each were convened on 15 October 1985 and 28 February 1986 to apprise the members of the Committee of the work done in the area and also to discuss strategies concerning formal and non-formal education of girls and questions concerning presentation of women in the media. The former meeting was attended by twelve participants and the latter by eleven.

A workshop on the development of methods and materials for NFE instructors' preparation of girls was organized at Rohtak for six days from 31 March to 5 April 1986. Modules on the five already identified areas were developed in the workshop. These areas were: (i) scientific temper and rationality of tool; (ii) emerging science and technology for rural women; (iii) legal literary component; (iv) eliciting community participation; and (v) utilization of media for educational purposes. Modules on the five areas were developed with the help of instructors working in the field.

The project on elimination of sex bias from children's literature (produced by the NBT and the CET), language textbooks/supplementary readers produced by the NCERT and the State of Tamil Nadu (English, Hindi and Tamil) was also taken up. For this purpose evaluative criteria were evolved and the evaluation tool on elimina-

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tion of sex bias was printed in Hindi and English separately. In the two workshops organized by the Department at Modipuram and Ootacumand and attended by 23 and 16 participants, respectively, a total of 400 books were evaluated. The vetting group meeting was organized with a view to tabulating and analysing the 400 evaluation cards.

The planning group meeting for the development of supplementary readers on the theme Towards Equality was organized at Lucknow for five days. A series of bibliographies, an outline of a small novel, a story collection on various identified values commensurate with the status of women, had been outlined. The meeting was attended by 13 persons.

Training and Extension Programmes

The Department organized a number of training programmes for teacher-educators and other personnel engaged in teacher education. Detailed information regarding these programmes is given below area-wise.

Teacher Education

- (i) *Models of Teaching*: An orientation programme on models of teaching was organized at Devi Ahilya University, Indore, for eight days. The main objectives of the programme were: (a) to provide training to teacher-educators in two models of teaching—concept attainment model and inquiry training model, (b) to study the efficacy of training strategies for these models, and (c) to study the extent to which the models of teaching could be integrated in practice teaching programmes. The orientation programme was attended by 55 teacher-educators from 27 secondary teacher education institutions. A master design of the experimental field study was developed. Every institution developed its own design and experimental study to be conducted within

the framework of the master project during 1985-86. Further, a workshop on models of teaching was organized at the Regional College of Education, Mysore, for three days. It was attended by 30 participants.

- (ii) *Planning and Designing Research Projects*: Two workshops on planning and designing research projects were organized for six days each at Nagpur University, Nagpur, and Mirza, Gauhati. These workshops were attended by 39 and 24 persons, respectively.
- (iii) *Orientation of Teacher-educators in Text-books*: Two orientation programmes of six days' duration were conducted for elementary teacher-educators in "Teacher and Education in the Emerging Indian Society" at Bombay (17 to 22 February 1986) and Amaravati (31 March to 5 April 1986) and were attended by 39 and 24 participants, respectively.

Another orientation programme was organized for secondary teacher-educators in the textbook "Curriculum and Evaluation". The programme was held at Trivandrum in October 1985 and was attended by 20 participants.

- (iv) *Orientation Programme on Seminar Readings*: A two-day orientation programme for the faculty of secondary teacher training colleges from northern States was organized at the NIE, NCERT, New Delhi, on 17 and 18 February 1986. It was attended by 22 participants and they were exposed to possible areas of innovations in the field of teacher education.

Special Education

Training of Key Personnel for Integrated Education for the Disabled: A three-month in-service training course for key personnel in integrated education for the disabled (IED) was organized at the NIE,

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NCERT, New Delhi, from November 1985 to February 1986. The trainees were helped in educating the disabled children and to develop suitable competencies for planning, supervising and implementing the IED programmes. The course provided working knowledge of the theory and practice of the education of the disabled. Ten persons participated in this course.

Education of the SCs/STs

- (i) *Training Courses for Teacher-Educators Working in Tribal Areas:* Two one-week training courses were organized at Allahabad and New Delhi for teacher-educators of elementary teacher training institutions located in tribal areas. The courses were planned to acquaint the teacher-educators with the life, culture and problems of tribal education. The first course was attended by 27 participants from Andhra Pradesh, Gujarat, Rajasthan and Maharashtra. The second course was organized at the NIE Campus, NCERT, New Delhi, where five participants from Mizoram, Sikkim, Nagaland and Assam attended the course.

Two training courses for teacher-educators of secondary teacher training institutions located in tribal areas were organized. During the course the teacher-educators were acquainted with the tribal life, culture and problems of tribal education. Both the programmes were organized at the NCERT, New Delhi, for seven days each. Twenty-nine persons attended the two courses.

- (ii) *Orientation Courses for Key Personnel of Non-Formal Programme in Tribal Areas:* The first orientation programme for key personnel of non-formal education in tribal areas was organized at Jorhat for seven days. It was attended by 14 persons working in the area of Non-Formal Education in Assam, Aruna-

chal Pradesh, Bihar, Orissa and Uttar Pradesh. The second orientation course was organized at Udaipur and was attended by 11 persons belonging to Andhra Pradesh, Tamil Nadu, Kerala, Karnataka, Rajasthan, Gujarat, Maharashtra and Madhya Pradesh. These courses helped in acquainting the key personnel with the socio-cultural life of tribal children, problems of tribal education and organization of non-formal education programmes in tribal areas.

- (iii) *Reorientation Course of Key Personnel of Non-Formal Education Centres in Tribal Areas:* A reorientation course for key persons of Non-Formal Education Centres of tribal areas of Madhya Pradesh was conducted at the NCERT, New Delhi. It was organized for five days and attended by 16 persons.

Women Education

Orientation Programmes for Key Personnel: Two orientation programmes for key personnel in evaluation of textbook materials were organized for five days each at Bangalore and Almora. The purpose of these orientation programmes was to provide training to the key persons in evaluation of textbooks and supplementary reading materials in the mother tongue, regional languages and English from the view-point of elimination of sex-bias. The two programmes were attended by 40 key personnel drawn from various SIEs/SCERTs in different States and Union Territories.

Another programme regarding orientation of key personnel on the status of women through curriculum at the elementary stage was organized at Puri. The duration of the programme was five days. Seventeen key personnel drawn from the State Institutes of Education/SCERTs of the North-East region attended the programme. Some participants developed items for teachers' handbooks on Status of Women through Curriculum at the Elementary Stage.

1985-86

Centres for Continuing Education of Teachers

The Department has been coordinating the activities of the Centres for Continuing Education of Teachers. These centres have been engaged in providing in-service education to secondary teachers and primary teacher-educators in the States/Union Territories. The grants to the centres are shared by the Central and the State governments on 50-50 basis.

During the period under review four regional conferences for the Honorary Directors/Coordinators were held at Coimbatore, Aurangabad, Patna and Calcutta. The main objectives of the conferences were: (i) to take stock of the activities and progress of CCEs in the States/Union Territories in the country, (ii) to find out solutions to the problems faced by them, (iii) to find out solutions to the problems faced by CCEs through exchange of experience and discussion, and (v) to discuss the role of CCEs in the new context and suggest changes in the existing scheme.

Detailed information regarding the four conferences and two working group meetings is given below:

- The First Regional Conference of the Honorary Directors and Coordinators of the CCEs in Kerala, Karnataka, Tamil Nadu and Pondicherry was organized at Coimbatore from 23 to 25 September 1985. It was attended by 29 persons.
- The Second Regional Conference of the Honorary Directors and Coordinators of the CCEs in Maharashtra, Andhra Pradesh and Himachal Pradesh was organized at Aurangabad from 19 to 21 November 1985. Twenty-six Honorary Directors/Coordinators of CCEs participated.
- The Third Regional Conference of the Honorary Directors and Coordinators of the CCEs in Bihar and Uttar Pradesh was organized at Patna from 16 to 18

January 1986. It was attended by 43 participants.

- The Fourth Regional Conference of the Honorary Directors and Coordinators of the CCEs in Eastern and North-East Region was organized at Calcutta from 26 to 28 February 1986. Nineteen persons attended it.
- The First Working Group meeting on “A Study of the In-service Education Agencies and Mechanism” was held in New Delhi from 28 to 29 August 1985. Five members attended the meeting.
- The Second Working Group meeting on “A Study of the In-service. Education Agencies and Mechanism” was held in New Delhi from 10 to 19 March 1986. Five members participated.

National Council for Teacher Education (NCTE)

The Department has been acting as the Secretariat for the National Council for Teacher Education (NCTE), established in May 1973 by a resolution of the Ministry of Education, Government of India, to maintain standards in teacher education, to tender advice to the Government of India and State governments on all matters pertaining to teacher education and to review the progress of plan schemes to ensure adequate standards in teacher education. The NCTE consists of four major academic Standing Committees—the Steering Committee, Committee on Pre-School and Elementary Teacher Education, Committee on Secondary and College Teacher Education and Committee for the Training of Teachers for Special Schools for the Physically Handicapped and the Mentally Retarded. During the year under report the following meetings/seminars/workshops were conducted under the auspices of the NCTE:

- Eleventh Meeting of the Steering Committee of the NCTE held on 26 August 1985.

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- Eighth General Body Meeting of the NCTE held on 23 December 1985.
- Second Meeting of the Working Group for Developing Handbook in Value-oriented Teacher Education held on 28-30 January 1986.
- Third Meeting of the Panel of Authors for Preparing a Source Book on College Teaching held on 19-21 February 1986.
- Ninth Meeting of the Secondary and College Teacher Education Committee of the

- NCTE held on 21 March 1986.
- Seventh Meeting of the Special School Teacher Education Committee of the NCTE held on 25 February 1986.
- Sixth Annual Conference of the SBTEs held on 3-4 March 1986.

Consultancy

Consultancy services were provided to the following organizations:

<i>S.No.</i>	<i>Name of the Organization</i>	<i>Nature of Consultancy</i>
1.	UNESCO	(i) Preparing discussion and working papers for the Regional Planning Seminar and Workshop on Special Education at Coimbatore, 12-24 August 1985 (ii) Development of Guidelines for preparing handbook for Teachers of Visually Impaired
2.	National Institute for the Visually Handicapped, Dehradun	(i) Development of academic programmes (ii) Designing teachers training programmes (iii) Planning and designing survey of facilities for the visually impaired
3.	Ali Yaver National Institute for Mentally Handicapped, Hyderabad	(i) Developing academic programmes (ii) Developing resource plans (iii) Preparing design for curriculum development at the primary level for the mentally handicapped
4.	Technical Teacher Training Institute, Chandigarh	Teaching models for the training of polytechnic staff
5.	Indian Association for Educational Technology	Development of Educational Technology for Special Education
6.	State Institute of Education, Delhi	Help in designing and planning the training programmes for Principals and Vice-Principals on educational management was extended.

Publications

The publications (printed and cyclostyled) of the DTESEES brought out during 1985-86 are as follows:

<i>S.No.</i>	<i>Title</i>	<i>Date of Publication</i>	<i>No. of Copies Published</i>
1.	Non-Formal Education in India	March 1986	1000
2.	A Study of Methods, Processes and Practices of Non-Formal Education Programmes in Tribal Areas	July 1985	500

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<i>S. No.</i>	<i>Title</i>	<i>Date of Publication</i>	<i>No. of Copies Published</i>
3.	Saora Primer for Class II (Part I)	June 1985	5000
4.	Report of the Training Programme for Key Persons	February 1986	200
5.	Report of the Conference of the Coordinators of IED Scheme	October 1985	200
6.	Adjustment of Instructional Materials and Methods to the Needs of Visually Impaired in Regular Schools	October 1985	100
7.	Adjustment of Instructional Materials and Methods to the Needs of Hearing Impaired in Regular Schools	January 1986	200
8.	Review of Research in Special Education	January 1986	100
9.	Modular Instructional Material for the Training of Resource Persons	(In press)	—
10.	Creative Art for the Disabled	March 1986	100
11.	Teacher and Education in Emerging Indian Society—Textbook for Elementary Teacher Training Institutions	(In Press)	—
12.	Thoughts and Experiments in Elementary Teacher Education Award-winning Paper of Seminar Reading Awardees, Volume II	May 1985	500
13.	Effectiveness Studies of Micro-teaching Components (Elementary Level)	January 1985	150
14.	Models of Teaching: Towards Developing Training Strategy	November 1985	150
15.	Psychology for the Elementary School Teachers	March 1985	1000
16.	Psychology for the Secondary School Teachers	(In press)	—

Integrated Education of the Disabled Bulletins

IED Bulletins, Vol. III, No. 1 to 4 (March, June, September and December 1985) were published and sent to various institutions.

Community Singing

Under the programme of developing Community Singing as a mass movement, the Department has been organizing training camps for community singing for music teachers from all parts of India. At present 15 songs selected from different Indian languages are being taught to the teachers by the music experts like Shri M.B. Srinivasan (Madras), Shri Kanu Ghosh (Bombay), Shri V.C. Maudgalya (Delhi) and Shri Satish Bhatia (Delhi). The camps have undoubtedly be-

come a source of nation-wide movement for strengthening the spirit of national integration and fostering patriotic values among young people all over the country.

During 1985-86, as 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 29 camps and trained 1,164 teachers from 19 States and Union Territories in the art and technique of community singing. Each teacher who has received training in the camp has been directed to teach songs to at least 1,000 children of his/her school and the neighbouring schools. The NCERT has also been able to train about

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140 teacher-trainers from all the States of the country during this year. These trainers will act as key persons for their respective States to propagate the scheme of Community Singing in a more vigorous way.

The NCERT has been distributing the book *Let's Sing Together*, recorded cassettes containing 15 songs, and tape recorders to all camp participants so that their work is facilitated and further training to school children is imparted without deviation from rhythm and melody. This also helps teachers in developing teaching-learning situation in their classrooms. Under this scheme a recorded cassette of "Childhood Memories of Smt. Indira Gandhi" is also being distributed to all the primary schools.

To accelerate the movement of community singing, the NCERT has appointed music instructors in southern, northern and western regions under the supervision of regional composer-conductors, viz., Shri M.B. Srinivasan, Shri V.C. Maudgalya and Shri Kanu Ghosh, respectively.

During the Republic Day Celebrations, 1986, Dr. Iqbal's famous song "Sare Jahan Se Achcha" was included in the cultural pageant as a grand finale in which 1,150 children of Delhi schools sang this song and enthused the spectators to sing with them.

Navodaya Vidyalayas

Recognizing that children with special talent or aptitude should be provided with opportunities to proceed at a faster pace, by making available to them education of good quality, irrespective of their capacity to pay for it, the Government of India in the Ministry of Human Resource Development decided to set up a residential Model School called Navodaya Vidyalaya, in each district during the Seventh Five Year Plan. These Vidyalayas are expected to be pace-setting institutions. The broad aims for the establishment of these Vidyalayas are to serve the objective of equity and social justice, promote national integration, provide opportunities to the

talented children to develop their full potential, and facilitate the nation-wide programme of school improvement.

Within this broad framework, the specific objectives of this scheme are as follows:

- To provide modern education of good quality, including a strong component of inculcation of values, awareness of the environment, adventure activities and physical education, for the talented children, predominantly from rural areas without regard to their family's socio-economic condition.
- To provide facilities, at a suitable stage, for instruction through a common medium, viz., Hindi and English, all over the country.
- To offer a common core curriculum for ensuring comparability in standards and to facilitate an understanding of the common and composite heritage of our people.
- To progressively bring students from one part of the country to another in each school to promote national integration and enrich the social content.
- To serve as a focal point for improvement in the quality of school education through the training of teachers in live situations and the sharing of experiences and facilities.

Admission to the Navodaya Vidyalayas is to be for Class VI. The basis of admission is a test conducted at the tehsil/block level in which all children who have passed Class V from any one of the schools of the tehsil/block, are eligible to appear.

Navodaya Vidyalayas are to be co-educational and primarily for children from rural areas. Hence admission of children from urban areas are restricted to a maximum of one-fourth. Reservation of seats in favour of children belonging to the Scheduled Castes and Scheduled Tribes is provided in proportion to their population in the concerned district, provided that in

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no district such reservation is less than the national average.

Education in Navodaya Vidyalayas, including board and lodging, as well as the expenses required for uniforms, textbooks, stationery, rail/bus fare from and to the homes, etc., is to be free for all.

The NCERT has been associated with this programme in various ways. Responsibility was entrusted to the Council to develop and redesign curriculum, textbooks and instructional materials, co-curricular activities, evaluative techniques and teacher education/orientation programmes. For this purpose appropriate committees with subject-matter experts were constituted at the NCERT. The reports prepared by these committees were further considered on 5 August 1985 by a Task Force constituted for this purpose. It comprised leading experts in the country. The final report, approved by the Task Force, provided the broad framework and guidelines.

The Model School Cell was set up in the Council which monitors the work of the Navodaya Vidyalayas in which various other departments of the Council are also actively involved in different ways.

It was decided to start two Navodaya Vidyalayas—one at Amravati in Maharashtra and the other at Jhajjar in Rohtak District in Haryana. Sites for these schools were selected and all arrangements were made through the NCERT to renovate and extend the buildings to make them fit for the use of the Navodaya Vidyalayas. Teachers, including the principals, were selected on deputation from the Kendriya Vidyalayas Sangathan. An orientation programme was organized for these teachers by the Model School Cell. Wide publicity was given for admissions to these schools. Selection tests were developed by

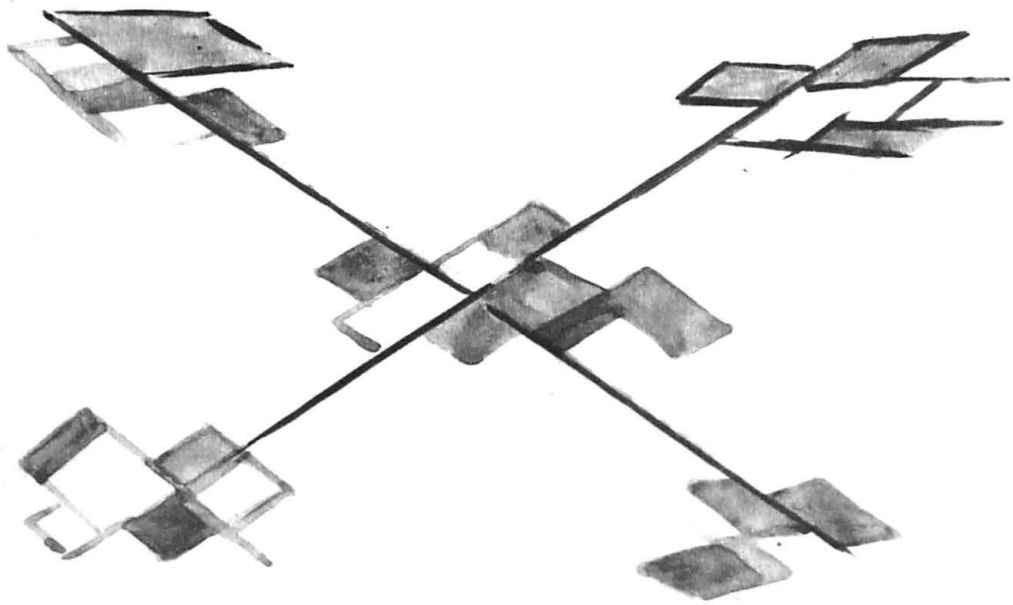
DMESDP and administered by them. On the basis of these tests, 80 students were selected in each school. The schools started work on 5 March 1986.

To meet the special requirements for the teaching of English in these schools a special Reader was prepared by DESSH and these were supplied to these schools. Also a special bridge course in the teaching of Hindi in the Navodaya Vidyalaya, Amravati, was developed by DESSH and the materials were sent to the schools. Arrangements for the purchase of furniture, equipment, etc., were made by the Model School Cell in collaboration with the respective Field Advisers. T.V. sets and tape-recorders were also supplied to these schools. Work on admissions to Class VI for the session 1986-87 was taken up both by the Model School Cell and the DMES & DP. Guidelines, information brochures and application forms for candidates were prepared and given to the schools.

The Model School Cell has been set up on an ad hoc basis with two members of the academic staff assisted by 10 members of the supporting staff to function till the schools are finally taken over by the Navodaya Vidyalayas Samiti set up by the Ministry of Human Resource Development.

The Cell has also been advising the Ministry of Human Resource Development on various matters relating to the Navodaya Vidyalayas.

The Ministry of Human Resource Development had sanctioned Rs. 22.50 lakh (under plan) for incurring expenditure on board and lodging, educational expenses, furniture, utensils, laboratory equipment, library books, pay and allowances and for repair, additions and alterations to the buildings for these two schools at Amravati and Jhajjar for the year 1985-86. The funds were released to the respective schools by the NCERT.



1985-86

EIGHT

REGIONAL COLLEGES OF EDUCATION

DEVELOPMENT of innovative programmes of pre-service teacher education is one of the major concerns of the Regional Colleges of Education. They have been engaged in 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, and West Bengal and the Union Territories of Andaman and Nicobar Islands, Arunachal Pradesh and Mizoram are covered by the College at Bhubaneswar while the States of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu and the Union Territories of Lakshadweep and Pondicherry are catered to by the College at Mysore.

Regional College of Education, Ajmer

64 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 1985-86 was as follows:

(A) Pre-service Courses

First Year B.Sc. (H/P) B.Ed.	69
Second Year B.Sc. (H/P) B.Ed.	53
Third Year B.Sc. (H/P) B.Ed.	46
Fourth Year B.Sc. (H/P) B.Ed.	68
B.Ed. (Science)	62
B.Ed. (Agriculture)	35
B.Ed. (Commerce)	30
B.Ed. (Hindi)	49
B.Ed. (English)	40
B.Ed. (Urdu)	31
M.Ed. (Science/Commerce/ Language)	20

Total 503

(B) In-service Courses

B.Ed. (SSCC) I Summer	105
B.Ed. (SSCC) II Summer	90

Total 195

*Thirty candidates are registered.

1985-86

Results

The results of the year 1985 of the students en-

rolled during the session 1984-85 in different courses were as follows:

<i>Course</i>	<i>Total Appeared</i>	<i>Total Passed</i>	<i>Pass Percentage</i>
First Year B.Sc. (H/P) B.Ed.	76	48	63.16
Second Year B.Sc. (H/P) B.Ed.	47	45	95.75
Third Year B.Sc. (H/P) B.Ed.	69	66	95.65
Fourth Year B.Sc. (H/P) B.Ed.	26	26	100.00
B.Ed. (Science)	72	71	98.61
B.Ed. (Agriculture)	26	26	100.00
B.Ed. (Commerce)	30	30	100.00
B.Ed. (Hindi)	43	43	100.00
B.Ed. (English)	27	27	100.00
B.Ed. (Urdu)	35	32	91.43
M.Ed.	14	12	85.71

Extension Services

The Extension Services Department of the College organized workshops/seminars on different areas related to school education keeping

in view the needs and demands of the States/ Union Territories covered by the College. During the year 1985-86 the following programmes were organized.

<i>S. No.</i>	<i>Title of the Programme</i>	<i>Number of Participants</i>
1.	Workshop on Population Education	34
2.	Workshop on Science Club Sponsors	34
3.	State-level Workshop on SC/ST Students	20
4.	Workshop on Correlational Techniques in Behavioural Sciences	21
5.	Regional Seminar-cum-Workshop on Identification Needs and Problems of SC/ST Students	27
6.	Regional Workshop for Teacher Education on Integration of P.E. Concepts in Secondary School Subjects through Practice Teaching	26
7.	Orientation Conference of Principals, Headmasters and Teachers of Cooperative Schools	64
8.	Workshop on Innovative Trends in History Teaching	13
9.	Workshop on Development of Resource Packages at +2 Stage Chemistry	18
10.	Workshop on Language Learning in Special Schools for Children with Audio Speech Impairment	21

1985-86

<i>S. No.</i>	<i>Title of the Programme</i>	<i>Number of Participants</i>
11.	Workshop on Development of Teaching Aids from Local Resources for Effective Teaching of Environmental Sciences	33
12.	Workshop on Ashram Schools	18
13.	Workshop on Preparation of Handbook on Tribal Education in Rajasthan	15
14.	Regional Workshop for the Educational Development of SC/ST Students	20
15.	Workshop on Preparation of Teachers Guide for SUPW Fruit Preservation	25
	Total	389

Publications

During the year under report the College brought out two issues of the research journal "The Educational Trends" published half-yearly. The publication of "School Science Resource Letter" has recently been started on quarterly basis.

8. B.A. B.Ed. IV Year	28
9. B.Ed. (Science)	48
10. B.Ed. (Commerce)	41
11. B.Ed. (Elementary)	38
12. M.Ed.	10
	Total
	516

Regional College Education, Bhopal

The Regional College of Education at Bhopal offers a four-year Integrated Course in Science Education leading to the B.Sc. B.Ed. Degree; a four-year Integrated Course in English leading to the B.A. B.Ed. Degree; a one-year B.Ed. Course with specialization in Science/Commerce; a one-year B.Ed. Course with specialization in Elementary Education; a one-year M.Ed. Course and a Summer School-cum-Correspondence Course leading to the B.Ed. Degree.

(B) In-service Courses

1. B.Ed. (SSCC) I Summer	121
2. B.Ed. (SSCC) II Summer	99
	Total
	220

Enrolment

(A) Pre-service Courses

1. B.Sc. B.Ed. I Year	84
2. B.Sc. B.Ed. II Year	75
3. B.Sc. B.Ed. III Year	61
4. B.Sc. B.Ed. IV Year	52
5. B.A. B.Ed. I Year	28
6. B.A. B.Ed. II Year	28
7. B.A. B.Ed. III Year	23

Results

The results of the year 1985 of the students enrolled at the Regional College of Education, Bhopal, during the session 1985-86 in various courses are given in Table 1.

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 following programmes were organized by the College during 1985-86 (Table 2).

1985-86

TABLE 1

<i>Course</i>	<i>Total Appeared</i>	<i>Total Passed</i>	<i>Percentage</i>
B.A., B.Ed. I Year	30	29	97
B.A., B.Ed. II Year	30	24	80
B.A., B.Ed. III Year	28	28	100
B.A., B.Ed. IV Year	20	19	95
B.Sc., B.Ed. I Year	81	77	96
B.Sc., B.Ed. II Year	65	64	98.5
B.Sc., B.Ed. III Year	57	56	98.7
B.Sc., B.Ed. IV Year	46	42	91.3
B.Ed. (Commerce)	40	40	100
B.Ed. (Science)	32	31	97
B.Ed. (Elementary education)	37	36	97.3
M.Ed.	9	7	77.8

TABLE 2

<i>S.No.</i>	<i>Programmes</i>	<i>No. of Participants</i>
1.	Workshop for Preparation of Workbook—Bal Bharati Urdu-I	18
2.	Orientation of Key Persons Engaged in Physics Teaching at +2 Level in Madhya Pradesh	18
3.	Seminar-cum-Workshop in Science and Mathematics for Method Masters and Secondary Senior Teachers at + 2 Level of the Region for the Development of Science and Mathemaics Education Course at B.Ed. Senior Secondary Level	21
4.	Seminar-cum-Workshop for the Teachers/Teacher Educators in Science and Mathematics for Elementary level of Madhya Pradesh	17
5.	Workshop on Evaluation Techniques for Elementary Teacher Educators of Gujarat State	4
6.	Orientation of Higher Secondary Teacher Educators and Teachers (Crafts/SUPW) in Madhya Pradesh for Implementation of SUPW	24
7.	Development of Instructional Material based on NFE Curriculum for Basic Training Institutions of Madhya Pradesh (tribal areas only)	27
8.	Workshop for the Review of Workbook in Organisation of Commerce for Maharashtra State	13

<i>S. No.</i>	<i>Programme</i>	<i>No. of Participants</i>
9.	Workshop for the Production of Instructional Material for the Teachers and Resource Persons of English Teaching Class IX of Madhya Pradesh (tribal areas only)	67
10.	Workshop for the Preparation of Workbook in Geography for Class XI of Maharashtra State	13
11.	Orientation of the Teachers of Higher Secondary Schools of Madhya Pradesh Teaching SUPW under the New 10 + 2 Pattern	23
12.	Seminar-cum-Workshop for the Teacher/Teacher-educators in Science and Mathematics of Elementary Level of Madhya Pradesh	16
13.	Review of M.Com. Ed. Syllabus	6
14.	Orientation Programme for Key Personnel in Teaching at Single Teacher Schools of the Region	24
15.	Orientation Programme for Elementary Teacher-educators of Maharashtra and Goa with Piagetian Method	25
16.	In-service Programme for Higher Secondary School Physics Teachers of Gujarat State for "Repairs and Maintenance of Laboratory Equipment"	16
17.	Intensive Course in English Teaching Methods for Teachers of Maharashtra and Goa	13
18.	Workshop of Teacher Education (Craft/SUPW) for Preparing Working Manual for SUPW Teachers	20
19.	Orientation Programme of Key Persons in Teaching of Commerce Subject at + 2 Level	25
20.	Seminar-cum-Workshop for the Method Masters of Secondary Colleges of Education of Gujarat in Teaching of Biology at +2 Level	3
21.	Workshop for the Production of Instructional Material for Teachers and Resource Persons of English Teaching Class IX of Madhya Pradesh	37
22.	Orientation Programme for the Teacher Education in the Area of Working with Community	4
23.	Orientation in Evaluation Techniques for Key Personnel of NFE Centres of Tribal Areas of Madhya Pradesh	36
24.	Workshop on Methodology of Gujarati Teaching for Elementary Teacher Education	25
25.	Content Enrichment Course in Biology for Teachers and Teacher-educators of Maharashtra State at + 2 Level	8
26.	Orientation Programme for Secondary Teacher-educators with Latent Trait Theory and Test Construction	10
	Total	513

Research Projects

Activities related to five research projects were carried out during the year 1985-86.

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1. The project on the development of supplementary reading material for conser-

vation of environment has been completed.

2. The work on the project "A Study to Flora of Bhopal to Produce Resource

1985-86

Material for the Biology Teachers of Madhya Pradesh" is in progress.

3. The project "The Study of Life in Fresh Water Leading to the Preparation of Teachers' Handbook on Fresh Water Biology" has been completed.
4. The project "Impact of Teacher Training (B.Ed. Degree) through Correspondence Course on Upward Mobility of Teachers in the Western Region: a Comparative Study" has been completed and the report is in the final stage of preparation.
5. The project "Developing, Validating and Testing the Efficacy of Self-study Learning Process-based Material for the Development of Some Integrated Processes (Classifying, Inferring, Predicting, Interpreting, Hypothesis-making and Hypothesis-testing) in Science" has been completed.

Developmental Programmes

- (a) *SC/ST Education*: The College took initiative in contacting the State departments of tribal welfare and making special provisions for admitting candidates from weaker sections of the society. One hundred and sixty such candidates are expected to join different courses in the coming session. Besides, taped and illustrated lessons using tribal/local environment for teaching Science at the Middle School were prepared.
- (b) *Population Education*: Four in-service programmes were organized for preparing scripts for puppetry. The material developed is under scrutiny and will be published thereafter.
- (c) *Vocationalization of Education at +2 Stage*: The vocational courses in (i) English Stenography and Typing and (ii) Basic Electronics Technology continued to be run on the CBSE pattern.

Participation in International Programmes

Prof. J.S. Rajput, Principal, Regional College of Education, Bhopal, participated as a Resource Person in the International Workshop on Physics Teaching organized by UNESCO and the University Grants Commission of Pakistan, held at Lahore from 17 August to 26 August 1985. He presented two papers: (i) "Approaches in Teaching Programmes in Physics" and (ii) "Approaches in Teaching of Physics at Senior Secondary Level". Prof. Rajput also presided over one of the sessions on "Unit of Physics".

Dr. R.P. Singh, Professor, Department of Science, and Dr. S.P. Sharma, Reader, Department of Science, visited the U.K. for orientation in "Computer Literacy and Studies in School" under the CLASS Project from 14 March to 6 June 1985.

Regional College of Education, Bhubaneswar

The Regional College of Education, Bhubaneswar, offers a four-year Integrated Course leading to B.Sc. (Hons) B.Ed. 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.

Enrolment

The enrolment in different courses during 1985-86 was as follows.

(A) Pre-service Courses

<i>Name of the Course</i>	<i>Enrolment</i>
4-year B.A. B.Ed. 1st year	60
2nd year	55

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3rd year	45
4th year	30
4-year B.Sc. B.Ed. 1st year	85
2nd year	80
3rd year	73
4th year	61
One year B.Ed. Secondary Science	98
One-year B.Ed. Secondary Arts	60
One-year B.Ed. Secondary Commerce	18
One-year B.Ed. Elementary Arts	13
One-year B.Ed. Elementary Science	8
One-year M.Ed.	23
Two-year M.Sc. (Life Science) Ed.	
1st year	19
2nd year	10
Total	<u>747</u>
B. In-service Courses	
B.Ed. SS/CC Secondary 1st year	176
2nd year	243
B.Ed. SS/CC Elementary 1st year	75
2nd year	88
Total	<u>582</u>

Results

The results of the University examinations for B.A. B.Ed. Part III and M.Sc. (Life Science) Ed. Part I were 100 per cent and for all other courses the results ranged between 70 and 98 per cent.

Extension Services

The College has organized 11 extension services programmes under non-Plan and four programmes under Plan at different venues for

the orientation of school teachers of the various States of the Eastern Region. These programmes are: a production-cum-orientation camp for the secondary school teachers of Orissa and Bihar teaching Oriya as the first and second language; a workshop for the preparation of model questions in Mathematics for Classes VI to X for the State of Tripura; a workshop on new trends in education for the secondary school teachers of the Eastern Region; content enrichment programme in Biology for the secondary school teachers of the Eastern Region; orientation courses in Physical Education for the secondary school teachers of the Eastern Region; Research Methodology for research scholars and teacher-educators of the Eastern Region; Environmental Biology with emphasis on Pollution Problems for the teachers of West Bengal; orientation programme for the secondary teachers of Meghalaya in new trends in content and teaching in General Science; orientation programme for the secondary school teachers of Mizoram in new trends in content and teaching in General Science; orientation programme for secondary school teachers in content and teaching of Mathematics for Meghalaya and Mizoram and workshop for the preparation of syllabus for the postgraduate teacher education programme in vocational subjects under non-Plan and Workshop for Scheduled Tribe teachers working in elementary schools of Orissa; workshop for Scheduled Caste teachers working in elementary schools of Bihar; workshop for Scheduled Tribe teachers working in elementary schools in Assam; and workshop for Scheduled Caste teachers working in elementary schools of Orissa under Plan.

Besides, the College took up a scheme for massive in-service training of the secondary school teachers of Orissa in the subjects of English, Geography, Mathematics and General Science. The instructional materials prepared by the respective Boards of Writers were reviewed and edited by editorial boards under the guidance of the Board of Secondary Education, Orissa, and the edited materials were printed in

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the form of booklets. Then four orientation courses for the State-level key persons of Orissa in English, Geography, Mathematics and General Science were organized by the College at four different venues in collaboration with the Board of Secondary Education, Orissa, and the key persons were trained with the help of the printed materials.

Under the National Population Education Project, the College conducted two workshops: Regional Seminar-cum-Workshop for Professors of Education of the Eastern States at Calcutta from 9 December to 11 December 1985 and National Population Education workshop at Puri Zila School, Puri, from 16 December to 20 December 1985.

Innovative Programmes

As part of the innovative practices and socially useful productive work, the Technology Department of the College has undertaken production of spit pot with stand to meet the requirement of the College. The production work is being assisted by the students of +2 vocational stream in Structure and Fabrication Technology. As a step further in this direction, the Technology Department has arranged placement in various establishments, firms and factories and the students were deputed for a four-week on-the-job training. The College has been recognized as one of the resource centres for CLASS Project computer training for teachers.

Co-curricular activities were witnessed during the annual cultural week of the College, annual functions of the different hostels and during religious and other special functions of the students. The other aspects of this programme are the Annual Sports Meet of the College students and the Second Inter-D.M. School Meet (INDEM, 1985) which was organized in the College from 23 to 26 December 1985. The student-participants from the four D.M. Schools located at Ajmer, Bhopal, Bhubaneswar and Mysore along with their coaches and officials participated in this colourful function.

Research Activities

The faculty of the College offers guidance for research leading to doctoral degrees in Education, Humanities and Science. The M.Sc. (Life Science) Ed. and M.Ed. students of the College have conducted research projects as a requirement of their course in various priority areas in Science and Mathematics and Education.

Two research scholars submitted their Ph.D. theses in Botany under the guidance of Prof. M.V. Ramji to the Utkal University. One of them was awarded the degree. Four Ph.D. theses have been submitted to the Utkal University under the guidance of Dr. K.C. Panda. Besides, nearly twenty research scholars are working for their doctoral degree under the education faculty.

Faculty Participation in International Programmes

Dr. M.V. Ramji, Professor and Head of Science Department, participated in the discussion relating to science curriculum at the school level held at the NCERT headquarters.

Dr. K.S. Rao, Professor in Science, was deputed to the UK under the CLASS Project scheme to receive training on B.B.C. micro computers and software development for four months at Moray House College of Education, Edinburgh, and Homerton College, Cambridge. He returned to Bhubaneswar after the completion of training in July 1985. Prof. K.S. Rao also attended a workshop held at the NCERT headquarters, New Delhi, for preparing the final version of resource material for teachers.

Dr. B.K. Sharma, Reader in Physics, participated in the Regional Training Workshop for Science Curriculum Developers and Teacher-educators, organized by UNESCO at Islamabad (Pakistan). Dr. Sharma presented two papers in the workshop. He also participated in the workshop to review the manuscripts of the textbook in Physics Part II for secondary schools held at the NCERT headquarters. Dr. Sharma presented two research papers—one in the Second Interna-

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tional Symposium on Hydrogen produced from Renewable Energy, held in the USA from 22 to 25 October 1985 and the other in the Sixth World Hydrogen Energy Conference (WHEC) held in Austria from 20 to 24 July 1985.

Dr. J.K. Mohapatra, Reader in Physics, proceeded to London for undergoing training in the AISEP as offered by the British Council Division.

Regional College of Education, Mysore

The Regional College of Education, Mysore, offers a four-year B.Sc.Ed. Degree Course, a four-year B.A.Ed. Degree Course, a one-year B.Ed. (Secondary) Course, a one-year B.Ed. (Elementary) Course, a one-year M.Ed. Course and a two-year M.Sc.Ed. Course in Chemistry, Physics and Mathematics. It also offers the facility to candidates to register themselves for the Ph.D. degree in Science and Education.

The enrolment in different courses during the

year 1985-86 was as follows.

Pre-services Courses	
M.Sc. Ed. (Chemistry)	34
M.Sc. Ed. (Mathematics)	30
M.Sc.Ed. (Physics)	38
M.Ed.	25
B.Ed. (Sec.)	77
B.Sc.Fd.	229
B.A.Ed.	115
Total	<u>548</u>

For want of eligible candidates no enrolment was made during 1985-86 in B.Ed. (Elementary Education).

Results

The results of the year 1985 of the students enrolled/on roll during the academic session 1984-85 in different courses are as follows.

S.No.	Course	Total Enrolled	Total Appeared	Total Passed	Pass Percentages
1.	M.Sc.Ed. (Chemistry) Fourth Semester	22	22	21	95.45
2.	M.Sc.Ed. (Mathematics) Fourth Semester	13	13	9	69.23
3.	M.Sc.Ed. (Physics) Fourth Semester	11	9	6	66.66
4.	M.Ed. Second Semester	25	23	20	86.95
5.	B.Ed. (Secondary) Second Semester	79	79	71	89.87
6.	B.Sc.Ed. (Eighth Semester)	45	45	36	80
7.	B.A.Ed. -do-	18	18	17	94.44

In-Service Programmes and Extension

72 During the year under review 1,108 teachers/

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

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<i>S.No.</i>	<i>Programme</i>	<i>No. of Participants</i>
1.	Workshop for the Development of Sample Unit Tests in Chemistry for the IX and X Standards of Karnataka	15
2.	Workshop for the Development of Resource Material in Chemistry for Use in CCEs	21
3.	Orientation Workshop for the AEOs and IOs under Akshara Sena Programme	66
4.	Training Course on Teaching Accountancy to the Teachers of Commerce at +2 Stage	29
5.	Workshop for the Development of Resource Material in Biology	34
6.	Orientation Workshop on Integrated Education of the Disabled	25
7.	Orientation Workshop on Physical Education for Primary Teachers	13
8.	Orientation Programme for Key Personnel of Andhra Pradesh and Karnataka in Sample Survey Methods of Education	10
9.	Orientation Programme in Research Methodology	22
10.	Orientation of Teachers in English at the +2 Level	26
11.	Seminar on Challenge of Education—a Policy Perspective	70
12.	Workshop for Development of Instructional Material for K. V. Schools' Teachers	15
13.	Workshop for Developing a Laboratory Handbook in Chemistry for K. V. Schools' Teachers	13
14.	Workshop for Diagnostic Testing and Remedial Teaching in Language (Malayalam)	25
15.	Orientation Programme for Method Masters in English	27
16.	Workshop for the Development of Resource Material in Mathematics	26
17.	Workshop for the Development of Resource Material in Physics for High School Teachers	26
18.	Orientation Programme for the Principals of Junior Colleges on Vocational Education	39
19.	do.	50
20.	Orientation Programme for the Principals of Junior Colleges on Vocational Education	26
21.	Orientation Programme in Geography for Teachers of Kerala	42
22.	Follow-up Workshop on Diagnostic Testing and Remedial Teaching in Malayalam	14
23.	Orientation Programme for Lecturers of English of Junior Colleges in Mysore City	30
SC/ST Education		
1.	Content Enrichment Programme for Primary School Teachers	40

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<i>S. No.</i>	<i>Programmes</i>	<i>No. of Participants</i>
2.	Workshop on Teaching Aids for the Primary School Teachers (adopted schools)	49
3.	Workshop for the Preparation of Teaching Aids for the Adopted Primary School Teachers	60
4.	Education Development of SC/ST School Teachers	60
5.	Content Enrichment Programme for SC/ST School Teachers	40
6.	Content Enrichment Programme for SC/ST School Teachers	40
7.	Content Enrichment Programme for SC/ST School Teachers	44
Population Education		
1.	Orientation-cum-Training Programme on Population Education	30
2.	Orientation-cum-Training Programme on Population Education	20
3.	Development of Visual Materials on Population Education	10
4.	Seminar on Population Education	15
5.	Orientation-cum- Training Programme for the Teacher-educators of Andhra Pradesh	36
Total:		1108

Research Activities

The College has undertaken research studies on

different aspects of school education as mentioned below.

<i>S.No.</i>	<i>Research Project</i>	<i>Investigator Incharge</i>
1.	Acceptance, Awareness and Impact of RCE, Mysore Programme (ERIC-sponsored project)	Dr. D.S. Babu Dr. S. Dandapani Dr. N.N. Prahallada
2.	A Comparative Study of the Effectiveness of open-ended Approach of Doing Physics Experiments versus Traditional Approach at Higher Secondary Stage (ERIC-sponsored project)	Dr. S.G. Gangoli Shri C. Gurumurthy

Publications

The following are a few publications brought out by the college:

Population Education—a Manual for Teacher-educators Edited by C. Seshadri and U.S. Madhyastha

Internship in Teaching Compiled and Edited by N.B. Badrinarayan

Studies in Educational Theory and Practice—a Collection of Articles and Research Papers by RCEM Faculty

Objective-based Teaching and Testing in

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Chemistry by K.N. Tantry, A.S. Janardhan and V.K. Kesavan

Chemistry through Interesting Experiments

Handbook of Laboratory Techniques in Chemistry

Compensatory Education Materials for the

Department of Cognitive and Linguistic Skills for

Scheduled Caste Children of Mysore District

Investigatory Projects in Chemistry, Edited by

A.S. Janardhan and T.J. Vidyapathy

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 practices in school education and teacher education.

The enrolment in different Demonstration Schools during the year 1985-86 was as follows:

Demonstration Multipurpose School, Ajmer	890
do. Bhopal	839
do. Bhubaneswar	1,145
do. Mysore	956

The results of the Board Examinations conducted during March-April 1985 were as follows:

<i>School</i>	<i>Class</i>	<i>No. of Students Appeared</i>	<i>No. of Students Passed</i>	<i>Pass Percentage</i>
DMS, Ajmer	XII	72	69	96
	X	71	65	93
DMS, Bhopal	XII	23	20	87
	X	59	59	100
DMS, Bhubaneswar	XII	49	44	89.7
	X	81	71	87.6
DMS, Mysore	XII	8	7	87.5
	X	76	64	84.2



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EDUCATIONAL TECHNOLOGY

WITH a view to giving a boost to the promotion of educational technology for improvement and spread of education in the country, the Central Institute of Educational Technology (CIET) was set up in May 1984, by the merger of the erstwhile Centre for Educational Technology and the Department of Teaching Aids of the NCERT. The CIET, headed by a Joint Director, functions as one of the constituent units of the NCERT with a good measure of autonomy.

Realizing the potential of educational technology in solving problems in education in the country, the CIET has undertaken multi-dimensional programmes to maintain pace with the increasing demands in this area. Efforts have been continued to design, implement, produce and evaluate various systems/media programmes in this respect. In addition, training programmes to develop competencies in various areas of educational technology, and research

and development activities were undertaken. Collaboration has been maintained with various States and national and international agencies. A three-year UNDP project, INSAT for Education, was signed by the Government of India in February 1984. An account of salient activities undertaken during the year is given below.

Research

The CIET completed a three-tier research study pertaining to Educational Broadcasts of All India Radio, Bangalore, from the production point of view. A panel of 50 teachers and students from the districts of Dharwar and Tunkur were trained in evaluation techniques; 25 randomly selected broadcast programmes were evaluated; the production personnel, script-writers, consultative panel members and educational authorities were also interviewed. The project report is at the writing stage. The details of on-going research studies are as follows:

On-going Research Projects

<i>Title of the Project</i>	<i>Duration of the Project</i>	<i>Date of Commencement</i>	<i>Progress Made</i>
Curriculum for Educational Radio	On-going	April 1983	A meeting of the experts was held wherein a project to develop radio curriculum for school broadcasts was discussed. It was recommended that, as a next step, we should sit with the teachers and find out their needs.
Pre-telecast testing of ETV Programmes	One year	April 1985	ETV programmes were tested with the children to find out their reaction and comprehension of the programmes. In all, seventeen programmes were pre-tested. In addition thirty-five programmes were pre-viewed by the faculty. Feedback was also collected from the field investigators and by visiting the field. The feedback reports were prepared and circulated among all concerned.

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<i>Title of the Project</i>	<i>Duration</i>	<i>Date of Commencement</i>	<i>Progress Made</i>
Evaluation Studies in respect of Educational Programmes of INSAT for the Children and the Teachers of Primary Schools	One year	April 1985	<p>A one-day workshop was also conducted to evaluate five ETV programmes designed for the primary school teachers.</p> <p>An audience profile study was conducted in the INSAT districts of Uttar Pradesh for the benefit of the Programme Planners.</p> <p>An attempt was made to monitor the utilization of ETV programmes in Orissa, Maharashtra and Gujarat, and to identify the factors affecting the utilization. The reports are under preparation.</p>

Training

Training Courses Organized during 1985-86

<i>Courses</i>	<i>Duration</i>	<i>Venue</i>	<i>No. of Participants</i>
Orientation Courses in Educational Technology for Teacher-educators from Uttar Pradesh	10 to 22 June 1985	CIET I.P. Wing	15
Training Course in Educational Technology and its Application in the Production for AV Materials Particularly Tape-slides	22 July to 3 August 1985	do.	15
Training Course in Photography	2 to 13 September 1985	do.	14
Training Course in Educational Technology for Haryana State	7 to 18 October 1985	Hissar	24
Training Course in Educational Technology and its Application on the Production of AV Materials Particularly Charts	14 to 25 January 1986	CIET I.P. Wing	19
Training Course in Educational Technology for Teacher-educators from the States of Madhya Pradesh, Maharashtra, Gujarat and Goa	3 to 14 March 1986	do.	19
Integrated Training Course for Scriptwriting and Production of Audio/Radio Programmes for Educational Purposes	13 November to 13 December 1985	CIET New Delhi	15
Training Course in ETV Production and Technology Operations	Six weeks	do.	54
Training in Technology Operation, Scriptwriting and Graphics	One month	do.	3
In-service Training in the ETV Programme Production	10 days	do.	1
Orientation Workshop on Writing Lessons for Distance Education for the University of Kashmir and Jammu	10 days (4 to 13 July 1985)	University of Kashmir, Srinagar	30
Orientation Workshop on Writing Lessons for Distance Education for Tutors of Correspondence Institutes of Allahabad, Delhi and Cuttak	10 days	Allahabad	35
		Total	<u>244</u>

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Developmental Activities

Workshops and Working Group Meetings

<i>Title of the Programme</i>	<i>Duration (Dates)</i>	<i>Venue</i>	<i>No. of Participants</i>	<i>Remarks</i>
Workshop to Discuss and Improve Programme Briefs in Mathematics for ETV Programmes	22 to 27 July 1985	SIET, Patna	9	
Workshop to Finalize Scripts in Mathematics for ETV Production	3 to 12 February 1986	SIET, Lucknow	10	
Workshop on Low-cost Teaching Aids for the Rural Primary School Teachers of Delhi	5 days in January 1986	do.	30	Each participant prepared one low-cost teaching aid during the workshop.
Workshop on Evaluation of Two films "SUPW" and "Ungraded Schools".	17 to 19 February 1985	CIET, N. Delhi	12	A report has been finalized for dissemination.
Working Group Meeting on the Editing of Mathematics Teaching Aids	December 1985	Madras	8	Editing of nearly eighty Mathematics Teaching Aids was done.
SIETs/SCERTs Coordination Meeting	Two days	CIET, N. Delhi	5	A status report of SIETs in respect of recruitment, programme production, studio, equipment, etc., was prepared.
Orientation Workshop in the Production of TV Programmes	Four Days	do.	54	
Workshop on the Development of Programme Briefs for ETV Production	1 day 10 June 1985	do.	19	A publication entitled "Programme Briefs for ETV Production" was brought out.
Workshop to Prepare a Handbook on Evaluation of Students' Assignments in Distance Teaching Institutions	3 days 11 to 14 March 1985	RCE, Bhopal	8	
			Total	155

Besides the above-mentioned programmes a Working Group Meeting on the assessment of Mathematics teaching aids was also held in August 1985. It was attended by ten participants who assessed eighty teaching aids in Mathematics.

Development of Instructional Materials

Preparation of Self-learning Cards in Mathematics for Single-teacher Schools at Primary Level: One thousand cards in Mathematics were finalized and are ready for printing.

Production of Tape Slides on "Valency": Tape slides on Valency along with brochure and manual have been prepared and tested. One hundred sets are under preparation for dissemination.

Production of Video Programme on Low-cost Teaching Aids: In May 1985 five programmes on video in the area of Low-cost Teaching Aids for telecast through INSAT-1B were developed and two programmes on Low-cost Teaching Aids were prepared in March 1986.

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Development of Charts/Tape Slides/Portraits:

(i) The CIET developed charts in Biology and Physics for Classes IX and X to train teachers and teacher-educators and Counsellors as per these details: (a) Twenty-two charts in Biology along with teaching notes were finalized. (b) Rough lay-out of 20 charts in Biology Series II was developed. (c) Art work on a series of 20 charts in Physics is being finalized. (ii) Three charts for Primary Schools (UNICEF) were developed. (iii) Work on the production of Tape Slides/AV material for the departments of the NIE and portraits of national leaders was also taken up.

Production of Films: Under a collaborative programme of the NCERT and the Department of Education, Rajasthan the shooting of the film on Non-Formal Education has been completed.

Shooting and editing of the film on Solar Eclipse has been completed. The production of the film "SUPW" has been completed. The script, location survey and shooting of the film "Desert Area Aravali Ranges" have been completed. The film on "Technique of Photography" has been completed.

Dubbing of Films in Hindi: The dubbing of the films "Science is a Part of Life" and "SUPW" has been completed.

Miscellaneous Cultural Exchanges: Three films were sent to the IR Unit of the NCERT under the Cultural Exchange Programme.

Besides producing ETV programmes and photographs for the various departments of the NCERT, the CIET prepared duplicate prints of various films for dissemination. The CIET received a request from the Education Department, Addis Ababa, Ethiopia, for the supply of films worth Rs. 30,000. Formalities have been completed. The supply will be effected in August 1986.

Audio Tapes for Teaching Hindi as Second Language: Twenty-five programmes were devised and produced for teaching Hindi as second

language to children of Orissa who had studied Hindi in their schools for two years. These audio programmes were played back to the intended audience in Orissa and an evaluation was made whether they were able to understand stories contained in these programmes. Positive results were obtained. Recordings of the reactions of the children to these programmes are available. A workshop was organized in Orissa to develop 20 briefs for preparing more programmes.

ETV Production: During the year the CIET-produced 89 programmes for INSAT transmission to be telecast every day under the Government of India project for six INSAT States. Out of these programmes 33 were for the children in the age-group 5-8, 33 for the children in the age-group 9-11, and 23 for teachers. These programmes are meant for curricular enrichment in the various school subjects and cater to the needs of both school-going and out-of-school children. All these programmes have been dubbed into Oriya, Telugu and Marathi; the programmes for teachers were also dubbed into Gujarati. There is a 45 minutes' telecast from 9.00 a.m. to 12.45 p.m. on every Wednesday and Thursday for the rural school children and on Saturdays for teachers.

Educational Radio/Audio Programmes: Fifty-eight audio programmes were produced under these titles: (i) Interview with Freedom Fighters; (ii) Audio Tapes for Teaching Hindi as Second Language to the School Children of Orissa; (iii) Programmes Developed by Trainees.

Consultancy

Consultancy was provided to the SIET, Lucknow, with regard to Scripts. About eighty Scripts were finalized for the SIET.

Extension Programmes

Extension Programmes organized during 1985-86 are mentioned below:

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Extension Programmes Organized during 1985-86

<i>Title of the Programme</i>	<i>Duration</i>	<i>Venue</i>	<i>No. of Participants</i>	<i>Remarks</i>
Training of Siksha Karmies in Content-cum-Method of Teaching Mathematics	21 to 27 December 1985	SWRC, Tilonia	25	—
National Seminar on Audio Tapes for Children	2 to 6 September 1985	NCERT, New Delhi	47	The report of the seminar is available. Five hundred radio sets were provided to ET Cell, Jaipur, for distribution in the schools for listening to radio programmes. UNICEF funds were utilized for this.
International Conference on ETV for Children of Developing World	17 to 21 March 1986	Indian Institute of Foreign Trade, New Delhi	16	The report of the Conference is available.
National Workshop on Educational Television as an Alternative System of Education	24 to 27 February 1986	CIET, New Delhi	36	—
Seminar on Distance Education for Senior-level Administrators of Department of Education, Uttar Pradesh	10 to 11 April 1986	Directorate of Education, Lucknow	50	—
			Total	174

Activities Relating to Technical Planning Operation and Maintenance Division

For the implementation of the project "INSAT for Education" launched by the Ministry of Education, six production centres were required to be set up in the six INSAT States besides the CIET's ETV Studio in Delhi. This work was awarded to Bharat Electronics Limited, on a turnkey basis and an order for Rs. 1,49,33,688 for the CIET ETV Studio and Rs. 9,19,732 for six Production Centres in the six INSAT States was placed with them.

ETV Studio and Programme Production

The installation and testing of the colour equipments in the CIET ETV Studio, Control Room and Telecine Room were completed in September 1985. Facilities like three-colour camera chain, vision mixer, Audio Mixer and Tele-

cine Chain (FDL-60) exist in this studio. Since then, the studio has been used for Educational TV Productions which are telecast through the INSAT. Occasions have come when crash programmes like Massive Teacher Training Programmes on National Education Policy in different languages were prepared within a very short period.

SIET Production Centres

The permanent studio building work of all the six SIET INSAT States is nearing completion. Bharat Electronics Limited has to start the installation of the video/audio equipments.

Equipment

For the ENG equipment for the CIET and the six SIETs, orders of the value of Rs. 4,05,10,630 were placed with the Gujarat

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Communications and Electronics Limited, Baroda. The ENG equipment, both to the CIET and the SIETs, has been supplied by the GCEL barring a few items.

CIET Building

The architects have finalized the drawings of the CIET building, taking into consideration the comments made by the users of the above building.

Approval for revised preliminary estimate cost of Rs. 337 lakhs has been given by the Ministry of Human Resource Development. Short-listing of tenders is in process.

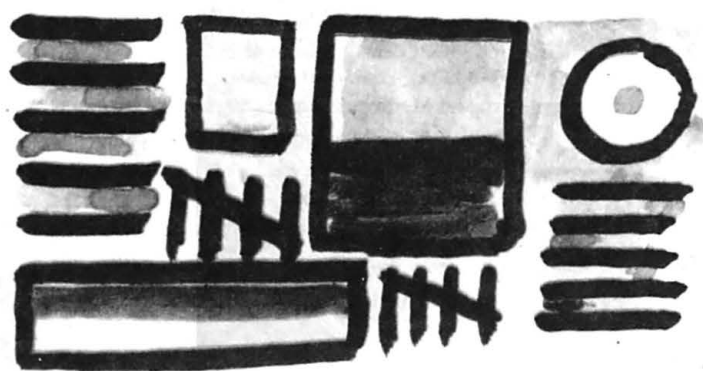
Publications

The details of the publications brought out by the CIET during 1985-86 are given below:

<i>S. No.</i>	<i>Title</i>	<i>Date of Publication</i>	<i>No. of Copies Published</i>	<i>Remarks</i>
1.	Book entitled "Preparation for Understanding" by Keith Warren, translated into Hindi and printed	February 1986	27,000	The album was brought out jointly by the CIET and DESS&H.
2.	India's Struggle for Independence—Visuals and Documents	December 1985	10,000	The album was brought out jointly by the CIET and DESS&H.
3.	Audience Profile of INSAT Districts of Uttar Pradesh	July 1985	250	It is a mimeographed report and was circulated among the SIETs of the INSAT States and all officers concerned with planning for INSAT.
4.	National Seminar on Educational Audio/Radio Programmes for Children	September 1985	250	The report contains 10 papers and suggestions and recommendations of the seminar.
5.	List of Transparencies	December 1985	2,500	List of filmstrips, tape slides and overhead transparencies available with the CIET.
6.	List of Video Programmes	February 1986	2,500	List of video ETV programmes available with the CIET.
7.	First International Conference on Educational Television for Children of the Developing World	March 1986	1,000	The report gives an account of the video programmes played back by the various participating countries, and the discussions that followed.
8.	"Samajh Ke Liya Tayari"—Hindi Translation of "Preparation for Understanding", a UNICEF Publication	June 1986	2,500	Useful for planners and producers of the ETV programmes for young children.

Besides the above-mentioned publications, a Catalogue of Children Literature was brought out

for the use of script-writers and producers of ETV programmes.



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TEN

MEASUREMENT, EVALUATION, SURVEY AND DATA PROCESSING

DEVELOPMENT 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 related 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 car-

rying 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

As part of the efforts to survey the library facilities, buildings, laboratories, educational facilities for the weaker sections, and development of criterion referenced tests, the DMESDP has been engaged in the research pursuits. The work is in progress. The research projects are mentioned below.

Research Projects of DMESDP

<i>S. No.</i>	<i>Title of the Project</i>	<i>Duration</i>	<i>Principal Investigator</i>	<i>Date of Commencement</i>	<i>Date of Completion</i>
1.	Development of Criterion Referenced Tests in Environmental Studies at the Primary Stage	Two years (likely to be extended)	Prof. Pritam Singh	December 1983	—
2.	Intensive Study of Science Laboratories in Secondary and Higher Secondary Schools	Two years	Dr. K.K. Rao Shri M.K. Gupta	August 1985	August 1987
3.	Sample study of Library Facilities and Their Utilization in High and Higher Secondary Schools of the States of Assam, Gujarat, Haryana and Tamil Nadu	Two years	Dr. C.L. Kaul Shri J.K. Gupta	April 1985	March 1987
4.	An Intensive Study of Secondary and Higher Secondary School Buildings in the States of Bihar, Himachal Pradesh, Karnataka and Madhya Pradesh	One and a half years	Shri Pushendra Kumar and Shri S.C. Mittal	January 1986	July 1987
5.	Survey of Educational Facilities for Weaker Sections of the Society, viz. the Scheduled Tribes in Orissa	15 months	Shri S.M. Bhargava	July 1985	December 1986

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Training in Educational Evaluation

With a view to developing objective-based, comprehensive and scientific evaluation procedures, the DMESDP has been engaged in the development of sample evaluation materials in the form of items and unit tests in different subject areas and the training of teachers, teacher-educators, and other personnel involved in educational evaluation and examination reform.

A number of pre-service and in-service training programmes for training teacher-educators, personnel at the State/Union Territory level engaged in the testing, evaluation and examination reform and paper-setters of examinations conducted by various Boards of Secondary/Higher Secondary Education were conducted during 1985-86. Five seven- or eight-day courses were organized to train item writers in History, Mathematics, Physics, Biology and Economics. One hundred and twenty-nine persons were trained in writing test items through these courses. Four seven-day training courses in sample survey methods were organized. These training courses were attended by 78 persons. Eight programmes were organized for the improvement of external examinations of the Boards of Secondary Education. Four hundred and seventy-three persons from Rajasthan, Assam, Haryana, Bihar, Orissa, and Manipur were trained in the recent techniques of examination reform. The other training activities carried out included a one-month training course for the Services personnel, a one-month All India Training Course in Educational Evaluation, a ten-day evaluation course for Minority Communities and a five-day evaluation course for public schools. One hundred and ninety-seven persons participated in these courses.

Developmental Programmes

The DMESDP undertook various developmental programmes during 1985-86. The outcomes of these programmes are mentioned below.

About 70 comprehension exercises in English were developed through a 10-day programme attended by 13 participants. It is intended to compile these exercises in two volumes and print them for wider circulation to students and teachers of Classes VIII, IX and X.

A seven-day workshop on the preparation of question bank in history yielded objective-based questions of different forms in History for Class XI. It was attended by 11 subject experts.

Twenty papers were presented in a two-day seminar on Open Book Examinations. Nine issues on the topic were debated in the seminar. A paper entitled "Outcomes of the Seminar on Open Book Examinations", including the preamble, issue-wise recommendations, researchable titles and the objectives to be used for developing questions for the Open Book Examinations, has been circulated for comments among the participants and the experts who showed interest in this area. Twenty-one academicians and evaluation experts participated in the seminar.

A scheme of evaluation in vocational subjects for the +2 stage was prepared in a four-day seminar held at Bangalore in collaboration with the Vocational Education Unit of Karnataka. Nine persons participated in the seminar.

In a seven-day workshop on the development of question bank in science for Class VI, about 2,500 objective-based questions of different forms were prepared on all the chapters of the book "Learning Science, Part I" for Class VI. It is proposed to circulate these questions among schools so that the teachers may use them for improving pupils' achievement and its evaluation. Twenty-one teachers participated in the workshop.

Unit tests and exercises were developed in Practical Geography through a eight-day workshop attended by 29 subject experts. It is intended to circulate these tests and exercises among schools.

An eight-day workshop on the development of sample questions for senior secondary classes

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in Biological Sciences yielded about 3,000 questions of different forms in Biology for Class XI. Twenty-four teachers participated in the workshop. These questions will be improved and edited and will be brought out in book form for the wider use of students and teachers.

A scheme of internal assessment of vocational subjects was developed for Karnataka schools through two workshops of three or four days' duration. Thirty-nine persons participated. The scheme was finalized in a subsequent meeting and a draft manual was prepared.

A six-day workshop was organized at Coimbatore for developing a scheme and methodology

for evaluating non-scholastic traits of pupil growth at the primary school stage. Twenty persons participated in the workshop. The scheme has been developed and will be refined, finalized and sent to SCERTs and SIEs for use in schools.

Consultancy and Extension Activities

DMESDP provides consultancy to the Boards of Secondary Education, Universities and other organizations like Defence Services. The following table presents an account of the consultancy provided by the DMESDP during 1985-86.

Consultancy Provided during 1985-86

<i>S. No.</i>	<i>Organizations Seeking Consultancy</i>	<i>Purpose of Consultancy</i>
1.	Defence Services, India (Army, Air Force, Navy)	To train the defence personnel engaged in training officers, recruits, etc., in the concept of evaluation, evaluation techniques and planning and implementing the new strategies of evaluation.
2.	Aligarh Muslim University	To train the Professors, Readers and Lecturers of the Aligarh Muslim University in writing objective-based items of different forms in the subjects of Physics, Chemistry, Biology, Mathematics, History, Geography, Economics and English.
3.	Madhya Pradesh Board of Secondary Education	To train the paper-setters of the Madhya Pradesh Board of Secondary Education in setting good question papers in English, Mathematics, Physics, Chemistry and Biology. To prepare model question papers for High School Examination conducted by the Madhya Pradesh Board of Secondary Education.

National Talent Search

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

mended to the NCERT for the Second Level Test. The second examination at the National Level was held by the NCERT on 14 July 1985 to select the requisite number of awardees. The National Level Test was conducted by the NCERT at 29 centres all over India. Some Indian students residing abroad also appeared in the National Level Test. The details are given below.

1985-86

Number of NTS Scholarships Awarded during 1985

Class	No. of Students Appeared in Second Level Test	No. of Scholarships Awarded (General)	Reserved Scholarships Awarded to SCs and STs
X	2,849	680	70

Total Number of Scholars on the Rolls (including the awardees of 1985)

Stage +2 stage	Number of Scholars			Total	
	UG	PG	Ph.D.		
1,125	2,917	349	83	4,474	(including 254 for SCs/STs)

Statement Showing Number of Candidates Selected under National Talent Search Scheme, 1985

S. No.	State/Union Territory	Quota Allotted	Selected		Total
			General	SC/ST	
1.	Andhra Pradesh	190	33	6	39
2.	Assam	130	4	—	4
3.	Bihar	155	54	14	68
4.	Gujarat	165	6	1	7
5.	Haryana	60	18	—	18
6.	Himachal Pradesh	25	4	—	4
7.	Jammu and Kashmir	25	—	—	—
8.	Karnataka	140	46	4	50
9.	Kerala	275	49	4	53
10.	Madhya Pradesh	225	26	3	29
11.	Maharashtra	305	148	24	172
12.	Manipur	25	—	—	—
13.	Meghalaya	25	1	—	1
14.	Nagaland	25	—	—	—
15.	Orissa	110	26	2	28
16.	Punjab	100	23	1	24
17.	Rajasthan	150	39	5	44
18.	Sikkim	25	2	—	2
19.	Tamil Nadu	235	68	3	71
20.	Tripura	25	5	1	6
21.	Uttar Pradesh	445	30	1	31
22.	West Bengal	175	39	1	40
23.	Andaman and Nicobar Islands	10	—	—	—
24.	Arunachal Pradesh	10	—	—	—

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25. Chandigarh	10	4	—	4
26. Dadra and Nagar Haveli	10	—	—	—
27. Delhi	55	50	—	50
28. Goa, Daman and Diu	15	2	—	2
29. Lakshadweep	10	—	—	—
30. Mizoram	10	—	—	—
31. Pondicherry	10	2	—	2
32. Candidates from abroad	13	1	—	1
Total	3,188	680	70	750

Data Processing

The main activities of the Data Processing Wing of the Department have been to transfer data on input media of the computer, develop software and finally process the data on the computer. The task of data processing concerning various research projects of different Departments/Units of the NCERT, including the processing of the results of the National Talent Search Examination and development of merit

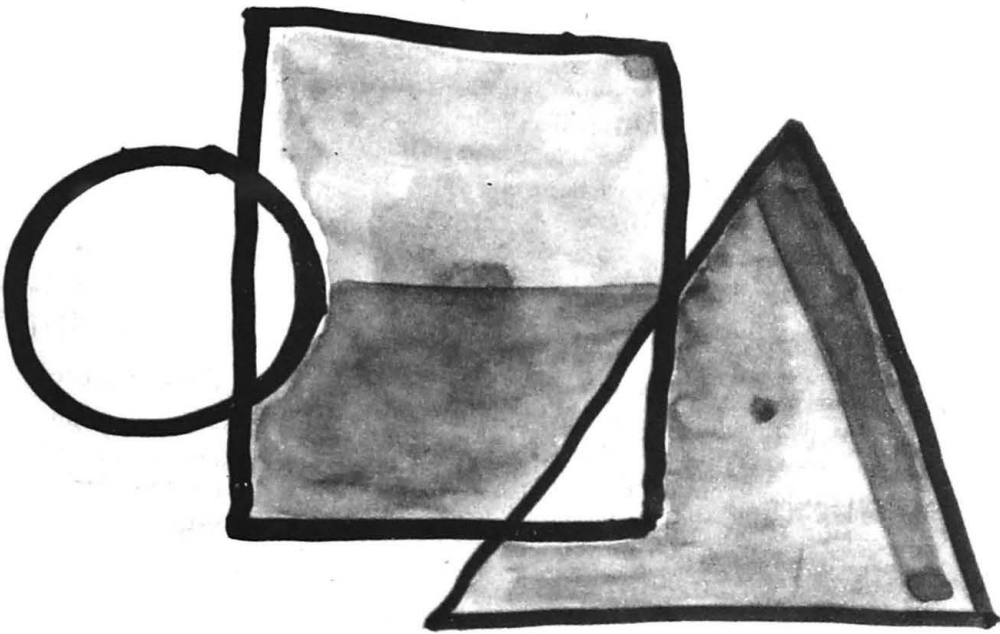
lists, etc., was carried out.

In addition to the above, the other activities carried out were:

1. Effecting the selection and purchase of New Computer System—OMEGA SUPERSTAR.
2. Providing help and guidance in the application of Statistical Methods and research areas, like education and psychology.

Publications Brought out during 1985-86

<i>S. No.</i>	<i>Title</i>	<i>Date of Publication</i>	<i>No. of Copies Published</i>
1.	Unit Tests in English (Course A) for Class X	April 1985 (cyclostyled)	200
2.	Sample Unit Tests in English	November 1985 (printed)	5,000
3.	National Talent Search Examination 1984—an Appraisal	November 1985 (cyclostyled)	200
4.	Diagnostic Evaluation and Remediation for Effective Learning	January 1985 (cyclostyled)	200
5.	Handbook of Evaluation in Economics	April 1985 (cyclostyled)	200
6.	Handbook of Evaluation in English	(sent for printing)	...
7.	Handbook of Evaluation in Geography	(sent for printing)	...
8.	Test Items in English Language (for Secondary Classes)	(sent for printing)	...
9.	Read, Understand and Answer, Vol. I (Comprehension Tests in English)	(ready for printing)	...
10.	Evaluation at the Elementary Stage (a Book of Readings)	January 1986 (printed)	1,000
11.	Educational Evaluation	January 1986 (cyclostyled)	200
12.	Developing Unit Test (Biological Sciences)	April 1986 (cyclostyled)	100
13.	The Rajasthan Scheme of Comprehensive Internal Assessment (ERIC Project Report)	August 1985 (cyclostyled)	100



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POLICY RESEARCH, PLANNING AND PROGRAMMING

THE 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 1985-86 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.

New Strategy for National Character Research

In the past, the Council, in its ERIC scheme, had supported only time-bound research projects formulated by individual researchers and academicians by providing requisite funds on a consolidated basis. While this type of support to individual projects continued, the ERIC decided to commission researches of national character in the priority areas so that these could be the basis

for policy decisions in the context of the Five-Year Plans. The strategy for commissioning research includes:

- (i) Identification of thrust areas through national seminars and listing problems and issues that should be investigated.
- (ii) Preparation of research designs by multidisciplinary teams.
- (iii) Identification of centres of research with requisite expertise and facilities for conducting a particular research.

It is hoped that, in due course of time, outposts of the ERIC will be developed for carrying out national character researches in three priority areas, viz. Universalization of Elementary Education, Vocationalization of Education and Curriculum Development.

Model for Educational Research

The ERIC has approved a model known as Research, Development, Diffusion and Adaptation Model (RDDA) which emphasizes the perspective of the "Originator" or "Developer" of an innovation. In this model, the educational institutions participate in research, development and pilot testing. It is expected that its implementation will provide wider basis for educational research for policy decisions.

NIE Lecture Series

Under the NIE Lecture Series five eminent speakers were invited to give 'talks' as given in Table 1.

Completed Projects

The research projects completed during the year under report are mentioned in Table 2. This is followed by brief accounts of the main findings of the projects.

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TABLE 1

<i>Speaker</i>	<i>Topic</i>	<i>Date</i>
Prof. J.P. Stoltman Prof. of Geography Western Michigan University Kalamazoo, Michigan (USA)	Computer-assisted Learning in Geography	22 July 1985
Prof. P.J. Kelly Deptt of Education Southampton University (UK)	Science Curriculum for the 90's	31 July 1985
Shri Sushil Dasgupta and his party, West Bengal	Lecture-cum-Demonstration on Songs of 'Freedom and Peace'	14 August 1985
Prof. N.C. Gupta Prof. of Educational Psychology Ball State University, Muncie, Indiana (USA)	Indo-American Differences in Anxiety, Self-concept and Achievement	29 August 1985
Prof. Dr. Jan W. Dobrowolski Instytut, Kształtowania Srowdowiska AGH, 30-059 Krakow, Poland	In and out of Class Environmental Education, New Concepts and Experiences about Interdisciplinary Environmental Education	21 January 1986

TABLE 2

<i>Title</i>	<i>Principal Investigator</i>
Status of Curriculum under 10+2 Pattern in Different States (Delhi, Gujarat, Maharashtra and Tamil Nadu) — a Study	Dr. G.L. Arora NIE (NCERT)
Cognitive Style and Cognitive Ability of Tribal and Non-Tribal High School Pupils—a Comparative Study	Prof. B. De, former Head, Deptt. of Psychology Patna University (Bihar)
A Study of Methods, Processes and Practices of Non-Formal Education Programme for Tribal Students	Dr. L.R.N. Srivastava and Dr. B.S. Gupta NIE (NCERT)
Analysis of Classroom Environment in Tribal Setting with a view to Study Its Effect on Learning and Attainment	Dr. S.N. Upadhyaya, Reader in Psychology Ravishankar University, Raipur (M.P.)
A Comparative Study of the Effectiveness of Open-ended Approach of Doing Physics Experiments vs. Traditional Approach at Higher Secondary Stage	Dr. S.G. Gangoli, Regional College of Education Mysore (NCERT)
A Study of Vocationalization of Education at +2 and +3 Stages in Commerce Stream (Maharashtra State)	Shri H.V. Gokhale, G.S. College of Commerce and Economics Nagpur (Maharashtra)
A Study in the Comprehensibility of Language Used in Science, Social Science and Language Textbooks at Primary Level	Dr. I.S.Sharma, NCERT
Guidance Needs of Children Living in Destitute Homes in Uttar Pradesh	Dr. Sahib Singh Banaras Hindu University, Varanasi
Discalculia amongst First Graders of Choryasi Block: a Psychometric Exploration	Dr. Gunvant Shah and Dr. Shashikant Shah South Gujarat University, Surat

STATUS OF CURRICULUM UNDER 10+2 PATTERN IN DIFFERENT STATES (DELHI, GUJARAT, MAHARASHTRA AND TAMIL NADU)—A STUDY

Principal Investigator: Dr. G.L. Arora

The present study was designed to study how the curricula adopted in the wake of the 10+2 pattern were being implemented in different States. The major objective of the study was to ascertain the extent to which the recommendations of the Education Commission (1964-66) and the National Review Committee (1977-78) along with the guidelines given in the NCERT Document (1975-76) had percolated in the States and the Union Territories of India and to analyse the prescribed curriculum in different States with a view to studying how it was being implemented in actual school settings.

The study was delimited to only four States/ Union Territory, namely, Delhi, Gujarat, Maharashtra and Tamil Nadu, at the first level of implementation, viz., the State Education Departments and the School Education Boards. Fifteen to 20 schools from each State were taken up for the study. The study revealed, as given below, the main characteristics of the curriculum being followed at the secondary and higher secondary stages of school education in the States and the Union Territory under study.

Secondary Stage

- (i) The three-language formula was being implemented in Gujarat, Delhi and Maharashtra but not in Tamil Nadu. In Delhi, it had been diluted. The number of academic subjects ranged from 5 to 7 in these States.
- (ii) In Delhi and Tamil Nadu only two languages, viz., the mother tongue and English were prescribed for the public examination while in Gujarat, Delhi and Maharashtra three languages were prescribed.
- (iii) Science and Social Science consti-

tuted compulsory area of curriculum in all the four States.

- (iv) SUPW had been included in the secondary school curriculum in all the four States and was not a subject of external examination. The expertise of local artisans for SUPW activities had been rarely utilized by the schools and the time allotted to SUPW activities varied from State to State.
- (v) All the States were giving more emphasis on Health and Physical Education. In the opinion of the school principals, the students of the four States were favourably inclined towards Physical Education and co-curricular activities.
- (vi) Weightage given to different subject areas differed from State to State.
- (vii) All the States stated that textbooks were available on time and the students were not facing any difficulty on this account.

Higher Secondary Stage

- (i) In Maharashtra, the +2 stage was located both in the higher secondary schools and degree colleges, whereas in the remaining three States it was in the higher secondary schools only.
- (ii) The courses had been divided into various streams in some of the States.
- (iii) The core curriculum was different in the four States. In Delhi, Maharashtra and Gujarat the students offering the vocational stream had to study only one language while in Tamil Nadu students had to study two languages.
- (iv) The number of vocational subjects was different in different States. Delhi and Maharashtra had prescribed highest number of vocational courses under the Commerce group, while Tamil Nadu had given precedence to agricultural vocational courses.

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- (v) SUPW had been prescribed as an area of higher secondary curriculum (academic stream) in Delhi and Maharashtra under the nomenclature of SUPW and work experience.
- (vi) General Foundation Course had been prescribed by the CBSE for vocational stream students. It was a compulsory area with a time allocation of 13.3 per cent of the total time. Maharashtra and Tamil Nadu had not included it in their curriculum. In Gujarat a curriculum area, titled "General Knowledge" was a compulsory subject in the vocational stream at the +2 stage.

COGNITIVE STYLE AND COGNITIVE ABILITY OF TRIBAL AND NON-TRIBAL HIGH SCHOOL PUPILS—A COMPARATIVE STUDY

Principal Investigator: Prof. B. De

It was a pilot study conducted in a cross-cultural perspective. The principal objective of the study was to investigate cultural difference in the cognitive style, general intelligence and creative thinking of tribal and non-tribal high school students. The samples were drawn from two major tribal communities, the Oraon and the Munda, of Ranchi and their Hindu counterpart students receiving education in Ranchi right from the beginning. The tribal group of 160 students (male and female Christian, Sarna, Oraon and Munda) and non-tribal group of 80 students (male and female Hindu students divided into the high caste and the Scheduled Caste) comprised the sample.

The main findings of the study were:

- (i) The tribals were more oriented towards field dependence and less towards field independence than the non-tribals.
- (ii) Inconsistent trends were observed in the scores when tested in the context of the various sub-groups based on ethnic, religious, sex and caste factors.
- (iii) The male and the female tribal and non-tribal students differed in field depen-

dence. In respect of field independence this difference had not been noticed among the male and the female tribal students.

- (iv) The tribal and the non-tribal students did not differ among themselves with regard to creative thinking.

A STUDY OF METHODS, PROCESSES AND PRACTICES OF NON-FORMAL EDUCATION PROGRAMME FOR TRIBAL STUDENTS

Principal Investigators: Dr. L.R.N. Srivastava and Dr. B.S. Gupta

A status study was undertaken with a view to finding out the efficacy of non-formal education centres run in different States vis-a-vis their objectives and to point out any shortcomings and suggest measures for the improvement. Five States, namely, Andhra Pradesh, Gujarat, Madhya Pradesh, Rajasthan and West Bengal, with 54 centres from 11 districts across these States, were selected for the study.

The study led to the following conclusions:

- (i) All the five sample States had started the non-formal education programme to help children in the age-group 9-14 who were either drop-outs or non-starters.
- (ii) Out of a total of 13,362 non-formal education centres run by the five sample States, 3,323 centres had been opened in tribal sub-plan areas. Total enrolment was 2,29,405 including 52,275 tribal children in the non-formal centres of Andhra Pradesh, Madhya Pradesh and West Bengal.
- (iii) The non-formal education centres were mostly run in the evening or at night in all the States except those run by the Directorate of Primary School Education in West Bengal, which functioned during the day.
- (iv) Except in West Bengal where each centre had two instructors, in all other States each centre had only one instructor. Each centre was run by either a primary school teacher or a local educated youth. In some centres of West

Bengal some of the instructors were graduates. (v) The rates of remuneration varied from State to State ranging from Rs. 50 to Rs. 100 per mensem. (vi) The maximum enrolment figure in each centre in the five sample States was 25 to 30 children. Seventy-two per cent of these were tribal children. (vii) Average attendance at all the centres was more than sixty per cent (viii) No record pertaining to the number of children joining the mainstream of education was available with any agency in the State. (ix) No extra curricular activity/sport activities were being organized for children. (x) Community involvement for effective functioning of the centres was almost nil. (xi) The average expenditure per child was Rs. 122 in Andhra Pradesh, Rs. 75 in Gujarat, Rs. 55 in Madhya Pradesh, Rs. 33 in Rajasthan, Rs. 57 in West Bengal (Secondary) and Rs. 46 in West Bengal (Primary). (xii) Andhra Pradesh, Gujarat, Rajasthan and West Bengal had developed a separate syllabus for non-formal education centre, while Madhya Pradesh has condensed the existing primary school syllabus into 18 units for use in the centres. (xiii) Instructional material was not provided well in advance as the States had not prepared any special instructional material for the centres. (xiv) The instructors at the centres had been using the old chalk-talk method for imparting instruction. (xv) The medium of instruction in all the five States, even at the centres having a predominant tribal population, was the regional language. (xvi) The amount sanctioned against contingent expenditure varied from Rs. 100 to Rs. 1200 per annum paid in irregular fashion in the five sample States.

ANALYSIS OF CLASSROOM ENVIRONMENT IN TRIBAL SETTING WITH A VIEW TO STUDY ITS EFFECT ON LEARNING AND ATTAINMENT

Principal Investigator: Dr. S.N. Upadhyaya

The present study aimed at assessing the three aspects of classroom environment, viz. Interpersonal Relationship, Goal Orientation and System Maintenance where an attempt had been made to see whether learning and attainment were differently correlated with different dimensions and areas of environment. The study was conducted on students of Class VIII, selected from the tribal schools of Dantawada, Jagdalpur, Narainpur, Kondagaon and Kanker Tehsils of Baster district of Madhya Pradesh.

The study revealed:

- (i) The greater the interpersonal relationship, the greater would be the achievement. This was true for the dimensions of Involvement and Affiliation, but not the Teacher Support.
- (ii) Goal Orientation and its two dimensions—Task Orientation and Competition—yielded high positive correlation with school achievement.
- (iii) As regards the System Maintenance and Change, it was also significantly and positively correlated with students' achievement. However, its various dimensions did not show any consistent pattern of correlation. While the dimensions of Order and Organization and Innovation were not significantly correlated with achievement, Rule Clarity correlated negatively and Teacher Control positively.
- (iv) No significant correlation between various aspects/dimensions of class-

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room environment and examination marks (particularly internal examination) was obtained which reflected high unreliability of internal examination.

- (v) Learning efficiency did not seem to depend upon classroom environment.

A COMPARATIVE STUDY OF THE EFFECTIVENESS OF OPEN-ENDED APPROACH OF DOING PHYSICS EXPERIMENTS VS. TRADITIONAL APPROACH AT HIGHER SECONDARY STAGE

Principal Investigator: Dr. S.G. Gangoli .

Open-ended approaches for performing experiments in the laboratory have been recommended by Prof. Rais Ahmed and Gangoli. The present research piece intended to ascertain the effectiveness of performing some of these experiments by the guided open-ended approach, vis-a-vis the traditional method. The study was made on the +2 children of the selected schools in Delhi. The sample comprised 92 students (66 boys and 26 girls).

The findings of the study were:

- (1) The students of the guided open-ended group showed better performance on the achievement test and the skill test than the students of the traditional laboratory group.
- (2) Though in general the development of creative abilities was shown to be independent of the approach, the development of the fluency aspect of creativity seemed to be enhanced by doing experiments in the open-ended way.
- (3) Students of high intelligence level of the guided open-ended group were superior to the students of the high intelligence level of the traditional laboratory group and the students of low intelligence level of the guided open-ended group were superior to the students of low intelligence level of the traditional labora-

tory group on the mean scores of post-achievement test and skill test. Also, within the guided discovery and traditional laboratory groups, the high intelligent students differed markedly from their counterparts with low intelligence level. From this one could conclude that the two approaches, namely, the guided open-ended approach and the traditional laboratory approach, were not affected by the intelligence level of the students.

- (4) Results similar to those in No. 3, showed that the guided open-ended and the traditional laboratory approaches were themselves not affected by the socio-economic status level of the students.
- (5) Results similar to Nos. 3 and 4 showed that the two approaches in this project were not affected by the creative abilities of the students.
- (6) The girls of the guided open-ended group showed better performance than the boys of the guided open-ended group and the girls of the traditional laboratory group were superior to the boys of the traditional laboratory group on the mean scores of post-test and skill test. This also showed that the guided open-ended and the traditional laboratory approaches were not affected by the sex of the students.

A STUDY OF VOCATIONALIZATION OF EDUCATION AT +2 AND +3 STAGES IN COMMERCE STREAM (MAHARASHTRA STATE)

Principal Investigator: Shri H.V. Gokhale

This study attempted to evaluate the existing system of vocational education in Commerce stream at +2 and +3 stages. Data were collected from students, teachers and employers of Nagpur, Aurangabad, Pune and Thana districts of Maharashtra. The findings of the study were:

The students, teachers, employers and experts in general considered these vocational courses to be useful as compared to

the general education. The present vocational courses at the +2 stage would not prepare students for job or self-employment and, therefore, they favoured the proposed specialized vocational courses at the +3 stage where more weightage would be given to the practical aspect of a vocation. Faculty-wise classification of roles and faculty-wise recruitment boards would be useful in linking jobs with education.

A STUDY IN THE COMPREHENSIBILITY OF LANGUAGE USED IN SCIENCE, SOCIAL SCIENCE AND LANGUAGE TEXTBOOKS AT PRIMARY LEVEL

Principal Investigator: I.S. Sharma

In the present study an attempt was made to find out the comprehensibility of language used in the textbooks of Science, Social Studies and Hindi at Grade 3 level in Rajasthan. A comparative study was made between the linguistic content of the three textbooks and spoken and written language of the children belonging to rural and urban areas. Three tests to measure the comprehensibility of language used in Science, Social Studies and Hindi textbooks were prepared and administered on a sample of 500 (250 rural and 250 urban) students.

The linguistic analysis gave the following findings:

(i) The three textbooks were quite inconsistent, in using norms, with the language of the children in rural and urban areas. (ii) In the textbooks, especially those in social studies, more verbs should have been used to satisfy the linguistic needs of the children. (iii) The textbooks in Science, Social Studies and Hindi indicated consistency in the use of adverbs. (iv) A large number of adjectives were used in the three textbooks and in the spontaneous language of the rural and urban children. (v) The percentage of complex sentences in Science and Social Studies textbooks was very low, which is appreciable. (vi) Both the rural and the urban

children had used a large number of simple sentences in their spoken and written language, which was not consistent with the use of simple sentences in Hindi textbooks. A similar situation existed in the case of the Social Studies textbooks and the Science textbook. (vii) A close consistency was observed between the use of the number of words in compound and complex sentences in textbooks and the spoken and written language of the children. (viii) There was inconsistency of the Hindi textbook with the other two textbooks. (ix) It was observed that several nouns, adjectives, verbs and adverbs which had been used in the textbooks and in the spoken and written language of the urban and the rural children were unique in character, i.e., they were used either in the textbooks or by the urban/rural children. (x)

There was a significant difference in the use of sentences between the spoken and written language of the children, the use of sentences in textbooks and the use of sentences by children in their spoken and written language, and the number of sentences used by the rural and the urban children in their spoken and written language. (xi) There was a significant difference in the use of parts of speech between the urban and the rural children in their language. (xii) There was a significant difference in the comprehensibility of language used in the textbooks of Science, Social Studies and Hindi was in the rural and the urban schools while there was no significant difference in the comprehensibility of language scores on the science textbook between the urban and the rural children.

GUIDANCE NEEDS OF CHILDREN LIVING IN DESTITUTE HOMES IN UTTAR PRADESH

Principal Investigator: Dr. Sahib Singh

The present study attempted to assess the needs of children living in destitute homes and to prepare a guidance programme for these chil-

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dren. The research questions were: (i) What are the needs of children living in destitute homes in relation to their intelligence, achievement, interests and adjustment? (ii) What type of guidance should be provided to such children to help them to develop their potentialities to the maximum?

The sample for the investigation consisted of 201 girls and 209 boys living in 25 destitute homes in Uttar Pradesh. Almost all destitute home children reading in Classes VI, VII and VIII were selected for the study.

The findings of the study were as follows:

(i) In destitute homes nearly 20 to 30 per cent children suffered from sickness, headache, fatigue, bad sleep and physical handicaps. Medical facilities for prevention, care and treatment of diseases were not available to nearly one-third of the destitute home children. (ii) Basic requirements of life, such as food, clothes and living conditions, were not adequately fulfilled in nearly half of the destitute homes. (iii) Personal and psychological relationships were strained on account of prevalence of a sense of insecurity, anxiety, frustration, boredom and pseudo-superiority complex in the majority of the destitute home children. Girls succumbed to these stresses and strains more often than boys. (iv) Life in the destitute homes was not conducive to the development of a harmonious social relationship. (v) Curricular and co-curricular programmes were definitely not suited to the needs of the majority of the destitute home children. (vi) Classroom teaching strategies were generally not geared to the needs of 20 per cent destitute home children. The teacher's reluctance to solve their problems, paucity of classroom discussions, indifference to home work correction, lack of remedial measures and partiality in evaluation were some of the complaints which these children had frequently made. (vii) In the area of teacher-taught relationships social distance appeared

red to prevail. (viii) Learning environment in the classroom, in the opinion of a majority of the children, presented a picture of chaos and confusion. (ix) Learning styles of nearly 20 per cent children coming from the destitute homes lacked order and coherence. They adopted haphazard methods of learning. (x) Need of vocational guidance was extremely felt by a large majority of the destitute home children. (xi) The performance of boys on the intelligence test at the age levels 12 and 15 was significantly better than that of girls (xii) In grade levels VI and VII the mean intelligence scores of boys were significantly higher than those of girls. (xiii) The achievement scores of boys and girls of various levels in all the curricular subjects differed significantly. (xiv) Boys had significantly better adjustments than girls in all grade levels. (xv) Subjects preferred by these children in order of importance were Hindi, English, Sanskrit, General Science and Social Studies. (xvi) More than 90 per cent children showed preference for Government service. Girls indicated their preference for nursing.

DISCALCULIA AMONGST FIRST GRADERS OF CHORYASI BLOCK: A PSYCHOMETRIC EXPLORATION

Principal Investigators: Dr. Gunvant Shah and
Dr. Shashikant Shah

The present investigation embodies a complete account of the work carried out with a view to find out the pattern of discalculia amongst the first graders of Choryasi Block (Surat District) and to study the probable psychological courses for it. It aimed at identifying the children suffering from discalculia, studying relationships between the achievement in arithmetic and three psychological factors, carrying out the case study of the ten children having maximum frequencies of discalculia and suggesting ways for decreasing discalculia amongst first graders.

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On the basis of the data collected from 897 subjects the following conclusions were made:

(i) Children were found to be suffering from certain problems regarding family environment, complexes like inferiority, alienation, lack of self-confidence, etc. Parents-child relationship was also not much healthy to motivate and encourage students for better learning. (ii) The mean achievement of children in arithmetic was extremely low. Private school children were found best on evaluation test while the children from the District Panchayat Schools scored the minimum. (iii) The boys were significantly better than the girls on arithmetic achievement scores. Coefficient of correlation between the achievement scores and the IQs was significantly positive but considerably

low. In some cases the IQs were above average level while the achievement scores were very low. (iv) The dyscalculia children followed two patterns of behaviour while answering the evaluation: first not writing anything in the answer paper (left blank pattern) and, second copying the question paper intact instead of giving responses to the questions. Answering without understanding and answering without pre-thinking were also observed while analysing the errors. (v) The case studies revealed that the reasons for academic backwardness amongst children could be other than IQ, school climate, teachers' attitude and family environment affected strongly the achievements of children. All these factors needed to be taken care of properly.

On-going Projects

Thirty-one departmental and twelve outside

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

<i>Title of the Project</i>	<i>Principal Investigator</i>
DEPARTMENTAL PROJECTS	
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 Level 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 Objectives 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 for Girls and Women for Vocationalization of Education	Dr. Surja Kumari
A Comparative Study of the Physical Facilities between Tribal and Non-Tribal Primary Schools	Dr. L.R.N. Srivastava
Identification of Regional-Local Need-based Vocations for Girls and Women for Vocationalization of Education	Dr. (Km.) S. Bisaria
Studying Problems of Indian School Education in a Historical Perspective	Dr. G.L. Adhya

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<i>Title of the Project</i>	<i>Principal Investigator</i>
Madhyamik Vidyalayon, Gurukulon Tatha Prasparik Sanskrit Pathshalaon ke Chhatron Ki Sanskrit Vidya ki Samparapti (Achievement) ka 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. Das
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 Centres	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 Studies at the Primary Stage (for Classes 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 Centres of NFE	Shri S.N.L. Bhargava and Shri 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	Prof. N. Vardya
Survey and Cultivation of Edible Mushrooms as a Work Experience/ Vocational Programme for the High/Higer Secondary Schools	Dr. G.B. Kanungo
Conservation of Aquatic Eco-system in Orissa	Dr. P.K. Durani
OUTSIDE PROJECTS	
A Study of the Feasibility of Involvement of Female Health Personnel in Women Education Programme in Rural Community	Prof. Purnima Mathur New Delhi

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<i>Title of the Project</i>	<i>Principal Investigator</i>
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 Comprehension 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 Under-graduate Level	Dr. R.S. Sharma and 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
Developing Strategies for Compensatory Language Programme of Pre-School Children having Socio-Economic and Cultural Deprivation (Disadvantages)	Dr. G. Pankajam Madurai
A Follow-up Study of Creatively Talented College Students	Dr. Girjesh Kumar Moradabad
Experiment on Continuing Education for Working Children in Rural Area	Dr. M.G. Mali Gargota
Impact of Education on the Socio-Psychology of Tribal School Students in Orissa	Dr. Girish Patel Phulbani

New Projects

Twelve research projects were approved for financial support under the scheme. The projects are mentioned below.

<i>Title of the Project</i>	<i>Principal Investigator</i>
DEPARTMENTAL	
An Intensive Study of Secondary and Higher Secondary School Buildings in the States of H.P., Karnataka, M.P. and Orissa	Sh. Pushpendra Kumar DMESDPU
An In-depth Study of Laboratory Facilities in relation to the Syllabus/ Curriculum in Secondary and Higher Secondary Schools	Dr. K.N. Rao DMESDPU
Sample Study of Library Facilities and Their Utilization in Secondary and Higher Secondary Schools—four selected studies	Dr. C.L. Kaul DMESDPU
Survey of Educational Facilities for the Weaker Sections of the Society	Dr. S.M. Bhargava DMESDPU
An Intensive Study of Teaching Aids at Middle and Secondary Stages of the Schools	Shri Satvir Singh DMESDPU

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<i>Title of the Project</i>	<i>Principal Investigator</i>
A Study of Administrative Structure of NFE and the Scheme of Monitoring and Supervision	Dr. B. Arora DPSEE
OUTSIDE PROJECTS	
Identification of Learning Disabled Indian Children and Development of an Effective Intervention	Dr. L.B. Tripathi University of Gorakhpur
Preparation of Question Bank in Gujarati	Dr. S.L. Modi Bhavnagar
Development of Tools for Identifying Creative Thinking Abilities among Pre-school Children for their Education and Personality Pattern	Dr. Bhoodev Singh Sultanpur
A Study into Causes of Stagnation and Drop-out at Primary Stage in the School of Manipur	Shri. G. Ganeshwar
A Study of Family Background Variables, Cognitive Characteristics and School Performance of Primary School Children	Dr. M.B. Buch Baroda
Tribals and Education—a Quest for Integration in the Regional Mainstream	Ms Hemlata Talesra Vidya Bhawan G.S. College Udaipur

Publication of Ph.D. Theses/Monographs

Ph.D. Theses/Monographs Published with the Assistance of ERIC

<i>Title</i>	<i>Name of the Author</i>
Strategies in Programmed Instruction	Dr. S.P. Mullick CIET, NCERT
Better Teaching through Effective Media	Dr. Shashi Kant Shah Surat (Gujarat)
A Psychological Study of Reading Abilities in relation to Achievements	Dr. Prabhjot Delhi
Equality of Educational Opportunity in India: a Myth or Reality	Dr. Surabhi P. Patel NCERT
Correlates of Anxiety	Dr. R.S. Singh Deoria (UP)
The Indian Teacher Educator—Some Characteristics	Dr. J.C. Goyal Bhutan
Stimulus Presentation and Person Preception	Dr. M.L. Gupta Gorakhpur
Vacaspati's Contribution to Advaita	Dr. V.N. Sheshagiri Rao Mysore
Sense of Deprivation among High School Students	Usha Upadhaya Varanasi

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<i>Title</i>	<i>Name of the Author</i>
Teachers and Educational Schemes for Scheduled Castes	Dr. S.K. Yadav NCERT
Personality and Academic Prediction	Dr. G.N. Prakash Srivastava RCE, Bhopal
Approval Motive	Dr. N.K.M. Tripathi Gorakhpur
College Achievers	Dr. S.B. Adaval Allahabad
Achievement in Algebra and Structure of Intellect	Dr. C.P.S. Chauhan Varanasi
Self-actualization among Teachers	Dr. Amulya Khurana Delhi
Caste and Religious Awareness among Children	Dr. Ram Kalap Tiwari
Speech Disorders in Children	Dr. Ashwani Kumar Srivastav Agra
Special Education Scenario in Britain and India—Issues, Practice Perspective	Dr. N.K. Jangira NCERT

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

<i>Title</i>	<i>Name of the Author</i>
A Study of Growth of Scientific Concepts among Elementary School Children	Dr. S.C. Arya Bhopal
Non-Verbal Classroom Interaction Patterns of Languages, Social Studies and Science Teachers	Dr. Rakesh Jain Sagar (MP)
Effect of Children's Perception of Home and School Environments on Their Scientific Creativity	Dr. Karuna Shankar Misra Allahabad
A Comparative Study of Effective and Ineffective High School Teachers in relation to Personality Factors, Organizational Climates, Sex, Location of the School and Disciplines in Moradabad	Dr. Yogesh Kumar Gupta Moradabad
Teachers and Educational Schemes for Scheduled Castes	Dr. S.K. Yadav NCERT
A Study of the Impact of Education on Social and Cultural Modernization of Hindu and Muslim Women	Dr. (Smt.) Mamta Agarwal DMESDP, NCERT
Effectiveness of Media with Reference to Classroom Ethos	Dr. Ummed Singh Surat
Study of the Psychological Foundations of the "Free Progress System" as Evolved in Sri Aurobindo International Centre of Education	Dr. Chander Kant Patel Gujarat
An Experimental Study in the Use of Modular Approach for Teaching Biology in Class XI	Prof. W.A.F. Hopper Madras
Adhunik Hindi men Bal Sahitya ka Vikas	Dr. Vijaya Laxmi Sinha Jabalpur (MP)
Some Indigenous Techniques Improving the Basic Mathematical Skills of Secondary School Children	Dr. Kirpanath Sinha West Bengal

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<i>Title</i>	<i>Name of the Author</i>
Biochemical Correlates of Scholastic Achievement, Achievement Motivation, Creative Functioning and Anxiety	Dr. Arunima Vats NCERT
Universal Primary Education as Innovation: A Study of Wastage in an Indian Village	Dr. Indu Grover Haryana
Socio-Cultural Factors Affecting Child Health	Dr. S.C. Gupta Ludhiana
A Comparative Cost of Effectiveness Study of Low Cost Audio-Visual Teaching Aids and High Cost Audio-Visual Teaching Aids	Dr. Vikramjit Singh NCERT
An Evaluative Study of Educational Development in Garhwal Division since 1947	Dr. K.B. Budhori Srinagar
Urbanization in Gujarat—a Geographical Analysis	Dr. U.P. Shahi Deonia (UP)

Training for Research

The Research Methodology Course, Level II, was conducted in the Department from 29 October to 5 November 1985. It was meant to help those scholars who were at the stage of data collection; selection of tools; preparation of tools; selection of samples, and preparation for data collection. Twenty-two scholars satisfying the eligibility criteria were selected out of 154 applications received through an open advertisement.

The Research Methodology Course, Level III, was organized from 28 February to 7 March 1986 at the NIE Campus. It was primarily meant for research scholars who were registered with the universities or allied educational institutions for educational research work leading to the Ph.D. degree and also for Principal Investigators or official investigators of research studies undergoing in the State Institutes of Education/SCERTs and training colleges and were at the stage of analysing the data. Out of 49 applications received through an open advertisement only 20 candidates were found suitable and were selected. Ten candidates attended the course. The faculty included three external guest lecturers and four NIE staff members.

ERIC Bulletin

Recognizing the importance of dissemination of research findings the ERIC has started pub-

lishing a quarterly research bulletin since 1984. These bulletins compiled by Dr. A. Sharma and Shri Sonti Subbarao give abstracts of the researches in the area of Universalization of Elementary Education (UEE) extracted from the three Surveys of Research in Education edited by M.B. Buch and thus cover all the research studies completed in Indian universities up to 1983.

The abstracts have been grouped under the following three headings which were suggested as new thrusts in the national seminar on Problems and Issues regarding Universalization of Elementary Education, held in March 1985.

- (i) Achieving Quantitative Targets.
- (ii) Planning, Financing, Monitoring and Evaluation.
- (iii) Community Participation and Linkages between Formal and Non-Formal Education.

The fourth thrust area as suggested was qualitative improvements of UEE.

The details of the two ERIC Bulletins brought out during 1985-86 are given in Table 3.

These bulletins were brought out with a view to providing useful information in designing national character researches in the area of Universalization of Elementary Education.

Developmental Activity

A national workshop for developing Research

1985-86

TABLE 3

<i>S. No.</i>	<i>Title</i>	<i>Author</i>	<i>Month of Publication</i>	<i>No. of Copies Published</i>
1.	Research Bulletin ERIC Special No. (1) Vol. II No. 112 Universalization of Elementary Education	Dr. A. Sharma Shri Sonti Subbarao	(April to September 1985) September 1985	300
2.	Research Bulletin ERIC Special No. (2) Vol. II No. 384 Universalizations of Elementary Education	Dr. A. Sharma Shri Sonti Subbarao	(October 1985 to March 1986) March 1986	300

Designs on identified issues/thrust areas concerning universalization of elementary education was organized at Banaras Hindu University, Varanasi, for eight days from 19 to 26 November 1985. About 40 persons, Deans and Heads and Professors of different faculties/departments such as Education, Psychology, Sociology, Social Anthropology, Econometrics, Educational Planning, Educational Finance, Administrators and Commissioners of Educational Research and Development and eminent researchers were initially invited to join and develop research designs on selected issues. Finally, 16 persons—14 outsiders and 2 NCERT faculty members—joined the Workshop and developed 14 research designs by working together for six to eight days.

These research designs developed at the BHU, Varanasi, were screened by the XI ERIC Sub-committee in January 1986, which made certain suggestions for regrouping and improving the designs. Accordingly, the two research designs for Group I, "Achieving Quantitative Targets" and "Determinants of Non-enrolment for SC/ST Students in Himachal Pradesh" were improved and submitted to the 16th ERIC meeting held in March 1986. The ERIC has made some suggestions for further improvement of the designs.

As regards Group II, "Qualitative Improvement" the XI Screening Sub-committee suggested regrouping of the research proposals and set up a sub-committee for preparing a comprehensive research proposal. The 16th ERIC meeting

has endorsed the recommendations of the Sub-committee.

Under Group III, "Planning, Finances, Monitoring and Evaluation", four research designs were prepared. However, the XI Screening Committee suggested to merge them into one comprehensive design and submit it to the 16th ERIC meeting. The 16th ERIC meeting after a thorough examination has approved the research design, titled "A Critical Study of the Financing of Elementary Education in India with particular reference to Policies, Procedures and Patterns of Government Grants-in-aid" under the leadership of Dr. J.L. Azad, Senior Fellow ICSSR.

Under Group IV, "Community Participation and Links between Formal and Non-Formal Education" four research designs were prepared. The XI Screening Sub-committee suggested to merge the four-design proposal into one comprehensive research proposal and submit it to the ERIC meeting. The 16th ERIC meeting has accepted the Sub-committee's recommendation.

Besides, several research institutions/organizations, RCEs, and NIE Departments were contacted to find out the research facilities available with them and also the areas of research interest for developing outposts of the ERIC for conducting national character researches. Four Regional Colleges of Education; Gujarat Vidyapith, Ahmedabad, and ERIC-DPRPP have agreed to offer the necessary facilities and act as outposts of the ERIC for conducting national character researches. The 16th meeting of the ERIC has approved the outposts.

1985-86

National Test Development Library (NTDL)

The NTDL serves as (i) a reference test library, (ii) an information centre for psychological tests, (iii) an agency for providing critical reviews of all published Indian tests, and (iv) an institution to identify gaps in test development.

The NTDL is guided by an Advisory Committee (Central Advisory Committee of NTDL) consisting of top psychometricians of the country as its members. The Committee meets once in a year in the month of March and reviews the work done by the NTDL during the year and suggests the next year's work-plan. The seventh meeting of the Central Advisory Committee of the NTDL was held on 24 March 1986.

NTL Bulletins

The NTL (National Test Library) Bulletin is

a continuous activity of the NTDL Project. It has brought out Bulletin No. 20: Reviews of Personality Tests in Print (III).

New Tests Purchased

The following new tests were added to the Library:

1. Career Development Inventory—School Form, College Form and University Form
2. Jensen Inventory
3. Copersmith Self-esteem Inventory
4. State Trait Anxiety Inventory Form Y
5. State Trait Anxiety Inventory (a Comprehensive Bibliography)
6. Bell: Adjustment Inventory (Student Form and Adult Form).



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TWELVE

EDUCATIONAL PSYCHOLOGY, COUNSELLING AND GUIDANCE

QUALITATIVE 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.

Research

Comprehensive research studies were undertaken on:

- (i) Psychological Characteristics and Educational and Vocational Planning of the Scheduled Caste High School Boys;
- (ii) Educational and Vocational Planning, Academic Achievement and Psychological Characteristics of Tribal Students;
- (iii) Vocational Behaviour and Vocational Adjustment of Students in Academic and Vocational Streams.

Some research studies were also undertaken on topics like Behaviour Modification, Creativity and Talent, and Criteria Referenced Testing. Out of six research projects, three were completed during the year under report. Brief accounts of the completed research projects and progress made on the on-going projects are given in Table 1.

Training and Extension Programmes

The Department of Educational Psychology, Counselling and Guidance organized the following Training/Extension programmes:

Diploma Course in Educational and Vocational Guidance

The course is designed to train counsellors for guidance bureaux, and secondary and senior secondary school teachers of guidance who will work in colleges and universities. This is full-time course of nine months; the minimum qualifications required for admission is Master's degree in Psychology or Education in second division. Candidates are admitted to this course on the basis of an all-India selection test. During 1985-86, 29 persons including four SC/ST trainees were given this training. Twenty-five trainees were given a stipend of Rs. 325 per month. Special coaching classes in English as well as in all theory papers were arranged for the SC/ST trainees. Many guest lectures by various experts were arranged. An educational trip to Bombay and Pune was also organized as part of the training programme.

Seminars/Workshops/Training Courses/Orientation Courses/Conferences

The Department organized a seminar for Minority Managed Schools and also a training course for Career Teachers from these schools. It also organized an All-India Conference of State Bureaux of Educational and Vocational Guidance to take stock of the current status of guidance services in schools in different States and to discuss their development during the Seventh Plan period. A seminar-cum-workshop to develop appreciation towards school guidance programmes

1985-86

TABLE I

S.No.	Name of the Project	Duration of the Project	Principal Investigator	Remarks
1.	A Study of Psychological Characteristics vis-a-vis Educational and Vocational Planning of Scheduled Caste High Schools Boys.	Two years	Prof. J.S. Gaur	Report-writing is in progress
2.	A Study of Educational and Vocational Planning, Academic Achievement and Selected Psychological and Home Background Variables of Tribal High School Students in and around Shillong (Meghalaya)	Three years	Prof. P.H. Mehta	Draft report is being prepared.
3.	Research on Vocational Behaviour and Vocational Adjustment of Students in Academic and Vocational Streams at + 2 Stage	Three years	Dr. (Smt) Swadesh Mohan Dr. (Smt) Nirmala-Gupta	Data-collection is in progress.
4.	Improving Cognitive Functions and Classroom Behaviour of Elementary Students by Contingency Management	Twenty-seven months	Shri R.K. Sharma	Report-writing is in progress.
5.	Bayesian Approach to Criterion Referenced Testing	Two years	Prof. R.K. Mathur	Work is in progress. A formula for true score distribution has been derived; a formula for evaluating the probability of correct or incorrect decision of classifying individuals into the ordered categories has also been derived.
6.	Background Study of the National Talent Search (NTS) Scholars (1978-80)	—	DEPC&G	Mimeographed report has been brought out.

among State-level officers was also organized during the year; representatives from 14 States/ Union Territories participated. A refresher course on Applications of Educational Technology in Guidance and Counselling in Schools was also organized. The Department also conducted two training courses for teacher-educators from various States on Identifying and Encouraging Creativity, three enrichment courses on Learning and Development for Primary/Secondary Teacher-educators and SIE/SCERT personnel,

and two workshops on Application of Behaviour Modification Techniques for Improvement of Education in School Setting. The training/extension programmes organized by DEPC&G during 1985-86 are summarized below.

1. Three seminars-cum-workshops on Guidance Services for Managers and Principals of Minorities Managed Schools of three days each were organized at the NIE; 69 persons participated.

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2. A 28-day training course for Career Teachers of Minorities Managed Schools was organized at the NIE; 31 persons participated.
3. A three-day All India Conference of Heads of State Bureaux of Guidance was held at the Indian Institute of Education, Pune; 18 persons participated.
4. A three-day seminar-cum-workshop of Resource Persons for Orienting Vocational Teachers in Guidance was organized at the NIE; 13 persons participated.
5. A five-day refresher course on Applications of Educational Technology in Guidance and Counselling in Schools was organized at the NIE; 20 persons participated.
6. Two enrichment courses of ten days each on Learning and Development for Primary and Elementary for Teacher-educators and SIE/SCERT Personnel were organized at Madras and Udaipur; 57 persons participated.
7. A ten-day enrichment course on Learning and Development for Secondary Teacher-educators and SIE/SCERT Personnel was organized at Aizwal; 16 persons participated.
8. Two workshops of 10 days each on Application of Behaviour Modification Techniques were organized at Madras and Calcutta; 37 persons participated.
9. A ten-day training course for Teacher-educators on Identifying and Encouraging Creative Potential in Elementary Grades was organized at Bangalore; 32 persons participated.
10. A six-day regional training course on Identifying and Developing Creative Talent at the Secondary Stage was organized at the NIE; 20 persons participated.

Developmental Programmes

The Department organized a national-level seminar to work out a model for identification and development of talent. A monograph on models for identification and development of talent has been developed with the objective of understanding various complex aspects—talent, creativity and giftedness. The monograph, when finally published, will be of interest to all concerned with education of the talented.

Two workshops on guidance to get teachers' feedback and to review the materials prepared on guidance of primary school children for communication to teachers through mass media were organized. The manuscripts of these programmes in Hindi and Urdu were sent for publication. The English version was brought out in the October 1985 issue of the NCERT journal, *The Primary Teacher*.

Besides these, the work on the development of a manual on Behaviour Modification Techniques in School Setting was undertaken and eight topics were written by the experts in the field. A planning group meeting for the development of multi-media package for training career teachers was organized. A title "Readings for Career Teachers" was published during the year under report. A number of objective (multiple) type questions/items were developed for the + 2 stage under the item-bank development programme in psychology.

Developmental programmes undertaken by DEPC&G are given below.

1. A three-day expert group meeting for developing a model for Identification and Development of Talent was held at the NIE from 3 February to 6 February 1986.
2. Preparation of Need-based Material on the Guidance of Primary School Children for Communication to Teachers through Mass Media: A three-day workshop to review the materials prepared was held at

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the NIE from 18 April to 20 April 1985; 18 persons participated. A two-day workshop to obtain teachers' feedback was held at Udaipur from 28 to 29 August 1985; Twenty-eight persons participated.

3. Development of Multi-Media Package for Training Career Teachers: Planning Group Meeting held at Ahmedabad from 18 December to 19 December 1985; 16 persons participated.
4. Development of a Manual on Behaviour Modification Techniques in School Settings: Second Editorial Board Meeting held at the NIE from 31 March to 2 April 1986; six persons participated.
5. Item bank development in Psychology at the + 2 stage was undertaken at Bhubaneswar from 28 November to 5 December 1985; 16 persons participated.

Development of Computer Software on Teaching of Certain Topics in Statistics

A Mirco Computer EPSON HX-20 has been used for the development of CBL packages on certain topics in sampling and statistical inference to be used for teaching the students of the Diploma Course in Educational and Vocational Guidance. During the try-out the trainees found these packages useful in providing better concepts in sampling, sampling distribution and statistical inference. Apart from the development of these CBL packages, certain computer programmes were also developed for important statistical sub-routines useful for analysing data.

These programmes were used for analysing data of a number of research projects both in and outside the Department.

Occupational Information Cell and Test Library

The Department maintains a full-fledged Guidance Laboratory which comprises two main sections: (1) Occupational Information Cell and (2) Test Library. The Occupational Information Cell maintains data base pertaining to a number of occupations classified into broad groups based on the National Classification of Occupations of the Directorate of Employment and Training, Ministry of Labour, Government of India. The Cell helps particularly the trainees of the diploma course in Educational and Vocational Guidance in acquiring information about the world of work, its acquisition, categorization, structure, working conditions, compensations, prospects, etc.

The Test Library section of the Guidance Laboratory maintains a collection of psychological and educational tests/questionnaires on varied topics like scholastic ability, intelligence and cognitive development, creativity and giftedness, interests and aptitudes, vocational maturity and aspirations, personality and adjustment, self-concept and perceptions, etc. The Test Library is used by research workers in education and psychology and also by the trainees in the EVG diploma course.

Consultancy

The details of consultancy provided by DEPC&G are given in Table 2.

TABLE 2

<i>S.No.</i>	<i>Consultancy Sought by</i>	<i>Purpose</i>	<i>Person(s) Associated</i>
1.	SCERT, Haryana	Organization of four programmes in Guidance	Prof. P.H. Mehta

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S. No.	Consultancy Sought by	Purpose	Person(s) Associated
2.	Child Guidance Clinic Dept. of Social Work, Delhi University	Meeting of the Advisory Committee	Prof. P.H. Mehta
3.	ICSSR, Delhi	Evaluation of research proposals	Prof. P.H. Mehta
4.	National Institute of Public Cooperation and Child Development, Delhi	Sampling techniques and survey methods in Nutrition Studies	Prof. R.K. Mathur
5.	C.M.C., Hyderabad	Evaluation of Computer Software under the project CLASS	Prof. R.K. Mathur
6.	CLASS Project	Teacher training programme at RCE, Mysore	Prof. R.K. Mathur
7.	Dept. of Psychology, Madras University, Madras	Lectures on Behaviour Modification in Community Settings	Prof. V.K. Singh
8.	Institute of Criminology and Forensic Science, New Delhi	Guest Lectures on Behaviour Modification	Prof. V.K. Singh
9.	Dept. of Psychology, Dayal Bagh University, Agra	National seminar on Behaviour Modification and Mental Health	Prof. V.K. Singh
10.	Institute of Criminology and Forensic Science, New Delhi	Training course on Police- Community Relations	Dr. (Smt.) K. Bhutani
11.	National Institute for Public Cooperation and Child Development, New Delhi	Lectures on Vocational Guidance and Vocational Training Programmes	Prof. (Smt) C. Dhar
12.	State Bureau of Educational and Vocational Guidance, Punjab, Chandigarh	Refresher course for District Guidance Counsellors	Dr. R.K. Saraswat

Publication

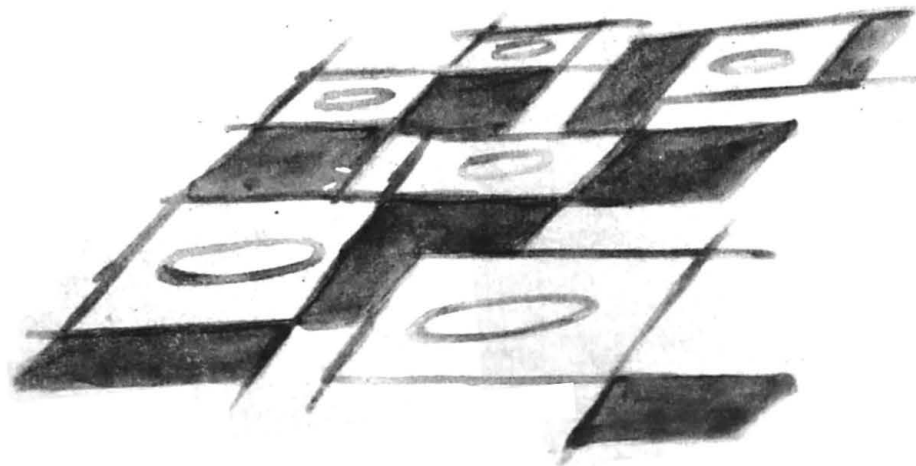
Research papers published during 1985-86 by faculty members are mentioned in Table 3.

TABLE 3

S. No.	Author and Title	Date of Publication	No. of Copies Published
1.	Mehta, P.H. and Mathur, R.K., A Multivariate Study of Some Cognitive Abilities and Academic Achievement of First Generation Learners and Non-first Generation Learners	<i>Indian Journal of Psychometry and Education</i> , 17 (1 and 2), January/July 1986, 1-16	—
2.	Mehta, P.H., Book review: Guidance and Counselling in Colleges and Universities, by S.K. Kochhar	<i>Journal of Indian Education</i> , X (5), January 85, 52-55	—
3.	Mehta, P.H., Bhatnagar, A., and Surinder Kumar, Vocational Planning among Tribal Students of Meghalaya	To be published in the <i>Journal of Social and Economic Studies</i>	—
4.	Mehta, P.H., Gaur, J.S. and Mohan, S., Problems of Boys with Superior Scholastic Ability: Part I—Problem Areas	To be published in the <i>Journal of Indian Education</i>	—

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<i>S. No.</i>	<i>Author and Title</i>	<i>Date of Publication</i>	<i>No. of Copies Published</i>
5.	Mehta, P.H. and Gaur, J.S., Report of the All India Conference of State Bureaux of Guidance, 1985, NCERT, New Delhi, 1985 (mimeographed)		300 (cyclostyled)
6.	Mehta, P.H., Mathur, R.K. and Pant, D., Influences on Level of Occupational Aspiration of Adolescents	Accepted for publication in <i>Indian Educational Review</i>	—
7.	Mohan, Swadesh (ed.), Readings for Career Teachers	October 1985	3,000
8.	Saraswat, R.K., (a) Self-concept in relation to Adjustment, Values, Academic Achievement, Socio-economic Status and Sex of High School Students of Delhi (Thesis Abstract)	<i>Indian Educational Review</i> , July 1985	—
9.	(b) Teachers of the Handicapped	<i>The Primary Teacher</i> , October 1985	
10.	Dhar, C., The Role of Women Psychologists in the School Setting	To be published in the "Proceedings of the Symposium on Women" held under the aegis of the 72nd Indian Science Congress	



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THIRTEEN

FIELD SERVICES AND COORDINATION

THE 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 1985-86, the Department Organized meets of District Education Officers 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. The role and responsibilities of the Field Offices of the Council for interaction with the States were also identified. The first meet held at Shimla from 21 to 25 May 1985 was attended by the DEOs from Himachal Pradesh. The second meet held at Bhubaneswar from 8 to 11 January 1986 was attended by fourteen DEOs of Orissa. The third meet held at Hissar from 21 to 24 January 1986 was attended by eleven DEOs from Haryana. The fourth meet held at Pune from 29 January to 2 February 1986 was attended by eleven DEOs from Maharashtra.

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 neces-

sary 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 1985-86 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 their Programme Advisory Committees at which proposals for the programmes for the year 1985-86 were finalized.

The details of other activities carried out by different Field Offices during 1985-86 are given below.

Field Office at Ahmedabad

The Field Office located at Ahmedabad carried out the following activities during the period 1984-85:

- An Educational toy-making competition and exhibition was organized for primary school teachers of Gujarat and the Union

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Territory of Dadra and Nagar Haveli. Over 50 toys were prepared. The programme was relayed on television as a part of quality improvement in education.

- A training course on the preparation of teaching aids was organized from 28 December 1985 to 1 January 1986. Thirty teachers and teacher-educators participated in the programme. Thirty teaching aids/models were prepared and exhibited.
- A teacher training programme on vocationalization of Education was organized from 11 to 15 March 1986. Ten teachers in technical area and 10 teachers in Home Science attended it.
- A seminar was organized on 25 October 1985 on New Education Policy—Role of Vocational Guidance. Also several meetings and exhibitions of teaching aids and educational toys were organized.

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

- A teacher training programme at Nargol, attended by 10 teachers of Umargaon Taluka and the Union Territory of Dadra and Nagar Haveli.
- A vocational guidance seminar for the teachers of four talukas of Bulsar district organized from 5 to 6 August 1985. Fifty teachers received the training in vocational guidance.
- A seminar on vocational guidance, "Our Commitments to the Weaker Sections of the Society", organized on 25 October 1985 at Ahmedabad. About 100 teachers of the Central Schools and Gujarat schools participated.
- Two guidance tools in the form of questionnaires were developed and responses of 199 SC/ST students from 13

schools obtained. Feedback was provided to the principals and teachers.

- The report of SC/ST project for providing vocational guidance to the SC/ST students of Class X of Chikhli Taluka completed in 1984-85 was published.

In addition to these activities, the Field Office continued to implement the experimental project scheme. Sixteen projects were financed during 1985-86. The schools have done innovative work in developing human values, improved methods of teaching languages and science, etc.

Field Office at Allahabad

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

- A workshop for revising Science and Mathematics syllabus at the elementary level, held from 20 to 24 July 1985. It was attended by 40 participants.
- A workshop on identifying educational problems of SC/ST communities, held from 20 to 23 January 1986 at the SIE, Allahabad, was attended by teachers belonging to SC/ST communities. It was followed by a supplementary workshop from 5 to 6 March 1986. Basic Siksha Adhikaries and other concerned officers participated.
- A workshop on curriculum for secondary teacher-educators was organized at the CPI, Allahabad, from 18 to 21 March 1986. Teachers, teacher-educators and researchers participated in the workshop.
- A workshop on seminar reading programme was organized at the CPI, Allahabad, from 31 March to 3 April 1986. Teacher-educators were the participants.
- A workshop on educational sample experimental projects was organized at the SIE, Allahabad, from 10 to 12 December 1985. Teacher-educators from elementary teacher training institutes

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were invited to the workshop. Thirty-two sample experimental projects were formulated to be carried out in their respective institutions.

- A workshop to review Urdu textbooks was held at the Urdu Department of the University of Allahabad from 11 to 14 March 1986.
- A State-level essay competition, "Hope for Better World", was organized as per the guidelines from the NCERT headquarters.
- An educational toy-making competition was conducted by the Field Office.
- "Education at a Glance"—An educational profile of Uttar Pradesh containing information about the status of education in Uttar Pradesh, achievements and new thrust was brought out by the Field Office.

The Field Office published the reports of experimental projects on elementary and secondary education, revision of Science and Mathematics curriculum, and revision of BTC, Curriculum. Two foreign delegations of two members each from Royal Nepalese Government and from West Germany visited the Field Office at Allahabad on 10-11 March 1986 and 26-27 March 1986, respectively.

Field Office at Bangalore

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

- A three-day workshop-cum-orientation programme was conducted at the DSERT, Bangalore, for 49 Inspectors of Schools from Bangalore and Mysore divisions on "Universalization of Education" and preparation of material on Aksharasena from 10 to 12 December 1985.
- An orientation-cum-workshop was organized from 25 to 27 February 1986 in collaboration with the Department of Education, Karnataka, for the Inspectors of Schools of SCs/STs covering the entire

State of Karnataka.

- A toy-making competition for Karnataka was conducted on 30 January 1986. One first prize of Rs. 200, one second prize of Rs. 100 and four consolation prizes of Rs. 50 each were awarded.
- Educational Profile of Karnataka: Trends in School Education, Part I, was prepared as part of understanding of the problems and issues in education in Karnataka. It contains the details about the land and its boundaries, the State before and after organization, and development of educational administration along with some vital statistics about its population, growth rate of literacy, rural-urban as well as male-female distribution of literacy, district-wise.
- Foreign delegations/experts visited the Field Office: a Chinese delegation from 30 April to 2 May 1985, Dr. D.V. Venkataswamy, Director, Curriculum Development Centre, Mauritius, from 24 to 27 December 1985 and British experts of the CLASS Project on 21 January 1986.
- The Field Adviser participated in various symposia, workshops and discussion at TV/AIR/Press with regard to the New Education Policy.

Field Office at Bhopal

The Field Office at Bhopal focussed its attention chiefly on the programmes relating to the development of tribal education and early childhood education. The major activities carried out during the year 1985-86 were as follows:

- A five-day orientation programme for tribal school teachers in preparing experimental projects for improving the classroom climate was organized. Twenty persons participated.
- A ten-day orientation of Resource Persons in various models of early childhood education was organized. The main

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focus of this programme was on Piagetian model which, besides clinical approach, provides a number of child-centred activities helping the child in his cognitive development.

In addition to these, the Field Adviser guided 15 programmes for tribal schools during 1985-86, which were finalized by the Tribal Welfare Department, Government of Madhya Pradesh. Also various experimental projects of the tribal schools were provided with financial assistance.

Field Office at Bhubaneswar

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

- A State-level toy-making competition. Twenty-one entries from the primary and pre-primary school teachers were received. First and second prizes and four consolation prizes were awarded.
- Two workshops on universal enrolment and retention in tribal sevashrams organized from 14 to 17 January and 3 to 7 March 1986, were attended by 26 and 15 elementary teachers, respectively.
- A workshop on experimental projects for primary school teachers on universal enrolment and retention was organized from 18 to 22 February 1986. Thirty teachers from elementary schools participated.
- A workshop on experimental projects for secondary school science teachers was organized at Phulbani from 4 to 7 February 1986. Thirty teachers participated.
- A training course for resource persons and key personnel in utilization of educational TV and radio programmes was organized at Konarak from 18 to 22 March 1986. Nineteen teacher-educators participated.

Under the experimental projects scheme, the Field Office received 138 proposals out of which 30 were selected for financial assistance.

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 teachers. Ten teachers participated.
- An orientation programme for the identification and teaching of the disadvantaged children for vocationalization was organized from 17 to 21 February 1986. Fifteen persons participated.
- An orientation programme on environmental psychology and integrated psychological development of the child, organized from 3 to 7 March 1986. It was attended by 20 participants.
- An orientation programme on integrated educational development of the children from 17 to 20 March 1986. It was attended by 18 participants.

Under the experimental projects scheme seven projects were given financial assistance. Besides, a publication, titled "Educational Set-up in Sikkim, West Bengal, Andaman and Nicobar Islands" was brought out by the Field Office.

Field Office at Chandigarh

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

- An orientation programme in designing experimental projects was organized from 9 to 11 September 1985. Twenty-nine primary and secondary school teachers participated in the programme. Twenty-seven project proposals were developed and improved.
- A two-day working group meeting to discuss the vocational aspirations of the Scheduled Caste students of Punjab and Haryana was organized from 26 to 27 February 1986. Twelve distinguished persons in the field of education belonging to university departments and

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research institutions participated.

- A seminar-cum-workshop on innovative trends in Science teaching was organized from 18 to 21 March 1986. Forty-five secondary school teachers participated. The report of the seminar was published.

Under the experimental projects scheme 20 project proposals were received by the Field Office out of which 15 projects were approved and financed.

Field Office at Guwahati

The major activities carried out by the Field Office at Guwahati were as follows:

- An orientation seminar on vocationalization of education was organized from 16 to 20 September 1985. Twenty persons attended it. The proceedings and recommendations provided suitable guidelines. The report has been accepted in Assam.
- A workshop on experimental projects was organized from 28 January to 2 February 1986. Twenty-eight teachers from BTC and primary schools situated in the SC/ST areas attended the workshop.
- A prize-giving ceremony for the winning teachers of Assam in the toy-making competition 1986 was organized at the Field Office on 26 February 1986. It was covered by the All India Radio Broadcast and the Doordarshan.
- The Field Office prepared Assam Educational Profile on the basis of plan documents, NEC publications and other source materials. Also a Directory of the Resource Persons of the States under the jurisdiction of the Field Office was prepared.

Field Office at Hyderabad

During the year under report the Field Office helped in the conduct of the programmes of various departments of the Council organized in the State of Andhra Pradesh. The two scheduled programmes of the Field Office, however, could

not be conducted due to the strike of secondary school teachers and lecturers in the colleges during March 1986.

Field Office at Jaipur

The major activities carried out by the Field Office at Jaipur were as follows:

- A five-day workshop on development of kits for single-teacher schools from 18 to 22 February 1986. A sample kit for teaching one or two Units for Classes I to V was developed on the pattern of self-learning, monitorial teaching and teacher activities with the participation of 18 teachers.
- An orientation programme for principals/headmasters in designing experimental projects was organized from 3 to 6 March 1986. Fifteen principals/headmasters participated. Thirty project proposals were finalized.
- A seminar to discuss causes of non-enrolment and drop-outs of SC/ST girl students of Udaipur and Sirohi districts was organized from 19 to 22 March 1986. Sixteen persons participated. Strategies for eradication of the causes were planned and chalked out.

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 1985-86:

- A workshop on increasing the holding power of elementary schools in the context of universalization of elementary education was organized at Karaikal (Union Territory of Pondicherry) from 8 to 12 April 1985. Forty teachers participated.
- A workshop on environmental studies approach for the benefit of elementary school teachers was organized at Erode (Tamil Nadu) from 4 to 8 February 1986. Forty teachers participated.
- A workshop on environmental studies

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approach was organized at Kalangani (Salam Distt.) from 11 to 15 February 1986. Forty teachers from Adidravider Institutions of Tamil Nadu participated.

- A workshop on environmental studies approach was organized at Karaikal (Union Territory of Pondicherry) from 18 to 22 February 1986. Forty teachers from Non-PCCR schools participated.
- A workshop on environmental studies approach for teachers of Tamil Nadu was organized at Tirunelveli from 3 to 7 March 1986. It was attended by 40 teachers.

Besides the above workshops the Field Office organized a toy-making competition for pre-primary and primary school teachers of Tamil Nadu and the Union Territory of Pondicherry. Two first and second prizes were won by the Pondicherry teachers. Consolation prizes, four each for Tamil Nadu and Pondicherry were also given away.

Field Office at Patna

The significant activities undertaken by the Field Office at Patna during 1985-86 were as follows:

- A workshop on the preparation of educational toys for pre-primary and school children was organized from 17 to 19 December 1985. Twenty-three participants and four resource persons produced a good number of educational toys.
- An orientation programme for SC/ST teachers of Palamu district in teaching science through environment was organized from 14 to 18 February 1986. Twenty-seven participants and four resource persons attended the programme.
- A State-level toy-making competition was organized on 17 January 1986. Cash prizes and certificates were given to the winners at a function organized on 4 February 1986.

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

Field Office at Pune

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

- An orientation course in teaching and evaluation of science at secondary level for the secondary school teachers of Goa was organized at Panaji from 19 to 24 March 1986. Forty-three science teachers participated.
- A workshop on teaching science through environmental approach for the teachers teaching science at Ashram schools in Tribal belt of Maharashtra was organized at Nagpur from 27 to 30 March 1986. Twenty-five teachers attended this programme.
- An environment course in science for the selective group of untrained teachers from the recognized elementary schools of Maharashtra was organized at Bombay from 29 March to 2 April 1986. Twenty-five teachers attended the course.
- A State-level toy-making competition for pre-primary and primary school teachers was organized. In all, 74 entries were received. First and second prizes and four consolation prizes were given away to the winners on 2 April 1986.

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:

- A State-level toy-making competition held at SCERT, Aizawal, and SIE, Agartala.
- An orientation programme in new trends in content and teaching of general science for teachers of Meghalaya was organized from 10 to 16 January 1986. Twenty teachers participated.
- A conference of paper-setters on techniques of paper-setting in various school subjects was organized from 4 to 10 February 1986 at MBSE, Aizawal. Thirty-four paper-setters

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of HSLC examination of Mizoram participated.

In addition to the above-mentioned programmes the Field Office completed a research project on SCs/STs titled "Micro-planning of Vocational Courses for Tribal Students at +2 Stage in Meghalaya". Another SC/ST-related research project, titled "Survey of Resource and Planning of Vocational Courses for Tribal Students at + 2 Level in Mizoram" is in progress. It is likely to be completed by July 1986.

Field Office at Shimla

The major activities undertaken by the Field Office at Shimla during 1985-86 were as follows:

- A programme for studying the effectiveness of school broadcasts in Himachal Pradesh was organized from 12 to 14 August 1985. Nineteen persons participated.
- A workshop on approaches to the content-methodology of teaching Biology to Classes IX-X was organized from 24 to 27 February 1986. Eleven persons attended the workshop.
- A workshop on the use of map skills as a strategy for teaching Geography to secondary classes was organized from 3 to 7 March 1986. Seven participants attended the workshop.
- A workshop on teaching strategies for elementary school children of migratory Scheduled Tribes of Himachal Pradesh was organized from 26 to 28 December 1985. Five teachers participated in the workshop.
- A conference for identifying the issues on development of Scheduled Castes and Scheduled Tribes in Himachal Pradesh was organized from 4 to 6 April 1986. Twenty-nine persons attended the conference.

Field Office for Jammu and Kashmir

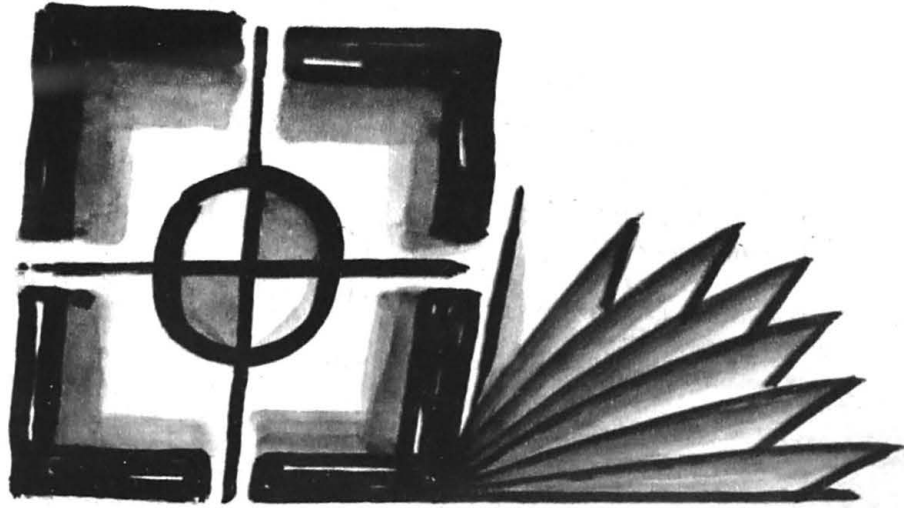
The major activities undertaken by the Field Office for Jammu and Kashmir during the year 1985-86 were as follows:

- A six-day orientation course of headmasters was organized at the SIE, Srinagar, from 24 to 29 October 1985. Twenty-five participants attended the course.
- A four-day orientation programme of principal was organized at the SIE, Srinagar, from 5 to 9 July 1985. Twenty-five principals attended the workshop.
- A workshop on Minimum National Core Curriculum at J & K Board of School Education was organized at Jammu from 10 to 12 March 1986. About 40 teachers from the State participated.
- A workshop on educational problems of SC and ST students belonging to Jammu and Kashmir State was organized at the SIE, Jammu, from 17 to 20 March 1986. Forty participants representing different categories of officers and teachers attended the workshop.
- A workshop on Teacher Education Curriculum was organized at the SIE, Srinagar, from 29 to 31 March 1986. Forty-five teachers and teacher-educators participated in the workshop.

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 in methodology and evaluation for high school SC/ST teachers was organized from 13 to 16 January 1986. Twenty-two teachers participated.
- A training course for key persons in SUPW was organized from 3 to 7 February 1986. It was attended by 34 participants.
- A workshop on Diagnostic Testing and Remedial Teaching in Sciences was held from 17 to 21 February 1986. Twenty-eight teachers participated in the workshop.



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PUBLICATION AND DOCUMENTATION

PUBLICATION

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 the 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 under report, 271 publications of all categories were brought out. The break-up is given below.

<i>Category of Publication</i>	<i>No. of Titles</i>
First edition textbooks/workbooks/prescribed supplementary readers	16
Reprints of textbooks/workbooks/prescribed supplementary readers	161
Textbooks/Workbooks for other government agencies	8
Research monographs/reports and other publications	45
Periodicals (issues)	41
Total:	271

The Department of Library, Documentaton 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.

Net Textbooks for the School Session 1986-87

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 and X. The NCERT also developed new textbooks in Languages and the Social Sciences for Classes XI and XII. While during the previous year, a number of new textbooks for Classes IX and X were brought out (as reported last year), during the year under review, the remaining new books for Classes IX and X were brought out as also some of the new textbooks for Classes X and XII, as per the details given below.

Class IX

1. Bhautiki, Bhag I
2. Rasayan Vigyan, Bhag I
3. Basic Biology Part I Vol. II
4. Adharik Jeev Vigyan, Bhag I Khand I
5. Adharik Jeev Vigyan, Bhag I Khand II
6. Ganit, Bhag I, Khand I
7. Ganit, Bhag I, Khand II

Class X

8. Mathematics, Part II

Class XI

9. Sahitya ka Swaroop
10. Physical Geography
11. Bhautik Bhugol

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Class XII

12. Abhinav Kavya Bharati, Bhag II
13. Abhinav Gadya Bharati, Bhag II
14. Kavya Sanchayan, Bhag II
15. Gadya Sanchayan, Bhag II

“Let’s Enrich Our English” Series

“Let’s Enrich Our English” series is a series of 20 booklets specifically designed to cater to the linguistic needs of secondary school students and pre-service and in-service teachers. The small booklets contain self-learning materials and are designed to develop in the learner the basic skills of reading and writing as well as to enrich his vocabulary and give him an insight into the important areas of English usages. So far eight booklets in the series have been published.

India’s Struggle for Independence— Visuals and Documents

It is perhaps the first publication of its kind which has attempted to make available to the reader in one volume some of the most significant and authentic visuals and source material on India’s struggle for independence. It comprises about 2,000 visuals, including paintings, sketches, photographs, and newspaper clippings and over 2,00,000 words of documents.

The publication has been brought out in two forms. One is a bound volume meant for libraries and individual readers. The second is intended for use in classrooms as a teaching aid. It is a portfolio of loose sheets which can be taken out separately according to the theme being covered in the classroom.

The publication, though basically intended to be a teaching material, will be of great appeal to the general reader for its comprehensive coverage of materials is generally not available. It was released by the Union Minister for Human Resource Development, Shri P.V. Narasimha Rao, on 24 December 1985 in New Delhi.

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 612 direct orders including 158 from Kendriya Vidyalayas, 25 from Sainik Schools, 30 from the Central Schools for Tibetans, 37 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 1986-87. In addition, textbooks for Class XI for the Board of School Education, Haryana, and 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 booksellers in Rajasthan. The book was prescribed for B.A. 1st year of the Rajasthan University.

Participation in Book Fairs/Exhibitions

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

- The Twelfth National Book Fair, organized by the National Book Trust in September-October 1985

- The Third National Children’s Book Fair, 127

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- Anand Bhawan, Allahabad, organized by the National Book Trust in November 1985
- Science Exhibition, Udaipur, organized by the NCERT in November 1985
- The Seventh World Book Fair, Pragati Maidan, New Delhi, organized by the National Book Trust in February 1986.
- Teachers' Meet Exhibition, New Delhi, organized by the DTESEES, NCERT, in September 1985
- The National Seminar on Vocationalization of Education, NIE Campus, New Delhi, organized by the Department of Vocationalization of Education in November 1985
- Exhibition of Books during International Conference on New Technologies in Higher Education, IIT, New Delhi, organized by Association of Indian Universities in November 1985.

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

- The London Book Fair, April 1985
- Canadian Book Fair, Toronto, June 1985
- International Book Festival and Back to School Fair, Manila, June 1985
- Malaysia Book Fair, July 1985
- Sixteenth Singapore Festival of Books and Book Fair, September 1985
- Fifth Moscow International Book Fair, September 1985
- Festival of India, Paris, October 1985
- Seventh Cairo International Book Fair, January-February 1986

Sale

During the year under review receipts from the sale of the NCERT publications amounted to Rs. 3,51,67,219.25. Publications worth \$ 533.86 were also sold to various parties abroad.

Copyright Permission

A number of State-level agencies showed interest in the books brought out by the NCERT.

The table on page 129 shows the agencies whom the Council gave permission during the year to adopt/adapt and publish its textbooks and other publications.

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 education/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.

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Permission Granted to States

Haryana

Secretary
Haryana School Education Board
Bhiwani (Haryana)

Permission was granted for adoption and publication of 18 NCERT textbooks for Class IX-X

Himachal Pradesh

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

Permission for adoption and reprinting of following NCERT textbooks for Class XI-XII was granted:

1. Mathematics, Book I
2. Mathematics Book II
3. Rangini for Class XI
4. Vyakaran Saurbham for Class XI-XII

Madhya Pradesh

Secretary
Board of Secondary Education
Madhya Pradesh
Bhopal

Permission for adoption of the following NCERT English textbooks for Classes XI and XII was granted:

1. English Reader (Core) Part I
2. English Reader (Core) Part II
3. English Supplementary Reader (Core), Part I
4. English Supplementary Reader (Core), Part II
5. Five One-Act Plays
6. Dear to All the Muses
7. On Top of the World
8. I-The People for Class XI

Maharashtra

Secretary
Maharashtra State Board of
Secondary and Higher Secondary
Education, Pune

Permission was granted to include a passage entitled "A Force is Mightier than Violence" from the NCERT supplementary reader—

Freedom Movement in India

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 education. During the year under review the following issues of these journals were brought out:

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<i>Indian Educational Review</i>	January 1985, April 1985, July 1985 and October 1985
<i>Journal of Indian Education</i>	November 1984, January 1985, March 1985, May 1985, July 1985, September 1985 and November 1985. Among these, the September 1985 issue was a special one on the theme of Educational Journalism
<i>Bhartiya Adhunik Shiksha</i>	July 1984, October 1984, January 1985, April 1985, July 1985 and October 1985. The July 1985 issue was a special one on Educational Journalism
<i>School Science</i>	September 1984, December 1984, March 1985, June 1985, September 1985 and December 1985
<i>The Primary Teacher</i>	January 1985, July 1985, October 1985, and January 1986
<i>Primary Shikshak</i>	January 1984, April 1984, July 1984, October 1984, January 1985, April 1985, July 1985, October 1985 and January 1986

Academic Programmes (Developmental)

The Journals Cell has undertaken two major projects (i) to develop two basic reference books, namely, (a) a Handbook and (b) a Yearbook on Educational Journalism and (ii) to orient teachers, teacher-educators and working journalists in the art of writing and producing school/college magazines and educational journals. Through

this orientation, the Cell proposes to prepare a set of key personnel who would collaborate with Journals Cell in undertaking crash orientation programme for improving the quality of educational journals and, in turn, the quality of school education.

During the year under review, the Journals Cell organized the following academic programmes:

Developing a Handbook on Educational Journalism

- (i) A preliminary meet to develop a blueprint of the Handbook on Educational Journalism, held at the Faculty of Education, Kashmir University, Srinagar, from 28 to 30 May 1985, was attended by eight participants. Besides the draft blueprint, different dimensions of educational journalism such as the newspaper reporting on education, producing educational magazines and journals, needed skills and potentialities of educational journalism, etc., were discussed.
- (ii) A workshop to develop material for the Handbook on Educational Journalism was held at the Nirmala Institute of Education, Panaji, Goa, from 6 to 8 November 1985. It was attended by 21 participants. Besides discussion on a number of papers on different aspects/topics of the Handbook, group work was done for developing three kinds of orientation programmes, i.e. (a) a skill-oriented programme for teachers for writing different kinds of papers for different journals and targets; (b) a skill-oriented programme for teachers in the art of producing quality school/college magazines; and (c) a skill-oriented programme for teachers in the art of writing book reviews for different kinds and categories of journals and magazines.
- (iii) A workshop to develop material for the Handbook on Educational Journalism was held at the SCERT, Bangalore from 21 to 23 January 1986. It was attended by

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27 participants. Besides presentation of papers and research studies on educational journalism, the draft blueprint of the Handbook was subjected to further discussion and modification in the light of critical and constructive suggestions made by the media expert Shri Patanjali Sethi of the Times of India Group, Bombay.

- (iv) A workshop to develop material for the Handbook on Educational Journalism held at the Department of Education, Kanpur University, Kanpur, from 30 March to 2 April 1986 was attended by 27 participants. Besides discussion on a number of papers on different topics/aspects of the Handbook, group work was done to work out minor details of the Handbook in the light of depth observations made, particularly by Prof. P.N. Malhan of the New Media Academy.

Developing a Yearbook on Educational Journalism

- (i) A workshop to develop a draft blueprint of the Yearbook on Educational Journalism was held at the Central Institute of English and Foreign Languages, Shillong, from 27 to 29 September 1985. It was attended by 16 participants. Besides developing the draft blueprint, a number of papers on different aspects of educational journalism were discussed to provide orientation in educational journalism.
- (ii) A workshop to develop material for the Yearbook on Educational Journalism held at the State Institute of Education, Port Blair, from 25 to 27 February 1986 was attended by 22 participants. Besides discussion on papers and studies on different aspects of educational journalism including the newspaper reporting on education, the draft blueprint of this title was further discussed and modified at the instance and on the basis of the experience provided by

the eminent journalist Shri Upendra Bajpei of the National Media Centre.

Research Activities

National Survey of Educational Journals

A comprehensive national survey of educational journals has been undertaken by the Journals Cell since August 1985. It is a two-year project. Besides the spade work and collecting basic data regarding the institutions producing educational magazines/journals in the country, an information blank-cum questionnaire for collecting details about various educational journals including school and college magazines has been developed. Work is in progress.

Impact of Academic Programmes undertaken by the Journals Cell

The production of the Handbook and of the Yearbook would pave way for quality production of journals, on the one hand, and for improving the language and communication skills of teachers, teacher-educators, research workers, working journalists in education, etc., on the other. The survey results are also likely to have a direct bearing on quality production of journals and, in turn, on quality improvement in school education.

The impact of these programmes has been quite significant in that there is evidence that a number of institutions/universities have started making provision for a course in educational journalism as part of Teacher Training/Training in Journalism and Mass Communication. In view of its great potentialities for educational purposes, the programme of educational journalism has received an overwhelming response from all quarters. Media persons feel interested in its growth and development in order that it succeeds in building a favourable climate for positive reporting on education. The schools of journalism are as equally enthusiastic as the teacher's colleges, as both these institutions aim at inculcating in their trainees adequate language and communication skills as a result of their training programme. The State-level agencies concerned with school education and teachers associations demand some kind

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of a crash orientation programme for teachers in the art of producing quality school magazines as a means towards better school education.

DOCUMENTATION

The Department of Library, Documentation and Information (DLDI) functions as an academic arm of the Council. Its main functions are to collect, organize and disseminate reading material with the following objectives:

- To cater to the needs of the members of the faculty of the National Institute of Education and scholars in the field of education all over the country;
- To act as a clearing-house for educational information;
- To promote research and study; and
- 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.

Collection

Books as on 31 March 1985	1,16,106
Books added during 1985-86	
(a) by purchase	2,323
(b) by gift	378
(c) Total added (a+b)	2,701
(d) Books withdrawn	455
(e) Total Collection as on 31 March 1986	1,18,352
Periodicals and Magazines received gratis or through exchange	402
Newspapers subscribed	16

Press Clippings

During the year, 16 newspapers were regularly scanned for news items and editorials relating to education and 1,358 press clippings were preserved for future reference.

Publications

The following publications were brought out during 1985-86:

1. Accession List (monthly)
2. Current Contents (monthly)
3. Select Abstracts on Moral Education by K.L. Luthra and H.S. Sharma
4. Select Bibliography on Education Policy by H.S. Sharma
5. Digest of Educational Systems of SARC Member-countries.

Pamphlets for International Relations Unit

A collection of pamphlets on Education and allied disciplines is being built up. The Department has already got a collection of 5,000 pamphlets.

Circulation

Membership during 1985-86	2,384
Consultation facilities availed by visiting scholars during 1985-86	436

Working Hours

In order to meet the demand of users, the Library observed extended library hours from 9 a.m. to 8 p.m. on all working days.

Training Programmes

The following programmes were organized:

1. A workshop on the Development of Teacher Training College Libraries, Lucknow, from 22 to 26 July 1985.
2. A workshop on the Development of Teacher Training College Libraries at elementary level, Santiniketan, from 8 to 12 January 1986.
3. In-service Training of School Librarians of Rajasthan held at Jodhpur from 21 to 25 January 1986.
4. In-service Training of School Librarians of Arunachal Pradesh held at Chonglong from 17 to 22 February 1986.

Extension

Shri K.L. Luthra, Head, DLDI, delivered a lecture on "Information Documentation Centres and Archives: a Comparative Study" on 10 March 1986

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at the School of Archival Studies, National Archives of India, New Delhi.

Libraries and Information Systems was jointly organized by the NCERT and Raja Rammohun Roy Library Foundation, Calcutta from 14 to 15 February 1986.

Development

A national seminar on New Education Policy,

Publications brought out by the Publication Department of the NCERT during 1985-86

<i>S.No.</i>	<i>Title</i>	<i>Date of Publication</i>	<i>No. of Copies Printed</i>
TEXTBOOKS AND PRESCRIBED SUPPLEMENTARY READERS			
CLASS I			
<i>Textbooks</i>			
1.	Bal Bharati, Bhag I (R.P.)	February 1986	1,90,000
2.	Let's Learn English, Book I (S.S.) (R.P.)	March 1986	2,20,000
3.	Mathematics for Primary Schools, Book I (R.P.)	January 1986	1,75,000
<i>Workbooks</i>			
4.	Abhyas Pustika Bal Bharati, Bhag I (R.P.)	January 1986	1,45,000
5.	Workbook for Let's Learn English, Book I (S.S.) (R.P.)	December 1985	1,60,000
CLASS II			
<i>Textbooks</i>			
6.	Bal Bharati, Bhag II (R.P.)	March 1986	1,86,000
7.	Let's Learn English, Book II (S.S.) (R.P.)	February 1986	2,05,000
8.	Mathematics for Primary Schools	February 1986	1,38,000
<i>Workbooks</i>			
9.	Abhyas Pustika Bal Bharati, Bhag II (R.P.)	March 1986	1,30,000
10.	Workbook for Let's Learn English Book II (S.S.) (R.P.)	January 1986	1,80,000
CLASS III			
<i>Textbooks</i>			
11.	Bal Bharati Bhag III (R.P.)	December 1985	1,30,000
12.	Let's Learn English Book III (S.S.) (R.P.)	February 1986	1,56,000
13.	Mathematics for Primary Schools, Book III (R.P.)	January 1986	1,16,000
14.	Environmental Studies for Class III, Part I (R.P.)	February 1986	52,000
15.	Environmental Studies for Class III, Part II (R.P.)	January 1986	65,000
16.	Paryavaran Adhyan for Class III, Bhag II (R.P.)	January 1986	10,000
<i>Workbooks</i>			
17.	Abhyas Pustika Bal Bharati, Bhag III (R.P.)	December 1985	85,000
18.	Workbook for Let's Learn English, Book III (S.S.) (R.P.)	February 1986	1,60,000
CLASS IV			
<i>Textbooks</i>			
19.	Bal Bharati, Bhag IV (R.P.)	February 1986	1,10,000
20.	English Reader, Book I (S.S.) (R.P.)	January 1986	1,80,000
21.	Mathematics for Primary Schools, Book IV (R.P.)	January 1986	1,25,000

*(S.S.) indicates Special Series and (R.P.) Reprints

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<i>S. No.</i>	<i>Title</i>	<i>Date of Publication</i>	<i>No. of Copies Printed</i>
22.	Environmental Studies for Class IV, Part I (R.P.)	April 1985	20,000
23.	Environmental Studies for Class IV, Part I (R.P.)	February 1986	50,000
24.	Paryavaran Adhyayan for Class IV, Bhag I (R.P.)	February 1986	30,000
25.	Environmental Studies for Class IV, Part II (R.P.)	February 1986	80,000
26.	Paryavaran Adhyayan for Class IV, Bhag II (R.P.)	January 1986	10,000
<i>Workbooks</i>			
27.	Abhyas Pustika Bal Bharati, Bhag IV (R.P.)	February 1986	1,05,000
28.	Workbook for English Reader, Book I (S.S.) (R.P.)	January 1986	1,85,000
<i>Supplementary Readers</i>			
29.	Read for Pleasure, Book I (R.P.)	February 1986	65,000
<i>CLASS V</i>			
<i>Textbooks</i>			
30.	Bal Bharati, Bhag V (R.P.)	December 1985	1,20,000
31.	Swasti, Bhag I (R.P.)	December 1985	45,000
32.	English Reader, Book II (S.S.) (R.P.)	January 1986	1,30,000
33.	Mathematics for Primary Schools, Book V (R.P.)	January 1986	1,00,000
34.	India and the World (R.P.)	February 1986	50,000
35.	Bharat Aur Sansar (R.P.)	January 1986	20,000
36.	Learning Science through Environment, Part III (R.P.)	January 1986	65,000
37.	Paryavaran Se Vigyan Seekhna, Bhag III (R.P.)	January 1986	8,000
<i>Workbooks</i>			
38.	Abhyas Pustika Bal Bharati, Bhag V (R.P.)	December 1985	1,00,000
39.	Abhyas Pustika Swasti, Bhag I (R.P.)	December 1985	34,000
40.	Workbook for English Reader, Book II (S.S.) (R.P.)	January 1986	1,20,000
<i>Supplementary Readers</i>			
41.	Read for Pleasure II (R.P.)	February 1986	60,000
<i>CLASS VI</i>			
<i>Textbooks</i>			
42.	Bharati, Bhag I (R.P.)	February 1986	85,000
43.	Swasti, Bhag II (R.P.)	December 1985	35,000
44.	English Reader, Book III (S.S.) (R.P.)	January 1986	90,000
45.	Mathematics for Middle Schools, Book I	December 1985	1,05,000
46.	Ganit Madhyamic Schoolon Ke Liye, Pustak I (R.P.)	January 1986	10,000
47.	Lands and People, Part I (R.P.)	December 1985	50,000
48.	Desh Aur Unke Niwasi, Bhag I (R.P.)	December 1985	20,000
49.	History and Civics, Part I (R.P.)	January 1986	54,000
50.	Itihas Aur Nagarik Shastra, Bhag I (R.P.)	January 1986	55,000
51.	Learning Science, Part I (R.P.)	January 1986	65,000
52.	Aao Vigyan Seekhein, Bhag I (R.P.)	March 1986	10,000
<i>Workbooks</i>			
53.	Abhyas Pustika Swasti, Bhag II (R.P.)	December 1985	30,000
54.	Workbook for English Reader, Book III (S.S.) (R.P.)	January 1986	95,000
<i>Supplementary Readers</i>			
55.	Sankshipt Ramayan (R.P.)	December 1985	40,000

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<i>S. No.</i>	<i>Title</i>	<i>Date of Publication</i>	<i>No. of Copies Printed</i>
56.	Read for Pleasure, Book III (R.P.)	January 1986	45,000
<i>CLASS VII</i>			
<i>Textbooks</i>			
57.	Bharati, Bhag II (R.P.)	January 1986	55,000
58.	Swasti, Bhag III (R.P.)	January 1986	10,000
59.	English Reader, Book IV (S.S.) (R.P.)	December 1985	75,000
60.	Mathematics for Middle Schools, Book II Part I (R.P.)	December 1985	74,000
61.	Ganit Madhyamik Schoolon Ke Liye, Pustak II, Bhag I (R.P.)	March 1986	10,000
62.	Mathematics for Middle Schools, Book II, Part II (R.P.)	December 1985	69,000
63.	History and Civics, Part II (R.P.)	December 1985	40,000
64.	Itihas Aur Nagrik Shastra, Bhag II (R.P.)	January 1986	38,000
65.	Lands and People, Part II (R.P.)	December 1985	46,000
66.	Desh Aur Unke Niwasi, Bhag II (R.P.)	December 1985	40,000
67.	Learning Science, Part II (R.P.)	January 1986	70,000
68.	Aao Vigyan Seekhein, Bhag II (R.P.)	January 1986	12,000
<i>Workbooks</i>			
69.	Abhyas Pustika Swasti, Bhag III (R.P.)	December 1985	20,000
<i>Supplementary Readers</i>			
70.	Naya Jeevan (R.P.)	January 1986	25,000
71.	Sankshipt Mahabharat (R.P.)	December 1985	40,000
72.	Read for Pleasure, Book IV (R.P.)	January 1986	27,000
<i>CLASS VIII</i>			
<i>Textbooks</i>			
73.	Bharati, Bhag II (R.P.)	December 1985	62,000
74.	Swasti, Bhag IV (R.P.)	January 1986	11,000
75.	English Reader, Book V (S.S.) (R.P.)	December 1985	50,000
76.	Mathematics for Middle Schools, Book II Part I (R.P.)	February 1986	87,000
77.	Mathematics for Middle Schools, Book III Part II (R.P.)	December 1985	75,000
78.	Ganit Madhyamik Schoolon Ke Liye, Pustak III, Bhag II (R.P.)	March 1986	12,000
79.	History and Civics, Part II (R.P.)	January 1986	35,000
80.	Itihas Aur Nagrik Shastra, Bhag II (R.P.)	February 1986	17,000
81.	Lands and People, Part III (R.P.)	December 1985	35,000
82.	Desh Aur Unke Niwasi, Bhag III (R.P.)	January 1986	15,000
83.	Learning Science, Part II (R.P.)	February 1986	55,000
<i>Workbooks</i>			
84.	Abhyas Pustika Swasti, Bhag IV (R.P.)	—	25,000
<i>Supplementary Readers</i>			
85.	Trividha (R.P.)	December 1985	32,000

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<i>S. No.</i>	<i>Title</i>	<i>Date of Publication</i>	<i>No. of Copies Printed</i>
86.	Read for Pleasure, Book V (R.P.)	December 1985	25,000
87.	Jeevan Aur Vigyan (R.P.)	December 1985	20,000
<i>CLASS IX</i>			
<i>Textbooks</i>			
88.	Steps to English—IV English Reader ('B' Course) (R.P.)	March 1986	46,000
89.	Physics, Part I (R.P.)	August 1985	40,000
90.	Physics, Part I (R.P.)	March 1986	1,38,000
91.	Bhautiki, Bhag I (First Edition)	April 1985	1,60,000
92.	Rasayan Vigyan, Bhag I (First Edition)	April 1985	1,60,000
93.	Basic Biology, Part I, Vol. I (R.P.)	August 1985	40,000
94.	Basic Biology, Part I, Vol. I (R.P.)	January 1986	1,40,000
95.	Basic Biology, Part I, Vol. II (First Edition)	October 1985	1,40,000
96.	Adharik Jeev Vigyan, Bhag I, Khand I (First Edition)	May 1985	1,60,000
97.	Adharik Jeev Vigyan, Bhag I, Khand I (First Edition)	December 1985	1,40,000
98.	Mathematics Part I (R.P.)	August 1985	40,000
99.	Ganit, Bhag I, Khand I (First Edition)	April 1985	1,40,000
100.	Ganit, Bhag I, Khand I (R.P.)	March 1986	71,000
101.	Ganit, Bhag I, Khand II (First Edition)	August 1985	1,60,000
102.	The Story of Civilization, Vol. I (R.P.)	March 1986	45,000
103.	Sabhyata Ki Kahani, Bhag I (R.P.)	March 1986	49,000
104.	Man and Environment (R.P.)	February 1986	49,000
105.	Manushya Aur Vatavaran	February 1986	52,000
106.	English Supplementary Reader (R.P.)	March 1986	37,000
<i>CLASS IX-X</i>			
107.	Citizen and the Government (R.P.)	August 1985	20,000
108.	Nagrik Aur Shashan (R.P.)	March 1986	95,000
<i>CLASS XI</i>			
109.	Steps to English—V English Reader ('B' Course) (R.P.)	February 1986	20,000
110.	Steps to English—V Supplementary Reader ('B' Course) (R.P.)	February 1986	34,000
111.	Ganit, Bhag II (R.P.)	April 1985	4,000
112.	Vigyan, Bhag II (R.P.)	April 1985	6,000
113.	Mathematics, Part II (First Edition)	January 1986	2,00,000
114.	The Story of Civilization, Vol. II (R.P.)	May 1985	16,000
115.	India on the Move (R.P.)	May 1985	8,000
116.	Bharat Vikas Ki Oar (R.P.)	July 1985	15,000
117.	Bharat Vikas Ki Oar (R.P.)	February 1986	50,000
<i>CLASS XII</i>			
118.	Abhinav Gadya Bharati, Bhag I (R.P.)	March 1986	55,000
119.	Abhinav Katha Bharati, Bhag I (R.P.)	March 1986	55,000
120.	Sahitya Ka Swaroop (First Edition)	September 1985	50,000
121.	Sahitya ka Swaroop (R.P.)	March 1986	30,000
122.	Kavya Sanchayan, Bhag I (R.P.)	October 1985	56,000
123.	Gadhya Sanchayan, Bhag I (R.P.)	November 1985	56,000
124.	Kahani Sanchayan, Bhag I (R.P.)	November 1985	62,000
125.	I-The People (English Reader) (R.P.)	March 1986	1,50,000
126.	Five One-Act Plays (R.P.)	April 1985	1,300

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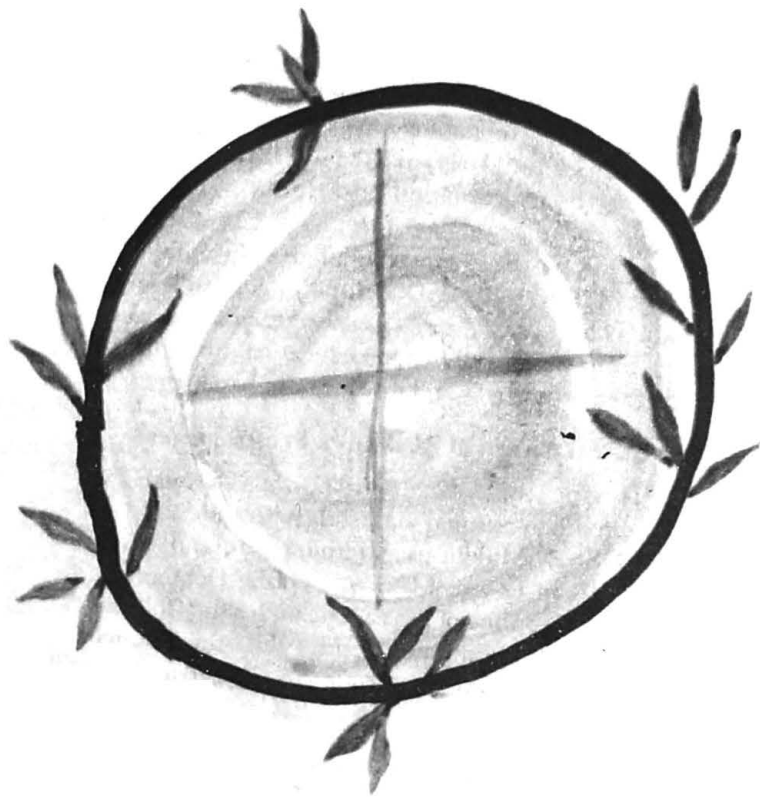
S. No.	Title	Date of Publication	No. of Copies Published
127.	Sanskrit Sahitya Parichay (R.P.)	March 1986	17,000
128.	Rangini (R.P.)	March 1986	17,000
129.	Bhautik Vigyan, Bhag I (R.P.)	February 1986	2,500
130.	Biologv. Part I (R.P.)	March 1986	23,000
131.	Mathematics, Book I (R.P.)	February 1986	30,000
132.	Ganit, Bhag I (R.P.)	April 1985	20,000
133.	Mathematics, Book II (R.P.)	February 1986	25,000
134.	Ancient India (R.P.)	April 1985	9,000
135.	Ancient India (R.P.)	March 1986	19,000
136.	Medieval India, Part I (R.P.)	February 1986	22,000
137.	Madhyakalin Bharat, Bhag I (R.P.)	February 1986	19,000
138.	Political System (R.P.)	March 1986	10,000
139.	Elementary Statistics	June 1985	25,000
140.	Prarambhik Sankhyaki	July 1985	20,000
141.	Evolution of Indian Economy	May 1985	30,000
142.	Evolution of Indian Economy	March 1986	20,000
143.	Bhartiya Arthavyavastha Ka Vikas	June 1985	21,000
144.	Physical Geography (First Edition)	May 1985	22,000
145.	Bhautik Bhugol (First Edition)	August 1985	16,000
146.	Bhautik Bhugol (R.P.)	March 1986	8,000
147.	General Geography of India, Part I (R.P.)	April 1985	15,000
148.	General Geography of India, Part I (R.P.)	February 1986	11,000
149.	Psychology—An Introduction to Human Behaviour (R.P.)	April 1985	1,500
<i>CLASSES XI-XII</i>			
150.	English Reader II (R.P.)	August 1985	70,000
151.	Physics (R.P.)	March 1986	18,000
<i>CLASS XII</i>			
152.	Abhinav Kavya Bharati, Bhag II (First Edition)	February 1986	80,000
153.	Abhinav Gadya Bharati, Bhag II (First Edition)	March 1986	80,000
154.	Kavya Sanchayan, Bhag II (First Edition)	March 1986	60,000
155.	Gadya Sanchayan, Bhag II (First Edition)	March 1986	60,000
156.	Dear to All the Muses (R.P.)	May 1985	4,500
157.	On Top of the World (R.P.)	March 1986	5,000
158.	Sanskrit Kavya Trangini (R.P.)	March 1986	15,000
159.	Mathematics, Book III (R.P.)	February 1986	20,000
160.	Mathematics, Book IV (R.P.)	February 1986	18,000
161.	Mathematics, Book V (R.P.)	February 1986	22,000
162.	Madhyakalin Bharat, Bhag II (R.P.)	April 1985	5,000
163.	Adhunik Bharat (R.P.)	March 1986	8,000
164.	Bhartiya Samvidhan Aur Shashan (R.P.)	April 1985	3,000
165.	Indian Democracy at Work (R.P.)	April 1985	4,000
166.	Bharat Mein Loktantra (R.P.)	March 1986	3,000
167.	An Introduction to Economic Theory (R.P.)	June 1985	5,000
168.	Human and Economic Geography (R.P.)	May 1985	8,000
169.	Manav Evam Arthik Bhugol (R.P.)	February 1986	3,000
170.	Bharat Ka Bhugol, Bhag II (R.P.)	March 1986	5,000

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S. No.	Title	Date of Publication	No. of Copies Published
URDU TEXTBOOKS			
<i>CLASS VI</i>			
171.	Riyazee (Mathematics), Book I (R.P.)	April 1985	6,000
172.	Urdu Ki Nai Kitab (New Book)	March 1986	5,000
<i>CLASS VII</i>			
173.	Tareekh Aur Ilme-e-Shahriyat (History and Civics), Part II (R.P.)	July 1985	2,000
<i>CLASS VIII</i>			
174.	Hisab (Mathematics), Book III, Part II (R.P.)	June 1985	2,000
<i>CLASS IX</i>			
175.	Insan Aur Mahaul (Man and Environment (R.P.)	April 1985	2,000
176.	Tahzeeb Ki Kahani (The Story of Civilization), Vol. I (R.P.)	April 1985	1,500
<i>CLASS XII</i>			
177	Riyazee (Mathematics), Book, V (R.P.)	November 1985	2,000
TEXTBOOKS/WORKBOOKS FOR OTHER STATES/ORGANIZATIONS			
178	Abhyas Pustika Arun Bharati, Bhag I (R.P.)	March 1986	28,000
179	Arun Bharati, Bhag II (R.P.)	March 1986	10,000
180.	Abhyas Pustika Arun Bharati, Bhag II (R.P.)	March 1986	12,000
181.	Arun Bharati, Bhag III (New Book)	July 1985	30,000
182.	Abhyas Pustika Arun Bharati, Bhag III	November 1985	30,000
183.	Gadya-Bharti (R.P.)	January 1986	8,000
184.	Kavya Bharti (R.P.)	January 1986	8,000
185.	Saora Bhasha Ki Praveshika	November 1985	5,000
SUPPLEMENTARY READERS			
<i>"Let's Enrich Our English" Series</i>			
186.	Let's Enrich Our English, Book I	May 1985	10,000
187.	Let's Enrich Our English, Book II	May 1985	10,000
188.	Let's Enrich Our English, Book III	May 1985	10,000
189.	Let's Enrich Our English, Book IV	May 1985	10,000
190.	Let's Enrich Our English, Book V	May 1985	10,000
191.	Let's Enrich Our English, Book VI	May 1985	10,000
192	Let's Enrich Our English, Book VII	February 1986	10,000
193.	Let's Enrich Our English, Book VIII	February 1986	10,000
RESEARCH MONOGRAPHS AND OTHER PUBLICATIONS			
194.	Curriculum Load at the School Level—a Quick Approach	May 1985	1,000
195.	Circular Motion—Teaching Unit in Physics	April 1985	2,000
196.	Electricity I—Teaching Unit in Physics	May 1985	2,000
197.	Electromagnetism—Teaching Unit in Physics	May 1985	2,000
198.	Parho Aur Barho—Urdu Primer Guide	July 1985	1,000
199.	Hindi Vyakaran Aur Rachna	July 1985	5,000
200.	Psychology for the Elementary School Teacher	April 1985	2,000

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<i>S. No.</i>	<i>Title</i>	<i>Date of Publication</i>	<i>No. of Copies Printed</i>
201.	Thermodynamics I—Teaching Unit in Physics	April 1985	2,000
202.	Kinetic Theory of Gases I—Teaching Unit in Physics	May 1985	2,000
203.	Rigid Body Rotation—Teaching Unit in Physics	May 1985	2,000
204.	Applied Electromagnetism—Teaching Unit in Physics	August 1985	2,000
205.	Kinetic Theory of Gases II—Teaching Unit in Physics	May 1985	2,000
206.	Towards a Model of Textbook Comprehensibility	August 1985	2,000
207.	National Science Exhibition, 1985	November 1985	2,000
208.	Structure and Working of Science Models 1985	November 1985	2,000
209.	Reading for Careers Teachers	October 1985	3,000
210.	Task Force on NCERT	October 1985	1,000
211.	Socially Useful Productive Work Source Book, Volume II	November 1985	2,000
212.	Annual Report 1984-85	December 1985	1,600
213.	Annual Report 1984-85 (Hindi)	December 1985	1,000
214.	Task Force Report on NCERT (Hindi)	December 1985	1,000
215.	Sample Unit Tests in History	November 1985	5,000
216.	Study Guide for CLASS (Computer Literacy and Studies in Schools)	May 1985	30,000
217.	Hindi Vartani Sambandhi Sudharmulak	November 1985	5,000
218.	Samhita (Data base) Working Manual	January 1986	3,000
219.	Mathland (Turtle Graphics) Working Manual	January 1986	3,000
220.	National Curriculum for Primary and Secondary Education—a Framework	January 1986	5,000
221.	Non-Formal Education Programme in India	January 1986	1,000
222.	Audit Report 1984-85	February 1986	5,000
223.	Report of the Committee on Examinations	February 1986	5,000
224.	Biochemicals and Behaviour	January 1986	1,000
225.	Innovative Practices in Secondary Teacher Education in India (1975-78) Volume II	February 1986	1,000
226.	Talent and Creativity	January 1986	1,000
227.	National Prize Competition for Children's Literature	April 1986	10,000
228.	Influence of Continuous Evaluation on Learning	February 1986	2,000
229.	Evaluation at the Elementary Stage—a Book of Readings	January 1986	1,000
230.	Comparison of the Developmental Norms	January 1986	1,000



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INTERNATIONAL RELATIONS AND ASSISTANCE

WITHIN the gamut of research, training and extension activities in school education at the national level, the NCERT maintains contact with various countries and international organizations like UNESCO; UNDP, UNICEF, etc. The NCERT acts as a major agency for implementing the provisions of bilateral Cultural Exchange Programmes (CEP) with other friendly countries. The major activities under the CEP are exchange of educational materials and visits of educationists for the study of educational system. The NCERT also sponsors the Council's faculty members for participation in international seminars/workshops/symposia/meetings/training programmes. It has also been undertaking training programmes for foreign nationals under attachment programmes in the field of school education, teacher education and educational technology. The International Relations Unit (IRU) at the NCERT is responsible for the coordination of the above-mentioned activities/programmes of the NCERT. The Unit also acts as the secretariat of the National Development Group (NDG) for Educational Innovations and as a clearing-house agency for furnishing information on school education in India to different countries and international agencies.

Bilateral Cultural Exchange Programmes

During the year 1985-86, the Council exchanged educational materials with the countries like USSR, Mauritius, Vietnam, Finland, Arab Republic of Egypt, Mexico, Cyprus, Democratic People's Republic of Korea, etc. under the Cultural Exchange Programmes. Besides this, the Council sent educational materials to countries like Spain, Nepal, the UK, Pakistan, Jordan,

Bhutan, Botswana, Saudi Arabia and Commonwealth of Dominica at their request. The following Cultural Exchanges took place during the year 1985-86:

Mr. Uttma Bissoondoyal, Director, Mahatma Gandhi Institute, Port Louis, Mauritius, visited the NCERT on 25 October 1985 to discuss the problems relating to cooperation in the areas of teacher education, curriculum development, second language learning, appropriate pedagogy and development of a programme of Indian language, culture and civilization under the provisions of the Indo-Mauritius Cultural Exchange Programme for the year 1985-86.

A three-member Soviet delegation led by Mr. Murat Penzhiev, Doctor of Philological Science, Chief of Public Education Department, Chardzhon Region, Turkmen, USSR, visited the NCERT from 14 to 23 November 1985 to study the modern state and tendencies of development of school education in India and get themselves acquainted with the system of advanced studies for pedagogical staff under Item 35 of the Indo-USSR Cultural Exchange Programme for the year 1985-86.

Dr. Smt. S.P. Patel, Professor, Department of Vocationalization of Education, NCERT, visited Greece from 2 to 12 March 1986 as a member of a two-member Indian delegation sent by the Ministry of Human Resource Development, to study vocational education under Item 3 of the Indo-Greek Cultural Exchange Programme for the year 1983-85 (as extended).

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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:

1. Mr. T.N. Sakya and Dr. Namtip from UNESCO Regional Office for Education for Asia and the Pacific, Bangkok, visited the NCERT on 11 April 1985 and discussed with the faculty members various UNESCO projects in education.
2. A three-member Chinese delegation from Beijing Teaching Aid Centre visited various institutions in India including the NCERT under the sponsorship of UNICEF from 23 April to 4 May 1985, in connection with production, distribution, application, research and development aspects of teaching aids.
3. A seven-member Regional Panel on Girls' Education sponsored by UNESCO visited the NCERT on 3 and 6 June 1985 during their study visit to India. The purpose of the visit was to share and exchange their experiences with policy-makers, planners and community workers of possible strategies and methods for effectively dealing with the problems of low enrolment of girls in primary education and to study and review the progress of the studies on the situation of girls' education.
4. Two Indonesian Fellows, M/s Rodji and Manutun Constant Parade were placed in the Department of Pre-School and Elementary Education for studies in the field of comparative study in literacy for a period of four weeks from 5 July to 7 August 1985.
5. Shri Gauri Shanker Sharma from Bhutan visited the NCERT from 15 to 19 July 1985 to acquaint himself with various aspects of the functioning of the NCERT with special reference to office management.
6. Mr. S.T. Mandizha, Lecturer, Curriculum Development Unit and Mr. W.F. Mayo, Science Teacher from the Republic of Zimbabwe visited the NCERT on 20 August 1985 to discuss the curriculum and syllabi with the NCERT faculty members.
7. His Excellency Mr. Armoorgum Parsuraman, Minister of Education, Art and Culture, Mauritius, along with his aides visited the NCERT on 20 September 1985 to discuss the activities of the NCERT in research, curriculum development, training and extension services.
8. Mr. Zhang Fuquan, Director, and Mr. Fu Li, Educational Researcher, Central Institute of Education Research, Beijing, visited the NCERT from 4 to 5 November 1985 for discussion and consultation on educational activities.
9. Mr. Nasirullah, Laboratory Assistant, India School in Kabul, underwent a training programme in the Department of Education in Science and Mathematics, NCERT, for a period of three months commencing on 1 November 1985 under the ITEC Programme of Ministry of External Affairs.
10. A team of eight UNESCO Fellows from Afghanistan were placed in the Department of Education in Science and Mathematics, NCERT, from 23 November to 22 December 1985 for training in science education.
11. Mr. H.R. Bajracharya, UNESCO Fellow from Nepal, was placed at the Regional College of Education, Bhopal, for advanced training in the field of im-

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- provement of educational methods from 17 November 1985 to 25 February 1986.
12. Mr. Do Dinh Thanh, Lecturer, Head, Section of Theoretical Physics, Hanoi Teachers Training College, attended an APEID special technical cooperation programme in science education at the Regional College of Education, Bhopal, for a period of three weeks from 17 November 1985.
 13. Inter-country Mobile Training Team in Population Education from Korea visited the NCERT from 11 to 16 November 1985 to train a team of Resource Persons from the participating countries who could plan and carry out training of personnel both for the in-school and the out-of-school population education at the national level.
 14. Four senior officials from the Bangladesh Equipment Board visited the NCERT from 1 to 7 December 1985 to familiarize themselves in development, production, quality control and distribution of educational equipment to educational institutions.
 15. A three-member Czech delegation led by the First Deputy Minister Incharge of Education and Culture, H.E. Dr. (Mrs.) Marta Vlachova, visited the NCERT on 5 December 1985 to study the problems of pre-school education, child care, and educational system in the Basic Schools in India.
 16. A Pakistani delegation visited the NCERT on 3 January 1986 to study different aspects of Special Education for Disabled Children.
 17. Two Ethiopian officials, Mr. Ato Khebede Fresenbet, Head of the EMPDA, and Mr. Ato Tesfa Alemayehu, Head, Printing Section of EMPDA, visited the NCERT on 22 December 1985 for a period of 15 days to study general management of textbooks, publishing, printing and production methods.
 18. A group of B.Ed. students from Bhutan visited the NCERT on 22 January 1986 to acquaint themselves with the programmes/activities of the Council.
 19. Shri R.D. Khati and Shri J.R. Adhikari, Research Officers of the National Education Committee of His Majesty's Government of Nepal, visited the NCERT from 25 January to 2 February 1986, to study the administrative and financial pattern of Educational institutions and their pattern of selecting textbooks.
 20. Dr. Maureen Woodhall, an eminent British educational economist and planner, visited the NCERT on 3 February 1986 and delivered a lecture on Vocationalization of Secondary Education.
 21. Dr. Ali Fakhro, Education Minister of Bahrain, visited the NCERT and discussed with the faculty members the educational activities of the Council.
 22. Mr. Takao Lizawa, an official of the Educational and Cultural Exchange Division, Ministry of Education, Japan, visited the NCERT from 4 to 10 March 1986 to study the present situation of education in the countries of Asia and the Pacific with particular reference to APEID.
 23. An eleven-member Dzonghka teachers' delegation from Bhutan visited the NCERT on 14 March 1986 to acquaint itself with the programmes/activities of the Council.
 24. The participants from Bangladesh, Zambia, Tanzania, Fiji, Ghana and Namibia attending the Second International Diploma Programme in Educational Planning and Administration at NIEPA visited the NCERT on 20 March 1986 and discussed with the faculty members the programmes and activities of the NCERT.

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Deputation of NCERT Faculty Members Abroad

1. Prof. Baquer Mehdi, Dean (Coordination), NCERT, participated in the UNESCO Sub-Regional Workshop on Curriculum Development held at Kuala Lumpur from 8 to 13 July 1985.
2. Dr. (Km.) L.G. Sumitra, Reader, CIET participated in the UNESCO Sub-Regional Workshop on Mass Media for Training Teachers and Community Workers working with Disadvantaged Groups and Out-of-School Population at Kuala Lumpur from 22 July to 2 August 1985.
3. Dr. B.D. Atrey, Professor, DESM, and Smt. S. Bhattacharya, Reader, DPSEE, participated in the APEID Regional Workshop for Development of Teaching-Learning Materials for Primary Level Science Education at Bangkok from 20 to 31 August 1985.
4. Prof. C. Sheshadari, Regional College of Education, Mysore, participated in the Operational Seminar on Improving Access to Education for Disadvantaged Group, held at Pakistan from 8-19 September 1985.
5. Dr. B.R. Goyal, Reader, DTESEES, participated in the APEID Regional Training Workshop on the Use of Educational Technology by Teachers at Seoul (Republic of Korea) from 16 to 27 September 1985.
6. Prof. R.M. Kalra, Professor Incharge, International Relations Unit, NCERT, undertook a study visit to Thailand and Philippines from 25 September to 2 October 1985, under his function as a key person in the APEID/MDG secretariat.
7. Prof. A.K. Jalaluddin, Joint Director, NCERT, participated in the Fourth Asian Seminar on Educational Technology (Tokyo Seminar), Third Programme Cycle of APEID, held at Tokyo from 10 to 19 October 1985.
8. Prof. J.S. Rajput, Principal, Regional College of Education, Bhopal, participated in the Regional Training Workshop for Science Curriculum Developers and Teacher-educators held at Islamabad from 19 October to 1 November 1985.
9. Shri O.P. Gupta, Reader, International Relations Unit, NCERT, participated in the APEID Regional Study Group Meeting on Identification of Causes of Educational Under-development in Rural Areas (Phase I) and on Relevance of Education to Rural Environment (Phase II) held at Bangkok from 22 October to 8 November 1985.
10. Shri K. Ramachandran, Lecturer, DPSEE, visited China along with a five-member Indian delegation under UNICEF-assisted programme to study Elementary and Non-Formal Education in China for a period of two weeks from 25 October 1985.
11. Dr. (Smt.)-S. Shukla, Head, DTESEES participated in the APEID Regional Technical Working Group-cum-Training Workshop on In-service Training of Educational Personnel held at Chiang-mai, Thailand, from 29 October to 16 November 1985.
12. Prof. K.J. Khurana, DESM, and Prof. M.S. Khaparde, Regional College of Education, Bhopal, participated in the Regional Workshop on Primary Science Education in Asia and the Pacific held at Tokyo from 1-24 November 1985.
13. Smt. R. Saini, Reader, NCERT, participated in the 11th Meeting of Experts on Asia/Pacific Music Co-production Programme-Utilization and Future Planning held at Tokyo from 6-10 November 1985.
14. Dr. (Smt.) Swadesh Mohan, DEPC&G, participated in the Regional Training on Improvement of National Edu-

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- ational and Vocational Guidance Service for Women and Girls held at Australia from 5 to 14 November 1985.
15. Prof. A.K. Sharma, Principal, Regional College of Education, Mysore, participated in the UNESCO Sub-Regional Workshop on Micro-Computers in Science and Mathematics Teaching held at Penang, Malaysia, from 18 to 22 November 1985.
 16. Dr. P.L. Malhotra, Director, NCERT, visited Pakistan at the request of Pakistan University Grants Commission for mutual exchange of experiences to promote activities relating to current organization of training programmes in various disciplines of education from 13-18 January 1986.
 17. Dr. A.B. Saxena, Reader in Physics, Regional College of Education, Bhopal, acted as a Resource Person to Curriculum Development Centre, Colombo, under the Mobile Team in Science Education from 17 February 1986 to 8 March 1986.
 18. Prof. P.N. Dave, Dean (Academic), NCERT, participated in the High-level Seminar on Educational Achievements in Asia and the Pacific under Japan National Institute for Educational Research, in collaboration with UNESCO ROEAP, Bangkok, to exchange information and experiences on the system of the Assessment of Educational Achievements at the Primary and Secondary Levels held at Tokyo, Japan, from 20 January to 1 February 1986.
 19. Shri K. Ramachandran, Lecturer, DPSEE, participated in the workshop on Contemporary Problems of Primary Education held at Bangladesh from 15 to 19 March 1986.
 20. Dr. P.L. Malhotra, Director, NCERT, participated in the International Symposium on Environment and Teaching Social Science in the framework of General Education held at Paris from 17 to 21 February 1986.
 21. A three-member delegation led by Dr. P.L. Malhotra, Director, NCERT, visited Bangladesh from 11 to 16 September 1985 in the context of evolving Educational Development Plan of Bangladesh during their Third Five Year Plan 1985-90.

UNESCO Mobile Teams

1. Dr. P.L. Malhotra, Director, NCERT, visited Thailand, Japan and Philippines from 8 to 22 May 1985 under a UNESCO Mobile Team in Vocational and Technical Education in Asia.
2. Dr. P. Raizada, Reader, Department of Vocationalization of Education, NCERT, visited Bangkok from 20 to 29 May 1985 under a UNESCO Mobile Team in Vocational and Technical Education in Asia.

UNESCO/APEID Seminars/Workshops

Dr. (Smt.) Sudesh Mukhopadhyaya, Lecturer, DTESE, NCERT, Dr. I.D. Gupta, Lecturer, Regional College of Education, Bhopal, Dr. Prem Lata Sharma, DTESE, NCERT, Dr. M.S. Samar, Lecturer, Regional College of Education, Ajmer, and Shri K.B. Rath, DMS, Bhubaneswar, participated in the Regional Seminar and Workshop on Special Education at Ramakrishna College of Education, Coimbatore from 12-24 August 1985 as participants/observers. Dr. N.K. Jangira, Reader, DTESE, NCERT, acted as a UNESCO Consultant in the Workshop.

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

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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 1985-86 for undertaking the following projects/studies:

1. Dissemination of Scientific and Technological Knowledge, Exchange of Experimental Data and Development of Extension Work Programmes.
2. Studies to Identify the Socio-Economic and Educational Factors involved by the Introduction of Production Work into Education.
3. Follow-up Workshop on Mass Media for the Training of Teachers and Community Workers working with Disadvantaged Groups and Out-of-School Population.
4. Preparation of a Conceptual Paper on New Developments in Primary Education.
5. Follow-up of the APEID Regional Training Workshop on Primary Science (August 1985)—Organization of National Training Workshops for Preparation of Teaching-Learning Materials.
6. Preparation of the Prototype Multi-Media Training Package in Environmental Education.

The liaison work of the UNESCO/APEID programmes is done mainly by two agencies:

- (i) Indian National Commission for Cooperation with UNESCO, Ministry of Human Resource Development.
- (ii) National Development Group (NDG) for Educational Innovations in India.

International Conferences

The NCERT assists the Ministry of Human Resource Development, Government of India, in the preparation of proposals for international

conferences organized by UNESCO, Commonwealth, etc. A brief account in this regard is as follows:

- (i) The UNESCO's Draft Programme and Budget 1986-87 (Document 23 c/5) was considered in the twenty-third session of the General Conference of UNESCO held in Sofia (Bulgaria) in October-November 1985. The comments/suggestions of the NCERT on the UNESCO's draft programme and budget were considered in the eighteenth session of the Indian National Commission for Cooperation with UNESCO on 21 September 1985.
- (ii) The NCERT suggested follow-up action on Recommendation No. 74 of the International Conference on Education (held at Geneva from 16 to 25 October 1984) concerning the universalization and renewal of primary education in the perspective of an appropriate introduction to science and technology.
- (iii) The NCERT studied the Report of the Ninth Conference of Commonwealth Education Ministers held in Nicosia (Cyprus) from 23 to 26 July 1984 and submitted a report to the Ministry of Education suggesting follow-up action on the recommendations.

Activities under the National Development Group

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 regional-level institutions and six State-level 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

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NDG Secretariat is responsible mainly for stimulating educational innovations and performing coordination and clearing-house functions. A pamphlet giving the background information about NDG and APEID has been printed and sent to various institutions and organizations in the States and the Union Territories for wide publicity. Also, a set of transparencies on NDG has also been prepared. During the year 1985-86, the NDG Secretariat published the January-March 1985 issue of the quarterly newsletter, titled "Educational Innovation". The manuscript of the April-June 1985 issue of the newsletter has been sent to the Press. The NDG provides a forum for educational innovators in different educational development sectors (general education, non-formal education, adult education, agricultural education, rural development, etc.), to meet and exchange innovative ideas and experiences by organizing regional and national seminars on educational innovations for development. During the year under report the NDG Secretariat organized a regional seminar (Northern Region) on Educational Innovations for Development from 17 to 20 December 1985 at the Technical Teachers' Training Institute Chandigarh. In this seminar, participants were invited from the States/Union Territories of Jammu and Kashmir, Himachal Pradesh, Punjab, Haryana, Chandigarh, Delhi and Uttar Pradesh. Thirty-five educational innovators from different educational development sectors attended the seminar. Twenty-two papers on educational innovations in general education, adult education, technical education, agricultural education and rural development were presented and discussed in the seminar.

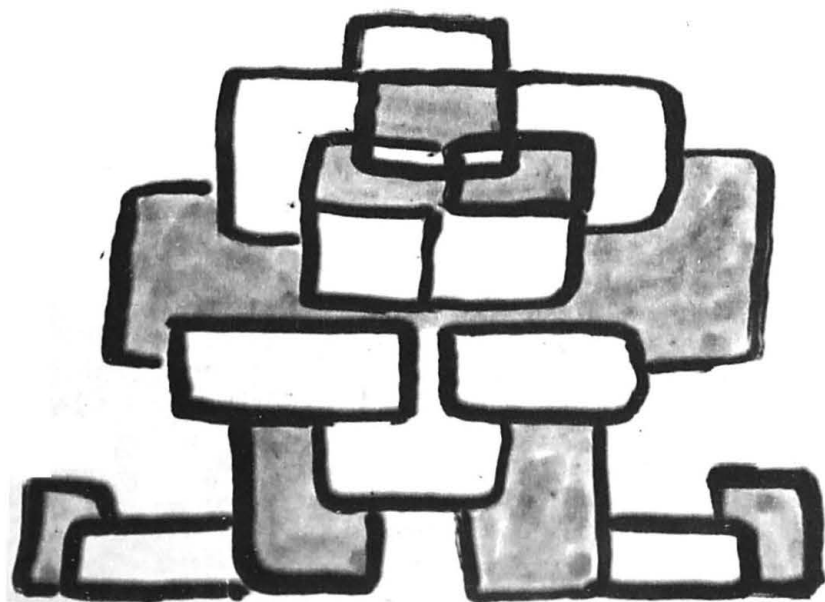
NDG Meeting

The General Body of the NDG in its meeting held on 31 January 1986, agreed that the following organizations in Uttar Pradesh may be made Associated Centres of APEID:

- (i) State Council of Educational Research and Training, Uttar Pradesh, Lucknow.
- (ii) Literacy House, Lucknow.

Necessary steps are being taken to obtain approval from UNESCO for recognition of these organizations as Associated Centres of APEID.

The meeting felt the need for setting up a State Development Group (SDG) for Educational Innovations in each State and Union Territory as Complementary Development Group of the NDG for effective inter-sectoral, inter-State and intra-State cooperation and coordination and hoped that the States would take initiative in this regard. Each SDG will comprise some of the leading institutions and organizations in each State/Union Territory in different educational development sectors like general education, Non-formal education, adult education, technical education, health and family welfare education, agricultural education, rural development, social welfare, etc. It was proposed that the Chairpersons of SDGs may be represented on the General Body of the NDG. Thus the formation of SDGs will make the NDG broadbased with representatives of all States and Union Territories. This arrangement will hopefully facilitate proper stimulation of innovative process in the country and will provide suitable machinery for inter-sectoral or multi-sectoral coordination and cooperation in the field of educational innovations for development.



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ADMINISTRATIVE AND WELFARE ACTIVITIES AND FINANCE

THE NCERT Secretariat continued to perform its functions of house-keeping in accordance with the 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 Fifth Inter-Regional Colleges of Education and NIE Staff Tournament was organized at the Regional College of Education, Mysore, from 9 to 12 December 1985. More than 175 players took part in Cricket, Volleyball, Basketball, Badminton, Tennis, Table Tennis and Football, for which the competition was held. The tournament was a great success.

Keeping in view the pressing demand of the Council employees at Delhi a proposal to construct 104 more staff quarters of different types was approved. A sum of Rs 1.05 crore has already been paid to the CPWD. The drawings for these quarters were prepared by the Senior Architect of the CPWD and put up to DUAC/DDA for approval. The work is likely to start soon. A shopping complex with a provision for 24 shops and a community hall will be constructed on the NIE campus for the benefit of the residents and the staff. A sum of Rs 16,40,300 has already been paid to the CPWD. The case is being pursued with the CPWD so that the work is started soon. The construction work to provide a lift and 10 more rooms in the NIE Guest House is expected to be completed by the CPWD very soon.

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 the following studies during 1985-86:

1. Study for the continuation of the ministerial posts for the live UNICEF projects on Nutrition and Health Education and Environmental Education, Primary Education Curriculum Renewal, Community Education and Participation, Early Childhood Education and Comprehensive Access to Primary Education.
2. Study report of the requirements of additional posts of Peons at the NCERT headquarters. The first draft was finalized and accepted by the authorities of the Council.
3. Study for the assessment of requirements of additional posts of Daftries at the NCERT headquarters.
4. A separate study for creation of posts of Packers for some of the UNICEF projects mentioned in (1) above was made and a report submitted.
5. Study for the requirements of additional posts of Chowkidars in the Regional College of Education, Ajmer.
6. The Unit was associated with the study of the staff assessment of Accounts Branch at the NCERT headquarters conducted by a group of trainees of the Advanced Course in Management and organized by the Institute of Secretarial Training and Management (ISTM). Based on this report a separate report for the creation of additional posts of Senior Accounts Officer and Accounts Officer (one each) was also prepared and submitted.
7. Study for the assessment of requirements of the posts of Private Secretaries in the offices

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of the Joint Director (Council Secretariat), the Joint Director (CIET) and the Secretary, NCERT.

8. Study of the requirements of additional posts of Chowkidars for the Regional College of Education, Bhopal, was conducted. The report, however, is yet under preparation.

Follow-up work was done on the various studies conducted by the Unit in the previous year particularly those on the Publication Department and the requirement of Hindi posts at the Council Secretariat.

Besides undertaking the studies mentioned above, the IWSU made some significant contributions in the areas of Record Management and Checks against Delays in the disposal of business. For Record Management, the Unit developed Record Retention Schedules for the records relating to programmes/activities of the Departments of the NIE as well as those in the Council Secretariat. For the Secretariat records the Retention Schedules were mainly adapted from those developed for the Secretariat of the Government of India. Some other steps were taken to simplify the procedures for reviewing the old records and destroying those records which were not likely to be needed any longer.

Activities of the Hindi Cell

The Hindi Cell of the NCERT accomplished the tasks, mentioned below, for progressive use of Hindi for official purposes.

Official Language Implementation Committee

The Hindi Cell convened three quarterly meetings of the Official Language Implementation Committee on 8 March 1985, 3 September 1985, and 13 March 1986, respectively.

The Official Language Implementation Committee of the NCERT constituted a Sub-Committee to review the progress of Hindi in various departments/sections of the Council and to identify problems faced by them. The Sub-Committee has so far completed the task in the

following departments/sections.

- (i) Establishment I Section; (ii) Establishment III Section; (iii) Establishment IV Section; (iv) CIET; (v) Regional Colleges of Education at Mysore and Bhubaneswar; (vi) The Field Offices at Bangalore and Bhubaneswar.

Besides, Official Language Sub-Committees have been constituted in the Regional Colleges at Ajmer, Bhubaneswar and Mysore.

Distribution of Material

The Cell distributed the following material among the various departments and units in the Council:

1. Compilation of Orders regarding the use of Hindi—75 copies.
2. Devnagari Type-writing Prashikshak—20 copies.

Translation

Two reports of the CIET were translated. Besides Hindi material for the annual diary of the Council was made available. Also a list of 108 translated forms used in administrative work was circulated in the Council.

Training

Fourteen employees of the Council were trained in Hindi typing during 1985-86. Six employees have passed the Hindi typing examination of the Ministry of Home Affairs, held in January 1986.

Creation of Hindi Posts

One post of Assistant Public Relations Officer has been created at the Council headquarters and selection has been made. Appointment is yet to be effected. The post of Hindi Officer and Hindi Assistants have been created in the Hindi Cell. Appointments are yet to be made.

The Hindi Cell has been sending quarterly reports of the progress of Hindi to the Ministry of Human Resource Development (Department of Education) as per the schedule.

FINANCE

Consolidated Receipts and Payments Accounts of the NCERT
for the Year 1985-86

<i>Receipts.</i>		<i>Amount (Rs.)</i>	<i>Payments</i>		<i>Amount (Rs)</i>
Opening Balances					
Cash in Hand and Bank	4,15,02,804.00		<i>Pay of Officers</i>		
Funds in Transit Cash	2,42,000.00		Non-Plan	1,25,76,124.00	
in GPF/CPF S.B. Accounts T 39	27,39,927.00	4,44,84,731.00	Plan	40,880.00	1,26,17,004.00
<i>Grants Received from the Ministry of Human Resource Development for Budgetary Expenditure</i>			<i>Pay of Establishment</i>		
Non-Plan	10,67,77,994.00		Non-Plan	1,02,95,640.00	
Plan	1,81,61,408.00	12,49,39,402.00	Plan	42,666.00	1,03,38,306.00
<i>Grants and Refunds pertaining to Specific Projects</i>		9,47,49,750.00	<i>Allowances and Honoraria</i>		
<i>Council Receipts</i>			Non-Plan	3,88,24,950.00	
Rent of the Council Buildings		12,09,496.00	Plan	1,59,452.00	3,89,84,402.00
Interest on Loans	87,826.00		<i>Travelling Allowances</i>		
Interest on STI	3,35,068.00	4,22,894.00	Non-Plan		9,29,399.00
Recovery of Over-payments		13,70,509.00	<i>Other Charges</i>		
Sale of Science Kit		23,84,245.00	Non-Plan	1,61,54,496.00	
Fees and Charges		5,48,301.00	Plan	1,15,927.00	1,62,70,423.00
Sale of Publications		3,52,41,482.00	<i>Scholarship/Fellowship</i>		
Leave Salary and Pension Contribution		72,318.00	Non-Plan	7,95,501.00	
C.G.H.S.		42,725.00	Plan	4,96,080.00	12,91,581.00
<i>Miscellaneous Receipts</i>			<i>Programme</i>		
From Council	15,04,880.00		Non-Plan	4,19,93,430.00	
From T 39 A/c	210.00	15,05,090.00	Plan	1,16,95,309.00	5,36,88,739.00
Interest on GPF/CPF Investment	33,32,981.00		<i>Equipment and Furniture</i>		
Interest on SB A/C in T39	1,68,498.00	35,01,479.00	Non-Plan	20,47,089.00	
Royalty		6,526.00	Plan	39,46,359.00	59,93,448.00
			<i>Land and Building</i>		
			Non-Plan	51,09,581.00	
			Plan	78,08,682.00	1,29,18,263.00

Recoveries and Payment of Loans and Advances to Staff of NCERT

Scooter/Car Advance	1,70,176.00
Cycle Advance	44,318.00
Fan Advance	5,640.00
House Building Advance	19,80,645.00
Festival Advance	3,12,961.00
Flood Advance	50,940.00

Advance of Pay and Advance of TA on Transfer

Permanent Advance	6,700.00
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Funds and CDS

GPF	1,09,80,844.00
CPF	7,81,648.00
CDS	

Deposits

Earnest Money and Security Deposit	5,63,402.00
Advance Receipt of Science Kits	15,75,000.00
Caution Money	1,58,986.00

Miscellaneous Payments

Pension and Gratuity (Headquarters, RCEs and FAs)	28,87,838.00
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<i>Audit Fees</i>	1,48,850.00
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LSPC	69,400.00
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Deposit-linked Insurance Scheme	12,564.00
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Advertisement	5,25,203.00
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CGHS	5,04,336.00
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Interest on GPF/CPF and Employer's Share	30,00,000.00
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House Rent	15,880.00
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Brokerage for GPF/CPF Investment	61,553.00
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Other Payments by CIET

Non-Plan	4,289.00	
Plan	500.00	4,789.00

Expenditure on Specific Projects	2,70,06,524.00
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Scooter/Car Advance	6,81,195.00
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Cycle Advance	75,942.00
---------------	-----------

Fan Advance	26,400.00
-------------	-----------

House Building Advance	27,59,088.00
------------------------	--------------

Festival Advance	5,38,095.00
------------------	-------------

Flood Advance	2,300.00
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Advance of Pay and Advance of TA on Transfer	30,264.00
---	-----------

Permanent Advance	6,700.00
-------------------	----------

GPF C. A/c	23,61,373.00	
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T. 39	40,37,143.00	63,98,516.00
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CPF C. A/c	9,32,362.00	
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T. 39	6,73,839.00	16,06,201.00
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CDS		2,129.00
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<i>Receipts</i>		<i>Amount (Rs.)</i>	<i>Payments</i>		<i>Amount (Rs.)</i>
			Earnest Money and Security Deposit		1,15,191.00
			Advance Receipt of Science Kits		19,04,175.00
			Caution Money		95,000.00
			Other Deposits		4,73,614.00
			Group Insurance Scheme		2,90,175.00
			GPF/CPF Investment (from T 39 A/c)		72,62,580.00
			Short-term Deposit		11,49,00,000.00
			Transfer of Funds to T 39		80,53,179.00
			Suspense		8,30,974.00
Other Deposits		25,85,841.00	GPF/CPF Remittance		1,22,954.00
Group Insurance Scheme		4,21,408.00	PLI/LIC Remittance		79,735.00
GPF/CPF Investment (from T 39 A/c)		24,61,400.00 ¹	Miscellaneous Remittance		56,892.00
Short-term Investment (from T 39 A/c)		11,49,00,000.00	Sub-Office Remittance		38,75,863.00
Transfer of Funds to T 39 GPF/CPF SB A/c (from T 39 A/c)		80,53,179.00	Income Tax Remittance		5,74,158.00
Suspense		49,397.00	Death Relief Scheme		30,978.00
<i>Remittances</i>			T.C.S. Remittance		2,77,331.00
GPF/CPF Remittance		1,23,394.00	Periodical Remittance	6,17,94,000.00	
PLI/LIC Remittance		82,342.00	Less Funds in Transit	25,40,000.00	5,92,54,000.00
Miscellaneous Remittances		62,045.00	Closing Balance		
Sub-Office Remittance		47,49,299.00	Cash in Hand and Bank	11,94,26,290.00	
Income Tax Remittance		5,80,438.00	Funds in Transit	25,40,000.00	
Death Relief Scheme		36,708.00	Cash in T 39 SB A/c	12,19,601.00	12,31,85,891.00
T.C.S. Remittances		2,78,759.00	Grand Total:		52,07,78,027.00
Periodical Remittance	5,94,96,000.00				
Funds in Transit	2,42,000.00	5,92,54,000.00			
Grand Total:		52,07,78,027.00			

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APPENDIX A

Scheme of Assistance to Professional Educational Organizations

THE National Council of Educational Research and Training has always recognized the importance of voluntary effort 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.

The major details of the scheme as they exist at present are as follows.

Objectives

The following are the major objectives of the scheme:

- (i) To sustain and promote voluntary effort for the improvement of education, especially school education.
- (ii) To encourage quality journals of a professional nature which could help in disseminating educational innovations.
- (iii) To promote extension work in education through voluntary organizations.

Conditions of Eligibility

Organizations

- (i) A Professional Educational Organization (PEO) would be eligible for getting the NCERT grant under this scheme only if it is:
 - (a) a society registered under the Societies' Registration Act (Act XXI of 1860); or
 - (b) a public trust registered under law for the time being in force; or
 - (c) an official organization of repute engaged in the conduct and promotion of educational activities.

An organization engaged by a State Government or a local body or established under an Act of a State legislature or a resolution of State Government shall not be entitled to assistance under this scheme.

- (ii) It should normally be operating at national/regional level for the improvement of school education. Only in exceptional cases, subject to funds permitting, shall applications from PEOs working at only the State level be entertained.
- (iii) It should be open to all citizens of India without distinc-

tion of religion, race, caste, creed, sex or language.

- (iv) It should be recognized where such recognition is required for securing grant from the State Government.
- (v) It should have a properly constituted managing body with its powers, duties and responsibilities clearly defined and laid down in a written constitution.
- (vi) It should ordinarily have been engaged for a minimum period of one year prior to the date of request for a grant-in-aid under the scheme.
- (vii) It should have at least 50 members on the roll on the date of application.
- (viii) It should not be run for profit to any individual or a body individuals.

Activities

- (i) Under this scheme the following types of activities shall be normally supported by the NCERT:
 - (a) Annual conferences of the PEOs provided they have a definite theme related to some national educational issues about which the NCERT may be concerned and/or which support the NCERT's work and may be useful in the furtherance of the NCERT's objectives.
 - (b) Production of educational literature including professional journals but excluding textual materials.
 - (c) Educational exhibitions if they have a bearing on educational innovations or on other educational developments of topical nature.
- (ii) No grant shall ordinarily be given for the following:
 - (a) Seminars and workshops especially of the type that can be organized or are being organized by the NCERT.
 - (b) Research Projects.

Magnitude of Grant

In order to avoid over-dependence of organizations on the NCERT the financial assistance under this scheme shall be given only on a sharing basis as follows:

- (i) The grant-in-aid from the NCERT shall not normally exceed 60 per cent of the expenditure on an activity during that year.
- (ii) The remaining 40 per cent of the expenditure will be managed by the organization from other sources, like grants received from other organizations or income from sale, subscription or advertisements in the case of journals. If, however, the income from these sources exceeds

40 per cent of the expenditure, the Council's share shall be accordingly reduced.

- (iii) If, by chance, the Council's grants during a year exceeds the admissible amount of 60 per cent of actual expenditure or the short-fall of the same from other sources, whichever is less, the excess would become recoverable or adjustable in the next year's grant.

Example:

If the actual expenditure on an activity is Rs. 1,700 while the NCERT's grant is Rs. 1,500 and the income from other sources is Rs. 900.

(a)	60 per cent of the expenditure	=	Rs. 1,020
(b)	Short-fall of expenditure from other sources (1700-900)	=	Rs. 800
	Recoverable amount		
	[Grant minus lesser of (a) and (b)]	=	1,500-800
		=	Rs. 700

Procedure for Applying

- (i) The PEOs should submit their applications in the prescribed application forms given in the Annexure complete in all respects and in duplicate.
- (ii) Separate applications should be submitted for each programme or activity.
- (iii) Each application should be accompanied by the following documents:
 - (a) Prospectus of the institution/organization or a brief description of its objects and activities.
 - (b) Constitution of the organization.
 - (c) A copy of the latest available annual report.
 - (d) In cases of requests for grants for the publication of journals/other materials, copies of previous issues of the journals/previous publications.
 - (e) The audited statement of accounts of the organization for the previous year along with a utilization certificate in the following form duly signed by the President/Secretary of the Association and the Auditors (Chartered Accountants etc.)

"I have verified the accounts of _____ in respect of the grant of Rs. _____ sanctioned by the National Council of Educational Research and Training for _____ with the help of the vouchers and certify that they are correct and the grant has been utilized for the purpose for which it was sanctioned."

A separate utilization certificate in the same form and/or statement of expenditure exclusively for the activity for which the grant has been given.

No grant can be sanctioned without the documents mentioned above.

General

- (i) In the case of grants for publication of journals it would be obligatory on the PEO to carry one advertisement of the NCERT without charges.
- (ii) In the case of grants for annual conferences the organization should associate some representative of the NCERT with the conference.
- (iii) The institution/organization shall maintain a record of all assets acquired wholly or substantially out of the grant. Such assets shall not be disposed of, encumbered with or utilized for the purpose other than those for which the grant was given, without prior sanction of the NCERT. Should the institution/organization cease to exist at any time such properties shall revert to the National Council of Educational Research and Training.
- (iv) The accounts and supporting documents shall be open to a test check by the Comptroller and Auditor-General of India at his discretion.
- (v) When the NCERT has reasons to believe that the sanctioned money is not being utilized for approved purposes, the grants may be recovered and payment of further grants stopped.
- (vi) The organization must exercise utmost economy in the working of the programmes approved and assisted by the NCERT.
- (vii) Applications for grant should be submitted to the Secretary, NCERT.

APPLICATION FORM

(To be submitted in duplicate)

NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

Scheme of Assistance to Professional Educational Organizations

Note: An application received in an incomplete form will not be entertained.

(To be completed by the Applicant)

1. Name of the institution/organization
2. Brief history of the institution/organization and its objects and activities
3. Whether registered under the Indian Societies Registration Act, 1860 (Act XXI of 1860) or any law for the time being in force
4. Whether the association has at least 50 members on the roll.
5. Details of grant solicited from any Central/State Government Department or Institutions established by Central/State Government and the amount sanctioned or likely to

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be sanctioned for the same activity for which financial assistance has been solicited in the application

6. Detailed description of the programme/activity for which assistance is requested—Estimated expenditure, phasing of expenditure—indicating recurring and non-recurring expenditure separately

7. Additional information, if any

Certified that the information furnished in the application is true to the best of my knowledge and belief.

Certified that the activities for which financial assistance is requested in this application is not covered by any other scheme operated by the Central/State Government or Institutions established by them.

Certified that I have read the NCERT scheme of financial assistance to PEOs carefully and I undertake to abide by the provisions of the same.

Signature-----
(Full name in block capital letters)

Designation-----

Full Address-----

Seal of the Organization-----

No.

Date

Place

Note: The application must be complete in all respects and should be supported by all the documents mentioned in Para 4 of the scheme.

Grants given by NCERT to Professional Educational Organizations during the Year 1985-86 for Publication of Journals

S.No.	Name of the Organization	Title of the Journal	Amount Sanctioned
1.	Indian Psychometric and Educational Research Association, Patna University Patna	<i>Indian Journal of Psychometric Education</i>	Rs. 5,000
2.	Association for the Promotion of Science Education 3, First Trust Link Street, Madavelipakkam Madras	<i>Junior Scientist</i>	Rs. 4,500
3.	S.I.T.U. Council of Educational Research 3, First Trust Link Street, Madavelipakkam Madras	<i>Experiments in Education</i>	Rs. 3,000
4.	Integrated Education, Rehabilitation and Research Centre for Handicapped S 601, School Block, Shakarpur Delhi	<i>Indian Journal of Integrated Education</i>	Rs. 4,000
5.	All India Science Teachers Association C/o Department of Pre-School Education, NCERT New Delhi	<i>Vigyan Shikshak</i>	Rs. 4,000
6.	Association for Improvement of Mathematics Teaching 25 Fern Road Calcutta	<i>Indian Journal of Mathematics Teaching</i>	Rs. 4,000
7.	English Language Teachers Association of India 3, First Trust Link Street, Mandavelipakkam Madras	<i>Journal of English Language Teaching</i>	Rs. 4,000
8.	Indian Association for Pre-School Education Faculty of Education, M.S. Univeristy Baroda	<i>Balak</i>	Rs. 2,500
9.	Indian Physics Association C/o Tata Institute of Fundamental Research, Homi Bhabha Road Bombay	<i>Physics News</i>	Rs. 5,000

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Grants given by the NCERT to Professional Educational Organizations for Organizing Seminars/Conferences during the Year 1985-86

<i>S.No.</i>	<i>Name of the Organization</i>	<i>Purpose</i>	<i>Amount Sanctioned</i>
1.	Indian Association of Educational Planning and Administration, 17-B, Sri Aurobindo Marg New Delhi	Seminar on Perspectives for New Educational Policy	Rs. 5,000
2.	Indian Academy of Social Sciences Ishwar Saran Degree College Allahabad	National Seminar on National Goals and Mass Media Communication	Rs. 5,000
3.	Central Building Research Institute Roorkee	International Symposium on School Building for Afro-Asian Countries	Rs. 40,000
4.	Indian Academy of Applied Psychology Banaras Hindu University Varanasi	23rd Annual Conference on Talent Search and Its Nurturance to Discuss the Status and Problems of Current Research in Educational Psychology with special reference to Programmed Learning and Developmental Level of Education	Rs. 5,000
5.	Indian Environmental Society (School of Planning and Architecture) P.O. Box No. 7033 Indraprastha H.P.O. New Delhi	International Conference on Environmental Education	Rs. 5,000
6.	The Friends at Archives Group National Archives of India, I Janpath New Delhi	Seminar on the Source of Indian History in the Lan- guages and Literatures of 16th to mid-Nineteenth Centuries in North Eastern India	Rs. 6,000
7.	Integrated Education, Rehabilitation and Research Centre for Handicapped S-601, School Block Shakarapur Delhi	4th Annual Conference to Dis- cuss the Instructional Material for the Handicapped Children in Integrated Education	Rs. 4,000

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APPENDIX B

Location of Field Advisers in the States

		Telephone No.	
		Office	Residence
1. Field Adviser (NCERT) 3-6-69/B/7, Avanti Nagar Bashir Bagh Hyderabad	Andhra Pradesh	35878	227207
2. Field Adviser (NCERT) Zoo Narangi Road Saheb Tilla Guwahati	Assam Arunachal Pradesh Manipur and 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, Rawalpora Srinagar	Jammu and Kashmir	77170	—
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	447314

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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

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APPENDIX C

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
President <i>ex-officio</i> | 1. Shri P.V. Narasimha Rao
Union Minister of Human Resource Development
Shastri Bhavan
New Delhi |
| (ii) Chairman of the University
Grants Commission <i>ex-officio</i> | 2. Dr. (Smt.) Madhuri R. Shah
Chairman
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi |
| (iii) Secretary to the Ministry of Education
<i>ex-officio</i> | 3. Shri Anand Sarup
Secretary
Ministry of Human Resource Development
Shastri Bhavan
New Delhi |
| (iv) Four Vice-Chancellors of Universities,
one from each region, nominated by the
Government of India | 4. Shri Kanti Chaudhury
Vice-Chancellor
Rani Durgavati Vishwavidyalaya
Jabalpur |
| | 5. Prof. M.N. Das
Vice-Chancellor
Utkal University
Vani Vihar
Bhubaneswar |
| | 6. Dr. R.S. Mishra
Vice-Chancellor
Lucknow University
Lucknow |
| | 7. Prof. V.C. Kulandaiswamy
Vice-Chancellor
Anna University
Madras |
| (v) One representative of each State Government and
Union Territory with a legislature, who shall be the
Education Minister of the State/Union Territory (or his
representative) and in case of Delhi the Chief Executive
Councillor, Delhi (or his representative). | 8. Education Minister
Andhra Pradesh
Hyderabad |
| | 9. Education Minister
Assam
Dispur |

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10. Education Minister
Bihar
Patna
11. Education Minister
Gujarat
Ahmedabad
12. Education Minister
Haryana
Chandigarh
13. Education Minister
Himachal Pradesh
Shimla
14. Education Minister
Jammu and Kashmir
Srinagar
15. Education Minister
Kerala
Trivandrum
16. Education Minister
Madhya Pradesh
Bhopal
17. Education Minister
Maharashtra
Bombay
18. Education Minister
Manipur
Imphal
19. Education Minister
Meghalaya
Shillong
20. Education Minister
Karnataka
Bangalore
21. Education Minister
Orissa
Bhubaneswar
22. Education Minister
Nagaland
Kohima
23. Education Minister
Punjab
Chandigarh
24. Education Minister
Rajasthan
Jaipur
25. Education Minister
Tamil Nadu
Madras

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(vi) All members of the Executive Committee not included above

26. Education Minister
Government of Tripura
Agartala
27. Education Minister
Sikkim
Gangtok
28. Education Minister
Uttar Pradesh
Lucknow
29. Education Minister
West Bengal
Calcutta
30. The Chief Executive Councillor
Delhi Administration
Delhi
31. Education Minister
Government of Goa, Daman and Diu
Panaji (Goa)
32. Education Minister
Mizoram
Aizawl
33. Education Minister
Government of Pondicherry
Pondicherry
34. Smt. Sushila Rohatgi -
Minister of State
Ministry of Human Resource Development
Shastri Bhavan
New Delhi
35. Dr. P.L. Malhotra
Director
National Council of Educational
Research and Training
New Delhi
36. Prof. D.S. Kothari
Chancellor
Jawaharlal Nehru University
New Delhi
37. Dr. C.L. Anand
Pro-Vice-Chancellor
North-Eastern Hill University
Lower Lachumiero
Shillong (Meghalaya)
38. Shri H.L. Babbar
Principal
N.D.M.C. Navyug School
Sarojini Nagar
New Delhi

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- (vii) (a) Chairman
Central Board of Secondary Education
New Delhi. *ex-officio*
- (b) Commissioner
Kendriya Vidyalaya Sangathan
New Delhi. *ex-officio*
- (c) Director
Central Health Education
Bureau (D.G.H.S.)
New Delhi. *ex-officio*
- (d) Deputy Director-General
Incharge of Agricultural Education
ICAR, Ministry of Agriculture
New Delhi. *ex-officio*
39. Shri D.P. Singh
Principal
Netarhat School
Netarhat (via Ranchi)
40. Dr. A.K. Jalaluddin
Joint Director
National Council of Educational
Research and Training
New Delhi
41. Prof. (Smt.) S. Shukla
Head
Department of Teacher Education
Special Education and Extension Services
NCERT
New Delhi
42. Dr. A.K. Sharma
Principal
Regional College of Education
Mysore
43. Dr. G.L. Arora
Reader
Department of Education in Social
Sciences and Humanities
NCERT
New Delhi
44. —
45. Shri L.S. Narayanan
Financial Adviser
Ministry of Human Resource Development
Shastri Bhavan
New Delhi
46. Chairman
Central Board of Secondary Education
17 B, Indraprastha Estate
New Delhi
47. Commissioner
Kendriya Vidyalaya Sangathan
Nehru House
4-Bahadur Shah Zafar Marg
New Delhi
48. Director
Central Health Education Bureau (D.G.H.S.)
Nirman Bhavan
New Delhi
49. Deputy Director-General
Incharge of Agricultural Education (ICAR)
Ministry of Agriculture
Dr. Rajendra Prasad Road
New Delhi

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(e) Director of Training
Directorate-General of Training
and Employment
Ministry of Labour
New Delhi. *ex-officio*

(f) Representative of Education of Division
Planning Commission
New Delhi. *ex-officio*

(viii) Such other persons, not exceeding six, as the Government of India may, from time to time, nominate. No fewer than four of these shall be school teachers.

50. Director of Training
Directorate-General of Training and Employment
Ministry of Labour
Shraima Shakti Bhavan
New Delhi

51. Educational Adviser
Planning Commission
Yojana Bhavan
Parliament Street
New Delhi

52. Prof. T. Subbarao
Principal
Technical Teachers Training Institute
Madras

53. Prof. P.B. Kulkarni
Principal
Technical Teachers Training Institute
Chandigarh

54. Shri Tushar Kanji Lal
Headmaster
Rangabelia High School
P.O. Rangabelia
24-Parganas
West Bengal

55. Shri Mohd. Hussain Abdi
Government Central Pedagogical Institute
Allahabad

56. Shri Demis D'Souza
Headmaster
St. Philomena's Boys High School
Puttur, Distt. D.K.
Karnataka

57. Smt. Vinodini Shah
Principal
Shri R.P. Patadia Girls High School
Surendranagar
Distt. Surendranagar
Gujarat

58. Secretary
Council of Indian School
Certificate Examination, Pragati House
3rd Floor, 47-Nehru Place
New Delhi

59. Shri C. Ramachandran
Secretary
National Council of Educational
Research and Training
New Delhi

Secretary

Special invitee

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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
Minister of Human Resource Development
Ministry of Human Resource Development
Shastri Bhavan
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
Minister of State for Human Resource Deve
Ministry of Human Resource Development
Shastri Bhavan
New Delhi |
| (b) A Deputy Minister in the Ministry of Education, nominated by the President
NCERT | 3. Ministry of Human Resource Development
Shastri Bhavan
New Delhi |
| (c) Director of the Council | 4. Dr. P.L. Malhotra
Director
NCERT
New Delhi |
| (d) Secretary, Ministry of Education
<i>ex-officio</i> | 5. Shri Anand Sarup
Secretary
Ministry of Human Resource Development
Shastri Bhavan
New Delhi |
| (iii) Chairman of the University Grants Commission, Member
<i>ex-officio</i> | 6. Prof. Yash Pal
Chairman
University Grants Commission
Bahadur Shah Zafar Marg
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
Chancellor
Jawaharlal Nehru University
New Delhi |
| | 8. Dr. C.L. Anand
Pro-Vice-Chancellor
North-Eastern Hill University
Lower Lachumiero
Shillong (Meghalaya) |
| | 9. Shri M.L. Babbar
Principal
N.D.M.C. Navyug School
Sarojini Nagar
New Delhi |
| | 10. Shri D.P. Singh
Principal
Netarhat School
Netarhat via-Ranchi |

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- (v) Joint Director of the Council
- (vi) Three members of the Faculty of the Council of whom at least two shall be at the level of Professors and Heads of the Departments nominated by the President
- (vii) One representative of the Ministry of Education
- (viii) One representative of the Ministry of Finance who shall be the Financial Adviser of the Council
11. Dr. A.K. Jalaluddin
Joint Director
NCERT
New Delhi
 12. Prof. (Smt.) S. Shukla
Head
Department of Teacher Education
Special Education and Extension Services
NCERT
New Delhi
 13. Dr. A.K. Sharma
Principal
Regional College of Education
Mysore
 14. Dr. G.L. Arora
Reader
DESS&H
NCERT
New Delhi
 15. Shri Y.N. Chaturvedi
Joint Secretary (Schools)
Ministry of Human Resource Development
Shastri Bhavan
New Delhi
 16. Shri L.S. Narayanan
Financial Adviser, NCERT
Ministry of Human Resource Development
Shastri Bhavan
New Delhi
 17. Secretary
NCERT
New Delhi

ESTABLISHMENT COMMITTEE (Under Regulation 10 of the Council)

- (i) The Director, NCERT
Chairman
 - (ii) The Joint Director
NCERT
 - (iii) A nominee of the Ministry of Education to be nominated by the President
1. Dr. P.L. Malhotra
Director, NCERT
Chairman
 2. Dr. A.K. Jalaluddin
Joint Director, NCERT
 3. Shri Y.N. Chaturvedi
Joint Secretary (SE)
Ministry of Human Resource Development
Shastri Bhavan
New Delhi

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- (iv) Four educationists to be nominated by the President, of whom at least one is a scientist
- (v) One representative from the Regional Colleges of Education, to be nominated by the President
- (vi) One representative of the National Institute of Education, Delhi to be nominated by the President
- (vii) Two representatives, one each from the regular academic and non-academic staff of the Council elected from amongst their category in the manner prescribed in Appendix to this Regulation
- (viii) Financial Adviser, NCERT
- (ix) Secretary, NCERT
4. Prof. H.C. Khare
Head, Department of Mathematics and Statistics, University of Allahabad
Allahabad
5. Prof. M.M. Puri
Professor of Political Science
G-16 Punjab University
Chandigarh
6. Dr. S. Anandalakshmy
Director
Lady Irwin College
Sikandra Road
New Delhi
7. Prof. M.I. Savadatti
Senior Professor of Physics and
Member of the Syndicate
Karnataka University
Dharwad
8. Dr. S.N. Dutta
Principal
Regional College of Education
Ajmer
9. Prof. S.H. Khan
Professor, DPSEE
NCERT
New Delhi
10. Shri J.S. Saxena
Reader
Regional College of Education
Ajmer
11. Shri M.S. Bist
Store-keeper, Gr. I
NCERT
New Delhi
12. Shri L.S. Narayanan
Financial Adviser, NCERT
Ministry of Human Resource Development
Shastri Bhavan
New Delhi
13. Secretary
NCERT
Member-Convener
-

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FINANCE COMMITTEE (Under Rules 62 of the Council)

- | | |
|---|--|
| 1. The Director of
NCERT (<i>ex-officio</i>) | 1. Dr. P.L. Malhotra
Director, NCERT, New Delhi |
| 2. Financial Adviser
(<i>ex-officio</i>) | 2. Shri L.S. Narayanan
Financial Adviser
NCERT
Ministry of Human Resource Development
Shastri Bhavan
New Delhi |
| 3. Joint Secretary (SE)
Ministry of Human Resource Development | 3. Shri Y.N. Chaturvedi
Joint Secretary (S)
Ministry of Human Resource Development
(Department of Education)
Shastri Bhavan
New Delhi |
| 4. Secretary, NCERT
<i>Member-Convenor</i> | 4. Shri J. Veera Raghavan
Adviser (Education)
Planning Commission
New Delhi |
| | 5. Dr. V.P. Dutt
Head
Department of Chinese and Japanese Studies
University of Delhi |
| | 6. Secretary
NCERT, New Delhi |

BUILDING AND WORKS COMMITTEE

- | | | |
|---|----------------------|--|
| 1. Director, NCERT
<i>ex-officio</i> | <i>Chairman</i> | Dr. P.L. Malhotra
Director, NCERT |
| 2. Joint Director, NCERT
<i>ex-officio</i> | <i>Vice-Chairman</i> | Dr. A.K. Jalaluddin
Joint Director, NCERT |
| 3. Chief Engineer, CPWD
or his nominee | <i>Member</i> | Dr. M.G. Joseph
Chief Engineer (Const.)
CPWD
R.K. Puram
New Delhi |
| 4. A representative of the
Ministry of Finance (Works) | <i>Member</i> | Shri M.R. Rao
A.F.A. (Works)
Ministry of Finance (Works)
Nirman Bhawan
New Delhi |
| 5. The Consulting
Architect of NCERT | <i>Member</i> | Shri I.D. Rastogi
Senior Architect, CPWD
(NDZ-IV) (Room No. 426)
'A' Wing, Nirman Bhawan
New Delhi |

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6.	Financial Adviser of the Council or his nominee	<i>Member</i>	Shri Man Mohan Singh Financial Adviser, NCERT Ministry of Education Shastri Bhavan New Delhi
7.	A nominee of the Ministry of Education	<i>Member</i>	Shri Y.N. Chaturvedi Joint Secretary (S) Ministry of Education Shastri Bhavan New Delhi
8.	A Civil Engineer of standing (nominated by the President)	<i>Member</i>	Shri R.A. Khemani Chief Engineer, DDA New Delhi
9.	An Electrical Engineer of standing (nominated by the President)	<i>Member</i>	Shri R.D. John Chief Engineer, Cauvery Bhawan 'F' Block, 9th Floor, Kempgowda Road Bangalore
10.	A member of the Executive Committee (nominated by the Committee)	<i>Member</i>	Prof. J.S. Rajput Principal Regional College of Education Shyamla Hills Bhopal
11.	Secretary, NCERT	<i>Member-Secretary</i>	Shri C. Ramachandran, IAS Secretary, NCERT

PROGRAMME ADVISORY COMMITTEE

1.	Director, NCERT	<i>Chairman</i>			
2.	Joint Director, NCERT	<i>Vice-Chairman</i>			
3.	Prof. S. Shukla Head Department of Education University of Delhi 33, Chhatra Marg Delhi	<i>Member</i>	7.	Prof. (Smt) S. Zaidi Faculty of Education Aligarh Muslim University Aligarh	<i>Member</i>
4.	Prof. C.L. Kundu Faculty of Education Kurukshetra University Kurukshetra (Haryana)	<i>Member</i>	8.	Director State Council of Educational Research and Training Mahendru Patna	<i>Member</i>
5.	Prof. N. Malla Reddy Faculty of Education Osmania University Hyderabad	<i>Member</i>	9.	Director State Institute of Education Solan (H.P.)	<i>Member</i>
6.	Prof. S. Narayana Rao Department of Psychology Sri Venkateswara University Tirupati	<i>Member</i>	10.	Director State Council of Educational Research and Training Meghalaya, Mawkhar Main Road Shillong	<i>Member</i>
			11.	Director State Institute of Educational Research and Training Udaipur (Rajasthan)	<i>Member</i>

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|--|---------------|--|---------------|
| 12. Director
State Council of Educational
Research and Training
6, D.P.I. Compound
College Road
Madras | <i>Member</i> | 25. Head
Department of
Education in Social
Sciences and Humanities
NCERT
New Delhi | <i>Member</i> |
| 13. Principal
Regional College of Education
Ajmer (Rajasthan) | <i>Member</i> | 26. Head
Department of Education in
Science and
Mathematics
NCERT, New Delhi | <i>Member</i> |
| 14. Principal
Regional College of Education
Bhopal (M.P.) | <i>Member</i> | 27. Head
Department of Pre-School and
Elementary Education, NCERT
New Delhi | <i>Member</i> |
| 15. Principal
Regional College of Education
Bhubaneswar (Orissa) | <i>Member</i> | 28. Head
Department of
Teacher Education,
Special Education and
Extension Services, NCERT
New Delhi | <i>Member</i> |
| 16. Principal
Regional College of Education
Mysore (Karnataka) | <i>Member</i> | 29. Head
Department of Vocationalization
of Education, NCERT
New Delhi | <i>Member</i> |
| 17. Prof. A.N. Maheshwari
Regional College of Education
Mysore | <i>Member</i> | 30. Head
Department of Educational
Psychology, Counselling
and Guidance, NCERT
New Delhi | <i>Member</i> |
| 18. Prof. K.C. Panda
Regional College of Education
Bhubaneswar (Orissa) | <i>Member</i> | 31. Head
Department of Policy Research,
Planning and Programming
NCERT
New Delhi | <i>Member</i> |
| 19. Prof. N. Vaidya
Regional College of Education
Ajmer (Rajasthan) | <i>Member</i> | 32. Head
Department of Library
Documentation and
Information, NCERT
New Delhi | <i>Member</i> |
| 20. Prof. S.T.V. Govindacharyulu
Regional College of Education
Shyamla Hills
Bhopal (M.P.) | <i>Member</i> | 33. Head
Department of Field Services and
Coordination, NCERT
New Delhi | <i>Member</i> |
| 21. Dr. W.A.F. Hopper
Field Adviser, NCERT
No. 32, Hindi Prachar
Sabha Street, T. Nagar
Madras (Tamil Nadu) | <i>Member</i> | 34. Head
Department of Measurement,
Evaluation, Survey and
Data Processing, NCERT
New Delhi | <i>Member</i> |
| 22. Dr. R.P. Kathuria
Field Adviser, NCERT
MIE-161, Block No. 6
Saraswati Nagar
Jawahar Chowk
Bhopal (M.P.) | <i>Member</i> | | |
| 23. Dr. K.L. Joshi
Field Adviser, NCERT
Laxmi Bhawan Building
Kothi No. 209/1 and 210/1
Near Saw Mill, Sanjauli
Shimla (H.P.) | <i>Member</i> | | |
| 24. Dr. D.K. Bhattacharya
Field Adviser, NCERT
Boyce Raod, Laitmukhra
Shillong (Meghalaya) | <i>Member</i> | | |

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- | | | | |
|--|---------------|--|---------------|
| 35. Head
Workshop Department, NCERT
New Delhi | <i>Member</i> | 45. Dr. P.M. Patel
Professor
Programme Section, NCERT
New Delhi | <i>Member</i> |
| 36. Head
Publication Department, NCERT
New Delhi | <i>Member</i> | 46. Prof. D.S. Rawat
Head, SEP Unit, NCERT
New Delhi | <i>Member</i> |
| 37. Joint Director
Central Institute for Educational
Technology, NCERT
New Delhi | <i>Member</i> | 47. Dr. R.M. Kalra
Head, I.R. Unit, NCERT
New Delhi | <i>Member</i> |
| 38. Dr. K.V. Rao
Professor
Department of Education in
Science and Mathematics
NCERT, New Delhi | <i>Member</i> | 48. Prof. I.S. Chaudhri
Incharge PCE Unit
NCERT
New Delhi | <i>Member</i> |
| 39. Dr. (K.m.) S.K. Ram
Professor
Department of Education in
Social Sciences and
Humanities, NCERT
New Delhi | <i>Member</i> | 49. Dr. R.P. Singh
Head, Journals Cell, NCERT
New Delhi | <i>Member</i> |
| 40. Dr. (Smt.) R. Muralidharan
Professor
Department of Pre-School and
Elementary Education, NCERT
New Delhi | <i>Member</i> | 50. Secretary
NCERT
New Delhi | <i>Member</i> |
| 41. Dr. (Smt.) S.P. Patel
Professor
Department of Vocationalization
of Education, NCERT
New Delhi | <i>Member</i> | 51. Chief Accounts Officer
NCERT
New Delhi | <i>Member</i> |
| 42. Dr. V.K. Singh
Professor
Department of Educational
Psychology, Counselling
and Guidance, NCERT
New Delhi | <i>Member</i> | 52. Shri H.K.L. Chugh
Deputy Secretary, NCERT
New Delhi | <i>Member</i> |
| 43. Shri K.N. Hiriyaniah
Professor
Department of Measurement,
Evaluation, Survey and
Data Processing, NCERT
New Delhi | <i>Member</i> | 53. Shri G.R. Das
Deputy Secretary, NCERT
New Delhi | <i>Member</i> |
| 44. Dr. O.S. Dewal
Professor
Central Institute for Educational
Technology, NCERT
New Delhi | <i>Member</i> | 54. Shri T.S. Sarma
Public Relations Officer, NCERT
New Delhi | <i>Member</i> |
| | | 55. Shri N. Ganeshan
Deputy Secretary, NCERT
New Delhi | <i>Member</i> |
| | | 56. Shri P.S. Mahalwal
O.S.D., CIET, NCERT
New Delhi | <i>Member</i> |
| | | 57. Shri S.K. Anand
O.S.D., NCERT
New Delhi | <i>Member</i> |
| | | 58. Shri R.P. Seth
O.S.D., NCERT
New Delhi | <i>Member</i> |
| | | 59. Lt. Col. M.L. Bhandari
V.S.O., NCERT
New Delhi | <i>Member</i> |

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60. Prof. K.N. Saxena *Member*
Incharge/Head
Model School Unit, NCERT
New Delhi
61. Dr. Kuldip Kumar *Member*
Professor, DEPC & G
NCERT
New Delhi

EDUCATIONAL RESEARCH AND INNOVATIONS COMMITTEE

1. Dr. Y Ravi
Director
State Council of Educational Research and Training
Aliya Primary School Campus
Opposite Andhra Pradesh Sports Council
Hyderabad
2. Dr. (Smt.) T. Thakur
Principal
State Institute of Education
Jorhat (Assam)
3. Dr. Partha N. Mukherji
Professor
Indian Statistical Institute
Sansanwal Marg
New Delhi
4. Dr. T.B. Naik
Director
Tribal Research and Training Institute
Gujarat Vidyapeeth
Ahmedabad (Gujarat)
5. Prof. A.L. Nagar
Delhi School of Economics
Delhi University
Delhi
6. Prof. Agha Ashraf Ali
Dean and Head
Postgraduate Department of Education
Kashmir University
Hazratbal
Srinagar (Jammu and Kashmir)
7. Prof. (Smt.) V. Agarwal
Professor and Head
Department of Psychology
Lucknow University
Lucknow
(Uttar Pradesh)
8. Dr. R. Srinivasan
Professor of Education

- Laxmi College of Education
Gandhigram, Distt. Madurai
Tamil Nadu
9. Dr. B.K. Roy Burman
Senior Professor
Council for Social Development
53 Lodhi Estate
New Delhi
10. Prof. B.R. Kamble
Head, Department of History
Shivaji University
Kolhapur (Maharashtra)
11. Dr. K.C. Panda
Professor
Regional College of Education
Bhubaneswar
12. Dr. S.T.V.G. Acharyulu
Professor
Regional College of Education
Bhopal
13. Dr. (Smt.) Amrit Kaur
Professor
Regional College of Education
Ajmer

ACADEMIC COMMITTEE

1. Director, NCERT *Chairman*
2. Joint Director, NCERT *Vice-Chairman*
3. Dean (Academic) *Convener*
4. Joint Director, CIET *Member*
5. Dean (Research) *Member*
6. Dean (Coordination) *Member*
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

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17. Head, Department of Field Services and Coordination
18. Head, Department of Library Documentation and Information
19. Shri. R.C. Sexena, Professor, DESM
20. Dr. Anil Vidyalankar, Professor, DESSH
21. Dr. (Smt.) S.P. Patel, Professor, DVE
22. Dr. Pritam Singh, Professor, DMESDP
23. Km. I. Malani, Professor, DPSEE
24. Dr. R.K. Mathur, Professor, DEPCG
25. Dr. K.N. Saxena Professor incharge, Model School Cell
26. Dr. N. Malla Reddy, Professor, Faculty of Education, Osmania University, Hyderabad (A.P.)
27. 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 *Convener*
Professor and Head
- (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
Firupati (A.P.)

2. *Departmental Advisory Board for the Department of Teacher Education, Special Education and Extension of Services*

- (i) Dr. R.C. Das *Convener*
Professor and Head
- (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. (Km.) Yashu Bohn 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 *Convener*
Professor and head
- (ii) Dr. P. Raizada, Reader
- (iii) Shri G. Guru, Reader
- (iv) Head, Department of Education in Science and Mathematics
- (v) Joint Director, CIEF
- (vi) Head, Department of Pre-School and Elementary Education
- (vii) Head, Department of Measurement, Evaluation, Survey and Data Processing
- (viii) Dr. U.C. Upadhyay, Asstt. 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 (A.P.)
- (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 *Convener*
Professor and Head
- (ii) Dr. B.P. Atreya, Professor
- (iii) Dr. Chottan Singh, Professor
- (iv) Shri R.C. Sexena, Professor
- (v) Dr. J. Mitra, Reader
- (vi) Head, Publication Department

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- (vii) Joint Director, CIET
- (viii) Head, Department of Teacher Education, Special, Education and Extension Services
- (ix) Head, Department of Pre-School and Elementary, Education
- (x) Prof. L.N. Vyas
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, Punjab University Chandigarh
- (xiii) Prof. M.P. Singh
Department of Mathematics
Indian Institute of Technology
New Delhi
5. *Departmental Advisory Board for the Department of Pre-School and Elementary Education*
- (i) Dr. P.N. Dave *Convener*
Professor and Head
- (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
- (xi) Prof. Satyabhushan, National Institute of Educational Planning and Administration, NIE Campus, Sri Aurobindo Marg, New Delhi
- (xii) Dr. Sachidananda, Head, Department of Anthropology and Sociology, A.N. Sinha Institute of Social Studies, near Gole Ghar, Patna (Bihar)
- (xiii) Shri I.S. Gaur, Additional Director (Basic), Directorate of Education, Allahabad (U.P.)
6. *Departmental Advisory Board for the Department of Education in Social Sciences and Humanities*
- (i) Shri B.S. Parakh *Convener*
Professor and Head
- (ii) Dr. Anil Vidyalkar, Professor
- (iii) Dr. G.L. Arora, Reader
- (iv) Dr. H.L. Bachhotia, Lecturer
- (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 (Punjab)
- (ix) Prof. R.N. Ghosh, Central Institute of English and Foreign Languages, Hyderabad (A.P.)
- (x) Prof. Namwar Singh, Jawaharlal Nehru University
New Mehrauli Road, New Delhi
7. *Departmental Advisory Board for the Department of Field Services and Coordination*
- (i) Dr. G. S. Shrikantia, Professor and Head *Convener*
- (ii) Dr. Vikramjit Singh, Professor
- (iii) Dr. Wolfgang, Director, SCERT, Meghalaya, Shillong
- (iv) Dr. S.C. Dash, Director, SCERT, Bhubaneswar (Orissa)
8. *Departmental Advisory Board for the Workshop Department*
- (i) Dr. P.K. Bhañacharya, Reader and Head *Convener*
- (ii) Shri Abu Bashir, Technical Officer
- (iii) Shri R.R. Sharma, Technical Officer
- (iv) Shri Ved Ratna, Professor, Department of Education in Science and Mathematics
- (v) Smt. S. Bhattacharya, Reader, Department of Pre-School and Elementary Education.
- (vi) Shri S.N. Ray, Lecturer, Department of Vocationalization of Education
- (vii) Prof. N.K. Tewari, Mechanical Engineering Department, Indian Institute of Technology, New Delhi
- (viii) Shri H.N.P. Poddar, Scientist Incharge, Workshop, National Physical Laboratory
9. *Departmental Advisory Board for the Department of Measurement, Evaluation, Survey and Data Processing*
- (i) Dr. H.S. Srivastava, *Convener*
Professor and Head
- (ii) Dr. A.D. Banerjee, Reader
- (iii) Shri J.P. Aggarwal, Reader
- (iv) Dr. C.L. Kaul, Lecturer
- (v) Head, Department of Education in Social Sciences and Humanities

1985-86

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|---|---|---------------|
| (vi) Head, Department of Education in Science and Mathematics | 2. Shri Veerāraghavan
Adviser (Education)
Planning Commission
Yojana Bhavan,
Parliament Street
New Delhi | <i>Member</i> |
| (vii) Head, Department of Educational Psychology, Counselling and Guidance | | |
| (viii) Dr. R.N. Mehrotra, Professor, Department of Education, Delhi University, 36, Chhatra Marg, Delhi | | |
| (ix) Prof. P.K. Roy, H-1456, Chitranjan Park, New Delhi | 3. Prof. Satya Bhushan
Executive Director
National Institute of Educational
Planning and Administration
NIE Campus
New Delhi | <i>Member</i> |

LIBRARY ADVISORY COMMITTEE

- | | | |
|---|-----------------|--|
| 1. Dean (Academic) | <i>Chairman</i> | |
| 2. Prof. (Smt.) Perin H. Mehta
Head, DEPC&G | <i>Member</i> | |
| 3. Prof. H.S. Srivastava
Head, DMESDP | <i>Member</i> | |
| 4. Prof. P.N. Dave
Head, DPSEE | <i>Member</i> | |
| 5. Prof. A.K. Mishra
Head, DVE | <i>Member</i> | |
| 6. Prof. B. Ganguli
Head, DESM | <i>Member</i> | |
| 7. Shri Jaipal Nangia
Head, Publication Department | <i>Member</i> | |
| 8. Prof. (Smt.) Adarsh Khanna
Representative of Head,
DTESEES | <i>Member</i> | |
| 9. Dr. P.K. Bhattacharya
Head, Workshop Department | <i>Member</i> | |
| 10. Professional Senior
(Deputy Librarian)
Department of Library
Documentation and Information | <i>Member</i> | |
| 11. Shri F.C. Katyal
Professional Assistant
Representative of Library
Association | <i>Member</i> | |
| 12. Head
Department of Library
Documentation and Information | <i>Convener</i> | |
| | | 4. Dr. (Smt.) Kapila Vatsyayan
Joint Educational Adviser
(Culture)
Ministry of Education and
Culture
Government of India
New Delhi |
| | | 5. Prof. M.R. Bhide
Poona University
Pune |
| | | 6. Prof. Rasheeduddin Khan
Jawaharlal Nehru University
New Mehrauli Road
New Delhi |
| | | 7. Prof. L.S. Kothari
University of Delhi
Delhi |
| | | 8. Prof. Durgananda Sinha
Director, A.N. Sinha
Institute of Social Studies
Patna |
| | | 9. Prof. R.N. Ghosh
CIEFL
Hyderabad |
| | | 10. Prof. Namwar Singh
Jawaharlal Nehru University
New Mehrauli Road
New Delhi |
| | | 11. Dean (Academic) |
| | | 12. Dean (Research) |
| | | 13. Dean (Coordination) |
| | | 14. Head, Publication Department |
| | | 15. Head, Department of Teacher
Education, Special Education and
Extension Services |

ADVISORY COMMITTEE/EDITORIAL BOARD FOR JOURNALS CELL

- | | |
|---|-----------------|
| 1. Dr. P.L. Malhotra
Director, NCERT | <i>Chairman</i> |
|---|-----------------|

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|-----|--|-----------------|
| 16. | Head, Department of Education in Science and Mathematics | <i>Member</i> |
| 17. | Prof. (K.m.) S.K. Ram, DESSH | <i>Member</i> |
| 18. | Prof. O.S. Dewal Journals Cell | <i>Convener</i> |

DISSEMINATION COMMITTEE

- | | | |
|-----|---|-----------------|
| 1. | Prof. R.P. Singh, NCERT | <i>Chairman</i> |
| 2. | Joint Director, CIET | <i>Member</i> |
| 3. | Dean (Academic) | <i>Member</i> |
| 4. | Dean (Research) | <i>Member</i> |
| 5. | Dean (Coordination) | <i>Member</i> |
| 6. | Head, Workshop Department | <i>Member</i> |
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Managing Director
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5-Ansari Road, New Delhi | <i>Member</i> |
| 13. | Smt. Madhu Chowdhury
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Connaught Circus
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- | | | |
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21. Dr. Suresh Shukla, *Member*
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Radio Division, CIET, NCERT
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Joint Director, NCERT
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13. Dr. M.M. Chaudhry
Joint Director, CIET, NCERT
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Head, DESSH and
Dean Academic, NCERT
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15. Prof. Snehlata Shukla
Head, DTESEES, NCERT
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16. Dr. A.K. Mishra
Head, Department of
Vocationalization of Education
NCERT, New Delhi

APPENDIX D

NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

Sanctioned Staff Strength as on 1 April 1986

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	286	2	3	26	106	585	77	104	258	378	1825
2.	RCE, Ajmer	66	27	46	1	6	43	4	4	40	83	320
3.	RCE, Bhopal	62	25	46	1	6	43	4	6	38	82	312
4.	RCE, Bhubaneswar	75	29	62	1	6	40	4	4	42	90	353
5.	RCE, Mysore	85	25	49	1	6	47	4	5	39	78	339
6.	FA's Offices	32	—	—	—	—	54	—	—	18	36	140
Total		606	108	206	30	130	812	93	122	435	747	3289

Summary: Group-wise

Group A	729
Group B	360
Group C	1453
Group D	747
Total	3289

Summary: Type-wise

Academic	920
Non-Academic (Ministerial)	972
Non-Academic (Tech.)	650
Group D	747
Total	3289



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

