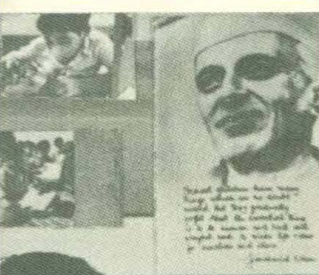


ANNUAL REPORT

1983-84

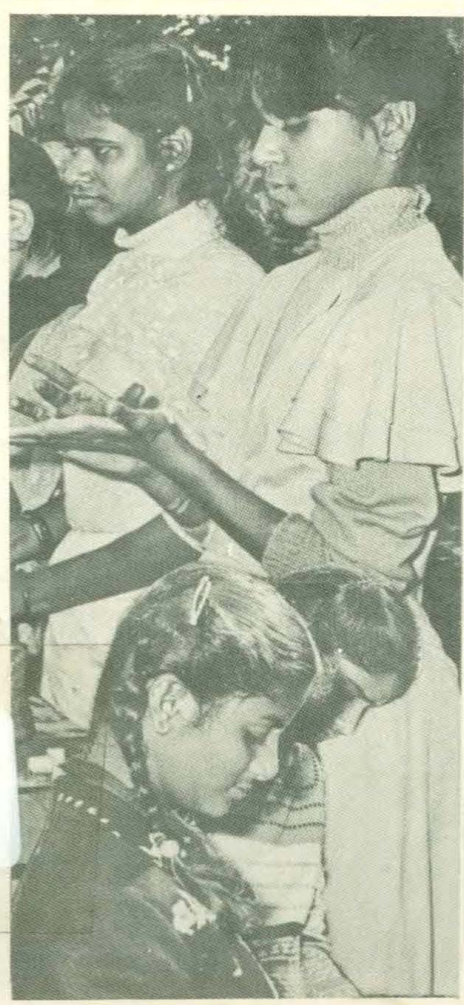


Richard Williams, actor, writer, director, and producer of the award-winning film *Boyz n the City*. He is shown here with the young actor who played the role of Ice Cube in the film.



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ANNUAL REPORT

1983-84

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एन सी ई आर टी
NCERT

राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
National Council of Educational Research and Training

December 1984
Agrahayana 1906

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1

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 Education and Culture. 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 Education and Culture 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 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 to educational personnel from other countries, and

serves as the academic secretariat of the National Council of Teacher Education.

Research

Being the apex national body for research in school education, the NCERT has very important functions, viz., to organize and support research and to train personnel in educational research.

The different departments of the NIE, the Regional Colleges of Education and the Centre for Educational Technology undertake programmes of research in various fields such as curriculum, instructional materials, child development, educational psychology, universalization of primary education, educational technology, teaching-aids, teacher education, etc.

The NCERT supports research by providing financial assistance and academic interaction to individuals and organizations. Assistance is

also given to scholars for the publication of Ph.D. thesis. The Council also awards junior and senior research fellowships so that educational problems are investigated and a band of competent research workers is created. It also conducts educational surveys from time to time for providing data on the 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 inter-country research projects.

Development

Development 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, where not much of significant work had been done in the past, 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 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 innovative programmes at the Regional Colleges of Education incorporate some innovative special 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 states and the state-level institutions. Functioning as the academic secretariat of the National Council of Teacher Education, the NCERT is involved in various activities including revision of the syllabi for teacher education at various levels and working of the Centres of Continuing Education.

The correspondence courses for untrained teachers of elementary and secondary schools help in removing the backlog of untrained teachers.

Extension

The NCERT has a comprehensive programme 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 NCERT works directly with various agencies and institutes in the states and also works extensively with the extension services departments and centres in teacher training colleges and schools with the purpose of providing assistance to various categories of personnel including teachers, inspectors and administrators, paper-setters, textbook-writers, etc. Conferences, seminars, workshops and competitions are organized as regular ongoing 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 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, 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 available with them for adoption and adaptation. The textbooks are published in English, Hindi and Urdu.

For the dissemination of educational information, the NCERT publishes five journals : (i) *The Primary Teacher*, published both in English and Hindi, aims at given 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 is undertaken on a conti-

nuous basis. Criteria, tools and techniques of evaluation have been developed. Guidelines and procedures for evaluation have been laid down from the point of view of their quality. 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 Scheduled Castes/Tribes) to final year students of Classes X, XI and XII. 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 also functions as the secretariat of the National Development Group for the Asian Centre for Educational Innovations and Development. 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 as 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 states and 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 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 :

- (i) Programme Advisory Committee.
- (ii) Finance Committee.
- (iii) Establishment Committee.
- (iv) Buildings and Works Committee.
- (v) Educational Research and Innovations Committee.
- (vi) Managing Committees of Regional Colleges of Education.

The Council's headquarters consists of :

- (i) The Council's Secretariat, and
- (ii) Accounts Branch.

The Chief Executives of the NCERT are the Director, the Joint Director and the Secretary. They are appointed by the Government of India. During the year under report the following officers occupied these positions :

Dr. P. L. Malhotra—Director—from 10 June 1983.

Dr. T. N. Dhar—Joint Director—Acting Director up to 9 June 1983.

Shri V. K. Pandit, IAS—Secretary up to 4 May 1983.

Shri C. Ramachandran, IAS—Secretary—from 5 May 1983.

The Director is also assisted in the academic functions by three deans whose names, designations and responsibilities are given below. The present incumbents were appointed for a period of two years from 16 January 1984.

Name and Designation

Responsibilities

Prof. B. S. Parakh
Dean (Academic)

To coordinate the academic work in the departments in NIE.

Prof. Atmanand Sharma
Dean (Research)

To coordinate the research programmes and to look after the work of Educational Research and Innovations Committee.

Prof. G. S. Shrikantia
Dean (Coordination)

To coordinate the activities of Services/Production Departments, Field Offices and the Regional Colleges of Education.

During 1983-84 the Council was running :

The National Institute of Education.
Regional Colleges of Education (4). Field Units (17).
Centre for Educational Technology.

National Institute of Education

During 1983-84 the National Institute of Education, New Delhi, had the following constituents concerned with research, development, training, extension, evaluation and dissemination in their specific areas :

1. Department of Education in Science and Mathematics.
2. Department of Education in Social Sciences and Humanities.
3. Department of Teacher Education.
4. Department of Teaching Aids.
5. Department of Measurement and Evaluation.
6. Publication Department.
7. Workshop Department.
8. Library and Documentation Unit.
9. Educational Psychology Unit.
10. Educational and Vocational Guidance Unit.
11. Planning, Coordination and Evaluation Unit.
12. National Talent Search Unit.
13. Population Education Unit.
14. Scheduled Castes and Scheduled Tribes Education Unit.
15. Survey and Data Processing Unit.
16. Socially Useful and Productive Work Unit.
17. Vocationalization of Education Unit.
18. Child Study Unit.
19. Women's Education Unit.
20. Journals Cell.
21. Comprehensive Access to Primary Education Cell.
22. Developmental Activities in Community Education and Participation Cell.
23. Primary Curriculum Development Cell.
24. Curriculum Group.
25. Non-Formal Education Group.
26. Extension Unit.

The Centre for Educational Technology, New Delhi, was set up in 1973 to develop modalities for the use of mass media in spreading education. It undertook research and development work in areas ranging from the production of instructional films to radio broadcasts and related educational materials. It also organized training programmes in educational television and school radio.

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 Multi-purpose 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 State Education authorities and with State-level institutions set up for providing academic and training inputs to the school system :

Ahmedabad	Allahabad	Bangalore
Bhopal	Bhubaneswar	Calcutta
Chandigarh	Gauhati	Hyderabad
Jaipur	Madras	Patna
Pune	Shillong	Simla
Srinagar	Trivandrum	

The organizational structure of the Council is shown below :

Structure of the NCERT
NCERT

<i>Secretariat</i>		<i>Constituent Units</i>		
Establishment Sections	Accounts Branch	Regional Colleges of Education (RECs)	Centre for Educational Technology (CET)	Field Advisers (F.A.'s) located at
Programme Section		Ajmer		Ahmedabad
Recruitment Sections		Bhopal		Allahabad
RCEs Unit		Bhubaneswar		Bangalore
Campus and Welfare Section		Mysore		Bhopal
Committees and Parliament Section				Bhubaneswar
				Calcutta

<i>Secretariat</i>	<i>Constituent Units</i>
Supplies and Services Section Vigilance and Legal Affairs Public Relations	Chandigarh Gauhati Hyderabad Jaipur Madras Patna Pune Shillong Simla Srinagar Trivandrum

NATIONAL INSTITUTE OF EDUCATION (NIE)

<i>Academic</i>	<i>Service Production</i>	<i>Units Cells Groups</i>
Department of Education in Science and Mathematics Department of Education in Social Sciences and Humanities Department of Teacher Education Educational Psychology Unit Department of Measurement and Evaluation	Department of Teaching Aids Publication Department Workshop Department	National Talent Search Unit Planning, Coordination and Evaluation Unit Library and Documentation Unit Vocationalization of Education Unit Primary Curriculum Development Cell Journals Cell Extension Unit Development Activities in Community Education and Participation Cell Curriculum Group Non-Formal Education Group Educational and Vocational Guidance Unit Population Education Unit Scheduled Castes and Scheduled Tribes Education Unit Socially Useful and Productive Work Unit Child Study Unit Women's Education Unit Comprehensive Access to Primary Education Unit Survey and Data Processing Unit

2

Highlights of the Year

THE period under review was marked by several important steps initiated by Council for providing quality inputs in an integrated manner in its programmes which are generally categorized under research, development, training extension and dissemination.

An Advisory Committee on Education and Values was constituted under the chairmanship of Professor D. S. Kothari to lay down guidelines of value-oriented education. The Working Group met in August 1983 and recommended several preparatory steps, including those for the development of curriculum and instructional materials for the promotion of moral education under the broad framework of value-oriented education. Preparation of two supplementary readers for school children of the secondary stage with emphasis on value-oriented education was taken up.

In view of the fact that much of the cognitive development and value orientation of the child depends on reading, the NCERT decided to launch a major programme, titled 'Reading to Learn'. The objective of the programme is to bring out graded reading materials in interesting style with very attractive illustrations, layout and design in a wide area of reading interest of Indian children. Under the project, two national workshops were held. Detailed guidelines for the development of graded materials for children—both in Hindi and in English—were developed. Several distinguished literateurs, poets and scholars participated in these workshops and volunteered to contribute writing specially addressed to children under this project.

In order to promote an awareness of India's freedom struggle among the younger generation, the Council took up an ambitious project of printing an album comprising about 80 panels of visual materials with brief write-ups and documentation depicting the glorious events of India's freedom struggle covering the period since the first war of Independence (1857). These materials have been collected from original sources by a research group of the Council dedicated to the task.

It was also felt that the younger generation of India today has very little opportunity of reading the writings of eminent thinkers, philosophers, scientists, social reformers and national leaders in original. In order to meet this growing need, the Council decided to launch an anthology series with the release of the first volume, titled *Science and Man*, by Smt. Sheila Kaul, Union Education Minister, in February 1984. The anthology contains excerpts from the writings of Mahatma Gandhi, Jawaharlal Nehru, P. C. Ray, Sarojini Naidu, Zakir Husain, C. V. Raman, Rabindranath Tagore, Lala Lajpat Rai, Sarvapally Radhakrishnan, Leo Tolstoy, Albert Einstein, Bertrand Russell and others. The second volume under the series based on the original writings of Jawaharlal Nehru was taken up and the book is proposed to be released in November 1984.

The NCERT undertook a project for the evaluation of school textbooks, in history and languages, from the standpoint of national integration through expert bodies nominated by the States and the Union Territories. The guidelines for evaluation were developed by the NCERT in collaboration with leading experts in different subjects. Several states have completed the evaluation and some have revised their textbooks.

One of the major areas of educational innovation taken up by the NCERT in the year under report is the introduction of microcomputers in the field of school education under a pilot project titled 'Computer Literacy and Studies in Schools (CLASS)' sponsored by the Department

of Electronics, Government of India. The NCERT, along with the RCE, Mysore, has been assigned the responsibility of developing teacher training programme and student curriculum and coordinating training programmes in collaboration with other 40 Resource Centres spread all over the country and the development of educational software in this new area of educational innovation. The first National Workshop for Development of Computer Literacy Curriculum was held at the NCERT on 26-27 March 1984.

The use of educational technology and methods of distant learning aimed at bringing about qualitative improvement in education and widening existing education through an integrated programme of educational technology including the use of radio and television continues through the Central Institute of Educational Technology and Educational Technology Cells in the states. The Satellite Transmission Service, utilizing INSAT 1B, was launched in Andhra Pradesh and Orissa. Four hundred and fifteen programme capsules were despatched to Upgrah Kendras for telecast in the two states.

During the period under review, the NCERT received dignitaries and educationists from more than 20 countries including Barbados, West Indies, Nepal, Pakistan, Thailand, Afghanistan, Sri Lanka, Bhutan, Bangladesh, the USSR, the USA, Behrain, Fiji, Japan, Vietnam, Mauritius, Tanzania and Somalia. The Council continues to work as an associated centre of APEID (Asian Programme of Educational Innovation for Development) and Secretariat of the National Development Group of APEID. Smt. Serla Grewal, Union Education Secretary, as Chairman of the National Development Group was elected Chairman of the Ninth Regional Consultation Meeting on APEID held in Bangkok on 20 to 26 March 1984. Dr. P. L. Malhotra, Director, NCERT, attended UNESCO Regional Seminar on Textbooks and Reading Materials at Wellington from 4 to 12 October 1983. Several other senior members of faculty of NCERT represented India in several international and regional conferences/workshops/seminars in the field of educational research and innovation.

The Council has been responsible for playing the role of central coordinating agency for providing resource support to several projects for the improvement of the quality of pre-primary, primary and middle level education and teacher education with a view to achieving the goal of universalization of elementary education. These projects include : (1) Children's Media Laboratory (CML) with focus on the development of simple inexpensive and effective media of educational value to the children of the age group 3 to 8; (2) Comprehensive Access to Primary Education (CAPE) with focus on the

development of relevant, problem-centred and work-based decentralized curriculum and learning materials for out-of-school children in the age group 9 to 14; (3) Developmental Activities in Community Education and Participation (DACEP), engaged in the development of instructional materials for the age groups 3 to 6, 6 to 14 and 15 to 35 years to meet the educational needs of the community; (4) Primary Education Curriculum Renewal (PECR) aimed at orienting and training teachers, teacher-educators and curriculum developers at the state-level centres in different aspects and components of Primary Education Curriculum Renewal; (5) Nutrition, Health Education and Environmental Sanitation (NHEES), under which packages of instructional materials on nutrition, health education and environmental sanitation suited to the needs of the children at the primary stage are developed and used in schools.

While the above projects were under implementation in the states under the guidance of the NCERT and the continuing assistance from UNICEF, efforts were made to mainstream these intervention programmes under the existing institutional arrangements in the States/UTs for the implementation of plan programmes for universalization of elementary education. Five external agencies were nominated to evaluate the above projects with a view to facilitate the process of institutionalization of the innovative methods, materials and practices as evolved and tested under the above projects.

The NCERT continued its effort to develop suitable non-formal teaching and learning strategies and support materials. Several research and development projects were also undertaken to study the nature and extent of community participation and its effectiveness in the educational development of Scheduled Caste and Scheduled Tribe population. Similarly, a study of subject-wise performance of tribal students at the primary level was also taken up to determine their weak and strong points.

The thrust of the NCERT's curriculum research, development and evaluation at the secondary level was on (1) revision of syllabi and instructional materials on the basis of the feedback received from the Secondary Boards of Education, school teachers and students, (2) provision of technical assistance to the states engaged in the implementation of the 10+2 pattern of school education and adaptation of instructional materials published by the NCERT and (3) research support for the evaluation of curriculum, syllabi and textbooks with a view to promote inter-state and international comparability and scientific methods of curriculum renewal.

A working group was constituted by the NCERT to conduct a quick in-house appraisal of 'Curriculum Load' at the level of general education from Classes I to X. The first phase of the survey was confined

to the Union Territory of Delhi and the report was in the process of finalization.

The Ministry of Education and Culture, Government of India, entrusted the NCERT with the responsibility of coordinating selection of post-graduate school teachers/teacher-educators from States and Union Territories for advanced training in Science and Mathematics in the UK under two separate schemes sponsored by the British Council. Twenty-three teachers/teacher-educators in Mathematics and twenty teachers/teacher-educators in Physics, Chemistry and Biology participated in these programmes in the year under review. The NCERT was also responsible for the organization of two training workshops with the help of the teachers/teacher-educators trained under the programmes, at Trivandrum and Allahabad for multiplier effect.

The NCERT took up the task of revising the secondary level syllabi and textbooks under a collaborative arrangement with the Central Board of Secondary Education. National seminar-cum-workshops were organized at the NCERT to review the progress in this regard. While reviewing the syllabi and textbooks for revision, care was taken to ensure that the language used in the textbooks was simplified, the presentation of the material was improved, the syllabi and the materials developed on the basis of such syllabi matched the level of comprehension of students and the material prescribed for each class could be covered during the time actually available during one academic year.

The thirteenth Annual National Science Exhibition for Children, organized by the NCERT in collaboration with the Government of Uttar Pradesh was inaugurated by the President, Giani Zail Singh, at Lucknow on 10 November 1983. The theme of the exhibition was 'Science and Technology for Productivity'. Nearly 300 teachers and students from 27 States and Union Territories participated in the exhibition. The NCERT also participated in the exhibition on Ocean Development and Resources from the Ocean organized by the Department of Ocean Development, which was inaugurated by the Prime Minister Smt. Indira Gandhi at Teen Murti Bhawan, New Delhi, on 4 November 1983.

The NCERT undertook a study on co-education in India for identification of regional, local need-based vocations for girls and women for vocationalization of education. Development of several supplementary readers relating to the problems of socialization of girls (13-18 years), dowry, women's legal rights, etc., has been taken up.

Measures were initiated by the NCERT to intensify the implementation of Population Education Project in the states and also for the development of learning materials in Population Education for use in non-formal education centres. Guidelines were developed for the introduction of Population Education in the syllabi for teacher training both

at the bachelor and the postgraduate levels.

The major thrust of the programmes undertaken by the NCERT in the area of vocationalization was on the preparation of instructional material for vocational students and teachers and the development of vocational curricula on the basis of identified minimum competencies related to different vocations. Similarly, several programmes were organized for the improvement of curriculum for Socially Useful Productive Work.

Efforts have been made to improve the techniques of measurement and evaluation. Analysis of external examination results for 1980 and 1981 at the end of Classes X, XI and XII conducted by different boards of education and study of the practices in paper-setting and evaluation of scripts by boards of secondary education in different states were carried out.

The National Talent Search Examination was conducted on 8 May 1983 at 445 centres in India and one in Bahrain. Seventy four thousand one hundred and eight students appeared in the test—42,964 for Class X, 5744 for Class XI and 25,400 for Class XII. Seven hundred and fifty students, including 75 Scheduled Caste and Scheduled Tribe students, were selected for the scholarships.

The NCERT conducted several surveys to study the educational backwardness of girls in several states, the impact of CARE-supported midday meals programme on enrolment and retention rates at the primary stage and stagnation and drop-out rate at the primary stage in nine educationally backward states.

Tools for monitoring and evaluation of universalization of elementary education were evolved as part of an on-going project undertaken by the NCERT. The tools were tried out in selected states and review meetings were organized to monitor the progress in the implementation of the programme.

In the field of teacher education, the NCERT brought out a textbook titled 'Teacher and Education in the Emerging Indian Society'. During the period under review, the NCERT initiated a major project on integrated education of the disabled.

Besides organizing national integration camps, the NCERT launched a project on community singing as a part of mass campaign for the training of school teachers in community singing. Cassettes containing selected songs in regional languages have been widely distributed for multiplier effect of the training programme.

The thrust of the programmes in the field of teacher education was on the revision of B.Ed. syllabi in the light of the Curriculum Framework recommended by the National Council for Teacher Education, the innovative pre-service training programmes conducted by the Regional

Colleges of Education and the short duration in-service programmes conducted through seventy-seven Centres of Continuing Education set up by the NCERT in collaboration with the States and the Union Territories.

The details of all on-going schemes and other activities of the NCERT have been reported in the subsequent chapters.

3

Early Childhood Education

THE NCERT undertakes a variety of programmes in the area of pre-school education, including the development of indigenous approaches and instructional materials, the training of personnel at various levels, the evaluation of on-going activities and the development of toys, picture books, audio-tapes, etc.

An important component of the programme is the children's media laboratory, set up with the UNICEF assistance, which aims at :

- (i) discovering and developing inexpensive and effective media of educational and entertainment value for children in the age-group 3-8.
- (ii) giving assistance to state departments of education to set up Early Childhood Education units at the state levels.
- (iii) to develop basic learning and play materials for pre-school children.

During 1983-84, the number of participating states increased from six to nine—the new states joining the programme in 1983-84 being Uttar Pradesh, Madhya Pradesh and Gujarat.

Training of Teacher-educators

Three programmes in Early Childhood Education of one-month duration each were organized for teacher-educators of Gujarat, Madhya Pradesh and Uttar Pradesh. The objective was to focus attention on the child and on the role of the teacher in fostering child development. Specifically, the course aimed at acquainting the participants with the trends in child development and their application to early childhood education. A great deal of emphasis was placed on practical activities such as creative drama, puppet-play, creative art, etc. State-level programmes like orientation courses for supervisors and workshops on the development of instructional materials for teachers and books for children were also organized in Bihar, Karnataka, Orissa, Maharashtra, Rajasthan and Tamil Nadu. Materials developed were printed by some of the participating states. In Maharashtra, parents' meetings were organized for 65 *balwadis* during February and March 1984.

Orientation Programmes in Children's Media for the State-level Resource Persons

Orientation programmes in children's media were organized for the state-level resource persons from all the three states which joined the Early Childhood Education Project in 1983-84. Six persons from each state were oriented in different aspects of children's media so that they could conduct in-service training programmes for teachers and teacher-educators in their states. The following aspects were covered in the orientation courses :

- (i) Low-cost play materials.
- (ii) Children's literature.
- (iii) Games and songs and rhythmical exercises.
- (iv) Puppets and puppet plays.
- (v) Production of audio-tapes and slide-tapes.
- (vi) Creative activities.
- (vii) The future courses of action to be taken by the resource persons in their states.

Script-writer's Workshop

A ten-day workshop in script-writing was organized from 20 to 29 September 1983 at the NIE Campus, New Delhi. The objectives were to develop scripts in Hindi and Tamil for audio programmes for pre-school children. Sixteen participants, eight in each language, invited

from Tamil Nadu, Uttar Pradesh and Delhi attended the workshop. Different aspects of the preparation of audio programmes for young children were discussed by the group. The writing of the scripts commenced on 23 September 1983. The scripts were discussed by eminent writers, editors and producers of children's programmes in both the languages. In all, 15 scripts in Hindi and Tamil were prepared. In addition, 11 poems in Hindi were also written. A variety of topics, e.g., the nest-building habits in birds, the food habits of animals, the characteristics of air, the purpose of wearing shoes, shadow formation, living and non-living things, kindness of animals, the sense of taste, musical instruments, mushrooms, colours, festivals and national days, etc., were covered in the workshop.

Play Materials Project

The specific objectives of the project are to survey the existing play materials in various states and to prepare manuals for teachers spelling out the educational potential of the available toys and prevalent games. The play materials project was completed in Himachal Pradesh, Uttar Pradesh and West Bengal and was in progress in Pondicherry.

Radio Monitoring Projects

The Radio Monitoring Projects were started to study the reactions of children to the programmes for young children being broadcast from the All India Radio stations at Bhopal, Hyderabad and Pondicherry. The reports are expected to be ready shortly. The monitoring of television programmes for children telecast by Doordarshan Kendras at Calcutta and Madras was also started.

Prototypes and Slide-tapes

Five audio prototypes in Hindi and seven in Marathi were prepared. The programmes are of about 15 minutes' duration, and each programme consists of songs, games and stories of interest to young children in the age-group 3-8.

One slide-tape programme entitled 'Chai Ki Kahani' depicting the process of making tea was prepared. A manual for teachers based on the survey of play materials of Maharashtra was printed and distributed exclusively in Maharashtra.

Five picture books, five sense perception books, ten conversation charts, twenty-six cards for cognitive skills were at various stages of printing.

Meeting of Directors of Early Childhood Education Project

A meeting of Directors and officials incharge of the Project was held

at the NIE Campus from 4 to 6 October 1983. Seven out of the nine states were represented in the meeting. Officials from Bihar, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan and Uttar Pradesh participated in the three-day meeting. The main objectives were to prepare plans of action and budget estimates for 1984 in consultation with the officials incharge of the project.

New Forms of Pre-School Education

The NCERT, in collaboration with the UNESCO Regional Office, Bangkok, organized a Study Group Meeting on the Development of New Forms of Pre-school Education from 25 to 30 April 1983.

The objectives of this meeting were—

- (i) to share experiences in regard to new forms of pre-school education in the region.
- (ii) to develop frameworks for the design of new forms of pre-school education with particular reference to children from disadvantaged environments and for mass implementation.

Representatives from Afghanistan, India (two of the four participants were from NCERT), China, Maldives, Sri Lanka and Nepal participated in the meeting. Observers included representatives of UNICEF, UNHCR, UNESCO, Indian Association for Pre-School Education, Lady Irwin College, National Institute for Public Cooperation and Child Development, Institute of Home Economics, Indian Council for Child Welfare, and NCERT.

The agenda for the meeting included—

- (i) New forms of pre-school education as practised in the countries of the region; basic design and management aspects and strengths and weaknesses of these at the design and implementation level.
- (ii) Needs of children from disadvantaged environments for pre-school education in terms of the total development of the child.
- (iii) Alternative designs and models for new forms of pre-school education capable of reaching children from disadvantaged environments on a mass scale.

The programme also included a visit to the Mobile Creche Centres and the National Institute for Public Cooperation and Child Development.

Training Programme in Early Childhood Education for Teachers from the Tribal and Remote Areas with Focus on Low-cost Play Materials

Five programmes of 10 days' duration each on Low-cost Play Materials and Games for Children were held during the year under report. The venues of these programmes were Solan, Binpur, Changlang, Along and

Bomdila. The objectives of these programmes were :

- (i) To plan programmes for pre-school children and to work with them to facilitate their overall development.
- (ii) To develop interest of teachers in preparing and using low cost simple play materials.
- (iii) To disseminate this information among other teachers and the parents of children.

National Seminar on Child Development and Early Childhood Education

A national seminar on Child Development and Early Childhood Education was held on the NIE Campus from 14 to 16 February 1984. The main objective of the seminar was to compile and disseminate information regarding the research work done in the areas of Early Childhood Education and Child Development in recent years. Twenty-eight participants from the various States and Union Territories attended the seminar.

The major areas on which papers were presented were : nutrition for the pre-school child, the problems of young children, learning disabilities, special educational needs of children, children's literature, environmental correlates of cognitive development, etc.

National Meeting on Pre-school Teacher Education

The NCERT conducted a UNESCO-sponsored national meeting on pre-school teacher training from 22 to 29 November 1983. Twenty-four participants from outside the NCERT and 14 members from the NCERT attended the meeting. The external participants represented voluntary organizations, private organizations, universities, eight State Institutes of Education and NIPCCD. The eight participants from State Institutes of Education were those directly associated with the implementation of Early Childhood Education Project at the state level.

The overall focus of the meeting was on teacher education at the early childhood education level. The specific foci of the meeting were :

- (i) Analysis of and discussion on the existing status of training programmes at different levels by different agencies vis-a-vis different types of pre-school programmes, and
- (ii) Projection into the future implications of the rapid increase in the number of pre-schools in the country in the next decade, and the imperative need for planning varied training models, both in-service and pre-service for different categories of personnel involved.

Recommendations were made specifically with reference to the

training of ICDS personnel, creche workers and early childhood education personnel at different levels.

Reaching the Community through Anganwadis

An action research project 'Reaching the Community through *Anganwadis*' has been taken up by the NCERT in Binpur II block of tribal area of Midnapore district, West Bengal. The Integrated Child Development Services project sponsored by the Ministry of Social Welfare has been in existence in Binpur block since 1978. Child development services are provided to children in the age group 0-6 years through various *anganwadis* set up in the block. The objective of the project 'Reaching the Community through *Anganwadis*' is to keep the *anganwadi* as a centre of activities, and through the *anganwadi* to reach out the community by organizing activities such as pre-school education supplementary feeding, and parent education.

In the first phase of the study, an investigation into the present status and problems of the *anganwadis* existing in Binpur block was conducted in the month of April 1983. The project-in-charge went round the *anganwadis* to make on-the-spot study. There have been 50 *anganwadis* in the block since 1976. Many of them are in remote areas and can be reached only by walking 15/16 kilometres. The total population covered by the ICDS project is 46,000. Fourteen *anganwadi* centres were visited in April 1983.

To strengthen the non-formal (pre-school) component, it was decided to organize for the *anganwadi* workers a ten-day workshop on Low-cost Play Materials and Games for Young Children.

In the second phase of the project a ten-day workshop for *anganwadi* workers of Binpur block on Low-cost Play Materials and Games was conducted from 7 to 16 November 1983 at Jhargram in Midnapore District. Thirty-one *anganwadi* workers participated in the workshop where suitable play materials and teaching aids were made from locally available cheap and waste materials to foster the development of all aspects of a child. Along with this, music, dance, drama and role-play were also organized for the workers. Each of the participants developed a kit and took it with her to her centre. The third phase started in January 1984.

Art Experiences for Young Children

Work on this project was going on at the following places in Delhi :

- (i) Bal Bharati Air Force School.
- (ii) School for the Blind Children.
- (iii) School for the Deaf and Dumb Children.
- (iv) Bhatti Village.

A three-day camp for normal and handicapped children was organized at Sri Guru Dev Ashram, Bhatti Village. The main objective was to develop an integrated programme for the normal and handicapped children.

National and State-level Toy-making Competition for Pre-Primary and Primary School Teachers

The National Toy-making Workshop commenced on 27 March 1984. The project was conducted in two phases : first at the state level and later at the national level. At the state level, the programmes were carried out by the Field Adviser from each state, and the toys were evaluated by a committee of three judges and prizes were given during the exhibition-cum-prize distribution function.

The conditions stipulated for the competition were :

- (i) The toy prepared must be the original work of the teacher.
- (ii) It should have educational value for children of pre-primary and primary schools.
- (iii) It should be prepared from locally available waste or low cost material.
- (iv) It should be accompanied with a brief write-up about the toy.

Research

Cognitive Development of Indian Children (2 to 13 years)—a Longitudinal Study

This is a study on the Piagetian model of (i) causal thinking, (ii) conservation, (iii) class relations, (iv) concept of space, time movement and speed, and (v) sensory motor structures. The study was undertaken to establish the stages of cognitive growth in Indian children. Most of the curriculum developers have accepted the Piagetian model as a framework. It is hoped that the findings of the present study will help the curriculum-developers in India.

The work on the project was started in October 1978. Data following a cross-sectional-cum-longitudinal design were collected on children at four age levels, viz. 2, 5, 8 and 11 years. The sample was followed for three years which comprised four testings. The report of the project was under preparation.

Evaluation of CML Materials

To investigate the impact of intervention, based on CML materials, on the language and cognitive development of pre-school children, a research study was launched in 1982 and it was completed in 1983.

The study was conducted on the tribal, urban-slum and rural children.

Its main objectives were :

- (i) To assess the effectiveness of the frequent use of CML materials (picture books, songs, games, picture cards, etc.) on the development of language and cognitive skills in pre-school children.
- (ii) To study the possibilities of helping the *anganwadi* workers develop an interest in pre-school education by getting them acquainted with CML materials and thereby helping them to develop similar activities using locally available materials.

The study was conducted by utilizing the already existing infrastructure in disadvantaged areas i.e. the *anganwadis* run under the Integrated Child Development Service (ICDS) Scheme of the Department of Social Welfare. The work samples were taken from the ICDS project, Tokapal, Distt. Bastar (M.P.) for the tribal study; from the ICDS project, Khanpur, New Delhi, for the urban-slum study, and from ICDS project, Ganeur, Distt. Sonapat (Haryana) for the rural study. More than 400 children were included in the study which was based on an experimental control group pretest post-test design.

The report for the tribal group is ready and data for the other two groups are being analysed.

4

Universalization of Elementary Education

ACKNOWLEDGING that universalization of elementary education is a task of the highest priority in educational development, the NCERT has undertaken a diversified programme in this regard, which includes research, development, training and extension. Activities are undertaken with a view to : renewing the primary curriculum to make it relevant and purposeful to the needs and life styles of children, specially those belonging to the weaker and disadvantaged sections of society; providing experiences which will increase access to formal education; and promoting, at the same time, the organization of non-formal education for those who desire to enrol themselves in the formal system and also for those who drop out permanently from it.

The NCERT continued to implement, with the collaboration of the

State Education Departments and state-level institutions like SIEs, SCERTs and teachers training institutes, the following projects—which are also assisted by UNICEF—each directed to a specific aspect of the strategy to promote universalization of elementary education.

- (i) Primary Education Curriculum Renewal.
- (ii) Comprehensive Access to Primary Education.
- (iii) Developmental Activities in Community Education and Participation.
- (iv) Nutrition, Health Education and Environmental Sanitation.
- (v) Early Childhood Education/Children's Media Laboratory.

While the activities under programmes (i) to (iii) are discussed in this chapter, the programmes (iv) and (v) are discussed in other chapters.

Primary Education Curriculum Renewal

The project 'Primary Education Curriculum Renewal' (PECR) is directed towards achieving the following objectives through adoption of various means related to the curriculum renewal programme :

To develop innovative curriculum which can meet the educational needs of different groups of children, specially the children belonging to disadvantaged sections of the society.

To adjust the curriculum qualitatively to the life-style of the child and the socio-economic opportunities likely to be available.

To make the existing primary education more meaningful by infusing gradually into the elementary school curriculum innovative ideas tested in the experimental educational programme in the project schools.

At the national level, the NCERT, through its Primary Curriculum Development Cell (PCDC), monitors the project and provides guidance to the 22 States and 8 Union Territories participating in the expansion phase of the project which was initiated in the year 1979-80. At the state level, the SIEs/SCERTs, through their State Primary Curriculum Development Cells (SPCDCs), are responsible for the implementation of the project. To assist the SIEs/SCERTs in the effective implementation of the project and close supervision of academic work in the project schools, 198 TTIs/supervisory institutes have been selected to participate in the project. Two thousand four hundred and eighty primary schools are participating in the project.

The following tasks are involved under the Primary Education Curriculum Renewal Project :

- Organization of socio-economic surveys.
- Development of an innovative curriculum plan.

Development of relevant and need-based instructional materials (textbooks, workbooks, teachers' guide, etc. and their try-out in the project schools.

Evolving relevant innovative teaching-learning strategies.

Evolving appropriate methods for the evaluation of the pupil's development.

Training of teacher-educators, teachers and other staff associated with the project.

The participating states/UTs are adopting various operational strategies to achieve the objectives. The socio-economic and educational survey of the project school areas conducted at the commencement of the project provided useful information for developing relevant curricula, syllabi, instructional materials, teaching-learning activities and strategies. In some regions the variations are so marked that some of the states like Orissa and Rajasthan are developing differential sets of instructional materials for children living in different regions. Some other states have decided to have a common set of textbooks accompanied by detailed teacher's guides which suggest teaching-learning strategies to take care of the special needs of children in different areas. The SIE, Maharashtra, has developed seven separate cluster-wise teacher's guides and supplementary reading materials.

Due to some administrative and other reasons, the programme implementation in different states/UTs was initiated at different points of time. The pace of implementation in different states has also been different. In the expansion phase, twelve states/UTs (A.P., Bihar, Delhi, Goa, Haryana, H.P., Maharashtra, Mizoram, Punjab, Tripura, Tamil Nadu and Uttar Pradesh) have introduced new instructional materials up to Class III during the academic year 1983. Nine states/UTs (Assam, Chandigarh, Dadra and Nagar Haveli, Gujarat, Lakshadweep, Orissa, Rajasthan, Sikkim and West Bengal) have introduced the instructional materials up to Class II. Four states/UTs (Karnataka, Kerala, M.P., and Pondicherry) have introduced instructional materials in Class I. Due to various reasons Jammu and Kashmir, Manipur, Meghalaya, Nagaland and Andaman and Nicobar Islands are still at the stage of developing/printing instructional materials for Class I under the PEER project.

Orientation/Training Programmes

During the year 1983-84, the participating states and Union Territories conducted about 230 orientation/training programmes for various functionaries in which more than 8,850 participants were orientated. Besides these, about 171 workshops were conducted for the

development of curriculum plans, instructional materials, etc., in which about 3,159 persons from the project schools, TTIs, SIEs and other institutions participated.

Guidance to States

At the national level, the NCERT completed the cycle of orientation of the staff of the participating TTIs on various aspects related to the PECR project. During the years 1982-83 and 1983-84, twenty-six orientation programmes were conducted for the TTIs staff in which 643 teacher-educators were trained. In addition, an orientation programme for the new members of the State Primary Curriculum Development Cells (SPCDCs) was organised by the NCERT at the SIERT, Rajasthan, Udaipur, from 14 to 21 November 1983. Twenty-nine participants from Andhra Pradesh, Jammu and Kashmir, Karnataka, Maharashtra, Nagaland, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal, Delhi and Dadra & Nagar Haveli participated in the programme. The NCERT organized four Regional Meetings of the Principals of the participating TTIs during 1983-84 at New Delhi, Jabalpur, Calcutta, and Hyderabad, which were attended by 169 Principals of the TTIs participating in the project.

A national-level meeting of the Coordinators of the PECR project was held at the NCERT Campus, New Delhi, from 2 to 8 September 1983. In this meeting, the progress of the project was reviewed and plans of action of the states and Union Territories for the year 1984 were finalized. Tentative plans of action for the first quarter of the year 1985 were also prepared by the project Coordinators. Besides this, the Coordinators made several important recommendations for the smooth implementation of the project. The NCERT provided guidance to the PECR project teams of the States in various aspects of the development of curriculum and instructional materials and the training of personnel, particularly in the states of Bihar, Haryana, Jammu and Kashmir, Madhya Pradesh, Rajasthan, Sikkim, Tripura, West Bengal and Uttar Pradesh and the Union Territories of Lakshadweep, Dadra and Nagar Haveli, Andaman and Nicobar Islands and Mizoram. Short-term consultancy services through specially deputed resource persons were also provided to the SCERT, Tamil Nadu, SIE, Jammu, and SIE, Goa.

Inter-State Study Visits of the PECR Project Coordinators

In response to a persistent demand from the PECR Project Coordinators for inter-state study visits, five study visits in the states of Uttar Pradesh, Rajasthan, Orissa, Maharashtra and Tamil Nadu were organized during December 1983 and January-February 1984.

Besides observing actual operation of some innovative teaching-learning methods, including activities in the environment, the Project Coordinators discussed various matters related to the implementation of the PECR project with the concerned teachers and headmasters of the schools.

Working Group Meeting to Review the Minimum Learning Continuum (MLC)

One of the special features of the PECR project is the development of competency-based curriculum. While the document, 'Minimum Learning Continuum', provides a sound basis for curriculum development, it was felt that a strategy should be drawn for reviewing the document in the light of the actual experience of all the states so that it could be further improved. A meeting for finalizing the strategy to review the Minimum Learning Continuum was organized by the NCERT from 6 to 8 December 1983. The working group meeting finalized the operational plan for review, try-out and improvement of the MLC.

High-level Consultative Committee Meet on PECR Project Evaluation

A meeting of the High-level Consultative Committee for PECR Project Evaluation was held on 30 and 31 May 1983. The committee examined the draft proposal on the PECR Project Evaluation prepared by the NCERT and offered suggestions for its revision and finalization.

Research Studies Under the PECR Project

The NCERT had initiated a series of case studies and status studies of the PECR Project schools in India during the year 1982-83. The data collected for the preparation of these studies were analysed during the year 1983-84 and the following studies were prepared :

Two case studies of the PECR Project schools, viz.,

- (i) Jeevan Shikshan Primary School, Karegaon, Pune (M.S.)
- (ii) Panchayat Union Primary School, Ammoor, North Arcoy (Tamil Nadu).

The rest of the case studies and status studies are in progress.

Wider Infusion of PECR Project Instructional Materials

So far the states of Gujarat, Haryana, Himachal Pradesh, Maharashtra, Orissa, Rajasthan, Sikkim, Tamil Nadu and the Union Territories of Andaman and Nicobar Islands, Lakshadweep and Mizoram have taken concrete steps/decisions for wider infusion of some of the instructional materials and other aspects of the curricula developed under the PECR project into their educational system. It is

through the implementation of the PECR project that some of the states/UTs like Sikkim, Andaman and Nicobar Islands, Pondicherry and Lakshadweep, which were hitherto using the curricula and instructional materials of other states, have started developing their own need-based curricula and instructional materials for the primary stage of education. A brief account of the steps taken by these states and Union Territories for wider infusion of the new curricula developed under project PECR is as follows :

Gujarat. The Education Department of Gujarat has revised its curriculum for the primary school stage. The new curriculum is based *inter alia* on the concept of environment-based education and the minimum learning competencies mentioned in the 'Minimum Learning Continuum' developed under the Primary Education Curriculum Renewal Project. The textbook in Environmental Studies developed under the PECR Project has been adopted by the State Textbook Board for use in the state.

Haryana. It has been decided to introduce the Teacher's Guides in SUPW, Arts and Crafts Activities, and Physical and Health Education developed under the PECR Project in all the schools throughout the state.

Himachal Pradesh. The Education Department has adopted the textbooks for all primary classes developed by the SIE, Solan, under the PECR Project for use in all the schools from the session 1983-84.

Maharashtra. The Education Department, Maharashtra, has revised its curriculum for the primary stage, based on the 'Minimum Learning Continuum'. The State Education Department has adopted for wider use the Teacher's Handbook in Environmental Studies for Classes I and II.

Orissa. The State Education Department, Orissa, has introduced in all primary schools of the State a common Teacher's Guide for all subjects for Classes I and II developed during the first phase of the PECR Project. The State Education Department has also introduced the Language Primer/Reader and the textbook in Arithmetic, developed under the project for different clusters, in selected adult education centres and non-formal education centres.

Rajasthan. The Government of Rajasthan has approved the new curriculum for the primary education which has been developed as a result of experiences gained through the implementation of the PECR Project in the state. The following instructional materials developed under the PECR Project in Rajasthan have also been adopted for wider use.

- (i) Workbook in Hindi for Classes I and II.

- (ii) Workbook-cum-Teacher's Guide in Mathematics for Classes I and II.
- (iii) Teacher's Guide in SUPW and Creative Expression for Classes III to V.
- (iv) Teacher's Guide in Health and Physical Education for Classes III to V.

These books have been published by the Rajasthan State Textbook Board.

Sikkim. The Government of Sikkim has introduced in all primary schools the instructional materials for Class I developed under the PECR Project. The textbook in English for Class II and its Workbook developed under the project is being introduced in all primary schools from the session 1984.

Tamil Nadu. The Government of Tamil Nadu has adopted for wider use the textbooks in Mathematics for Classes I and II developed by the SCERT, Madras, under the PECR Project.

Andaman and Nicobar Islands. The Andaman and Nicobar Islands Administration has decided to introduce the instructional materials developed under the PECR Project in all primary schools of the Union Territory.

Lakshadweep. The Education Department, Union Territory of Lakshadweep, has developed, under the PECR Project, the instructional materials for Classes I and II in Language (Malayalam), Mathematics, Environmental Studies, SUPW and Creative Expression. The books have been introduced in all Malayalam-medium schools of the Union Territory.

Mizoram. The Education Department, Mizoram, has adopted the textbooks in Mizo for Class I to V and textbooks in Environmental Studies (Social Studies) for Classes III to V developed under the PECR Project.

Comprehensive Access to Primary Education (CAPE)

The project 'Comprehensive Access to Primary Education (CAPE)' is a part of the effort of the Government of India to meet the minimum educational needs of a large number of children hitherto unreached and to achieve the target of enrolling out-of-school children in the age group 9-14 in part time non-formal education programme. Under the project, locally relevant learning materials (learning episodes) are being developed in sufficient quantity and variety. The learning episodes are developed through the introduction of a training-cum-production mode into the curriculum of elementary teacher training institutes (TTIs) and/or into the in-service training courses for primary school teachers. The learning episodes, after processing and refinement, will be used in a

network of experimental learning centres to be established/adopted and attached to the elementary teacher training institutes (TTIs), in-service teachers' training centres (ITTCs) in the States and Union Territories participating in the project. Thereafter, evaluation centres and accreditation services will be established in the states/UTs, so as to enable the children attending these learning centres to receive credit certificates for their academic achievements.

Objectives of the Project

The specific objectives of the project are : (i) to develop a non-formal system of education and to increase the participation of children, especially those belonging to the disadvantaged sections of the society, in non-formal education activities, organized as an alternative to formal schooling, and (ii) to evolve flexible, problem-centred and work-based decentralized curricula and learning materials relevant to the needs and life situations of diverse groups of children, not only for non-formal but also for formal channels of education.

Schedule of Implementation of the Project

The basic activities under the project CAPE are carried out in three major phases. The first phase consists of activities leading to the development and production/publication of learning episodes in sufficient quantity and variety. The second phase includes activities related to the establishment/adoption and running of learning centres and the third phase covers all activities leading to the establishment of evaluation centres and accreditation services.

Agreements for implementation of the project have been executed by all the States and Union Territories except the Union Territories of Arunachal Pradesh and Pondicherry. However, the schedule of activities has not been uniform since the date of commencement of the project activities has not been the same in the case of all the States/Union Territories participating in the project. Ten states and three Union Territories commenced the project activities in 1979, seven states and two Union Territories in 1980, one state in 1981, two states and one Union Territory in 1982 and one state in 1983. The state of Tripura and the Union Territory of Dadra and Nagar Haveli are yet to commence the project activities

Major Activities Carried out

In all the states and Union Territories which have commenced implementation of the project, the activities related to the first phase of the project have been in progress. The major activities carried out under

the project during the year 1983-84 include the following :

Meetings of Principals of TTIs/ITTCs to review the implementation of training-cum-production mode and development of draft learning episodes by teacher trainees.

Training of teacher-educators of TTIs/ITTCs and in-service teachers in the methodology of developing learning episodes.

Training of teacher-educators of TTIs/ITTCs in the methodology of developing learning materials for learners having low or no reading ability and in the methodology of integrating competencies related to different subject areas and disciplines into the learning episodes.

Training of art teachers/artists in the methodology of developing illustrations for learning episodes.

Orientation of education officers at the district and block levels to the planning and management aspects of the project CAPE.

Screening of draft learning episodes for processing and refinement.
Processing of learning episodes selected for publication.

Meetings of Advisory Board at the State/UT level for reviewing and finalization of learning episodes selected for publication.

Printing/publication of learning episodes.

Physical Targets Achieved

Thirty SIEs/SCERTs/DSERT/SIERT and 980 elementary teacher training institutes (TTIs)/in-service teacher training centres (ITTCs) in the country are involved in the implementation of CAPE. During 1982-83, 23 meetings of Principals of TTIs/ITTCs were held to review the introduction of training-cum-production mode for the development of draft learning episodes by teacher trainees. In all, 671 Principals of TTIs/ITTCs participated in these meetings. Two hundred and twenty four teacher-educators of TTIs and 368 in-service teachers were trained in the methodology of developing learning episodes. Two hundred and twenty teacher-educators of TTIs were trained in the methodology of processing learning episodes and 448 teacher-educators of TTIs were trained in the methodology of developing learning materials for learners having low or no reading ability and in the methodology of integrating competencies related to different subject areas and disciplines into the learning episodes. Five hundred and thirty-one educational officers at the district and block level were oriented to the planning and management aspects of CAPE and 156 artists/art teachers were trained in the methodology of developing illustrations for learning episodes. Forty workshops involving 739 teacher-educators of TTIs and in-service

teachers were conducted for the screening and selection of the draft learning episodes developed by teacher-trainees of TTIs and by in-service teachers. During the period 1983-84, 67 workshops were held involving a total number of 1,106 teacher-educators of TTIs/ITTCs for the processing and refinement of learning episodes selected for publication. About 300 modules developed by the teacher trainees of TTIs and in-service teachers were processed and refined for publication. Twelve meetings of Advisory Boards at the State level were conducted to review, finalize and approve the learning episodes for publication. During the period under report 474 learning episodes (in the form of capsules) were published in the states of Andhra Pradesh, Assam, Bihar, Haryana, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu and Uttar Pradesh and the Union Territory of Mizoram.

Developmental Activities in Community Education and Participation (DACEP Project)

Objectives of the Project

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

A related objective is to test whether by removing the dichotomy between the school and the community the former can extend its assistance to the latter so that the school may become a catalyst for social change in other sectors of the community.

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

The project is in line with the Government of India's comprehensive programme of non-formal education. The programmes and activities developed under the project meet the broad objectives of improving the life and living of the people through their willing participation and

provide the required competencies to satisfy the packages of minimum learning needs.

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

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

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

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

Implementation of the Project

The project was initially taken up in 14 States/UTs in the year 1976 on an experimental basis. Two community centres in each state were opened for this purpose. These centres were located in very poor, rural, tribal and hilly areas and urban poverty areas. Encouraged by the outcome of the project, the number of community centres was increased in the year 1981 from two to four or five in the 14 States/UTs and two community centres were opened in each of the remaining States/UTs except in Arunachal Pradesh which did not participate in the programme. The number of community centres has thus increased from 28 to 102 to provide for greater socio-economic and cultural variations and to develop suitable models of non-formal education for each community according to its needs. Ninety-nine of these centres had come into existence up to December 1983. Besides, nine more centres were approved to be set up—in Tamil Nadu (5), Madhya Pradesh (3) and Orissa (1)—in which the honorarium of the community workers was to be borne by the state governments. Four of these centres, viz. three in Madhya Pradesh and one in Orissa, had already come into existence and the centres in Tamil Nadu are likely to start functioning in 1984.

A variety of patterns of non-formal education for different target groups covered under the project are being developed in all the States/UTs. These patterns are based on the survey findings and the demands of the local situations. The methods and materials developed in the community centres are being modified on the basis of feedback data.

Three courses were organized for Project Coordinators and community workers of the participating States/UTs. The aim of organizing these courses was to focus attention on the various aspects of the project. Community workers were invited to these courses to present the real pictures of the centres, organization of programmes and activities for different age groups, difficulties at the centres, etc. Besides, three orientation courses were organized at the zonal level for the concerned Block Development Officers and Project Coordinators in which issues concerning the relationship between education and developmental programmes were discussed with a view to ensure greater participation of the people in developmental activities.

At many centres, communities have started taking interest in the activities of the centres. In some of the states, materials developed for the centres are being adopted for wider use in the non-formal education programmes.

Monitoring of the Project

The project is monitored by the Community Education Group of the NCERT at the national level and executed by a team of workers at the State Institutes of Education/State Councils of Educational Research and Training, Teacher Training Institutions and village-level authorities in the participating states. The grassroot-level workers like teachers, community workers and community members are involved in the planning and execution of the programmes and activities in the community education centres.

Evaluation of the Project

An internal evaluation of the project is currently being carried out. The tools for evaluation were developed at the NCERT level and made available to the States/UTs for adoption/adaptation. An external evaluation of the project has already been assigned to an external agency.

Non-formal Education

The Council took up the work of Non-formal Education in July 1978. The major thrust in this area has been directed towards conducting research, developing conceptual and instructional materials, organizing conferences and orientation programmes and disseminating information through NFE Newsletter and NFE Resource Centre. The Council prepares prototype materials also which are being used by different states and Union Territories in the country.

During 1983-84, the NCERT accomplished the following tasks in the area of non-formal education.

Research

Compilation and Linguistic Analysis of Hindi Vocabulary. The report on the project was prepared and circulated to various persons and institutions in 1982. The same has been sent to the press. During 1983-84, a master list of 15,197 words with 12 kinds of frequencies based on types of vocabulary, grades, area and sex has been cyclostyled and circulated. Another master list in alphabetical order with different kinds of frequencies is being prepared and cyclostyled. The data collected for the project include 32 more lists based on their grammatical, structural and semantic analysis. It is expected that these lists will be useful for the reading specialists, writers of instructional materials, test framers and researchers.

Evaluation of Non-formal Education Instructional Materials. This project aims at developing tools for the evaluation of the instructional

materials developed under Non-formal Education programme. The following tools have been developed and are being modified on the lines suggested by the members of the planning group in its meeting held on 5 and 6 July 1983.

- (i) Analysis Proforma.
- (ii) Manual for filling up the analysis proforma.
- (iii) Aspects and criteria for evaluation.
- (iv) Interview schedule for teachers.
- (v) Identification data of the book.

The tools will be tried out and standardized.

It has also been suggested that a brochure having the following centres should be prepared.

- (i) Concept and nature of non-formal education.
- (ii) Approaches to non-formal education.
- (iii) Instructional objectives.
- (iv) Methodology and procedure for the evaluation of instructional materials.
- (v) Tools for evaluation.
- (vi) Interpretation and use of data.

The brochure is under preparation.

Identification of Various Approaches/Strategies on Non-formal Education. The project aims at identifying various approaches/practices of non-formal education being followed in the Hindi-speaking states covered by the centrally sponsored scheme of non-formal education for the age-group 9-14.

Five questionnaires have been framed to collect the data from the following persons.

- (i) Directors/Resource persons of the training programmes.
- (ii) Basic Education Officers.
- (iii) Officers-in-charge of NFE programmes.
- (iv) Supervisors.
- (v) Centre teachers.

These questionnaires were modified on the basis of a pilot study. Later, they were circulated to the Departments of Education, voluntary organizations and the community centres in the states. On the basis of the data, three separate reports have been prepared.

Development

Development of NFE Instructional Materials for the Middle Level (VI-VIII). The Council took up the project to develop syllabus and instructional materials for non-formal education for the middle level in

November 1982. The project aims at the production of instructional materials including syllabus, learning materials and support materials in Hindi, Natural Sciences, Social Sciences, Mathematics, Home Science and SUPW. The materials are being developed following the special approach of NFE in view of the level of the target group, the teacher's background, limitation of time factor and obtainable natural resources. Forty-two integrated lessons in the areas of natural sciences and social sciences have been prepared following the integrated approach. Fifty-three lessons in the areas of natural sciences and social sciences have been prepared following the subject approach. Nine lessons of mathematics for the first year following the integrated approach have been prepared. These materials have been organized year-wise. Planning for language books have already been done and the lessons are being prepared. The curriculum emphasizes the continuity of the experiences of the learners, both inward and outward exposition of the learner to the improved process and techniques of life and living, integration of various learning areas and reducing the curriculum load in terms of quantity through a process of qualitative integration of themes. Some of the innovative features of these learning materials are :

- The materials have been developed following the number of formats, viz., story, dialogue, travelogue, poem, narration, activity and experience-based presentation.
- The language of the materials has been chosen with utmost care at the learner's level and his background.
- Evaluation questions include items on content areas, activities for application of knowledge and exercises on language skills.
- This provides situations for integration of conceptual knowledge with day-to-day life activities of children, the integration of different subjects and the integration of subjects with language.

Development of NFE Instructional Materials in Urdu for the Primary Level. The NFE group has taken up the project of preparing the instructional material in Urdu for non-formal education at the primary level. Ten books, including the Problem and Need-based Curriculum, Teacher's Guide, three Language Readers and their guides, Mathematics book and Training Manual, have been prepared, out of which nine books have been published. During 1983-84, the second book including lessons on language, social sciences, and natural science, was being prepared following the integrated approach.

Training

A training/orientation programme for resource persons was organized

from 17 February to 3 March 1984 for the field functionaries from the nine educationally backward states. Representatives from the Departments of Education and the voluntary organizations working for the NFE programmes in the states participated in the training programme. The main focus of the training programme was to discuss the workable approaches and strategies to be adopted for the teaching of Language, Mathematics, Natural Sciences, Social Sciences and Socially Useful Productive Work at the primary level. The programme resulted in the status paper on the teaching of various subjects in NFE centres at the primary level. Some discussion at the middle level was also initiated and a tentative outline was prepared by the group.

Extension

Non-formal Education Bulletin and Resource Centre. 'The Non-formal Education Bulletin' is a quarterly publication. The Bulletin aims at exchanging experiences, identifying and disseminating information on various innovative practices and ideas and highlighting various issues and problems in the area of non-formal education. The four issues of the Bulletin were brought out during the year. Besides book-reviews, research abstracts and NFE news, the four issues carried articles like 'Linkage between formal and non-formal education', 'Problems and Issues of Non-formal Education', 'Non-formal Education in Madhya Pradesh, Andhra Pradesh, Rajasthan and NCERT's experiences on non-formal education'.

The Non-formal Education Resource Centre maintains the reports and instructional materials received from various educational agencies in India and abroad. Important information and materials have been compiled in usable form for the benefit of non-formal education workers and researchers.

Coordination

Two meetings of the Coordination Committee on Non-formal Education were held during 1983-84—the first on 13 September 1983 and the second on 30 December 1983. The first meeting discussed the programmes/projects proposed by different units/departments of NCERT and recommended to Programme Advisory Committee. In the second meeting the policy and the academic issues for developing the programme of non-formal education programme in the country were considered.

Annual Conference

An Annual Conference on Non-formal Education was organized at NIE, NCERT, on 28 and 29 February 1984. The Joint Directors

incharge of NFE in the states and one officer from each SIE/SCERT/SIERT were invited to participate in the conference. The problems and issues both at the primary and the middle levels were discussed and a number of valuable recommendations were made in the conference. Brief reports of the NFE programme as being run by the states were also presented in the conference.

Monitoring and Evaluation of Universalization of Elementary Education Programme

Tools for monitoring and evaluation of universalization of elementary education programme had been evolved as a part of an earlier project. The effectiveness and usability of these tools in the natural setting and with the existing infrastructure had to be established. With this in view, a follow-up of the earlier project was taken up in the states of Jammu and Kashmir, Orissa and Rajasthan. For the purpose of the application of these tools, one district each in the three states—Badgam District in Jammu and Kashmir, Nayagarh District of Orissa and Udaipur District of Rajasthan—was identified. The educational backwardness of the districts was the main criterion for their identification for purposes of the application of the tools.

The present venture covered both formal and non-formal sectors of education at the school/NFE Centre level, Block level, District level, and State level. Except in respect of non-formal education centres, the periodicity of all monitoring and its reporting was a quarter (three months) at all the levels. The monitoring of the programmes of non-formal education centres, however, was attempted on a monthly basis but only at the first level. From the block-level onwards, even the non-formal education programme was monitored quarterly.

The most important procedural innovation of the scheme was the organization of quarterly meetings at each level. It was at these meetings that the monitoring reports were handed over personally to the officers of the next higher level who convened these meetings. Besides these, written communications and oral discussions about the problems and difficulties and the efforts made to overcome them proved to be very useful, particularly in diagnosing the difficulties and providing prompt remedial measures as also for modifying earlier policy decisions or taking new ones. In all, 612 participants from Jammu and Kashmir, 311 participants from Orissa and 557 participants from Rajasthan took part in 3 planning, 8 orientation, 2 monthly review and 9 quarterly review meetings held at state, district and block levels in the three states.

A joint meeting of the personnel from the states involved in the project was held on 12 and 13 October, 1983, at the NIE Campus, New Delhi. During the course of the meeting it was felt that the tools were useful and appropriate for smooth application within the existing infrastructure. The only input required was a one-day orientation to the functionaries at different levels.

Research Studies

Study of Different Streams of Educational Thought and Practices in India after Independence (1947-1980)

The study deals with the following four streams of educational thought :

- Hindu Yoga Sadhana Education Thought.
- Psycho-analytical Thought.
- Gandhian Educational Thought.
- Marxist Thought.

A study of the literature of the following three streams of thought has been completed.

- Hindu Yoga Sadhana Stream of Thought.
- Psycho-analytical Stream of Thought.
- Stream of Gandhian Educational Thought.

The study of the literature on the Marxist stream of educational thought is under preparation.

A Study of the Effect of Psycho-social Factors on the Comprehensibility of Language used in Science, Social Studies and Language Textbooks at Primary Level.

The main objectives of the study were to see the effect of intelligence and socio-economic status on the comprehensibility of language used in textbooks. Three different Close Tests, based on the textbooks of Science, Social Studies and Hindi, were constructed for measuring the comprehensibility of language of Grade III children. These tests were tried out on a sample of 200 children and finally administered on a sample of 400 children of Rajasthan. The textbooks were prepared and prescribed by the Government of Rajasthan.

For measuring the intelligence of these children, Ravan's Progressive Matrices (Coloured) were used. S.P. Kulshrestha's Socio-economic status scale was applied to assess the socio-economic status of the children. The sample covered almost 50 per cent children of both the sexes out of whom 50 per cent were from rural and 50 per cent from

urban area. The data have been computerized and the report-writing is going on.

As evident from the data, there seems to be a significant difference between urban and rural children on the comprehensibility of language used in the textbooks of the three subject areas. However, sex does not have any significant effect on the comprehensibility of language. Intelligence has revealed a significant difference on the comprehensibility of language between high, average and low intelligence groups. The three intelligence groups within themselves also reveal significant difference at .01 level for "t" value. The "t" value, showing the significant difference among three means of intelligence groups, is highest for Hindi textbooks followed by Social Studies and Science textbooks. The socio-economic status of the children does not affect the comprehensibility of language in the three subject areas but the parental occupation as well as parents' education has revealed significant difference in the comprehensibility of language. Similarly, the parental income has also indicated significant difference in the comprehensibility of language of different income groups. However, the type of family, that is, the nuclear family and the joint family, does not reveal any significant difference in the comprehensibility of language of the students.

Detailed analysis of the data, which is being carried out, may reveal further the effect or combined variables on the comprehensibility of language used in the textbooks.

5

Education of the Disadvantaged

E DUCATION of the children of the disadvantaged sections of society, particularly the scheduled tribes and the scheduled castes, constitutes an important area of concern in education. The NCERT which has been conducting research and preparing curricula and instructional materials for use by such children, organizes training programmes and produces supplementary reading materials for disadvantaged groups.

Priority has been given to the problems of these children in the various programmes of the Council. References have already been made in the preceding chapter on Universalization of Elementary Education, especially under the project Primary Education Curriculum Renewal.

During the year under report a number of special research and development programmes were undertaken by the Council. The programmes have helped in identification of problem areas and learning problems of children and in the development of suitable instructional

materials and training of personnel at various levels.

Research Programmes

The following studies were undertaken/completed during the year :

A Study of the Methods, Processes and Practices of Non-formal Education Programmes in Tribal Areas

The study was undertaken in five states—Andhra Pradesh, Gujarat, Madhya Pradesh, Rajasthan and West Bengal. The aim was to find out the various methods, processes and practices adopted by these states in undertaking non-formal education programmes in tribal areas. The study has been completed.

A Study of the Nature and Extent of Community Participation and Its Effectiveness in Educational Development of Scheduled Tribes in Nagaland

The study was undertaken in fifteen primary, middle and high/secondary schools in Kohima district of Nagaland. The objectives of the study were : (i) to find out the nature and extent of community participation in educational development programmes, (ii) to find out the effectiveness of community participation in educational development, and (iii) to suggest ways and means to encourage members of the tribal community to participate effectively in the educational development programmes. The study has been completed.

A Study of the Interrelationship between Education of the Scheduled Tribes and Their Socio-economic Mobility

The objectives of the study are : (i) to find out the extent of educational development of the scheduled tribes, (ii) to find out the extent of socio-economic mobility among the scheduled tribes, and (iii) to find out or establish correlation, if any, that exists between education and socio-economic mobility. The study is to be undertaken among the Kharia, Munda and Oraon tribes of Bihar. Tools for data-collection have been prepared.

A Comparative Study of Physical Facilities in the Primary Schools in Tribal and Non-tribal Areas

The study is intended to study the existing physical facilities in the primary schools located in tribal and non-tribal areas with a view to comparing the existing facilities provided between tribal and non-tribal area primary schools. Data have been collected from 42 tehsils of eight districts, four each in Madhya Pradesh and Orissa. Work relating to analysis of data and report-writing was in progress.

A Study of Subject-wise Performance of Tribal Students of Primary Level to determine Their Weak and Strong Points

The aims of the study are to assess the subject-wise performance of tribal students at the primary level and to determine their weak and strong points so as to suggest ways and means to improve the performance of tribal students at the primary level. Five states, namely, Andhra Pradesh, Madhya Pradesh, Himachal Pradesh, Gujarat and Orissa, and three Union Territories, namely, Mizoram, Andaman and Nicobar Islands and Lakshadweep, were selected for the study. The first stage of data-collection has already started. Data from Orissa were collected and the data-collection work from other states was in progress.

Determination of Causes of Low Enrolment of Tribal Girls with a view to suggesting Remedial Measures

The study is aimed at finding out the causes of low enrolment of tribal girls so as to suggest remedial measures. Research design and sample were finalized. The study would be conducted in 13 districts of eight states. Preparation of tools was in progress and data-collection work would start shortly.

Developmental Programmes

Working Group Meeting for Analysis and Development of Curriculum for Tribal Students of Andhra Pradesh

A working group meeting was organized by the NCERT at Hyderabad to analyse the existing curriculum at the primary stage and to develop a modified curriculum in view of the needs of the students belonging to the Gond Tribe in Andhra Pradesh. The meeting was held from 26 October to 2 November 1983 and was attended by the NCERT staff and other experts in the area—from the Directorate of Education, Andhra Pradesh, and the SIE, Andhra Pradesh, the Central Institute of Indian Languages, Mysore, and the Tribal Cultural Research and Training Institute, Hyderabad. A modified curriculum was developed and sent to the Government of Andhra Pradesh for further necessary action.

Preparation of Textbooks for Tribal Students

A working group meeting was organized at Berhampur in Orissa from 21 to 30 December 1983 to prepare a primer for Class II children on Saora tribe of Orissa. The meeting was attended by 23 participants consisting of teachers, circle inspectors and district inspectors of schools and staff members of the NCERT. A manuscript in two

parts in languages and arithmetic in Saora dialect written in Oriya script was prepared during the meeting. A second working group meeting was organized at the NIE, New Delhi, from 16 to 30 January 1984 to finalize the primer for Class II children of Saora tribe of Orissa. The primer was finalized and sent to the press.

Preparation of Instructional Material for Tribal Students of NFE Centres

A working group meeting was organized at the RCE, Bhopal, from 9 to 13 February 1984 to finalize a primer for Santal students of non-formal education centres in West Bengal. The meeting was attended by eight experts in Santali language and personnel from the NCERT.

Preparation of a Training Package for Teachers of NFE Centres in Tribal Areas

In view of the problem of training all the teachers of NFE centres in Tribal areas in the country the NCERT is going to prepare a training package on various problems of education in tribal areas and make it available to teachers of NFE centres. Papers on different aspects received from expert writers in the field were finalized in a working group meeting held from 26 to 28 March 1984.

Training Programmes

Training Course for Teacher-educators of Elementary Teacher Training Institutions located in Tribal Areas

The NCERT organized a training course for teacher-educators of elementary teacher training institutions located in tribal areas, from 5 to 11 January 1984, at the NIE, New Delhi. The aim of the course was to acquaint the teacher-educators with the tribal life and culture and the problems of tribal education. The course was attended by twenty participants from eight states—Bihar, Gujarat, Kerala, Madhya Pradesh, Maharashtra, Nagaland, Rajasthan and Tripura.

Training Course for Teacher-educators of Secondary Teacher Training Institutions located in Tribal Areas

The NCERT organized a training course for teacher-educators of the secondary teacher training institutions located in tribal areas, from 3 to 9 February 1984, at the NIE, New Delhi. The aim of the course was to acquaint the teacher-educators with the tribal life and culture and the problems of education in tribal areas. The course was attended by 27 teacher-educators from nine states—Andhra Pradesh, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Orissa, Tamil Nadu and Tripura.

Orientation Course for Key-Personnel of Non-formal Education Programme in Tribal Areas

The NCERT organized two orientation courses for key personnel of non-formal education programme in tribal areas. One course was organized at Shillong from 5 to 11 January 1984 and was attended by nine participants from three states. The second course was held at the RCE, Bhopal, from 3 to 9 February 1984 and was attended by 22 key personnel from different states. The aim of the course was to orient the key personnel in the tribal life and culture and in the organization of NFE centres in tribal areas.

Orientation Course for Saora Tribal Teachers for using the Saora Primer

An orientation course for Saora tribal teachers from the sample schools of two educational districts of Parlakhemundi and Gunupur was organized at Parlakhemundi (Orissa) on 3 and 4 August 1983 in which 104 teachers participated. The teachers were oriented in how to use the Saora Primer (a textbook in Saora tribal dialect brought out by the NCERT) introduced in Class I of the sample schools of the two districts.

Orientation Courses for District Education Officers from Tribal Areas

The NCERT organized two orientation courses for District Education Officers from tribal areas at the NIE, New Delhi. One course was organized from 16 to 30 January 1984 and was attended by participants from Gujarat, Himachal Pradesh, Maharashtra, Orissa and Rajasthan. The second course was organized from 16 February to 1 March 1984 and was attended by participants from five states—Gujarat, Madhya Pradesh, Orissa, Tamil Nadu and Uttar Pradesh.

A meeting was held in Gujarat Vidyapeeth, Ahmedabad, from 13 to 14 December 1983 to prepare a design for the evaluation of textbooks written in tribal dialects.

National workshop of Key Persons in respect of Learning Problems of Children particularly of Disadvantaged Groups

The NCERT organized a ten-day national workshop at Delhi from 15 to 24 December 1983 with the objective of developing programmes for understanding the needs and learning problems of children, particularly of disadvantaged groups, and also developing skills in identifying them and training key-personnel in states, who may be called upon to organize such programmes for teacher-educators in their own states. The workshop was attended by 11 senior teacher-educators from the states of Bihar, Gujarat, Karnataka, Kerala, Haryana, Maharashtra,

Madhya Pradesh, Orissa, Rajasthan and the Union Territories of Delhi and Chandigarh. They reviewed the present state of affairs regarding training and research programmes to understand the needs and learning problems of elementary education children particularly of the disadvantaged groups and considered certain basic concepts, and characteristics of deprived children and ways and means of eliminating the effects of deprivation.

For managing educational programmes for the deprived children, systems approach was recommended, the word 'system' meaning two or more parts functioning as one. The following were identified as essential sub-systems : Administrative Sub-system; Instructional Curriculum Sub-system; Nutritional Sub-system; Medical and Health Services Sub-system; Parent-involvement Sub-system; Community-involvement Sub-system.

Both the pre-service and the inservice teacher training programmes were regarded desirable for developing specific teacher-learner behaviours. Such training will again demand systems approach, competency-skill based programmes, operationally defining each individual task and the skill required on the job. The participants deliberated on methods and techniques to develop language skills, numericals skills and teaching styles. They also discussed how to manage classes effectively, how to handle discipline problems realistically and how to evaluate achievements—cognitive, affective and psychomotor.

Use of Hindi Language

The NCERT has prepared supplementary readers for tribal students of the Santal, Munda, Oraon and Gond tribes written in their own dialects as well as in Hindi. The supplementary readers are in press.

6

Curriculum, Textbooks and Supplementary Readers

CURRICULUM development is a continuous and ongoing process and it has to keep pace with the new and emerging needs and also the changing conditions in the country and the world at large. Efforts to review and upgrade curricula and syllabi, and to prepare and improve textbooks for the various classes, initiated earlier, continued and were intensified. Studies have also been undertaken in the area of curriculum load and other related areas. To maintain pace with the expanding requirements, attention is being paid to new areas such as developing computer awareness in schools. The emphasis on relating instruction with environment has been continued. Care is also being taken of value orientation in education.

Curriculum Development and Research

Curriculum Load at the Primary and Secondary Stages of School Education

The NCERT set up a Working Group in 1983 under the Chairmanship of its Director, Dr. P. L. Malhotra, to examine the question of curriculum load on pupils. The Group has decided to conduct the study in two phases. In the first phase, the study was confined to the Union Territory of Delhi, and in the second phase, four more states were covered. Five questionnaires have been developed for undertaking a perception survey in the Union Territory of Delhi. Meetings were also held with the heads of secondary and primary schools included in the sample of the study. Data-collection is in progress. The report of the study will be discussed in a national seminar and modifications in the curriculum will be made, if found necessary.

Curriculum Evaluation at the 10+2 Stage in the Light of Instructional, Developmental and Social Objectives of Education

An ERIC-supported project entitled 'Curriculum Evaluation at the 10+2 Stage in the Light of Instructional, Developmental, and Social Objectives of Education' was undertaken on 15 October 1983 for a preliminary study.

The project aims at providing a scientific basis for revising and improving the curriculum. The specific objectives of the project are :

- (i) to determine whether the desired objectives can be achieved through the present curriculum.
- (ii) to evaluate the teaching methods being used for achieving the desired objectives of education, and
- (iii) to examine the techniques used for pupil evaluation.

Under this project subject-wise instructional, developmental, and social objectives for ten school subjects have been prepared with the help of subject teachers who participated in ten working group meetings organized separately for each subject from 24 January to 8 March 1984. In all, 28 teachers from different schools of Delhi participated in the project.

Effective Use of School Curriculum

A development-cum-research project entitled 'Effective Use of School Curriculum' was undertaken a few years ago and is presently in its final phase of analysis of the findings. During the developmental phase of the project, appropriate support materials were produced, which consisted of several publications, viz., (i) Developmental Objectives of Educa-

tion at the Primary Stage, (ii) Psychology of the Child and the Curriculum, (iii) Teaching-Learning Strategies for Pupil Development, (iv) Co-curricular Activities in the Effective Use of School Curriculum, (v) Teaching Skills for Effective Use of School Curriculum, and (vi) Evaluation of Pupil Development. During the experimental phase a parallel group study was planned and conducted in order to see whether the teachers following the guidelines provided in the materials prepared during the preparatory phase helped the children to develop as better 'learners', better 'persons', better 'citizens' and better 'workers'. The findings are being statistically analysed.

A Study of Curriculum Content not based on Books provided in Various Categories of Schools in and around Delhi

The study has been undertaken to find out the possibilities of understanding the school curriculum content and strategies which would help in the development of competencies, attitudes, values, habits and behaviours that are associated with desirable affective and cognitive development necessary for children to become better 'persons', better 'citizens', and better 'workers'. The study is expected to reveal the status of this type of curriculum content vis-a-vis the attitudes of teachers and educational administrators towards it, the constraints in the introduction of such type of content, and the means of overcoming them.

Status of Curriculum under 10+2 Pattern of Education in Different States

The project aims at making a status study of curriculum at the secondary and higher secondary stages of school education in three states, viz., Gujarat, Maharashtra and Tamil Nadu, and one Union Territory, Delhi. Relevant data have been collected through questionnaires, interviews, etc. An on-the-spot study was also made in some selected schools. The draft report was sent to educational authorities in the states concerned for their comments and suggestions.

Curriculum Resource Centre and Bulletin

The Curriculum Resource Centre in the Council has continued to keep contact with various educational agencies and organizations in India and abroad. Important information and materials from various curriculum agencies within the country and abroad have been compiled for the benefit of curriculum workers and researchers. The Centre has now with it an almost complete set of the syllabi being used in the States. These are available for reference and consultation purposes. Special brochures carrying useful information about various aspects

of school curriculum are brought out by the Centre. During 1983-84 three brochures Nos. 6, 7 and 8 were brought out. The Brochure No. 6 entitled 'Curriculum-related Projects of NCERT' gives a brief description of the curriculum-related work being undertaken by the various constituents of the NIE in tabular form. Brochure No. 7 entitled 'Analysis of Syllabi of Different States and Union Territories' presents a consolidated comparative analysis of syllabi prescribed by different States and Union Territories except for the states of Rajasthan, Bihar and U.P. The analysis of syllabi prescribed by these three states have been given in Brochure No. 8 (in Hindi).

The Curriculum Bulletin which has served as a useful means of disseminating ideas on school curriculum among educational workers entered its fourth year of publication during 1983-84. The usual Four issues of the Bulletin were brought out during the year. Besides book reviews, research abstracts, etc., the four issues during the year carried articles like 'Curriculum Research', 'Family life Education', 'Moral Education', etc.

Enhancing the Role of Arts in Formal and Non-Formal Education at the Primary Level

The project aims at systematically developing a classroom teaching-learning strategy in arts for the purpose of integrating arts with other subjects on the basis of process-experience approach to teaching. In this connection, ten local primary schools have been selected for developing teaching units for integrating arts with other school subjects. Two meetings of teachers of these schools and other experts were conducted in December 1983, wherein sample teaching units for Classes IV and V were developed and analysed in respect of expected competencies and behavioural outcomes.

Three workshops-cum-orientation meetings of teachers and head-masters were also organized in this connection in January/February 1984.

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

Draft report of visual arts courses developed during 1982-83 has been finalized.

Preparation of Instructional Materials for Teachers and Students in Various Arts at Different Levels of Education

The work on this project has been continuing since 1982-83. The two drafts of the instructional materials prepared have now been finalized. Illustrating the material and reproducing children's art works are in progress.

SOCIAL SCIENCES AND HUMANITIES

Curriculum Development

The NCERT had developed curriculum when it launched the 10+2 pattern of education in mid-seventies. It was, therefore, high time that the NCERT revised its syllabi in general and textbooks in particular. Two national workshops—one in Social Sciences and other in Languages—were organized. These workshops were attended by the university experts, teacher-educators, teachers, curriculum specialists and those who were involved in writing the NCERT textbooks in these two areas. The workshops provided an opportunity to have another look at the NCERT syllabi right from Class I to Class XII in order to modify them in the light of the feedback from students, teachers, educational administrators, legislators and others interested in education.

Curriculum has also been developed in Moral Education, which is now more commonly known as value-oriented education. Classes IX to XII have so far been covered under this project.

Development/Revision of Textbooks

During this year the following textbooks were revised as their revision was long over due, and these have been sent to the press :

- Evolution of Indian Economy for Class XI.
- India on the Move—A textbook of Economic Geography for Secondary Schools for Class X.
- Bharatj Part I—Class VI.
- A Sociology Textbook for Classes XI and XII.

For the first time the NCERT took up the programme of developing textbooks in Urdu for the entire school stage, from Class I to Class XII. Under this scheme manuscripts of textbooks for Classes VI and VII have been finalized.

The other books which have been developed or are in the process of development are :

Grammar Books

- Functional Grammar in Hindi for Classes I to V.
- Grammar in Sanskrit for Classes V to VIII.

Supplementary Reading Books

- Rajarshi Purushottam Das Tandon.
- Kalidas aur Unki Kirtiyan
- Four Supplementary Booklets in Hindi for Class I.

Guide books for Teachers

- A book on Reading Comprehension.
- Swasti Sandarshika—A Guidebook for teachers in Sanskrit for Classes V to VIII.

Work books

- Swasti Abhyas Pustika—A workbook in Sanskrit for Class V.
- Audio tapes of Sanskrit poems have also been prepared.

Training and Extension

The NCERT organized a training programme of 10 days for key persons teaching Hindi as second language in the state of Kerala. It was attended by 50 participants.

The NCERT also organized two training programmes of six days each for Hindi Teachers of Municipal Corporation of Delhi. About a hundred teachers participated in this programme.

The NCERT assisted the schools of Atomic Energy Commission in orienting their teachers in English and Hindi.

Research and Experimentation

The department continued to work on the project 'Methods of Teaching Sanskrit in Schools'.

Under this project, a pilot study for Delhi schools was completed.

A workshop was organized to analyse Geography syllabi in different states of the country for the entire schools stage. Twelve states participated in the programme.

Special Projects

The NCERT has undertaken a series of special projects in the area of Social Science and Humanities. A brief account of each of these projects is given below.

Value-Oriented Education

The project which was initiated mainly with a view to developing curriculum in moral education was expanded to encompass a very broad area which is now known as value-oriented education. A high-power committee under the chairmanship of Dr. D.S. Kothari has been constituted to provide guidelines and to coordinate this programme at the national level. A couple of titles have been commissioned to authors under this project. The draft manuscript of one of the books was discussed in a meeting.

Under this project, the curriculum for Classes I to XII has been finalized. The scope of this project embraces moral, spiritual, social, civic and scientific values. It thus aims at the development of scientific temper as well.

Reading to Learn

This project has been taken up by the Council primarily to cultivate reading habit among young children. It aims at making it grow into a big movement. The project envisages, initially, to work on two languages—English and Hindi. Basically, the project would concentrate on the needs of the age-group five to eight and would then work upwards. It would have to cater to both the streams of learners who study them either as the first language or as the second language. Keeping in view the explosion of knowledge at a very rapid pace, it becomes imperative that the children in their formative stages develop reading habits. This would necessarily depend upon the availability of reading materials written in a very simple but appealing language and produced attractively. Furthermore, it should be within the easy reach of children and parents of modest means both in urban and rural areas. In fact, the project would focus on the needs of those who are in rural areas and belong to backward and deprived classes.

The project has an added significance in view of the increasing role of television and other visual mass media which take away much of the time of the younger generation, leaving them with relatively little time to read books.

In view of the great significance attached by the Council to this programme two National Steering Committees have been set up—one for Hindi and the another for English—consisting of eminent scholars, children's artists, educators and representatives of institutions like the Children's Book Trust, the National Book Trust, the Central Institute of English and Foreign Languages, Kendriya Hindi Sansthan, the State Institutes of Education, etc.

Under this project three national workshops have been organized, two in Delhi for Hindi and English each and one in Hyderabad for English.

The workshops developed detailed guidelines in regard to criteria for the development of materials. The types of materials to be developed have been identified. The *modus operandi* to be followed in the planning, development and finalization of the material has also been discussed. Care is being taken to ensure low pricing and quick distribution of such materials. The workshops have also identified topics, themes, etc., both in the areas of fiction and non-fiction. It has been suggested that by and large 60 per cent of the materials

should be in the category of fiction and 40 per cent in that of non-fiction. The material is expected to be imaginative enough to challenge the young readers and at the same time easy to read. It will not be dovetailed either to the curriculum or to the textbooks *per se*.

Preparation of Visual Panels of Freedom Movement

The NCERT has been working on this project for the last two and a half years and has now been able to finalize over 50 panels dealing with different events, themes and landmarks in our freedom struggle spread over a hundred years. Besides collecting original photographs, pictures, newspaper cuttings, illustrations, cartoons, etc., a good many original documents have also been identified and procured. While selecting these documents an attempt has been made to see that they would have a special appeal to school children and would inculcate in them the spirit of patriotism, nationalism and national integration. These documents would be printed on the pages facing the visual panels for the benefit of teachers and other readers who are interested in knowing more about the freedom movement.

Preparation of a Module in Environment Education

Funds for this project are being provided by UNESCO. Under the project a module is being prepared for the elementary school teachers of social studies on the subject of Environment Education. A synopsis of this module was developed and sent to the UNESCO headquarters in Paris. It has been approved by them. The module which runs into about eighty pages is almost ready and would be sent to UNESCO shortly.

Reference Materials in Hindi

The NCERT has been working on this project for the last two years. A book entitled 'Vidyarthi Hindi Sahitya Kosh' has been planned. It would contain information on standard Hindi works which the high school students should know. They would also know about the eminent literary figures in Hindi from various departments of literature such as poetry, novel, prose, short story, drama, one-act play and criticism. Two workshops were organized to finalize the list of entries and to identify suitable authors for write-ups on each of these themes and topics. There would be in all 3000 entries.

Reference Materials in Sanskrit

On similar lines, the NCERT has been working in the area of Sanskrit and has planned to bring out the following two titles :

- (i) Vidyarthi Sanskrit Sahitya Sandharbh Kosh.
- (ii) Bal Sanskrit Shabd Kosh (a Sanskrit dictionary for beginners).

Multi-media Package in English

This project has been taken up by the NCERT at the request of the Ministry of Education and Culture, Government of India. As there is a general complaint that the standards of English all over the country are deteriorating, it has been found necessary that some urgent action should be initiated to reverse this trend. It has, therefore, been decided to develop small bridge courses to ensure that the students at the end of a given school stage acquire the minimum expected competencies. These courses would be found useful as remedial measures by schools and teachers. In order to lighten the task of the teacher it has been proposed to develop multimedia packages. One workshop was organized to thrash out this problem in all its dimensions and arrive at a suitable action-plan. Material to be developed has been entrusted to suitable experts and institutions. The material is now under preparation.

Innovations in Schools

The NCERT has conducted an all-India competition on the subject in which 99 entries were received from different parts of the country. Each of these entries was evaluated by a set of two reviewers independently. In all, 24 entries were selected for the certificate of merit and cash award of Rs. 500 each.

A workshop of all the awardees was organized in Delhi for four days in which the reports and findings of the award-winning innovations were discussed at length. The opportunity was utilized to edit the reports of these innovations so that these could be subsequently printed for wider circulation.

All-India Children's Literature Competition

This competition is being organized every two years. However, in the light of certain difficulties faced in implementing this project, its rules, regulations and *modus operandi* were reviewed critically and necessary modifications in the scheme were introduced. Advertisements and notifications are being issued inviting suitable entries of books published during 1980-82. In addition, unpublished manuscripts could also be received under this scheme. These should be written against the background of the Indian freedom movement.

There would be in all 36 awards of Rs. 5000 each. There would be two awards in each of 16 languages and four in Hindi.

Building up of Educational Archives

This project was initiated last year and the work on this continued during this year.

Working with the States

Arunachal Pradesh

The NCERT has been intensively working for the development of curriculum and textbooks in English and in Hindi for the Union Territory of Arunachal Pradesh.

During this year a Hindi textbook for Class III—Arun Bharti, Part-III—has been prepared and sent to the press. The workbook for this class is under preparation. Two workshops were organized, one in Itanagar and the other in Delhi, for planning and reviewing the manuscripts of the books. The following three English books were developed :

- (i) Dawn Readers—textbook for Class I.
- (ii) Dawn Readers—supplementary book for Class I.
- (iii) Dawn Readers—workbook for Class I.

Andaman and Nicobar Islands

The NCERT, at the request of Andaman and Nicobar Administration, organized a series of training programmes simultaneously for teachers of Hindi in Primary, Middle, Secondary and Higher Secondary Schools. Hindi as the second language was also one of the areas of interest in this programme. The training programme was organized for ten days at Port Blair.

Jammu and Kashmir

The NCERT assisted the state of Jammu and Kashmir in organizing training of key persons in the state in the areas of Social Studies, History, Geography, Civics and Economics. The programme was necessitated by the fact that the NCERT textbooks have been adopted by the state.

Meghalaya

The NCERT assisted the State Institute of Education, Meghalaya, in the revision of their syllabi in Social Studies, viz. History, Geography and Civics.

Rajasthan

The NCERT helped the SIERT, Rajasthan, Udaipur, in the revision of their syllabi for the elementary school stage.

Uttar Pradesh

At the request of the Boards of High School and Intermediate Education in Uttar Pradesh, the NCERT participated in revising its curriculum in Social Sciences and Hindi and also in reviewing the manuscripts of some of its textbooks.

Haryana

The NCERT assisted the State of Haryana in the Development of curriculum for the neo-literates to ensure that they do not relapse into illiteracy. This was then followed up with identification of suitable themes for preparing small booklets. One of the special features was the development of teaching-learning material for rural women. The material consists of primer, a workbook, a teachers guide and supplementary books containing stories and parables.

Madhya Pradesh

The NCERT has been collaborating with the state of Madhya Pradesh in the area of material development for adult education for the last five years. During this year, the Council assisted in the development of teaching-learning materials for women in tribal and backward areas. Under this programme the material developed consists of a primer, a workbook, an instructor's guide and supplementary readers containing poems and stories.

SCIENCE AND MATHEMATICS

A multifarious programme covering the use of environment as a resource for science education, dissemination of the concept of environmental education, and review of curricula in all science subjects and in mathematics, evaluation of textbooks, promotion of nutrition/health education and environmental sanitation, national science exhibition, etc., was undertaken in 1983-84.

Environmental Education

A workshop was organized for the development of materials for pupil's evaluation in Environmental Studies at the primary level in the first week of April 1983 at the Women's Basic Training Institute, Varanasi, U.P. A first draft of the materials was prepared for further refinement and publication.

An orientation course-cum-workshop for resource persons in environmental studies was organized for the state of Tamil Nadu from 18 July to 30 July 1983. Thirty participants attended the programme. They were made familiar with the philosophy of the programme and the materials developed in NCERT.

A five-day workshop on Environmental Studies for SC/ST teachers of Standard I and II was organised at St. John Vestry Hr. Sec. School, Trichi from 5 to 9 March, 1984, in collaboration with the Directorate of Adhidravidar and Tribal Welfare, Tamil Nadu, the Directorate of School Education and SCERT, Madras. Fifty teachers participated in the workshop.

Another workshop for the development of materials for pupil's evaluation in Environmental Studies at the primary level was organized in the last week of February 1984 at Chhattarpur, Madhya Pradesh.

Physics Education

The Council participated in an International Conference on Teaching Aids in Physics Education organized by the Indian Institute of Technology, Madras, at Madras from 22 to 24 February 1984. A paper on 'Teaching Aids Activities of NCERT in Physics Education' was presented. In addition, low-cost electronic apparatus was also displayed. The participants included delegates from the U.S.A., West Germany, India, Nepal, Thailand, Malaysia and Singapore.

An orientation programme for physics teachers at the + 2 stage was organized for the Union Territory of Dadra and Nagar Haveli from 9 to 30 May 1983. The Individually Guided System of Instruction (IGSI) was explained to the participants.

Chemistry Education

The NCERT organized a Workshop at the NIE, New Delhi from 6 to 9 April 1983 to analyse the syllabi of Chemistry at the secondary level from different states and to prepare a core syllabus.

A workshop was organized at the Kendriya Vidyalaya, Mathura Refinery Project, Mathura, in the first week of April 1983 for the development of concept-centred experiments in Chemistry for Class XII. During the workshop, difficult concepts were identified and experiments were designed. The feasibility of some of the experiments was also discussed.

Biology Education

A workshop was organized in the first week of April 1983 to develop a resource book on laboratory and field activities for teaching Biology

at the secondary and senior secondary levels. About 200 experiments/activities were identified. The material is proposed to be further reviewed in another workshop and by a try-out in schools.

An orientation programme in New Biology was organized for teacher-educators and key persons of different states, who were oriented to the concepts and, the teaching of New Biology.

Another orientation course in New Biology was organized in the month of January 1984 for teacher-educators and key persons.

Mathematics Education

A workshop was organized in the first week of April 1983 for the preparation of a handbook in Mathematics for primary school teachers. Preliminary work for the preparation of the handbook was undertaken in this workshop.

An orientation programme for mathematics teachers was organized in the month of May 1983 at Silvassa in the Union Territory of Dadra and Nagar Haveli. Difficult concepts in Calculus were discussed in this workshop.

Another orientation-cum-workshop was organized for training primary teachers of Atomic Energy Central School, Jaduguda in May 1983.

A workshop was organized at the Atomic Energy Central School, Anu Shakti Nagar, Bombay, in May 1983. Enrichment material in content and applications of mathematics was sought to be developed with the assistance of CAMET trained teachers. Eminent scientists and engineers were invited to give lectures on various topics explaining the application of mathematics in these topics.

“A workshop in connection with evaluation of Class VIII Mathematics textbook was organized in Madras in the third week of January 1984. In addition to the evaluation of textbooks, the syllabus in Mathematics at the middle school level was also discussed.”

A workshop was organized to consider the revision of existing + 2 syllabus in Mathematics in the month of February 1984.

The NCERT participated in a meeting organized by the Indian National Science Academy to discuss a general decline in interest in the study of Mathematics.

Science Education up to the Secondary School Stage

The NCERT provided assistance to the SCERT, Meghalaya in a ten-day workshop organized by it to revise the science curriculum for Classes VI to X. A comprehensive curriculum guide was developed for the use of science teacher-educators and teachers.

A workshop was organized in the second week of October 1983 at the Government Central Pedagogical Institute, Allahabad, on 'In-depth Study of Implementation of Integrated Science Curriculum'. The participants worked on the revision of the syllabus with a view to introduce greater element of integration of different science disciplines.

A workshop was organized at the Science Centre, Karol Bagh, New Delhi, in the second week of January 1984 to finalize experiments and activities in science for secondary classes.

The NCERT prepared a country-paper on 'Position of Science Education in India' under a contract with UNESCO Regional Office, Bangkok. The paper provides a comprehensive coverage to the growth of school science education in post-Independent India.

Assistance was provided to the SIERT, Rajasthan, for the revision of science syllabus for the middle schools in a workshop held at Udaipur in the last week of January 1984.

Assistance was also provided to the SCERT (Science Unit), Gurgaon (Haryana), in a workshop organized by them under the project 'In-depth Study of the Implementation of Integrated Science Curriculum in Schools'.

Health and Nutrition Education

A workshop for the development of Core Health Education Syllabus for the primary stage was held in the first week of March 1984 in Delhi. The objectives of the workshop were.

- (i) to identify the components of the syllabus on Health Education, keeping in view the prevalent health problems, especially among school children;
- (ii) to develop a curriculum frame which should be student-oriented instead of being teacher-oriented and which should have a distinctly positive approach;
- (iii) to make curriculum health-oriented rather than disease-oriented, and
- (iv) to include activities for improving basic skills for adopting healthy habits.

A list of 12 general objectives was finalized. Thereafter the specific objectives based on the general objectives at the various class levels, i.e. I-V, were identified. Based on the specific objectives, major and minor ideas were identified for the syllabi of the entire primary level.

Nutrition/Health Education and Environmental Sanitation (NHEES)

The project was initiated in five states in 1976, viz. Gujarat, Madhy

Pradesh, Punjab, Tamil Nadu and West Bengal. West Bengal dropped out subsequently. In 1982, ten more States/UTs took up the project. These states/UTs were Andhra Pradesh, Assam, Bihar, Haryana, Karnataka, Maharashtra, Mizoram, Orissa, Rajasthan and Uttar Pradesh.

From 1983 onward, the old centres (Regional Centres) which were started in 1976 were supposed to expand the scope of NHEES Curriculum by integrating it with the existing primary school curricula of the respective states and also to act as resource centres for the neighbouring states which have taken up the project later.

None of them, however, has been able to integrate the NHEES curriculum with the state curriculum for primary classes, instead, they have made some efforts (Tamil Nadu, in particular) to go for lateral expansion of the project.

The project so far run by these old centres has been evaluated by the Nutrition Foundation of India. The report has not yet been circulated.

During 1983, most of the new centres have completed a number of the following activities :

- (i) Baseline survey on nutrition, health and sanitation habits for different ecological areas in the states (e.g. coastal, tribal, urban, underprivileged, etc.).
- (ii) Development of instructional package for primary schools on the basis of the survey data.
- (iii) Try-out of the package in a few primary schools in order to obtain feedback on quality and suitability.
- (iv) Orientation of teacher-educators and supervisors.
- (v) Training of teachers from 100 experimental schools.
- (vi) Introduction of materials in experimental schools.
- (vii) Evaluation and further revision of materials.
- (viii) Introduction of important messages to underprivileged communities with a view to focussing attention on information of desirable nutrition and health habits.

All new states have not progressed uniformly. Some states, e.g. Assam, Karnataka and Orissa, have been busy with some of the above activities.

Of the budget allocations for various states during the year 1983, Mizoram tops the list with a percentage utilization rate (PUR) of 98.8 per cent; Rajasthan coming second with PUR of 86.1 per cent.

National Science Exhibition

The Thirteenth National Science Exhibition for Children was organized jointly by the NCERT and the Government of Uttar Pradesh, at Lucknow, from 10 November to 16 November 1983.

One hundred and fifty-seven students and one hundred and thirty-six teachers from twenty-seven states and Union Territories, including thirty-six students/teachers from Lucknow, participated in the exhibition. One hundred and forty-one selected exhibits were displayed. In addition to the NCERT, Hindustan Aeronautics Ltd, Central Drug Research Institute and Industrial Toxicological Research Centre also displayed materials relating to their activities.

Another exhibition was organized at the same time in Delhi at Teen Murti Bhawan. It was inaugurated by the Prime Minister, Smt. Indira Gandhi. The theme of this exhibition was 'Ocean Development and Resources from the Ocean'. The following institutions/departments participated in this exhibition :

- (i) The NCERT.
- (ii) The Department of Ocean Development.
- (iii) The National Institute of Oceanography.

All India Science and Mathematics Education Projects

Under the All-India Mathematics Education Project a seminar-cum-interview was held for selecting teachers/teacher-educators for training in advanced methods of Mathematics Education under CAMET programme in the U.K. This was a newly designed selection procedure in which tests were administered to the participants and they were also required to speak on topics related to mathematics education. Besides, there was a final interview by the selection board. This selection exercise was conducted in the month of April 1983.

Another selection exercise for the All-India Science Education Project (AISEP) was organized from 23 to 30 May 1983 for selecting teachers/teacher-educators in Physics, Chemistry and Biology for advanced training in the teaching of science in the U.K. The selection exercise was aimed at selecting teachers with good academic standing, leadership qualities and high communication skill, so that they could act as good resource persons on their return from training. The selection exercise consisted of a first level interview in the state followed by a one-week seminar-cum-interview in the NCERT, New Delhi. The teachers were administered an achievement test. One of their lesson plans was discussed in a group and they were asked to present their ideas on a topic relating to science education. This was followed by an interview. Representatives from the British Council and Chelsea College also participated in the selection exercise. Outside experts were invited for the final interview. Twenty teachers/teacher-educators were selected under this programme.

Under the AISEP Programme two academic staff members from the NCERT and one science educator from SCERT, U.P., were deputed for a three-month study tour to acquaint themselves with the first-hand information about the AISEP training programme.

Indian Science Congress

An exhibition of some selected models from the National Science Exhibition for Children, 1983, held at Lucknow during November 1983, was organized for the first time at the 71st session of the Indian Science Congress Association held at the premises of Birla Institute of Technology (BIT), Ranchi from 3 to 7 January 1984.

Out of the six selected models invited for display at the exhibition, the following five working models were displayed :

<i>Name of the Exhibit</i>	<i>Name of the School</i>
1. Endless Energy Project	Shri Renuk High School Baradapur, Distt. Beed (Maharashtra)
2. Machine for the Production of Fibres from 'Hathibada' leaf	Bhuban High School, P.O. Bhuban, Distt. Dhenkanal (Orissa)
3. A Machine Generating Power and Operating Multipurpose Functions	Swaruppur High School, P.O. Swaruppur, Distt. Murshidabad (West Bengal)
4. Modern Multipurpose Hearth	STS High School, Telagubalu, P.O. Child Kanahatti Distt. Bellary (Karnataka)
5. Solar Car	Seth Samatramji Dugar Higher Secondary School, P.O. Saradarshahr Distt. Churu (Rajasthan)

The models displayed at the NCERT pavilion attracted large crowds. Most of the delegates evinced keen interest in the working of the various models which were explained to them by the students who had actually developed these models and were invited to participate in the exhibition.

Computer Awareness in Schools

The Government of India has embarked upon a scheme to develop computer awareness in schools. A National Committee has been constituted for the purpose and a National Seminar was organized at the NCERT to devise syllabus in Computer Education for schools.

National Science Centre

A proposal has been submitted to the Ministry of Education and Culture, Government of India, for setting up a Science Centre as a major development programme on the occasion of the Silver Jubilee Year of the NCERT, commencing on 1 September 1986. The Science Centre will be attached to the Department of Education in Science and Mathematics at the NIE Campus, New Delhi.

The objective of the Science Centre is to highlight the thrust of the Council's activities for qualitative improvement of school education in general and science education in particular in the country. Prof. D.S. Kothari has consented to preside over the meetings of the Advisory Committee constituted by the NCERT to finalize the details of the scheme.

WOMEN'S EDUCATION

The Council has been undertaking various research, developmental and training programmes for promoting universalization of girls' education, vocationalization of women's education, and enhancing the status of women through the school curriculum. Some of the major activities undertaken during the year under report were as follows :

Research

A study to identify sex-stereotypes in educational programmes and textbooks for the Asian and South-East Asian countries was conducted and completed. The research was confined to secondary sources on economy, society and culture of the countries. It was a UNESCO-sponsored study.

A study on the implications of point No. 16 of the Twenty Point Programme for Andhra Pradesh was undertaken and completed. The implications for universalization and vocationalization of education for women were considered and backward districts were identified and backwardness was quantified. It was an exercise in model building for the states and Union Territories.

The work on the study, entitled 'Status Study of Co-education in India' was completed.

The other research studies continued were :

Need-based, ecologically determined and change-oriented educational system for a nomadic community—ERIC project.

Identification of regional, local, need-based vocations for girls and women for vocationalization of education—ERIC project.

Determinants of under-achievement in Mathematics for girls including socially handicapped girls—ERIC project.

Development

The following developmental work was completed in this area during the year :

- (i) The report entitled 'Regional Guide for Identification and Elimination of Sex-stereotype in and from Educational Programmes and Textbooks' was developed for UNESCO.
- (ii) The approach paper for a seminar on Implications of Twenty Point Programme (Sixteen) for Andhra Pradesh was prepared.
- (iii) Numeracy lessons for adult women learners for Haryana were developed.
- (iv) The syllabus frame for the +2 level Sociology was revised.
- (v) A paper on Women's Education and Rural Development was developed and prepared for the IV Annual Conference on Education and Regional Disparities organized at Patna by the Society for the Study of Regional Disparities.
- (vi) The syllabus for Home Economics at the +2 level was finalized.
- (vii) Two film strips—(a) Understanding Numbers and (b) Concept of Prime Number—were completed.
- (viii) Norms for screening and evaluating textbooks in mother tongue and second language were developed.
- (ix) Evaluation Tools and Manual of Instructions for evaluators were tried out, vetted and finalized.

Development work on the following items is continuing :

- (i) A supplementary reader for appropriate socialization of girls (13-18 years).
- (ii) Two supplementary readers on Anti-dowry.
- (iii) Legal literacy (awareness) as a component of school curriculum.
- (iv) Preparation of teaching aids along with teacher's handbook at primary stage.
- (v) Women and the law.

Training and Extension

An orientation programme on Teachers' Handbook for the Status of Women through Curriculum was organized for key persons working at the elementary stage in Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and the Union Territory of Delhi.

Another orientation programme on Teachers' Handbook on the status of women through the Curriculum was organized for key persons working at secondary and senior secondary stages in Uttar Pradesh,

Madhya Pradesh, Haryana, and Rajasthan.

The NCERT provided resource persons for the training programmes of principals of women's colleges—a UGC project.

The NCERT provided consultancy to the following agencies :

To NIEPA on their project entitled 'Educational Component of Rural Development'—a UNESCO project.

To the Ministry of Education and Culture for the assessment of augmentation of girls and women's education in Tamil Nadu and Kerala.

To NIEPA for developing indicators for educational disparities.

To the Department of Science and Technology through their Committee on Science and Technology for Rural Women.

To SIERT, Udaipur, Rajasthan, with regard to evaluation of English textbook for Class VIII, from the view-point of status of women.

EVALUATION OF TEXTBOOKS FROM THE STANDPOINT OF NATIONAL INTEGRATION

The programme of evaluation of textbooks from the standpoint of national integration is being carried out since 1981. It has been decentralized and the States/UTs have taken it up. The NCERT is coordinating the programme and has also prepared guidelines for the evaluation of textbooks. Many states have completed the programme and have introduced the revised textbooks in schools. Efforts are being made to see that the states where the work is slow also expedite the programme. They have been requested to complete the work by the end of June 1984 and introduce the textbooks from the academic session 1984-85. Such states are Andhra Pradesh, Madhya Pradesh, Jammu and Kashmir, Kerala, Manipur and Sikkim. West Bengal which had not agreed to undertake the programme so far has also taken up the programme. Thus, all the states and UTs (except those which use the NCERT textbooks or the textbooks of neighbouring states) have agreed to undertake the programme of evaluation of textbooks.

7

Education and Work

VOCATIONALIZATION of education at the +2 level essentially aims at equipping the students with required skills and knowledge concerning various vocations so as to make them better employable for several jobs/services needed by the community. Such a serious task calls for a good and meaningful programme of vocational training which is possible through the provision of good curricula, competent teachers, suitable instructional materials, infrastructural facilities within the institutions, etc. Incidentally, the vocational programme in the states was launched under conditions of near-absence of the above inputs with the anticipation of providing them all in course of time. Under such circumstances it was but natural for the NCERT to plan its programmes/activities with the prime objective of filling this void. Accordingly, the major thrust of the activities during the year under report was on the development of instructional materials for vocational students and teachers and vocational curricula on the basis of identified minimum competencies.

VOCATIONALIZATION OF EDUCATION

Instructional Materials

Vocational courses at the +2 level were started without any suitable instructional/textual materials on the premise that students and teachers would be making use of already existing reference materials which were available in practically all major disciplines for the students of the general academic stream and degree courses of universities. The experience of the past six or seven years has shown utter unsuitability of such reference materials for vocational students due to various factors like difficult language, scant relevance to vocations, heavy cost, non-availability in average school library, etc. It was under such conditions that the NCERT initiated an ambitious and bold programme to develop self-explanatory instructional-cum-practical manuals, teachers' guides, supplementary readers and test items for vocational students in an easy-to-understand language with the help of experts having practical field experience and specialists from various organizations as well as practising vocational teachers. Workshops were organized to develop instructional materials in the vocational areas as given below :

In *Agriculture*, at the University of Agricultural Sciences, Bangalore, from 12 to 17 January and 21 to 23 January 1984 where six manuals on Fruit Culture, Fruit Production, Vegetative Propagation, Vegetable Crops, Floriculture and Plant Protection were developed for Horticulture Vocational Course.

In another workshop organized at the same venue from 18 to 22 January 1984, three manuals that had been developed earlier for Crop Production Course were reviewed and finalized for wider dissemination in printed forms.

In *Technology*, at TTTI, Chandigarh, from 1 to 8 December, 1983 where three manuals for Lineman Vocational Course for Grade XI were developed, which were later reviewed and edited in another workshop at the NIE, Delhi, from 30 January to 2 February 1984. A set of another three manuals for the same vocation for Grade XII was developed in a workshop held at AVTI/ITI, Faridabad, from 24 February to 2 March 1984. These were reviewed and edited in a subsequent workshop held at the NIE, New Delhi, from 9 to 12 March 1984.

Three laboratory manuals for Electrical Domestic Appliances and Rewinding Course were developed at the NIE, New Delhi, from 6 to 13 January 1984.

In *Para-medical*, at Kasturba Gandhi Medical College, Manipal, from 2 to 11 February 1984 where a manual for Medical Laboratory Techni-

cian Course was developed. The manual was reviewed in a subsequent workshop at the NIE, New Delhi, from 19 to 25 March 1984.

The long-felt need for a supplementary reader for Multipurpose Health Worker Course was fulfilled by developing the reader in a workshop conducted from 27 March to 3rd April 1984 at the NIE, New Delhi.

In *Commerce*, at Banaras Hindu University, Varanasi from 26 to 31 March 1984 where a guidebook for conducting practicals in Office Practice Course was developed.

Minimum Competency-based Vocational Curricula

Besides providing a suitable plan of study and practice, a good vocational curriculum must take cognizance of job opportunities available in the vocation, describe the jobs and analyse them for the knowledge and skills required and personality traits. The curriculum should also provide comprehensive information about the vocation including marking scheme, references, necessary equipment, etc. The present vocational curricula hardly meet these requirements, hence a good deal of ambiguity prevails among teachers as well as students regarding the scope of vocational training. In order to fill this void and provide the states with model vocational curricula the NCERT conducted the following workshops with the help of knowledgeable persons from various vocational fields.

- (i) At Vallabh Vidyanagar, from 16 to 20 April 1983 for eight vocational courses—two each in Agriculture, Commerce, Technology and Home Science.
- (ii) At the NIE, New Delhi, from 20 to 24 June 1983 for two commerce-based vocational courses, viz., Banking, and Marketing and Salesmanship.
- (iii) At NDRI, Karnal, from 12 to 16 December 1983 for Dairying and Animal Husbandry course.
- (iv) At TTTI, Bhopal, from 20 to 24 December 1983 for two commerce and two technology-based courses, viz., Insurance, Purchasing and Storekeeping, Computer Techniques and Air-conditioning and Refrigeration.
- (v) At the Institute of Engineering and Rural Technology, Allahabad, from 27 to 31 March 1984 for Auto Engineering Technician and Electrical Domestic Appliances and Rewinding courses.
- (vi) At the Central Institute of Fisheries Education, Bombay, from 19 to 24 March 1984 for Inland Fisheries and Fish Processing Technology courses.

In response to an urgent request from the Government of Haryana, the NCERT conducted a workshop at the NIE, New Delhi, from 9 to 12 September 1983 where 20 vocational syllabi were developed and revised for immediate introduction in the state.

The syllabus of General Foundation Course was developed in a workshop conducted at the NIE, New Delhi on 22 November 1983 for the students of the vocational stream recommended for introduction throughout the country.

An orientation workshop was conducted at the Regional College of Education, Mysore, from 28 to 30 November 1983 to work out the plan of action for those states which are preparing to launch a vocational programme in the near future.

Short-term Teacher Training

With a view to update the vocational expertise and competencies of teachers and to acquaint them with the philosophy of the scheme of vocationalization of education, so that they deliver the goods envisaged through vocational training at the + 2 level, the NCERT organizes short-term teacher training programmes in various vocational areas in appropriate institutions of specialized learning by utilizing the best available resource persons. In these training programmes the vocational teachers are exposed to actual field conditions of their vocations, and they are familiarized with the scope of vocations and are also introduced to proper methods of teaching vocational subjects.

During the year under report the NCERT organized a short-term teacher training programme for teachers of Fresh-water Fish Culture and Fish Processing Technology Vocational Courses in the states of Maharashtra and West Bengal. The training was conducted from 24 May to 20 June 1983 at the Central Institute of Fisheries Education, Bombay. The trainees worked in fish farms, hatcheries, processing plants and laboratories. They were also taken aboard m/v Saraswati to participate in operations concerning deep-sea fishing.

Orientation Programmes

At the request of the state governments, the NCERT periodically conducts orientation programmes for key persons in the states. In these programmes the participants are helped to properly understand and interpret the nationally accepted policy on vocationalization of higher secondary education. Orientation programmes for the following groups were organized by the NCERT during the period under report and the participants included officers from the states already running vocational courses as well as from the states which are planning to

launch vocational programmes at the + 2 stage in the near future :

- (i) For the key-person of Haryana at ITI, Gurgaon, from 23 to 25 September 1983.
- (ii) For the principals of schools/junior colleges of Andhra Pradesh at the Board of Intermediate Education, A.P., Hyderabad, from 27 to 30 September 1983.
- (iii) For the key-persons of Orissa at the RCE, Bhubaneswar, from 22 to 25 October 1983.
- (iv) For the key-persons of Gujarat at V.S. Community Science Centre, Ahmedabad, from 13 to 17 December 1983.

Consultancy Work and Coordination with Other Agencies

The NCERT regularly extends its expertise and cooperation to the various state organizations by conducting different programmes at their request for the promotion of vocational education in schools at the + 2 level. Participation by the NCERT in programmes conducted by organizations like UNESCO, UNICEF, Punjab Education Reform Commission, SIEs, State Boards of Education, NIEPA, etc., will go a long way in promoting and popularizing vocational education. Expert service was made available to Bhutan, under a UNICEF programme, for the development of science kits and workshops.

SOCIALLY USEFUL PRODUCTIVE WORK (SUPW)

In order to take stock of the situation concerning SUPW in the states the NCERT organized a National Seminar on SUPW at the NIE from 11 to 13 April 1983 where the participants from different states reviewed the situation and made concrete suggestions for improving the teaching of SUPW in schools. The NCERT organized for the key-persons two orientation programmes in SUPW—

- (i) for Madhya Pradesh at the College of Education, Ujjain, from 22 to 26 August 1983 where the participants were introduced to several SUPW activities. Modalities were evolved to bring into the fold of SUPW some of the work-oriented programmes in the state such as 'Earn while you Learn', craft education and work experience.
- (ii) for the southern region at Ernakulam from 27 to 31 January 1984 where the main emphasis was given on identification of area-specific and need-based activities that could be effectively introduced in the schools in total conformity with the concept and philosophy of SUPW.

At the request of the Government of Punjab, the NCERT organized a workshop for Curriculum Development of SUPW at the SIE, Chand-

garh, from 7 to 10 December 1983 where a detailed SUPW curriculum was developed containing *inter alia*, the plan of implementation of SUPW in schools.

Consultancy and Collaboration with Other Agencies

The NCERT expertise and cooperation was made available to organizations and agencies like UNESCO, SIEs, SCERTs, NIEPA and others working for the promotion of SUPW as an integral part of general school education. The NCERT deputed its participants for the UNESCO sponsored study visits to Thailand, Japan and South Korea to study the component of work education in the school curricula of these countries.

The NCERT also sent its expert on a high-level delegation to study the vocational and technical education system in the USSR under the bilateral cultural exchange programme.

The NCERT undertook an indepth study of Work Experience/SUPW programmes in India and brought out three volumes dealing with review of policies and implementation, a directory of projects and a directory of institutions working in this area. The project was sponsored by the UNESCO Regional Office of Education for Asia and Pacific, Bangkok, as an activity under APEID.

8

Training of Teachers and Other Personnel

THE changes in the school curriculum and the effective transaction of the same envisage *inter alia*, corresponding programme in the area of teacher education—both pre-service and in-service. The developments in teacher education have not only to keep pace with the programmes of curriculum development at the school level, but they have also to precede the process of actual implementation of these programmes. The quality of teacher education programmes largely depends upon the quality of teacher-educators and other educational personnel associated with the training of teachers. In addition, suitable instructional materials and adequate research support are of vital importance in this field. The NCERT directs its efforts towards these objectives through a comprehensive programme of research,

development and training in the field of teacher education.

The work of Centres of Continuing Education, started a few years back, has been continuing. In addition, a special programme of Integrated Education of the Disabled (IED) has also been taken up. The Department of Teacher Education in the NCERT also serves as the academic and administrative secretariat of the National Council for Teacher Education (NCTE).

The specific programmes in respect of the various operational areas of work are described below.

Developmental Programmes

Development of Textbooks/Handbooks in Teacher Education

The following activities were undertaken :

A textbook on Health and Physical Education, Recreation and Games. Two workshops of authors were organized at the NIE, New Delhi, from 26 to 30 September, 1983 and from 12 to 16 March 1984. Sixteen participants from various institutions attended each of the two workshops. A comprehensive course line was developed and the book has been finalized for publication.

Teaching of Science in Elementary Schools. The manuscript of the book has been prepared and it is being edited.

Core Teaching Skills—Microteaching Approach. In pursuance of the NCTE curriculum Framework, the NCERT has prepared a handbook entitled 'Core Teaching Skills—Microteaching Approach'. A preparatory workshop involving 14 teacher-educators was organized at the NCERT Campus, New Delhi, from 9 to 12, August 1983 for the evaluation of the book. Each teacher evaluated each chapter of the book using the User Assessment Schedule. The guidelines for reviewing the book by student-teachers were also prepared and given to each of the teacher-educators for obtaining the feedback from student-teachers.

Syllabus of M. Ed. Paper on Teacher Education

A six-day workshop was organized at South Gujarat University, Surat, from 3 to 8 October 1983, to develop the syllabus of M.Ed paper on teacher education. The workshop also prepared a plan for the development of a resource book on teacher education based on this syllabus for the use of M.Ed. students.

Development of a Question Bank

The NCERT has initiated work on the development of a question bank based on the new B. Ed. syllabus under the NCTE Curriculum Frame-

work. A workshop on question bank related to the paper 'Teacher and Education in the Emerging Indian Society' was held from 25 to 29 October 1983, at the Regional College of Education, Mysore.

Extension

Revision of B. Ed. Syllabus

Since the revision of B. Ed. curriculum in the light of the NCTE Curriculum Framework was a priority task, the Council organized during the year under report a series of workshops on this subject as mentioned below :

- (i) At Meerut, College, Meerut from 7 to 11 November 1983, for the revision of B. Ed. syllabi of the universities of Agra and Meerut. More than thirty teacher-educators participated in the workshop.
- (ii) At Hawabagh Women's Training College, Jabalpur, from 17 to 21 January 1984 to revise the B. Ed. syllabus of the Jabalpur, Raipur, Billaspur and Rewa universities. Twenty-nine teacher-educators participated in the workshop.
- (iii) At Sagar University from 13 to 17 February 1984 to revise the B. Ed. syllabus of Indore, Bhopal, Gwalior and Ujjain universities in the state of Madhya Pradesh. Twenty-three teacher-educators attended the workshop.
- (iv) At Madurai from 13 to 17 February 1984 to revise the B. Ed. syllabus of the universities in Tamil Nadu. The Principals and the senior teacher-educators of the colleges of education in Tamil Nadu attended the workshop.
- (v) At M.D. University, Rohtak, from 27 to 31 March 1984 to revise the B. Ed. syllabus.
- (vi) At Garhwal University, Srinagar, U.P. from 9 to 13 May 1983 to revise the B. Ed. syllabus of Kumaon and Garhwal Universities.

Annual Conference of the Directors of SIEs/SCERTs

One of the regular extension activities in the area of teacher education has been to provide a forum for the Directors of the SIEs/SCERTs to discuss the activities undertaken and the problems faced by them. The NCERT organizes every year a conference of the Directors of the SIEs/SCERTs. This year the conference was organized from 21 to 23 February 1984 at the SIERT, Udaipur. It was attended by sixteen representatives of the SIEs/SCERTs. The conference discussed the future plans and reviewed the progress of their institutes.

Seminar Readings Programme for Teacher-educators

This is a regular annual programme of the Council. Its objectives

are to promote innovative programmes and to stimulate teacher-educators to write about the experiences gained by them through experimentation, study and creative thinking about education problems in the field of teacher education. The programme also provides the means through which the results of experimentation, research and creative thinking by teacher-educators are disseminated and presented to the teacher-educators in the country. Papers for the Tenth All-India Competition were invited from the principals, the teacher-educators and the coordinators of the secondary and elementary teacher training institutes. The papers received were got evaluated by two separate panels each of three examiners. Ten papers at the secondary level and seven papers at the elementary level were selected for the awards and merit certificates.

Orientation Programmes

The NCERT organized the following orientation courses for teacher-educators, both at the elementary and the secondary levels to help them teach effectively the various theory papers under the revised curriculum scheme :

- (i) At Waltair, for six days in April 1983 for teacher-educators of Andhra Pradesh to orient them about the core paper on 'Teacher and Education in the Emerging Indian Society'.
- (ii) At Pune, for six days in August 1983, for the teacher-educators from the Junior Colleges of Education, Maharashtra.
- (iii) At Trivandrum, from 9 to 23 January 1984 for the participants from the southern states.
- (iv) At Gandhi Gram, from 6 to 11 February 1984. The state-level resource persons were oriented in teaching of SUPW.
- (v) At Banaras Hindu University, Varanasi, from 5 to 10 March 1984. It was attended by seventeen participants.
- (vi) At Allahabad from 30 May to 4 June 1983 to orient L.T. Teacher-educators of U.P.

Training Programmes

Training-cum-research strategy has been found effective in stabilizing microteaching programme at the secondary teacher education level. This strategy is now being applied at the elementary teacher education level. A training-cum-research project has been designed to validate the effectiveness of overall microteaching procedure and also to study the effectiveness of variations in its components with regard to the development of general teaching competence of pupil-teachers. The

first workshop on 'Planning and Designing Sub-studies' was organized at the NCERT Campus from 16 to 21 August 1983. Twenty-eight participants from 20 elementary teacher education institutions representing 10 States and the Union Territory of Delhi attended the workshop. The main objectives of the workshop were, firstly, to identify and refine the five teaching skills specific to the elementary stage and their behavioural components and, secondly, to explain and discuss the Master Project design and to help teacher-educators to plan and design specific sub-studies which they would conduct in their respective institutions. The participants conducted the experiment in their respective institutions. The second workshop was held at the SIE, Bangalore, from 21 to 24 March 1984, to help the teacher-educators in the analysis of data, interpretation of results and writing of the project reports.

Teaching Models

A training workshop on teaching models for secondary teacher-educators was organized at the NIE Campus, New Delhi, from 27 September to 1 October 1983. The main purpose of the workshop was to orient the teacher-educators for a try-out of three teaching models—Inquiry Training Model, Expository Teaching Model, Mastery Learning Model. A comprehensive training package consisting of study guide sheets, worksheets and selfcheck sheets, was supplied to each participant. The material prepared in the Department of Teacher Education was reviewed in a Working Group of six teacher-educators, which met in New Delhi from 3 to 6 August 1983.

A training programme in research methodology was organized at the SIE, Allahabad, from 26 to 31 December 1983. Thirty-four participants attended the training programme.

Publications

The following publications have been brought out :

- (i) Teacher and Education in the Emerging Indian Society (secondary level).
- (ii) The Third National Survey of Secondary Teacher Education in India.
- (iii) Thoughts and Experiments in Secondary Teacher Education 1982-83 (mimeographed).

The following publications are in press:

- (i) Innovative Practices in Secondary Teacher Education in India, Vol. IV.
- (ii) Curriculum and Evaluation (secondary level).
- (iii) Educational Psychology.

- (iv) Content-cum-Methodology of Teaching of Mathematics for Secondary Teacher Training Institutions.
- (v) Content-cum-Methodology of Teaching of Mathematics for Elementary Teacher Training Institutions.
- (vi) Samanya Adhyayan Kaushal.
- (vii) Psychology of the Elementary Teacher (textbook for Elementary Teacher Education level).

The following manuscripts are being finalized for printing :

- (i) Teaching of Science in Elementary Schools.
- (ii) Innovative Practices in Secondary Teacher Education, Vol. V.
- (iii) Studies and Investigations on Teacher Education in India.
- (iv) Textbook in Health, Physical Education, Recreation and Games for Secondary Teachers.
- (v) Teacher and Education in the Emerging Indian Society (elementary level).

National Council for Teacher Education (NCTE)

The following are the Academic Standing Committees of the NCTE :

1. Steering Committee.
2. Committee on Pre-School and Elementary Teacher Education.
3. Committee on Secondary and College Teacher Education.
4. Committee for the Training of Teachers for Special Schools for the Physically Handicapped and Mentally Retarded.

While the committees meet more often to discuss matters within their specialization, the NCTE meets once a year to consider the recommendations of the committees and to give broad guidelines and recommendations on matters of policy. Workshops, seminars, orientation programmes, meetings of the working groups or sub-committees of the above committees are held in pursuance of the broad policy guidelines formulated by the NCTE. During the year under report the following meetings/seminars/workshops/orientation-cum-training programmes were conducted under the auspices of the NCTE :

<i>Name of the Programme</i>	<i>Dates</i>	<i>Number of participants</i>
1. Orientation Programme for Key Persons in SUPW held at Silchar	25 to 31 May 1983	27
2. Value-oriented Teacher Education Expert Committee Meeting of the NCTE Committee on Secondary Education, NIE Campus, New Delhi	27 to 29 July 1983	9
3. Training Course for Resource Persons in Teacher Education in the Emerging Indian Society, at the SIE, Pune	3 to 8 August 1983	49

4. Working Group Meeting for the Preparation of Norms for Teacher Training Institutes for Blind, at NIE Campus, New Delhi	12 to 15 September 1983	17
5. Seventh Meeting of the Secondary and College Teacher Education Committee of NCTE, NIE Campus, New Delhi	20 September 1983	14
6. Meeting of the Sub-Committee of the Secondary and College Teacher Education Committee of the NCTE to discuss Modalities for organizing National Seminar on Implementation of NCTE Curriculum-problems and Prospects held at the NIE Campus, New Delhi	19 December 1983	10
7. Meeting of the three-Member Sub-Committee constituted to classify the Recommendations in terms of the Agencies which are expected to take action on them and to work out Operational Details of Implementation of those Recommendations and to formulate the Syllabus for Introduction of Futurology as a part of an Optional Course like Educational Planning and Management at the M.Ed. level, held at the NIE Campus, New Delhi	20 December 1983	6
8. Fifth Meeting of the Academic Standing Committee for Training of Teachers for Special Schools (for physically handicapped—deaf, dumb/blind and mentally retarded), held at the NIE Campus, New Delhi	21 December 1983	6
9. Seventh Meeting of the Pre-School and Elementary Teacher Education Committee of the NCTE, held at Bangalore	17 and 19 January 1984	10
10. General Body Meeting of the NCTE held at the NIE Campus, New Delhi	31 December 1983	46

The decisions of the NCTE Committee and reports of the programmes are circulated among different agencies, such as the Planning Commission, UGC, NCERT, Universities, Education Departments in States/ Union Territories, SCERTs/SIEs, RCEs, Field Advisers (NCERT) and State Boards of Teacher Education for guidance and implementation.

Centres for Continuing Education

The aim of the Centres for Continuing Education is to orient secondary school teachers and primary school teacher-educators. Seventy-seven Centres are functioning at present in different states and Union Territories of the country. The grants to the Centres are shared by the

Centre and the states on 50-50 basis. More centres are proposed to be opened in different states and Union Territories all over the country. The Government of Uttar Pradesh had sent to NCERT a list of 12 centres to be opened in the state.

Integrated Education of the Disabled

The NCERT is required to play a vital role in the development of Integrated Education of the Disabled. In order to respond to this need and as a follow-up of the recommendations of the Standing Committee of NCTE on Special Education, the NCERT organized several programmes in this area. These programmes are detailed below :

Finalization of the Syllabus for the Training of Key Persons in Integrated Education for the Disabled

The syllabus for the six-month training course for key persons in Integrated education of the disabled was developed in April 1983. The syllabus is spread over two terms of three months each. The first term covers the core training programme comprising introductory courses on visual handicap, mental retardation, orthopaedic handicap and hearing impairment. The courses on the psychology of the disabled, curriculum and teaching, and planning and management of IED programme are also covered. The second term covers specialization in one of the four areas of disability through internship programme.

Development of Syllabus for Training of Teachers of Visually Handicapped

The Standing Committee of NCTE appointed a working group to develop syllabus for one-year course for the training of teachers on visual handicap. The syllabus was developed in a meeting of the working group from 18 to 25 September 1983 and was placed before the Standing Committee on preparation of Teachers for Special Education. The syllabus has now been circulated to institutions preparing special teachers for educating the visually handicapped.

Development of Norms for Institutions Training Teachers for Visual Handicap

In order to implement the syllabus prepared by the working group for the training of teachers of the visually handicapped, norms for teacher training institutions were also developed. These norms are to be presented to the NCTE Standing Committee on Special Education for finalization.

Development of Syllabus for B.Ed. Special Education

The NCERT prepared the draft syllabus for B.Ed. Special Education.

It was finalized in the National Workshop organized at Allahabad from 27 to 30 December 1983. This course will be made available to the Regional Colleges of Education and other university departments for planning their own courses in B.Ed. Special Education. The UGC has already allowed some of the universities to develop departments of Special Education. This course will cater to the needs of the special departments.

National Workshop on Integrated Education for the Visually Handicapped

A UNESCO-sponsored workshop on Integrated Education of the Visually Handicapped was organized from 5 to 16 March 1984 at the NIE Campus, New Delhi. It was attended by 30 participants, mostly teachers and teacher-educators working in different institutions for the blind.

Workshop on Behaviour Modification

The NCERT organized Behaviour Modification Workshop on Neuro-muscular and Orthopaedic Handicap for three days from 19 to 21 July 1983. It was attended by 30 participants including the trainees in the course on Integrated Education of the Disabled, the NCERT staff and also the staff from the Spastic Society of India (northern region). Mr. Malcom Jones, Psychologist, Beach Tree House in Britain, was the resource person.

Exhibition of Books on Special Education

The NCERT organized on 19 and 20 September 1983 a two-day exhibition of books on Special Education with a view to developing consciousness in the trainees and staff of the special education institutions. The agencies of the book trade participated in the exhibition. Books on Special Education from the NIE Library, the British Council and UNESCO were also displayed.

Training Course for Key-Persons in Integrated Education of the Disabled

The NCERT conducted a 12-week course for key-persons in the integrated education of the disabled commenced on 30 May 1983. Twenty participants from the NCERT, the University Departments of Education, the SCERTs/SIEs, and the Spastic Society of Northern India successfully completed the course. The trainees acquired working knowledge and competence in the four areas of disabilities—visual handicap, speech and hearing disorders, orthopaedic handicap and mental retardation. However, each participant specialised in one area of disability. The course had practical bias as 50 per cent of the time

was devoted to working with handicapped children in different institutions including those following integrated education settings at Delhi.

Survey of Research in Special Education in India

An ERIC project on the survey of research in special education has been started. The survey purports to collect abstracts of individual as well as institutional projects conducted up to 1984. It is proposed to review the research area-wise and give abstracts of researches.

Clearing House Activities

The NCERT has started a quarterly bulletin on Integrated Education of the Disabled, which will serve as a clearing house function. The first issue was released in September 1983. The second and third issues were brought out in December 1983 and March 1984 respectively. The bulletin provides for exchange of information regarding education of the disabled in the NCERT and its constituent colleges as well as in the states.

Regional College of Education, Ajmer

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

Enrolment

This year the College enrolled 367 students for the regular B.Ed., M.Ed. and First year B.Sc. (Hons/Pass) B.Ed. courses in the following streams :

M.Ed.	17
B.Ed. (Science)	55
B.Ed. (Agriculture)	25
B.Ed. (Commerce)	26
B.Ed. (English)	27
B.Ed. (Hindi)	38
B.Ed. (Urdu)	29
First year B.Sc.	57
Second Year B.Sc. (Hons/P) B.Ed.	65
Third Year B.Sc. (Hons/P) B.Ed.	28
Total :	<u>367</u>

The enrolment in B.Ed. Summer School-cum-Correspondence Course was 136.

Results

One hundred and fifty-six untrained teachers of the northern region

appeared in 1983 at the B.Ed. Summer School-cum-Correspondence Course examination.

Extension Services Department

The Extension Services Department of the College organizes programmes suggested by the states in the northern region and proposed by the faculty of the College on the basis of the needs of the states. The following programmes were undertaken during the period under report.

- (i) A Workshop on Lesson-writing (Phase I) for correspondence Part of SSCC at Ajmer from 7 to 14 January 1984.
- (ii) A Seminar-cum-Workshop on Institutional Planning at Ajmer from 21 to 24 February 1984.
- (iii) A Workshop on Science Club Sponsored Activities at Ajmer from 5 to 10 March 1984.
- (iv) A Workshop on Lesson-writing (Phase II) for correspondence Part of B.Ed. SSCC at Lucknow from 21 to 26 March 1984.
- (v) A Workshop on Preparation of Teachers Guide on SUPW (Fruit Preservation) at Lucknow from 29 March to 7 April 1984.

CAPE Project

Most of the states associated with this project have been busy during this year in processing the self-learning material in the form of learning package modules and capsules developed by the pupil-teachers and getting the processed material printed. The members of the CAPE team of this college went from time to time to the states of the northern region, more specifically to Uttar Pradesh, Rajasthan and Himachal Pradesh, to assist and supervise the processing of the developed CAPE material. In Rajasthan, 13 modules comprising 89 capsules had been processed and were at the printing stage. In U.P., 13 modules comprising 77 capsules were under print after due processing.

The team members also acted as resource persons in various workshops of the SIE, Uttar Pradesh, and the SIERT, Rajasthan, conducted for preparing the CAPE material for semi-literate children.

Value-oriented Education

The RCE has been stressing the need for development of values during teacher training programme and has taken up this programme in a practical manner through the preparation of charts and the organization of special lectures, and consciousness for value education is being developed among students of the College. In B.Ed. classes, the

students were acquainted with the utility of imbibing values in personal life. Besides, a scheme for extension lectures on value-oriented education has been drawn up. Under this scheme, a lecture was arranged on 'Relevance of Eithical Values in Modern Times' on 11 October 1983.

The manuscript of a publication entitled 'Values in Education' is being prepared for wider use. The College is also contacting All India Radio for the dissemination of the programme through radio talks.

Department of Agriculture

Apart from the regular teaching programmes, the Department organized the following research/developmental activities:

- (i) Demonstration and research trials on fodder were conducted on the instructional farm of the College for the benefit of students and the farmers of the community. Noteworthy amongst them was the cultivation of oats during the winter season because green fodder proved to be quite successful for this area of the arid zone.
- (ii) Research trials on mustard varieties were conducted at the instructional farm of the College for the benefit of students and the farmers of the community.
- (iii) An orchard was developed on the instructional farm to meet the instructional requirement of the fourth year science students.
- (iv) A central horticultural nursery on the College campus was developed for disseminating the concept of SUPW activities in the area of pot culture and ornamental gardening/kitchen gardening.
- (v) An intensive programme of the beautification of the campus was conducted through developing new lawns and flora and modifying the lay-out of the gardens.

The staff of the Department of Agriculture also cooperated with the local Krishi Gyan Kendra which is a part of the Agriculture University, Udaipur, in organizing an exhibition for the benefit of farmers.

Department of Science

Apart from the regular teaching programmes, the Department of Science organized a Seminar and Exhibition on Environmental Education on the World Environment Day on 7 June 1983.

Summer School-cum-Correspondence Course

In the session 1983-84, 136 student-teachers joined the course. The course started in the month of June due to delay in the conduct of

regular university examinations.

Three weeks' continuous internship programme is arranged at various selected centres. The College supervisors examine and evaluate 42 lessons of student-teachers. This year the internship programme was organized from 18 August to 7 September 1983 at Delhi, Ajmer, Chandigarh, Allahabad, Mathura/Raya and Rohtak.

Regional College of Education, Bhopal

The Regional College of Education, Bhopal, caters to the teacher training needs of the states of Madhya Pradesh, Maharashtra and Gujarat and the Union Territories of Goa, Daman and Diu and Dadra and Nagar Haveli. It also organizes various programmes for meeting the requirements of these states.

The College continues to run the following courses :

- | | |
|-----------------|--|
| 1. M.Ed. | With specialization in Science Education, Teacher Education, Educational Administration and Guidance |
| 2. M.Ed. | Elementary Education |
| 3. B.Sc., B.Ed. | Four-year integrated course |
| 4. B.A., B.Ed. | Four-year integrated course with English as a special subject |
| 5. B.Ed. | One-year course in Language, Science and Commerce |
| 6. B.Ed. | One-year course in Elementary Education |
| 7. B.Ed. | Summer School-cum-Correspondence Course |

Enrolment

A total number of 586 students were on the rolls of the College during the session 1983-84. The class-wise and state-wise break-up is given in the Statement I.

Finding that the position of enrolment of students from Gujarat, Maharashtra, Goa, Daman and Diu and Dadra and Nagar Haveli was unsatisfactory, the College made special efforts for enrolment from these states and Union Territories. Application forms for admission were also made available at the State Institute of Education, Maharashtra, Pune, and also at the Field Adviser's office, Pune and at the Vocational Guidance Bureau, Ahmedabad, as additional facility for students seeking enrolment from these states.

The position of state-wise enrolment and results for the session ending 30 April 1983 is given in Statement II.

STATEMENT I
Enrolment in the Various Courses of Study at the Regional College of Education,
Bhopal, during the Session 1983-84

Name of the Course	Madhya Pradesh				T	Maharashtra				T	Gujarat				T	Goa, Dadra Nagar Haveli				T	Other States and Countries				T	Grand Total
	W		G			W		G			W		G			W		G			M		F			
	M	F	M	F		M	F	M	F		M	F	M	F		M	F	M	F		M	F	M	F		
M. Ed.	—	—	2	9	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11		
M.Ed. (Ele.)	—	—	1	3	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4		
B.Sc. B. Ed. I Yr.	—	2	18	53	73	2	—	3	—	5	—	—	1	—	1	—	—	—	—	—	—	—	—	79		
B.Sc. B.Ed. II Yr.	3	—	19	40	62	—	—	1	1	2	—	—	—	—	—	—	—	—	—	—	—	—	1	1	65	
B.Sc. B.Ed. III Yr.	—	—	14	33	47	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	48	
B.A. B.Ed. I Yr.	3	3	—	19	25	—	—	2	2	4	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2	31
B.A. B.Ed. II Yr.	1	—	5	20	26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	—	6	32
B.A. B.Ed. III Yr.	1	2	6	14	23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23	
B.Ed. (Science)	—	—	5	11	16	4	1	6	3	14	—	—	1	—	1	—	—	2	—	2	—	—	—	—	33	
B.Ed. (Com.)	—	—	8	3	11	9	—	20	—	29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	40	
B.Ed. (Ele.)	—	2	—	12	14	9	—	6	1	16	—	—	2	1	3	—	—	—	—	—	—	—	—	—	33	
B.Ed. (SSCE)	2	—	40	3	45	8	—	42	3	53	3	—	40	5	48	—	—	27	14	41	—	—	—	—	187	
Total :	10	9	118	220	357	32	1	81	10	134	3	—	44	6	53	—	—	29	14	43	—	—	7	2	9	586

Abbreviations used: W—Weaker Section

G—General Section

M—Male

F—Female

T—Total

STATEMENT II

The Result for the Year 1983 (of the students enrolled during the session 1982-83)

Name of the Course	Madhya Pradesh		Maharashtra		Gujarat		Goa		Other States/ Countries	Total		Grand Total	No. of Students who appear- ed	No. of Students who pass- ed the exam.
	G	W	G	W	G	W	G	W		G	W			
M.Ed.	10	—	—	—	—	—	—	—	—	10	—	10	10	7
M.Ed. (Ele.)	5	—	—	—	—	—	—	—	—	5	—	5	3	3
B.Sc. B.Ed. I Yr.	64	4	2	—	—	—	—	—	1	67	4	71	66	54
B.Sc. B.Ed. II Yr.	49	1	1	—	—	—	—	—	—	50	1	51	50	36
B.A. B.Ed. I Yr.	26	1	—	—	—	—	—	—	6	32	1	33	32	26
B.A. B.Ed. II Yr.	21	3	—	—	—	—	—	—	—	21	3	24	23	21
B.Ed. (Lang.)	27	3	11	7	6	—	—	—	—	44	10	54	53	48
B.Ed. (Science)	19	2	11	4	7	—	1	—	—	38	6	44	39	37
B.Ed. (Commerce)	15	3	11	4	2	1	2	—	—	30	8	38	38	38
B.Ed. (Ele.)	12	2	3	15	4	8	—	—	—	19	25	44	42	41
B.Ed. (S.S.C.C.E.)	52	22	62	6	53	11	30	9	—	197	48	245	245	224
Total	300	41	101	36	72	20	33	9	7	513	106	619	601	535

Abbreviations used : G—General Section

W—Weaker Section

Extension Programmes

The College organized the following in-service programmes during the year under report.

<i>Sl. No.</i>	<i>Title</i>	<i>Duration</i>	<i>Venue</i>	<i>No. of participants</i>	
				<i>Invited</i>	<i>Attended</i>
1.	Training Workshop in the Utilization of Audio-visual Aids and Production of Graphics for M.P. School Teachers	8 to 13 Aug. 1983	Bhopal	31	27
2.	Seminar-cum-Workshop for the Method Masters of Secondary Colleges of Education (for Higher Secondary level in Chemistry)	25 to 30 Aug. 1983	Bhopal	27	16
3.	Workshop on Revision of Paper I of the NCTE Syllabi	5 to 10 Sept. 1983	Vallabh Vidya Nagar	35	12
4.	Orientation of Career Masters of the BTIs of Madhya Pradesh in Educational and Personal Guidance at Elementary Level	12 to 17 Sept. 1983	Bhopal	30	17
5.	Seminar-cum-Workshop for Method Masters of Secondary Colleges of Maharashtra in Science at +2 level	19 to 24 Sept. 1983	Nagpur	30	14
6.	Training Programme for the Coordinators of Extension Services Departments of the Region	21 Oct. to 1 Nov. 1983	Bhopal	44	25
7.	Orientation Programme for the Elementary Teacher Educators in Agriculture	7 to 11 Nov. 1983	Bhopal	35	18
8.	Orientation Programme for the Tribal School Teachers of Madhya Pradesh in Accelerated Teaching	19 to 26 Nov. 1983	Bhopal	30	19
9.	Orientation Programme in Educational Technology for the Elementary Teacher Educators of Maharashtra, Gujarat and Goa	25 to 30 Nov. 1983	Panjim	35	23
10.	Workshop for the Production of Self-learning Cards	13 to 17 Dec. 1983	Amarkantak	30	23
11.	Conference of Teachers and Teacher-educators for the Evaluation of In-service Programme on Activity Methods	5 to 10 Jan. 1984	Bhopal	35	25
12.	Workshop on the Identification of Teaching Skills and State-	10 to 14 Jan. 1984	Bhopal	30	23

	gies for Using Environmental Approach in Teaching				
13.	Orientation of Secondary Teacher-educators in Piagetian Psychology	27 Feb to 3 March 1984	Bhopal	45	21
14.	Orientation-cum-Training Programme for the Resource Persons on Teaching the Handicapped	5 to 28 March 1984	Bhopal	46	11

The State-wise break-up of the in-service programmes organized during the year under report is as under :

Sl. States No.	No. of Programmes	No. of Persons	
		invited	attended
1. Madhya Pradesh	5	151	109
2. Maharashtra	1	30	14
3. Gujarat, Maharashtra and Goa	1	35	18
4. Regional	7	269	128
Total :	14	485	269

Research Projects

The progress of the various projects undertaken by the College is as under :

- (i) A Research Study for Identification of Teaching Skills and Training Strategy for Implementing Environmental Approach at Primary Level. (Principal Investigator : Dr. J.S. Raiput)

Under this project a comprehensive instructional package in Hindi for teaching Environmental Studies I and II to Classes III, IV and V of the schools of Madhya Pradesh has been developed and printed. The material largely contains a detailed unit-wise teachers' guide along with evaluation questions. Two parallel forms of environmental awareness tests have been developed and standardized and are being used for testing the efficacy of the instructional material. An inventory of some teaching skills useful in employing environmental approach along with the components of each has been prepared. The work of linking these skills with the specific units is being done.

- (ii) A Study of Life in Fresh Water leading to the Preparation of a Handbook for the Biology Teachers. (Principal Investigator : Dr. G.K. Lehri)

Monthly water samples were collected from Upper Lake, Lower Lake and Chunna Bhatti Lake during the year 1983-84. The collected water samples from these three lakes were analysed in relation to temperature, phosphate, nitrite, nitrate, dissolved oxygen biochemical, oxygen demand and pH. level. The water samples were further analysed for various Zooplankton and Phytoplankton during this period. Fresh

water fishes of upper and lower lakes were collected, identified and arranged systematically for further investigation.

- (iii) Development of Tools and Techniques to find out Equivalence between the Achievement of Students in Non-formal Centre and Formal Schools. (Principal Investigator : Dr. J.S. Rajput)

The project has been completed and the material produced is under print.

- (iv) A Study of Flora of Bhopal to produce Resource Material for Biology Teachers of Madhya Pradesh. (Principal Investigator : Dr. P.K. Khanna)

This ERIC-sponsored research project to study the flora of Bhopal to produce resource materials for the Biology teachers of Madhya Pradesh has been undertaken. Two Junior Project Fellows have been busy in the collection, identification and preservation of plant specimens found in Bhopal. An exhaustive list of plants quoted as examples in the textbooks of Classes IX, X and XI has been prepared. The material produced after the completion of the project will be useful to the biology teachers of the secondary level.

- (v) Impact of Teacher Training (B.Ed. Degree) through Correspondence Course on Upward Mobility of Teachers in Western Region—A Comparative Study. (Principal Investigator : Dr. D.C. Upreti)

The study aims at finding out the impact of B. Ed. training through B. Ed. Summer School-cum-Correspondence Course on the mobility of primary and middle-level teachers. It also aims at finding out the extent to which variables like family background, place of work, job aspirations, etc., have affected the promotion of teachers in higher grade and status. Data have been collected and are being analysed.

- (vi) Developing, Validating and Testing the Efficacy of Self-Learning Process-based Material for the Development of Some Integrated Processes (Inferring, Predicting, Hypothesis-making and Hypothesis testing) in Science. (Principal Investigator : Dr (Smt.) A. Grewal).

Process-based multiple choice test items have been developed under the project. The test consisting of 46 test items has been tried out on a sample of 125 students. The items are based on the processes of classifying, inferring, predicting, hypothesis-making and experimenting processes. The test samples are being scored. Instructional material explaining the measurement and rationale of the processes under study has been prepared. Also, the first draft of the material in modular form for the processes of hypothesis-making and inferring has been prepared.

Developmental Projects

- (i) Preparation of Instructional Materials for the State of Haryana

The College organized a six-day workshop for the preparation of instructional material-cum-practical manual in Farm Mechanics, from 22 to 27 March 1984. The workshop was organized at a request to NCERT by the Government of Haryana. The manual, it is hoped, will be useful to all those concerned with the programme of vocational education in Agriculture at the + 2 (higher secondary school) level.

(ii) **Special Education Project**

The College has organized an Orientation-cum-Training Programme for the Resource Persons in Teaching the Handicapped. Two lecturers of the College have been deputed for training in Special Education in the U.K. with the assistance of the British Council.

(iii) **Population Education Programme**

A seminar was held on 14 and 15 November 1983 with the objectives of orienting the Deans of the Faculties of Education of the universities of Western Region. Fifteen participants attended this seminar.

A workshop was organized from 29 November to 3 December 1983 for the orientation of teacher-educators of Madhya Pradesh. Thirteen teacher-educators attended this workshop.

Non-Formal Education Project

A non-formal education centre named 'Balwadi' is being run on the College campus with the assistance of the State Government. In addition to play and educational activities, nutrition is also provided to the children.

The final report on the working of the centres of non-formal education which were started under the NIE Experimental Project has been finalized.

National Integration Programmes

Community-singing programme has been introduced in the Demonstration Multipurpose School attached to the College. Five teachers of this school have already been trained in community-singing. Teachers of other schools will also be trained in the community-singing.

The College also provided resource persons for the evaluation of Urdu textbooks of Classes I to VIII from the point of view of national integration.

Centres of Continuing Education

The reports of the two in-service courses organized in the previous session, for the resource persons of the Centres of Continuing Education, were brought out by the College and circulated in the region.

National Cadet Corps

Sanction for the raising of NCC Companies, both for boys and girls,

was received from the Director, NCC, Madhya Pradesh, Bhopal. With this, two separate units, one for the girls (Girls Division) and the other for boys (Senior Division) started functioning during the session.

Faculty Improvement Programmes

Ph.D. Awards. The following members of staff received Ph.D. degrees from various universities :

1. Shri S.N.L. Bhargava, Lecturer in Education, for his thesis on 'A Study of Some Cognitive Processes in Science Learning with reference to Physics for Students of Higher Secondary Classes'.
2. Shri Rajendra Dixit, Reader in English, for his thesis on 'EE Commings as a Deviant Poet'.
3. Shri S.P. Mistry, Work Experience Teacher, for his thesis on 'Role and Impact of Women Leadership in Social, Political and Administrative Affairs of Madhya Pradesh'.
4. Shri A.K. Banerji, Postgraduate Teacher, for his thesis on 'Frequent Changes in Indian Music'.

Ph.D. Programme. One Junior Research Fellow has joined as a Research Scholar for undertaking research in the area of Non-formal Education. She has prepared synopsis of the project. Sampling and pre-test of items is under progress.

Research and Publications

- (i) Environmental Approach for Science and Social Studies—Instructional Material (a project report)
- (ii) Tools and Techniques to assess performance of children of Non-formal Education Centres and Primary Schools (a project report)
- (iii) *Saagar Deep* (Marathi)—Local specific material on NFE published in collaboration with the State Institute of Education, Pune.

Off the Campus Activity. The College, in collaboration with Madhya Pradesh Council of Science Technology, Bhopal, organized film shows every week at different schools of Bhopal.

Demonstration School

The enrolment position in various classes for the session 1982-83 and the results declared during 1983-84 are as under :

<i>Class</i>	<i>No. of Students</i>	<i>No. of Students Passed</i>	<i>Percentage</i>
I	84	84	100%
II	77	77	100%
III	72	72	100%
IV	79	79	100%
V	82	78	95%
VI	83	73	88%
VII	81	66	81%

VIII	62	67	92%
IX	68	54	80%
X	55	49	80%
XI	10	19	100%
XII	20	16	80%

Regional College of Education, Bhubaneswar

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

During the period under report the Regional College of Education, Bhubaneswar, trained 1,557 pupil-teachers and serving teachers through regular teacher training programmes. Two hundred and twenty-six teachers and teacher-educators were also oriented through different short-term courses. The D.M. School, attached to the College, provided quality education to 1,065 students from the primary to the + 2 stage.

Pre-service Training Programme

To prepare quality teachers who might introduce desired changes in school education, the College offered the following regular courses approved by the Utkal University :

- (i) A four-year Integrated course leading to B.Sc. (Hons.) B.Ed. and B.A. (Hons.) B.Ed. degrees for +2 students.
- (ii) A one-year course leading to B.Ed. (Secondary) degree for graduates and postgraduates in Arts, Science and Commerce.
- (iii) A one-year course, leading to B.Ed. (Elementary) degree for graduates and postgraduates in Arts and Science.
- (iv) A one-year course, leading to M.Ed. degree for those having a bachelor's degree in education.
- (v) A two-year course leading to M.Sc. (Life Science) Ed. degree for Science graduates.

Enrolment : The table below gives the course-wise enrolment during the year under report :

<i>Sl. No.</i>	<i>Name of the Course</i>	<i>Enrolment</i>
1.	B.A.B.Ed. Part I	54
2.	B.A.B.Ed. Part II	31
3.	B.A.B.Ed. Part III	44
4.	B.Sc. B.Ed. Part I	83
5.	B.Sc. B.Ed. Part II	68
6.	B.Sc. B.Ed. Part III	52
7.	B.Ed. Science (Secondary)	100

8.	B.Ed. Arts (Secondary)	60
9.	B.Ed. Science (Elementary)	13
10.	B.Ed. Arts (Elementary)	10
11.	B.Ed. Commerce (Secondary)	20
12.	M.Ed.	21
13.	M.Sc. (Life Science) Ed. Part I	20
14.	M.Sc. (Life Science) Ed. Part II	20
15.	B.Ed. (SS/CC) Secondary First Year	251
16.	B.Ed. (SS/CC) Secondary Second Year	175
17.	B.Ed. (SS/CC) Elementary First Year	98
18.	B.Ed. (SS/CC) Elementary Second Year	71

TOTAL : 1,191

The year witnessed substantial improvement in the performance of the students at the University level examinations as illustrated in the table below :

Sl. No.	Name of the Course	No. of Students Appeared	Total Passed	Percentage
1.	B.A.B.Ed. Part I	34	31	91.2%
2.	B.A.B.Ed. Part II	44	41	93.2%
3.	B.Sc.B.Ed. Part I	73	69	94.5%
4.	B.Sc.B.Ed. Part II	53	42	79.3%
5.	B.Ed. Science (Sec.)	103	81	78.6%
6.	B.Ed. Arts (Sec.)	73	45	61.6%
7.	B.Ed. Commerce (Sec.)	13	11	84.6%
8.	B.Ed. Arts (Elem.)	13	11	84.6%
9.	B Ed. Science (Elem.)	8	3	37.5%
10.	M.Sc. (Life Sc.) Ed.	16	Results awaited	
11.	M.Ed.	—	—	—
12.	B.Ed. (SS/CC) (Sec.)	194	113	58%
13.	B.Ed. (SS/CC) (Elem.)	84	60	71%

In-service Training Programmes

These programmes were offered with a view to improve the efficiency of teachers in service, and they included (i) Summer School-cum-Correspondence Course and (ii) Extension Programmes.

Summer School-cum-Correspondence Course : This course, leading to the award of B.Ed. degree of the Utkal University is meant exclusively for untrained graduate and post-graduate teachers with at least five years' teaching experience in a recognized elementary/middle/high/higher secondary schools in the Eastern Region.

The College has also taken up preliminary steps for the introduction of vocational stream at the +2 stage in the D.M. School with provisions to offer courses in—

- (i) Basic Electronic Technology

(ii) Fabrication Technology.

The syllabus on Fabrication Technology which is not provided in the CBSE syllabus is ready for onward transmission for getting necessary approval for affiliation. Steps are being taken to prepare instructional materials in the above two areas and in Radio Electronics Servicing and Maintenance and Mechanical Servicing and Maintenance.

Besides, at the request of the State Government, the College opened a Sub-centre for the Summer School-cum-Correspondence Course at Imphal to clear the backlog of untrained teachers in this area. The sub-centre has been active as shown by the details given below :

Number of Students Admitted

<i>Course</i>	<i>First Year.</i>	<i>Second Year</i>
SECONDARY	129	134
ELEMENTARY	103	Nil

Performance of the Students

<i>No. of Students Appeared</i>	<i>First Division</i>	<i>Second Division</i>	<i>Total</i>	<i>Percentage</i>
137	—	58	58	42%

Extension Programmes : The College also provided intensive programmes of in-service education to teachers and to the supervisory and administrative personnel of primary, secondary and higher secondary schools. The details of the programmes conducted during the year under report are given in Statement III. A total number of 226 teachers and teacher-educators of the region benefited by these programmes.

Population Education Project

The National Project on Population Education as extended to RCEs was launched in this College in the latter half of 1983. The first Regional Seminar on Population Education was held in January 1984 and the participating Deans of Education framed a syllabus on Population Education to be incorporated into the B Ed. Curriculum of various universities and also worked out a syllabus of a special paper for the M.Ed. level. A Documentation Centre has also been opened.

Research Projects

The College has undertaken research studies which has been financed by various funding agencies, as per details given below :

<i>Funding Agency</i>	<i>Department</i>			<i>Total No. of Projects</i>
	<i>Science</i>	<i>Education</i>	<i>Gen. Edn.</i>	
ERIC	1	3	—	4
UGC	—	—	1	1
CSIR	1	—	—	1

STATEMENT III

The Extension Services Programmes Organized by the Regional College of Education, Bhubaneswar during 1983-84

<i>Sl. No.</i>	<i>Title of the Programme Venue and Dates</i>	<i>States Covered</i>	<i>Category of Participants</i>	<i>Number of Participants</i>
1.	Workshop for Development of Low-cost Teaching Aids at RCE, Bhubaneswar, from 28 November to 5 December 1983	Orissa, West Bengal, Sikkim, Meghalaya and Assam	Teacher-educators of Secondary Training Schools and Senior Teachers of Primary and Secondary schools	24
2.	Training Programme in SUPW at RCE, Bhubaneswar, from 12 to 23 December 1983	Orissa	Secondary School Teachers	9
3.	Innovative Trends in Teaching Poetry in Mother Tongue at Secondary Level at RCE, Bhubaneswar, from 5 to 10 December 1983	Orissa and Bihar	Teachers in Service at Secondary Level	16
4.	Research Methodology for Teacher-educators of Eastern States at RCE, Bhubaneswar from 9 to 21 January 1984	Eastern States	Teacher Educators of Training Colleges	29
5.	Teaching English as a Second Language at RCE, Bhubaneswar from 23 to 30 January 1984	Eastern States	Key Persons involved in the Teaching of English	26
6.	Workshop of Education of Exceptional Children at RCE, Bhubaneswar from 20 February to 3 March 1984	Eastern States	Teachers in the Special and Integrated Schools	40
7.	Orientation Course in Physical Education for In-service Teacher-Educators (Primary Education) at Government College of Physical Education, Cuttack, from 17 to 25 February 1984	Eastern Region	Teacher-educators of Primary Education	27
8.	Orientation Course in Physical Education for In-service Teachers of High Schools at Physical Education Department, Kalyani University, from 1 to 10 March 1984	Eastern Region	Physical Education Teachers of High Schools	25
9.	Conference of Coordinators of Continuing Education Centres of Eastern States at SIE, Imphal, from 1 to 2 March 1984	Eastern States	Coordinators of Continuing Education Centres of Eastern States	12
10.	Teaching of Science in Secondary Schools —Tryout of Books at RCE, Bhubaneswar from 14 to 24 March 1984	Eastern Region	Teacher-educators of Training Colleges	18

The College offers facilities for advanced research leading to doctoral and post-doctoral degrees in Education, Science and Humanities. Some Research Fellows and Teacher Fellows are attached to the departments, as per details given below :

<i>Department</i>	<i>No. of Candidates awarded Doctorate Degree</i>	<i>No. of Doctoral Students working at present</i>	<i>No of Post- doctoral Students</i>
Education	3	25	—
Science	—	9	—
Humanities	2	6	—

Research Publications

Prof. K.C. Panda and Smt. N. Panda have published a monograph on 'Mathemagenic Activities and Prose Learning'—a review of research with educational implications.

Three research workers have submitted their doctoral dissertations to the Utkal University in the faculty of Education under the guidance of Prof. K.C. Panda in the areas of Adult Learning, Measurement and History of Indian Education.

Dr. S.K. Mohapatra, Lecturer in Chemistry, has published as co-author a textbook of Chemistry for + 2 level for schools and colleges of Orissa.

Dr. N. Khattar, Reader in Zoology, has sent three research papers on 'Neuro-Secretory Cells' for publication in the foreign journals.

Dr. B.P. Panda, Retired Lecturer in Bengali, had been awarded a fellowship by the UGC for advanced studies in literature for a period of two years in this institution. This term has been extended by the UGC for another year for completion of his research project, 'Contribution of Oriya Poets to Medieval Bengali Literature'.

Prof. M.V. Ramji and his research colleagues have undertaken a CSIR scheme for studying the development and morpho-genesis of plants from embryological point.

Academic and Other Recognitions

Shri M.D. Panda, Lecturer in Education, has been awarded the Ph.D. degree under the guidance of Dr. G.B. Kanungo, Principal of this College.

Dr. P.C. Dash, Lecturer in Education, has been selected for the award of a British Council Technical Training Fellowship and has proceeded to the U.K. for training in Mathematics Teaching.

Dr. D.C. Sahoo, Lecturer in Mathematics has been selected for the CAMET Programme and proceeded to the UK. for higher studies in

Mathematics Education for nine months.

Dr. J.K. Mohapatra, Lecturer in Physics, participated in the UNESCO Sub-Regional Workshop to develop training materials in selected laboratory techniques in Physics and Chemistry, held at Malaysia from 19 to 29 December 1983.

Prof. K.C. Panda, professor and Head of Education, attended a seminar on Education of the Disabled, organized by S.N.D.T. Women's University, Bombay, under the auspices of Indo-US Sub-Commission on Education and Culture of the UGC from 12 to 17 February 1984 and presented two papers on 'Integration and Mainstreaming' and 'Inter-disciplinary Research'.

Dr. P.K. Das, Lecturer in Economics, attended a workshop at Hissar. for the preparation of syllabus for Home Economics at the + 2 stage.

Laboratories

The laboratories and workshops in Science, Technology, Education, General Education, Commerce and Agriculture Departments, were fully utilized for instructional purposes during the period under report.

The Agriculture Department of the College has developed a nursery and students' practical plot in an area of about 0.5 hectare, for imparting work-experience on crop and horticultural projects to the students of the College. Besides this, the entire area of about one hectare of lawn, garden and fruit plantation is also utilized for educational purposes. There is a small dairy with gobar gas plant attached to it for demonstration and practical work.

Collaboration with Field Offices and the States of the Eastern Region

During the year under report, the members of the staff of the College helped the Field Advisers of the Region in organizing programmes in their respective states.

The Field Advisers also in their turn supplied the necessary feedback from the states/UTs in the region to the College to enable it to develop relevant programmes to meet the needs of the region.

Student Activities

The College Women Team won the University Championship in Table Tennis.

Three of the Table Tennis players (women) represented Orissa State and participated in the National Women's Sports Festival held at Ahmedabad.

Students in the Community: The B.Ed. curriculum has been revised. According to Paper IX of the syllabus, students are

expected to take up different projects in the community. Under this scheme, the following four important events were completed by the students.

- (i) A Blood Donation Camp was organized in the College with the help of the Orissa Red Cross Blood Bank, Cuttack, on 9 December 1983. Seventy students donated blood on the day. Since all the students who were desirous of donating blood could not be covered on that day, another camp was organized on 13 December 1983. In total 109 bottles of blood was donated to the Orissa Red Cross Blood Bank, Cuttack.
- (ii) Safai work by the students was organized on the College Campus in December 1983.
- (iii) A family survey was done in January 1984 in the nearby villages of Nandan Kanan and Khandagiri. About 200 students of the B.Ed. classes made survey of at least four families each successfully.
- (iv) The B.Ed. students of the College were asked to make at least one illiterate person literate. The students carried out this assignment satisfactorily.

Demonstration Multipurpose School

The School functions as a practising school of the pupil-teachers enrolled in the various teacher education courses of the College. Improved methods of teaching and innovative practices are tried-out in the School. The total number of students on the rolls in 1983-84 was 1,065.

Enrolment in 1983-84

Class	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
No. of Students	91	79	82	81	106	107	113	84	87	120	71	44
TOTAL : 1,065												

Results, 1983

Examination	No. of Students		Percentage
	Appeared	Passed	
All India Senior School Certificate Examination	49	47	96%
All India Secondary School Examination	114	114	100%

Besides the excellent result at the Board examination in 1983, two students of the school have been awarded NTS scholarship for the +2. Course by the NCERT for two years. Three students of the

School have been awarded medals in G.K. Competition held under the auspices of the Central Institute of General Knowledge Learning, Delhi; The D.M. School students also participated in literary, cultural and games competitions organized by the UNIVERSE, Cuttack, and Nehru Youth Affairs, Bhubaneswar and won the Championship.

The Junior Division Army Wing, NCC, won the Chief Minister's Best Contingent Republic Day Shield for 1983 held at Bhubaneswar.

Regional College of Education, Mysore

The Regional College of Education, Mysore, caters to the teacher training needs of the States and UTs of southern region, i.e., Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Lakshadweep and Pondicherry.

Pre-service Programmes

The College continued to offer the following pre-service courses in Teacher Education in the year 1983-84 :

M.Sc.Ed. Mathematics/Physics/Chemistry. These four semester postgraduate courses prepare a cadre of teachers competent in the postgraduate level content in the given subject and in its integration with the relevant pedagogical aspects. In spite of problems connected with acceptance of innovative courses of this nature, the products of these courses are being well-received for employment as postgraduate teachers/lecturers and also in research institutions.

M.Ed. This is a two-semester course, with a common syllabus with the M.Ed. course of the University of Mysore, with specialization in Elementary Education and special Education. Other approved fields of specialization are educational Technology and Educational Administration.

B. Ed. This is a two-semester course offering specializations in the teaching of Science, Mathematics, English and Social Studies and also Primary Education. The course has been organized on the lines of the NCTE recommendations to serve as a model for the universities in the region for the reorganization of their teacher education curricula.

B. Ed. (Summer School-cum-Correspondence Course). The Course was instituted in the year 1966 with the prime objective of clearing the backlog of untrained secondary school teachers in the southern region. As the objective has been achieved, the course is being discontinued.

B. Sc. Ed./B.A.Ed. This is an eight-semester integrated course covering B.Sc./B.A. degree level content and B.Ed. level pedagogical courses for preparing teachers of Science and Mathematics/English and Social Science (History). The courses have been recognized as equivalent to B.Sc./B.A. and B.Ed. degrees by the Association of Indian Universities and almost all institutions in the country for employment as teachers as well as for higher studies.

The pre-service courses are run on semester basis. By and large the products are very well received in the various educational and research institutions in the country.

The enrolment position of the various courses and the results of the examinations of these courses are given in the following two tables :

Students Enrolment during 1983-84

<i>Course</i>		<i>Boys</i>	<i>Girls</i>	<i>Total</i>
1. M.Sc. Ed.	Physics I Year	10	6	16
	II Year	9	4	13
	Chemistry I Year	8	16	24
	II Year	11	11	22
	Mathematics I Year	3	14	17
	II Year	5	8	13
2. M.Ed.	—	13	5	18
3. B.Ed.	Secondary	58	70	128
	Primary	10	7	17
4. B.Sc.Ed.	I Year	23	36	59
	II Year	17	38	55
	III Year	18	27	45
	IV Year	23	31	54
5. B.A.Ed.	I Year	8	22	30
	II Year	8	23	31
	III Year	5	14	19
6. B.Ed. (SSCC)	—	159	34	193

Results of the Various Courses of the College during the Year 1983

<i>Course</i>		<i>No. of students passed in</i>		
		<i>I Class</i>	<i>II Class</i>	<i>III Class</i>
1. Final M.Sc.Ed.	Mathematics	4	6	—
	Physics	3	3	1
	Chemistry	10	4	—
2. Final B.Ed.	Primary	21	2	—
	Secondary	35	77	6
3. Final M.Ed.		—	18	—
4. Final B.Sc.Ed.		17	1	18
5. Final B.A.Ed.		—	—	—
(The B.A. Ed. students would be appearing for their final examination during May 1985)				
6. B.Ed. (SSCC)		28	124	33

In-service Education and Extension

A major thrust of the College is in the area of in-service education of teachers. The College organizes, in consultation with the states of the region, programmes of in-service teacher education in the areas for which expertise is available in accordance with national priorities. During this year programmes have been conducted in the following

major areas :

- (i) Content enrichment in Science, Mathematics and English.
- (ii) Teaching of language skills.
- (iii) Development of Investigatory Projects in Science.
- (iv) Curriculum Development in Vocational subjects.
- (v) Integrated Education of the Disabled.
- (vi) Population Education.
- (vii) Evaluation Strategies.
- (viii) National Talent Search Examinations.
- (ix) Reorganization of Teacher Education Curricula on the NCTE lines.

A list of In-service programmes conducted during the year under review is given in the following table :

In-service Programmes Organized during 1983-84

<i>Sl. No.</i>	<i>Title of the Programme</i>	<i>No. of Participants</i>	<i>Dates</i>	<i>Venue</i>
1.	Orientation Programme for Key Personnel of A.P. for teaching the New Syllabus for Classes VI and VII	40	16.5.1983 to 21.5.1983	Hyderabad
2.	Orientation Programme for Educational Administrators and Headmasters on New Trends in School Administration and Emerging Trends in School Curriculum	23	26.5.1983 to 28.5.1983	RCEM
3.	Pre-internship Conference for B.Sc. Ed. Internship in Teaching Programme	22	20.7.1983 to 22.7.1983	RCEM
4.	Workshop on Improvisation of Teaching Aids in Magnetism and Electromagnetic Induction	16	8.8.1983 to 12.8.1983	RCEM
5.	Workshop on Trying out Instructional Materials on Special Relativity for PG Teachers of Kendriya Vidyalayas	15	16.8.1983 to 20.8.1983	RCEM
6.	Meeting of Directors of Technical Education and Vocational Education of the Southern Region	19	3.10.1983	Madras
7.	Conference of Experts in the Field of Science and Technology	17	18.9.1983	RCEM

8.	Conference of Cooperating Teachers of B. Ed. Internship in Teaching Programme	44	10.11.1983 to 12.11.1983	RCEM
9.	Orientation Course in Observational Astronomy for High School Teachers from Karnataka	33	26.12.1983 to 29.12.1983	RCEM
10.	Training Course in Micro-teaching for Elementary Teacher Educators of Kerala	35	16.1.1984 to 21.1.1984	Trichur
11.	Orientation Course on Special Education for the Heads of Training Colleges of the Southern Region	16	21.2.1984 to 24.2.1984	RCEM
12.	Orientation Course in Observational Astronomy for Central School Teachers of Southern Region	24	6.3.1984 to 9.3.1984	RCEM
13.	Conference on the Reorganization of Teacher Education Programme (secondary) in the Region on NCTE Guidelines	13	15.3.1984 to 15.3.1984	Hyderabad
14.	Workshop to design Investigatory projects in Chemistry at +2 Stage for Teachers of KV Schools of Southern Region	20	19.3.1984 to 23.3.1984	RCEM
15.	Workshop for Preparing a Package for Developing Spoken Skills in English at the Primary Level for Teachers of Tamil Nadu	4	19.3.1984 to 23.3.1984	RCEM

Research

Despite the demanding nature of the preservice and in-service programmes, the College is actively involved in educational research activities also. In addition to the three Junior Research Fellows who are working under the guidance of College faculty, faculty members are engaged in different kinds of research activities. The details of research activities in progress at the College are given below :

1. Acceptance, Awareness and Impact of RCE (Mysore) Programmes (ERIC Project) : Tools for collection of data have been prepared.
2. An Experimental Model for a Co-operative Remedial Centre in an Institution : The educational needs of the children on the

- tional Campus, RCE Mysore (ERIC Project)
3. A Comparison of Psycho-social Development of Primary (I to IV) Children with and without the Background of Pre-primary Education : Campus have been identified
The subjects for the research work have been identified and administration of the psychological tests is in progress.
 4. Children who fail in the Elementary Grades and Their Parents : Children have been identified and their bio-data has been collected.
 5. An Analytical Study of Some Correlates in the Acquisition of Science Concepts in School Children (Ph.D. research) : The data collection is almost over.
 6. An attempt to identify Various Patterns of Family Life in India : The work is about to be completed.
 7. An Investigation to assess the Expertise in Population Education of Adult Education Programme Personnel in Pondicherry and Its Relationship to Attitudes towards Such Programme (NCERT Research Fellowship) : Construction of tools is being taken up.
 8. Programme of Health and Physical Education for the Secondary Schools of Karnataka, Maharashtra, Tamil Nadu and Delhi (Ph.D. Research) : Work has been completed and the thesis is to be submitted.
 9. Development of a Competency-based Curriculum Design for the Methodology of Teaching Mathematics and Its Validation : Work has been completed and the thesis is being written.
 10. Home Language, School Language and Educational Performance—an Empirical Study of Scheduled Caste Children of Different Social Classes (NCERT Research Fellowship) : Construction and standardization of language ability tests and achievement tests are in progress.
 11. Fact-finding Survey on Education of the Disabled Children in the Southern Region : Data collection has started.
 12. Impact of drawing Skills in Academic Performance of the Deaf Children : 25 B.Ed. students are teaching drawing skills

- from the Government Deaf and Blind School, Mysore
13. A Comparative Study of Open-ended Approach in Performing Physics Experiments Vs. Traditional Approach at Higher Secondary Stage (NCERT Research Fellowship) : twice a week. The work is in progress. The project is being carried out in two colleges involving 200 students of I year PUC in Mysore city. Physics experiments for both the groups in the areas of measurement, mechanics, sound, and liquids, and data collection are in progress.

Other Major Programmes

1. **Population Education :** The National Population Education Programme is now extended to this College to carry out the task of institutionalization of population education at different levels of education—secondary teacher education, postgraduate, M.Phil and Ph.D. in Education in the colleges and universities in the southern region.

The following programmes were conducted during the period under report :

- (i) A conference of professors and deans of the faculties of education from the universities in the southern region from 17 to 19 November 1983.
- (ii) A workshop for the preparation of instructional materials in Population Education for developing a teachers' handbook for use in colleges of education from 9 to 13 January 1984.
- (iii) A workshop for the processing and refinement of the instructional materials produced and finalization of the Teachers' Handbook from 20 to 24 February 1984. The Handbook is available in print.

2. **Educational Technology :** The College has undertaken a programme in Computer Literacy which has been identified as a priority area. A Computer Education Centre has been established and it is being developed further to make this College a Centre for Designing Training Programmes in the field of Computer Education.

3. **UNESCO Project on Technology in General Education :** UNESCO has assigned to the College a project entitled 'Technology in General Education'. The objectives of this project are to bring through the teaching of science such implications of technological design processes and problem-solving skills as can be effectively done

through the teaching of science at the high school level. The faculty of the College and the school have been responsible for the development of Students' Manual, Teachers' Manual, and Kits connected with some chosen themes like Energy and Simple Machines, Friction, Combustion for Light, Household Electricity and Electromagnetic Devices. These materials will be tried out in the Demonstration School so that their effectiveness could be ascertained for wider dissemination.

4. *Faculty Collaboration with the State Departments of Education/ Other Agencies in the Region* : Though most of the programmes attempted are conducted on the College campus, the faculty is also deputed to various centres in the region for collaborative activities, consultation etc. with the State Departments of Education and other educational agencies.

5. *Recognitions to Faculty of the College/School* : (i) The following Faculty Members were selected for advanced training in Mathematics Education and Science Education by the British Council and were under training for nine months in the United Kingdom.

- (a) Smt. S. Vasantha, Lecturer in Mathematics.
- (b) Shri B.C. Basti, Lecturer in Mathematics.
- (c) Dr. S.C. Jain, Reader in Education.
- (d) Dr. L. Srikantappa, Reader in Zoology.

(ii) Dr. C. Seshadri, Professor and Head of the Department of Education, was commissioned by the National Commission on Teachers-1 to write an expert paper on 'Multi-dimensional Role of Teachers'. He was invited to present his paper at the Commission's Meeting in Delhi from 23 to 25 January 1984.

(iii) The following members of staff received National Awards under the scheme 'Seminar Reading Programme' of the NCERT :

- (a) Dr. S. Dandapani
- (b) Shri A. Nagaraj
- (c) Smt. H.P. Shyamala
- (d) Smt. S.K. Shamala

Demonstration School

The College has a school attached to it, which is affiliated to the Central Board of Secondary Education, New Delhi. The school serves as a laboratory to the College and its innovative programmes. Details regarding enrolment and results are given in the table below.

Details Regarding Enrolment and Results of Classes

I to XII of DMS—1982-83

<i>Standard</i>	<i>Enrolment</i>	<i>Result (No. of students passed)</i>
I	90	88
II	84	75

III	84	81
IV	91	81
V	80	71
VI	86	74
VII	84	76
VIII	90	81
IX	82	74
X	65	62
XI	29	24
XII	23	19

The year under report brought a rich harvest of prizes and distinctions in different fields. The Inter-High School Cultural, Literary and General Knowledge Competitions and Sports and Games organized by the College and other local schools provided good opportunities for the students to exhibit their talents in respective fields.

Institutional and individual prizes in various events were won by the students.

Propagation of Hindi

An awareness has been created in all the non-Hindi speaking members of the College staff to learn and make use of Hindi progressively.

Hindi classes for the benefit of the employees have been started in the College. In all, eleven employees appeared for the Prabodh examination and ten for Praveen.

Educational Psychology

Training

The following training programmes were organized :

Training Course in Administration of Psychological Tests and Interpretation of Test Scores for Teacher-educators

The short-term objective of the course was to train teacher-educators in the skills of administration, scoring, interpretation and communication of psychological test scores for correctly understanding the student's intelligence, interest and personality. This will improve teacher competency in providing education according to the child's abilities and will also improve the quality of teacher-child interaction in the classroom. The long-term objective is to extend skills through psychological practicum in the pre-service courses at the B.Ed. level. The course is highly practical and is of eight days' duration.

During 1983-84, three courses were conducted. The details are

given in the table below.

<i>Name of the States</i>	<i>Venue</i>	<i>Dates</i>	<i>No. of Participants</i>
1. Western U.P.	Delhi	12 to 19 December 1983	16
2. Rajasthan, M.P. and J. K.	Delhi	16 to 23 January 1984	12
3. M.P. and U.P.	Delhi	28 March to 4 April 1984	12

According to available information, some training colleges have introduced the psychological testing practicum in their B.Ed. courses.

Enrichment Course on Learning and Development for Teacher-educators of Secondary Teacher Education Institutions and SIE/NCERT Personnel.

While emphasizing instruction, teachers tend to be oblivious of the learner. They have some notions about the teaching-learning process but do not seem to recognize the need of the students having some minimal readiness, growth and entry-behaviours which can be fruitfully taken advantage of by them in everyday classroom teaching-learning situations. The principles of reward and reinforcement are ignored in the management of learning situations.

One course was organized at Delhi from 16 to 25 January 1984 for the states of Jammu and Kashmir, H.P., Punjab and Haryana. Fifteen participants attended the course which was accepted by the participants in their valuation as highly practical and useful.

Enrichment Course on Learning and Development for Teacher-educators of Elementary Teacher Education Institutions and SIE/SCERT Staff Members.

The primary school teacher has a vital role to play in the learning and development of the child at early stage. It is generally found that he or she does not possess a sound knowledge of the principles of either learning or development processes and, furthermore, is unable to correctly apply the principles of reinforcement for the purpose of encouraging the child and making school an attractive place for the child. Management of the classroom is also very individualistic.

The first course was organized from 2 to 11 January 1984 at Trichur, Kerala, for the states of Kerala and Tamil Nadu. Twenty seven participants attended the course.

The second course was organized at Rahara (24 Parganas, West Bengal) for the states of West Bengal and Orissa, from 20 to 29 February 1984. Nineteen participants attended.

Workshop on Application of Behaviour Modification Techniques in the School Setting for Teacher-Educators at Elementary School Level.

The objective of this workshop was to acquaint the teacher-educators with the theory and practice of behaviour modification, to expose them to its practical application and to train them in some simple techniques easily applicable in classroom settings.

Two workshops were organized—one at Lucknow from 27 January to 5 February 1984 and the second at Nawagong from 19 to 28 March 1984. Eighteen participants from Uttar Pradesh and 10 from Assam attended the workshop.

The Government of Bihar has started a unit on behaviour modification in their SCERT at Patna, under consultation with the NCERT. They are planning to have some more regional training courses on the Techniques of Behaviour Modification.

Developmental Programmes

The NCERT has at hand developmental projects for :

- (i) providing reference material in psychological testing.
- (ii) improving instructional materials for the teaching of psychology.
- (iii) providing guidance services for adjustment in school and home and in general.
- (iv) developing a manual of behaviour modifications for primary teacher-educators.

A brief progress of the work on various projects during the year under report is given below.

National Test Development Library (NTDL). Set up by the Council 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 tests, and (iv) an institution to identify gaps in test development. It is guided by an advisory committee consisting of top psychometricians of the country as its members.

The fifth meeting of the Central Advisory Committee of the NTDL was held on 26 March 1984.

The Library has till date procured 577 published tests and 233 unpublished tests developed or used as part of Ph.D. Programme.

The NTDL has brought out three bulletins as under :

NTL Bulletin :

- | | |
|------------------------|--|
| No. 13
(Sept. 1983) | Information about Indian Unpublished Tests (Intelligence, Creativity, Aptitude and Organizational Climate) |
| No. 14
(Dec. 1983) | Reviews of Indian Intelligence Tests in Print (Intelligence) |
| No. 15
(March 1984) | Reviews of Indian Personality Test in Print (Personality) |

It has published a pamphlet 'Guidelines for Test Reviews'.

Mental Measurement Year Book. Test reviews prepared last year have been finalized by a Board of Editors. Action is under way to publish them in the form of Mental Measurement Year Book. It covers 34 intelligence test reviews and 48 personality test reviews.

Test Reviews. This year Interest Inventories and Attitude Scales were reviewed. One workshop was held from 27 to 30 September 1983. Ten reviewers attended the workshop and reviewed 30 tests. Two more workshops were held during the period January-March 1984 and 29 tests were reviewed. In addition, nine personality tests were also reviewed.

Seminar on Test Construction. A seminar was held in March 1984 to develop understanding of the various principles and techniques required in the construction of tests in the area of personality in the light of the short-comings noted in the test reviews prepared on personality tests in order to improve the existing tests, and to discuss new concepts of personality measurement in the context of Indian society and culture. Fourteen papers were discussed. The seminar made 17 recommendations.

Meetings of the Editorial Board of Reviewers on Tests of Intelligence and Personality were held in August and October 1983. Forty-two reviews of personality tests and 16 reviews of intelligence tests were finally edited.

Development of a Manual of Psychology Experiments and Practicum for Classes XI and XII. The NCERT prepared two manuals for Psychology Practicum prescribed for Classes XI and XII of the Central Board of Secondary Education. It is being reviewed by experts.

Psychological Services Centre. The Centre is set up to cater to the needs of school-going children with regard to their adjustment, learning problems and choice of courses and ultimately to provide therapeutic and informational services. The Centre attended to nine cases registered with it.

Preparation of Model Syllabi in Psychology for Senior Secondary stage. To keep pace with the changing content of psychology over the last decade or two it has been felt necessary to analyse in detail the syllabi of psychology as taught at the senior secondary stages of the school education in various states. The project aims at collecting the syllabi of psychology from various States, analysing them, making suggestions for their improvement and preparing an improved and updated draft syllabi for the States. Survey of the related literature has been undertaken. Syllabi have been collected from different states.

Development of a manual of instruction for teachers at the elementary level of school education on the Application of Behaviour

Modification Techniques in school setting. A survey has been undertaken to assess the classroom practices

Educational and Vocational Guidance

A study of Psychological Characteristics vis-a-vis Educational and Vocational Planning of Scheduled Caste and Non-Scheduled Caste High School Boys has been taken up as an ERIC project since July 1983. This study falls under item 7 of the new 20-Point Programme. Necessary data collection work from 33 government schools from the state of Haryana included in the sampling grid on this study was completed. (This is an ongoing ERIC project.)

A study of the Educational and Vocational Planning, Academic Achievement and Selected Psychological and Home Background Variables of Tribal High School Students in and around Shillong (Meghalaya) was also in progress. This project also falls under item 7 of the New 20-Point Programme. (This is an ongoing ERIC project.)

Additional multivariate statistical analyses for the project 'Research on First Generation Learners in Class I' were done during the year, and their report drafted. Three supplementary studies were also carried out, viz. comparisons across areas varying in the level of development of (i) first generation learners, (ii) non-first generation learners, (iii) schools. The reports of these three studies have been finalized, and two of them have been sent to journals for publication. As regards the study at the Class X level, three more sections of the report for the monograph were completed.

Further work on the project 'Factors Affecting Career Choices of Adolescents' was done. The data were sent for punching.

Statistical analyses for the project 'The Educational and Vocational Planning of Boys with Superior Scholastic Ability' were completed. Two reports based on these analyses were drafted.

Scoring and tabulation of the data for 'A Study of the Self-concept of Boys with Superior Scholastic Ability' was done. Some statistical analysis was also done and a partial report drafted. A draft manual of the Self-concept Inventory was also prepared.

The work on the project 'Adjustment Pattern of Boys with Superior Scholastic Ability' was completed and its report drafted.

The 22nd Diploma Course in Educational and Vocational Guidance commenced on 22 August 1982 and ended on 30 April 1983. Twenty-nine candidates joined the course, out of whom two were deputed—one each by the Governments of Manipur and Nagaland. Out of 29 trainees who joined the course, four non-official trainees dropped out during the course. Twenty-five trainees including five scheduled caste

candidates were awarded a stipend of Rs. 250 per month. Twenty-five trainees took final examination out of whom 23 were declared successful.

The 23rd Diploma Course in Educational and Vocational Guidance commenced on 1 August 1983. Thirty-two candidates joined the course, out of whom seven were deputed by the Governments of Madhya Pradesh, Nagaland, Andhra Pradesh and Rajasthan.

Two faculty members were invited to participate in a seminar on 'Excellence in Science' convened by the Science Advisory Committee to the Cabinet, held under the auspices of the Indian National Science Academy and the Department of Science and Technology, New Delhi, during September 1983.

Assistance was provided to the State Institute of Education, Gujarat, by way of deputing one resource person for training teacher-educators on the applications of educational technology for achieving the targets of universalization of elementary education.

Resource persons were also deputed for the in-service training programme for District Employment Exchange Officers organized by CIRTES, Pusa, New Delhi.

A Career Teachers Training Course was organized for nine high school teachers of Mizoram for four weeks at New Delhi and also for teachers of Arunachal Pradesh for four weeks in 1984 at the SIE, Changlang.

Information and guidance material was supplied to schools requesting such information. A number of researchers and occupational information seekers from all over the country benefited by way of visiting the Guidance Laboratory, especially its occupational information corner.

A Book of Readings for Career Teachers was finalized. The pre-publication draft of the book has been brought out in mimeographed form.

A draft report of an Intervention Programme for First Generation Learners of 10th Grade conducted earlier was prepared.

The NCERT has also contributed by way of developing innovative procedures to train counsellor-trainees in inter-personal skills and inexpensive teaching aids to reinforce classroom teaching of psychology of adjustment, behavioural counselling, research methodology and educational technology.

The NCERT was developing a guidance programme for girls of secondary classes. A programme of group guidance was tried out in one local school. Some data obtained under the project on a group of girls of Class X were being analysed.

The papers, namely 'Counselling Adolescents in the Educational Context' and 'Counselling of Girls for Careers and Education' were prepared and presented by two faculty members at a National Seminar on the Management of Mental Health and Medicare in the Social Context.

A research report entitled 'Variation between Schools—Across Areas Differing in Level of Development, and Its Impact on First Generation Learners' was sent for publication to the Journal of Comparative Education Review.

A research report entitled 'First Generation Learners Across Areas Differing in Level of Development' was sent for publication to the Journal of Economic and Social Studies.

An abstract of a paper entitled 'A Study of Self-concept in relation to Adjustment, Values, Academic Achievement, Socio-economic Status and Sex of High School Students' was published in the annual conference souvenir of Indian Academy of Applied Psychology, March 1983.

Facilities of counselling services were provided to referred cases.

Consultancy was provided to some local institutions for planning and initiating programmes of guidance and counselling.

A report of the last All-India Conference of Heads of State-level Guidance Agencies has been brought out in mimeographed form and widely circulated for further action in relation to development of school guidance programmes.

9

Educational Technology

RREALIZING the importance of Educational Technology, the NCERT has undertaken multi-directional programmes to maintain pace with the increasing demands in this area. Efforts were continued to organize training programmes in the development of software and other aids and to undertake research and developmental activities in this area. Collaboration has been maintained with various agencies. Programmes have been undertaken to create at the NCERT the necessary facilities by constructing suitable studio complex and acquiring equipment.

Training Courses/Workshops and Orientation Courses

(i) A national workshop for identification/selection of themes/topics for ETV programmes of INSAT was organized from 31 March to 5 April 1983. It was attended by about 70 participants with diverse back-

grounds and expertise, namely, educationists, teacher-educators, child psychologists, content experts, evaluators, researchers, producers, writers, broadcasters, media men and actual classroom teachers, representing all the six INSAT states, SCERTs/ET Cell, besides Space Application Centre, All India Radio, Doordarshan, Regional Colleges of Education, NCERT Departments/Units, CET and Ministry of Education. The workshop recommended a large number of themes and topics for ETV programming for INSAT.

(ii) A five-day workshop for developing programme briefs for ETV was organized from 26 to 30 April 1983. The programme briefs developed during the workshop were edited and circulated to all concerned organizations.

(iii) The NCERT organized an orientation-cum-selection workshop for ETV script-writers from Uttar Pradesh from 4 to 18 May 1983. Being the first in a series of four courses planned for 1983-84, the programme was aimed at creating a pool of ETV script-writers who could be utilized by Doordarshan Kendras in the country and also by the upcoming State Production Centres and the CET for writing educational TV programmes for formal and non-formal systems in the context of INSAT. Twenty-six participants attended the course out of whom sixteen script-writers were finally selected from Uttar Pradesh for the advanced level eight-week ETV training course.

In this series, two orientation-cum-selection workshops for ETV script-writers, one each for Gujarat and Maharashtra, were organized at New Delhi from 1 to 15 February, 1984 and from 17 February to 2 March 1984, respectively. In all, 32 participants (15 from Gujarat and 17 from Maharashtra), selected through open advertisement/interview and deputed/recommended by the State ET Cells and Doordarshan, participated in the 15-day orientation-training courses.

A list of ETV script-writers trained by the CET during the last five years was updated and sent to the Director-General, Doordarshan, and the Station Directors of concerned Doordarshan Kendras as well as to all concerned ET Cells/SCERT. These organizations were requested to utilize the trained script-writers for writing scripts for ETV programmes.

(iv) A six-day workshop on multi-media approach in innovative practices in teaching-learning techniques for the instructors of adult education was organized from 11 to 16 May 1983 at Port Blair in collaboration with the Adult Education Cell of the Directorate of Education, Andaman and Nicobar Islands. Nineteen participants attended the workshop.

(v) A workshop in the first phase of the project titled 'A Package to Teach Yourself to Draw a Self Learning Instructional Materials for Secondary Teachers' was organized at Vishva Bharati, Santiniketan,

from 16 to 26 June 1983 to develop materials for skill development in visual communication and proper use of chalk board for better and effective teaching-learning system. Sixteen participants belonging to the states of Bihar, Orissa and West Bengal attended the workshop.

(vi) The NCERT organized a two-day orientation of the state-level key personnel of Maharashtra in ETV utilization on 2 and 3 September 1983. In all, 43 participants were oriented. The resource person thus trained will, in turn, train actual TV user teachers and custodians of the TV schools in batches by holding similar training camps in the state. A training manual was developed for the purpose, which would be used by resource persons also in the training of the TV user teachers/custodians.

(vii) The NCERT organized an orientation course in educational technology for teacher-educators at the Regional College of Education, Mysore, from 6 to 16 September 1983. Thirty teacher-educators of the secondary level from the states of Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu participated in the programme.

Another orientation course in educational technology for teacher-educators from the states of Maharashtra and Gujarat was organized from 21 November to 1 December 1983 at the Educational Technology Cell, Bombay. Thirty participants attended the course.

(viii) A workshop on learning games for Instructors of Adult Education Centres was organized in collaboration with Seva Mandir at Udaipur from 21 to 25 November 1983. There were 15 participants. A number of learning games for literacy etc. were prepared.

(ix) Under the project 'Multi-media Package for Teaching Difficult Concepts in Geography for Class VI', the Centre for Educational Technology, NCERT, organized two workshops—one on identification of difficult concepts in teaching geography from 5 to 8 September 1983 at New Delhi and another on the development of instructional materials in teaching difficult concepts in geography in Class VI from 20 to 26 October 1983 at the Department of Geography and Regional Development, University of Kashmir, Srinagar. The project aimed at removing certain errors and developing instructional material, giving due weightage to the cause-and-effect relationship, human response to environment and interrelationship and interactions among various geographical aspects.

(x) A programme for writers of correspondence education study material was organized in collaboration with the Board of Secondary Education, Rajasthan, Ajmer, from 27 January to 6 February 1984. The objectives of the programme were : (a) to provide theoretical input relating to distance education, which included the concepts of distance education, sub-systems of distance education, skills and techniques.

relating to writing, editing, proof-reading and marking a copy for the press and (b) to develop lessons in different formats. The programme was attended by 32 participants.

(xi) A workshop to develop procedures in organizing Contact Programme in Correspondence Education was organized from 27 to 31 March 1984 at Madurai Kamaraj University.

(xii) In connection with the project 'Development of multi-media Package in Teaching Difficult Concepts in Geography in Class VI' a workshop on the development and vetting of instructional material was organized at the University of Madras from 15 to 21 February 1984. Fifteen participants, including Readers, Lecturers, teachers and textbook writers, attended the programme, and material on country studies was developed.

(xiii) A workshop was organized at Xavier Institute of Social Services, Ranchi from 20 to 25 February 1984 in connection with the project 'Learning Games for Instructors'. Fifteen participants attended the programme and a handbook on the project was prepared.

(xiv) A workshop was organized at the Literacy House, Lucknow, from 20 to 26 February 1984 for developing self-learning instructional materials on visual communication through chalkboard—an ideal teaching tool used in the classroom situation. Twelve teacher-educators from Bihar, Orissa and West Bengal attended this workshop. Various aspects of utilization of chalkboard in the teaching-learning situation were discussed and efforts were made to innovate certain devices to enable the teachers to develop certain basic skills in expressing abstract ideas through visual symbols needed for better and effective teaching-learning process.

(xv) A workshop for developing a series of ETV scripts was organized at the CET from 28 February to 8 March 1984. A dozen scripts of programmes for teachers were developed in this workshop.

(xvi) An orientation course-cum-workshop for ET Cell Officers from states was organized from 12 to 15 March 1984 at New Delhi to orient the ET Cell Officers to the concept of educational technology, to identify the major problems of education in their states and to examine and discuss how educational technology can tackle some of them. The programme also assisted the ET Cell Officers to prepare a plan of action for their respective cells.

ETV INSAT Programme

Transmission and Despatch of ETV Programmes

The Satellite Transmission Service, utilizing INSAT-1B, was launched in Andhra Pradesh and Orissa. Programme capsules were despatched

to Upgrah Doordarshan Kendras for telecast in the two states. As regards Nagpur (Maharashtra) programme, tapes were air-freighted for telecast in the three districts of Maharashtra beginning from 15 October 1983.

Transmission Schedule for Hyderabad, Sambalpur and Nagpur

Integrated date-wise transmission schedules for Orissa (Sambalpur) and Andhra Pradesh (Hyderabad) were finalized and circulated to all Doordarshan Kendras, SCERTs, E.T. Cells and all others concerned. Transmission schedule for Nagpur was drawn up in so far as CET's programme schedule for three days was concerned and programme capsules were sent as per schedule.

Teacher Guidance Notes

Teacher Guidance Notes for the programme being telecast from Hyderabad and Bhubaneswar were sent regularly.

ETV Programme Preview and Field Testing

The internal programme preview committee completed the preview of all ETV programme series produced by the NCERT last year. The comments/suggestions of the preview committee were made available to TV producers for necessary revision of programmes. The preview committee started the preview of all new programmes being produced by the CET.

A set of criteria and tools were evolved for field testing the ETV programmes produced by the NCERT. The try-out for field-testing of ETV programmes has started in collaboration with the Municipal Corporation of Delhi. A few schools in the rural areas of Delhi were identified for this purpose.

Evaluation of Programmes

The NCERT completed an evaluation study on the impact of the ETV programmes on the children of Classes IV-V in Sambalpur district (Orissa) covered under the INSAT-1B programme. It was observed that the medium of TV was helpful in imparting useful information to the children of the rural primary schools. The children of the TV schools did better on an achievement test than the children on non-TV schools. All the same, the extent of the gain was rather small, 3.2 per cent only. The study has shown that the TV operates under various limitation and constraints, undermining the utilization of the ETV programmes, but for which the results would have been more satisfying.

One of the major recommendations of the study was that there was need to design a system for improving the utilization of the ETV programmes. For this, there is need to chart out specific jobs and responsibilities in respect of various agencies concerned with ETV services for bringing about better coordination among the agencies, and to create a cell in the State Departments of Education for constantly monitoring the system and taking immediate action.

Data for the need assessment study in respect of ETV programmes of primary school children of Orissa are being collected and analysed.

Film Unit

The Film Unit completed two-thirds shooting part of the film 'Ungraded School' and 'SUPW' at Chandigarh, Delhi and Bangalore. Negatives were sent for processing in the month of December 1983. During January and February 1984, the rough-out of the film on Techniques of Photography and the shooting of Film Clips were completed.

Radio Unit

A meeting was held on 25 May 1983 in connection with the utilization of the radio for education and involvement of the Regional Colleges of Education in this venture. A committee including representatives of the Directorate-General of AIR and the CET was set up for examining the problems of utilization of the radio. A curriculum committee was also set up to go into the problems of curriculum for educational radio.

Under the Radio Pilot Project, 99 programmes have been capsuled for the purpose of broadcasting from AIR, Jaipur, re-editing of 16 audio programmes was done and 38 fresh programmes were produced and broadcast from AIR Jaipur.

A workshop was held from 27 to 29 July 1983 for identification/selection of topics for the project on Special Education for National Integration and Development of Values among Young Children. The subjects of 19 programmes were finalized in the workshop, which were developed into programme briefs.

The NCERT has developed, produced and tested prototype of audio-tape programmes for disadvantaged group of educable and mildly retarded children. Based on the results of the tests, further production will be undertaken.

Technical Facilities at the Centre for Educational Technology

Building

The conversion of the old Library Block on the NCERT Campus into

a single Studio Complex is under progress. An agreement was reached with the Department of Space for constructing single studio ETV buildings in Bhubaneswar, Patna, Lucknow, Pune and Hyderabad. The building lay-out design was discussed and finalized and the Department of Space was busy with the detailed planning for the civil and associated works. Regarding the ETV Studio building at Ahmedabad the Government of Gujarat has already initiated the construction work on its own.

Suitable buildings were finally identified at Bhubaneswar, Patna, Lucknow, Hyderabad and Bombay so that the concerned SCERTs in these states could take up the work of conversion of these buildings into temporary ETV studios. The NCERT was in touch with the State Governments and had offered all design help in order to facilitate these conversions.

Equipment

During the last financial year an order had been placed on the GCEL, Baroda, for the supply of a number of 3/4" and 1" video recording and editing systems. Part of these supplies had already arrived from abroad at the GCEL factory in Baroda and was inspected. All these supplies are meant to equip the CET's ETV Studio on the NCERT Campus.

Discussions had been held with the GCEL, Baroda, for the supply of 3/4" and 1" video recording and editing systems for the ETV Studios in the six INSAT states.

A series of technical discussions had been held with Bharat Electronics Limited, Bangalore, who are progressively manufacturing studio colour cameras and associated equipment. They had communicated their willingness to supply the needed studio equipment for the CET Studio as well as the six INSAT states on a turn-key basis.

The language dubbing of ETV programmes in Marathi, Oriya and Telugu was undertaken using original visuals from our Hindi programmes. For this purpose a temporary studio had been prepared only for dubbing commentaries and captions using the old CCTV equipment of the CET.

Teaching Aids

The NCERT organized an All India (NCERT) Seminar on Audio-Visual Educational Materials from 20 to 24 February 1984. The major objectives of the Seminar were :

- (i) to demonstrate quality AV software for the formal and non-formal education of children at the school level.
- (ii) to discuss the methodology of its production.

(iii) to discuss the facilities required for quality software production, its duplication, distribution and utilization.

The Seminar was attended by 16 participants. More than 300 teaching aids consisting of charts, models, folios, kits, games, filmstrips, audio cassettes, AV packages, films and computer-aided instruction, were demonstrated and discussed. Eminent educationists and producers of audio-visual material of repute delivered lectures on various connected themes.

As an adjunct to the Seminar the NCERT organized from 20 to 25 February 1984 an exhibition of audio-visual educational material—both hardware and software—produced by various commercial and educational organizations in the country. The exhibition was visited by about 1,000 persons.

An orientation programme in educational technology was organized for two WHO Fellows from Nepal from 11 to 15 April, 1983. The programme included, *inter alia*, need assessment of Nepal in educational technology.

An officer from the Rural Development Department of Afghanistan was imparted orientation training from 13 to 18 May 1983 in the area of photographic process and filmstrip production. He was deputed under the UN Fellowship programmes through the Centre for Development of Instructional Technology, New Delhi. During his brief stay he was also exposed to various aspects of educational technology.

A Fellow from Sri Lanka under the UNDP programme was given training from 3 October to 2 December 1983 which included, *inter alia*, preparation of teaching aids and equipment related to the projects in his country.

The NCERT organized a course in photographic skills and appreciation for its academic staff from 26 April to 6 May, 1983. The course was conducted by Shri T. Kashinath, an eminent Indian photographer. During the course, a number of lectures highlighting various aspects of photography were delivered by Shri Kashinath. Besides, a number of photographs were analysed by him. The practicals consisted of the participants taking nearly 200 photographs on themes such as portraits, transport, flowers, animals, trees, slums, etc.

A training course in educational technology and its application in the production of video programmes was conducted from 14 to 27 September 1983. Ten participants from voluntary organizations from all over the country were imparted training in writing scripts, shooting video programmes, handling video cameras in the studio and, finally, editing the programmes on half-inch VCR. The participants developed scripts and produced seven short programmes.

The NCERT organized a two-day orientation programme for the four Fellows from the Indian National Trade Union Congress sponsored by International Labour Organization. They were exposed to the programmes of low-cost teaching aids and preparation, use and development of AV aids in non-formal education situations with special reference to the techniques of preparation of flannel cut-outs and flip charts.

An orientation training was organized from 16 to 21 May 1983 for one librarian of the Indian Institute of Technology, Kanpur, and two teachers from Mahant Harkishan Das Vidya Niketan, Mathura, in the operation and maintenance of AV equipment.

The NCERT organized a Regional Seminar on low-cost Teaching Aids at the State Institute of Education, Solan (H.P.), from 27 to 29 July 1983 in which 21 key personnel from seven states of northern region participated. The participants chalked out a model plan in the development and use of low-cost teaching aids at the district level. The model plan includes objectives, methodology, materials for the preparation of teaching aids and the teachers who could be trained at the block and district levels.

The NCERT assisted the SCERT, Bihar, Patna, in organizing a training course in the operation and maintenance of AV equipment and also silk screen printing for the local participants of the region from 25 July to 3 August 1983.

A Technical Training Course in the operation and maintenance of AV equipment was conducted from 1 to 9 September 1983. Thirteen participants from Sikkim, Karnataka, Kerala, Manipur, Tripura, Mizoram, U.P., M.P., and Haryana participated in the course. In addition, there were five local participants.

The NCERT organized from 30 November to 6 December 1983 a workshop on the second phase of the self-learning cards for single teacher primary schools of Ahmedabad District in collaboration with Vikram Sarabhai Community Science Centre, Ahmedabad. Twenty-two primary school teachers participated. The cards prepared in the area of Mathematics were categorized as : (i) Concept or Information Cards, (ii) Practice Cards, (iii) Testing Cards and (iv) Activities Cards. The content analysis of the cards prepared in the workshop held earlier was finalized.

A training course on educational technology for the production of tape-slide programmes was organized at New Delhi from 2 to 16 February 1984. The course was especially organized for the western region of India with the major objective of enabling the participants to produce tape-slide programmes and organizing similar training courses involving the local people from their respective institutions.

Sixteen teacher-educators from SIE/SCERTs, Teachers Training Colleges and CIETs of Maharashtra, Goa, Rajasthan, Gujarat and Madhya Pradesh participated in the training course. Besides, six science teachers from Delhi schools also attended. During the course, five tape-slide programmes in the subject areas of Physics, Chemistry, Biology and Mathematics were developed by the participants.

A workshop on the development of tape-slide material was organized in collaboration with the State Institute of Educational Technology, Manipur, at Imphal from 5 to 15 March 1984. Thirteen participants from the SIET and the schools of Manipur attended the workshop. During the workshop six tape-slide programmes were produced.

A training course in the operation, maintenance and utilization of AV equipment was organized at the RCE, Mysore, from 5 to 10 March 1984. Thirteen participants from different teachers training colleges of Karnataka, which have AV equipment, attended the course. The objectives of the course were to create an awareness in the efficacy of AV equipment in teaching-learning situations and to acquire skills in the operation of the equipment. The participants were given intensive practical training besides theoretical lessons.

A workshop was organized from 12 to 20 March 1984 for the development of laboratory material in Mathematics at the primary level. Twelve teachers from Delhi schools participated. Besides preparing the design and models on a number of concepts such as number-system, decimal, fraction, etc., the participants were involved in the testing aids in Mathematics at the middle school level.

Meetings of the Working Group

The NCERT organized a three-week working group meeting on the preparation of low-cost teaching aids in Mathematics at the middle school level from 10 to 28 May 1983. The meeting was conducted in collaboration with the Association for the Improvement of Mathematics Education, Vijayawada. Shri M.V.S. Rao Vyas, Innovator and author of 'Down to Earth Manual', also participated. Forty-one teaching aids in the form of models and charts were developed by the group along with 50 illustrations and write-ups of each. Out of 50 illustrations, 10 sketches have since been finalized. The manual consisting of all the aids indicating the models, illustrations and preparation process along with material would be prepared as part of deliberations of the working group meeting. As a follow-up, all the 50 illustrations which are presently in the draft form will be finalized for the printing of a manual.

Another working group meeting on the preparation of Mathematics teaching aids at the middle and high school levels was held from 28

September to 13 October 1983. The meeting was the third phase of the programme. Forty teaching aids in Mathematics were prepared along with the write-ups, designs and models separately. The main objective of organizing the working group meeting is to get these aids tested for the preparation of the manual and to disseminate the ideas to school teachers.

The fourth meeting of the working group was held from 4 to 12 January 1984. So far, 90 aids in Mathematics with write-ups and illustrations of each had been developed. It was emphasized during the meeting that the physical models should, as far as possible, reflect the process of preparation so that mathematics thinking could be evolved in its broader perspective.

A working group meeting for the finalization of charts in the subject area of Physics was held from 25 to 27 August 1983. The charts are being developed for Classes IX and X. Two resource persons, one from Delhi University and the other from a local higher secondary school, were invited. During the meeting 17 charts were discussed and finalized for production.

A working group meeting for the production of tape slides on 'Valency' was conducted on 12 and 13 December 1984. During the meeting the script on 'Valency' developed earlier was refined and finalized for production.

Evaluation of DTA Products and Prototypes

The NCERT conducted a three-day evaluation workshop from 9 to 11 August 1983 at the State Institute of Education, Allahabad, to evaluate the low-cost teaching aids in Mathematics produced for primary school children. Seventeen participants, including two resource persons, attended the workshop.

The NCERT had produced a set of 20 charts in Geography for the secondary school stage. A workshop for the evaluation of these charts was organized on 19 and 20 December 1983. Nine participants took part in the workshop. The charts were discussed with reference to target audience, format, use of charts and accuracy of the content. Various suggestions given by the group were analysed for making necessary corrections and modifications in the charts.

Dubbing of DTA Films for INSAT Programmes

The following five films produced by the NCERT have been dubbed into Telugu, Oriya and Marathi languages for National Telecast under the INSAT programme :

- (i) Teaching of Science through Environment—Rocks and Soil.

- (ii) Understanding Animals.
- (iii) Learning through Environment
- (iv) Science is Doing.
- (v) National Science Exhibition.

Production of an Album on India's Struggle for Independence through Visuals and Documents

For developing teaching aids material in the area of Modern Indian History, a project entitled 'India's Struggle for Independence—through Visuals and Documents' has been taken up. The album will consist of about 80 panels highlighting various aspects of Indian freedom movement right from the arrival of the Europeans in India to the attainment of independence.

On the basis of the suggestions received in the two national workshops and exhibitions conducted by the NCERT, over 80 per cent of the work regarding finalization of the panels had been completed. Before the materials are sent to the press, it was decided to get them finally reviewed by four eminent historians so that there might be no controversy on the project when it is published. The panels have since been reviewed by the Review Committee. It is expected that the printing of the panels which are to be brought out in the form of an album will be completed during the year 1984-85.

Video-tape Programmes

The following scripts have been finalized for the development of video-tapes for INSAT :

- (i) Gauri aur Gautam ka Pump.
- (ii) Food from Trees.
- (iii) Water.
- (iv) Soft water.

The Video-tape mentioned at S. No. (i) has been produced in collaboration with the Centre for Development of Instructional Technology, New Delhi.

Under the project on the development of video-tapes on eminent scientists, educationists, artists and literary persons, the following programmes have been developed :

- (i) Mr. T. Kashinath, Photographer.
- (ii) Smt. Mahadevi Verma, Poetess.
- (iii) Prof. I. Prigogine, Nobel Laureate, Scientist.
- (iv) Arvind Gupta, a Social Worker-cum-Teacher.
- (v) Prof. Stephan Gould, Evolutionist.

The tape-slide programme on Population Education has been con-

verted into 3/4" U-matic colour video-tapes for possible transmission by Delhi Doordarshan.

Portraits of Indian Leaders

The NCERT undertook the project of preparing a prototype set of 25 portraits of eminent Indian leaders, each portrait having a quotation which has a bearing on education, culture, humanity and national integration. The first set comprising seven leaders had been completed last year. The work pertaining to quotations and photographs of other 18 leaders has also been completed. These quotations have been selected from the speeches, letters, autobiographies, biographies and various other sources available on the concerned leaders.

Central Film Library and Educational Films

A festival of the NCERT films and other educational films was organized at Bhopal from 8 to 11 December 1983 in collaboration with the Board of Secondary Education, Bhopal, and the Field Adviser, Madhya Pradesh. The festival intended to create an awareness of the use of films in education among teachers and students. The purpose was also to highlight the role of the NCERT in the production of films on teacher education as also in the distribution of films through its Central Film Library which has more than 8,000 educational films in stock.

During the year 1983-84, 92 new institutions were enrolled as members of the Central Film Library, thus increasing the total membership to 3,905. Eighteen films were added to the stock of the Central Film Library, increasing the total number of films to 8,192. During the period under review, 10,040 films were issued to the member institutes all over the country.

The screenings of the CET/DTA films was arranged at the All India Conference of Primary Teachers held at Patna from 3 to 4 January 1984.

The DTA/CET films were also screened at the National Science Exhibition held at Lucknow during the third week of November 1983.

Production of Films

The production of one film entitled 'Science is Part of Life' has been completed. It is meant for the middle school science teachers. It highlights the advantages of integrated science curriculum where the need is to relate science in an integrated form with the local environment.

Sale of Films

During the year 1983-84, the NCERT sold the 16 mm prints of its educational films worth Rs. 43,171.05.

Preview and Purchase of Films

The following films were previewed and approved by the Preview Committee set up by the NCERT for their possible acquisition for the Central Film Library.

- | | | |
|-------------------------------------|---|--------------------------------|
| (i) Blues for the Red Planet | } | Cosmos Series
by Carl Sagan |
| (ii) Traveller Tales | | |
| (iii) The Backbone of Night | | |
| (iv) The Journeys in Space and Time | | |
| (v) Persistence of Memory | | |
| (vi) The Encyclopaedia of Galactica | | |
| (vii) Indus Valley to Indira Gandhi | } | Produced by
BBC. |
| (viii) The Infinite Variety | | |
| (ix) Building Bodies | | |
| (x) Conquest of the Waters | | |
| (xi) Invasion of Land | | |
| (xii) Victors of the Dry Land | | |
| (xiii) Lords of the Air | | |
| (xiv) The Rise of the Mammals | | |
| (xv) Care of the Eyes | | |
| (xvi) Gobar Gas Plant | | |
| (xvii) Surdas | | |

Revised Edition of the Directory of AV Equipment and Materials

The revised edition of the Directory of AVA equipment and materials has been compiled after collecting the relevant data from all over the country and is now at the printing stage.

Exhibitions

The Department of Teaching Aids organized an exhibition of its AV materials for the Vishwa Hindi Sammelan.

The Department also participated in the exhibition organized by the Indian Association for the Advancement of Science, held in New Delhi on 1 to 2 March 1984.

Workshop

The Workshop Department is engaged in research and development of Science equipment for schools; prototype and batch production of science kits on the request of various states; training of ITI apprentices and resource persons from States/UTs and foreign countries; central storage and distribution of office equipment, and maintenance activities. The major thrust is on the development of low-cost science equipment for schools.

Design and Development

Research and development work in bringing out cheaper versions of apparatus like barometer, molecular models, models in oceanography, etc., was being carried on.

Two panels depicting the use of low-cost materials from local resources in teaching science at the primary level were developed and displayed in the Ministry of Education and Culture.

On the recommendations of the Advisory Committee of the National Science Exhibition, a Science Club Kit was developed. This new kit contains 58 items of hand tools, instruments, multipurpose tools specially designed by the NCERT, consumables and first-aid equipment. It facilitates average range of fabrication work generally required by students and teachers for setting up experiments and preparing science exhibits. The first prototype of Integrated Science Kit for Classes VI to VIII has already been developed and the kit was demonstrated to school teachers.

Exhibits, panels, stands, etc., for the National Science Exhibition for Children, 1983, were developed and displayed by the workshop.

Batch Production

Four hundred primary science kits were despatched to the SIE, Jammu and SIE, Goa, and six primary science kits to other institutions. Nearly 3,000 primary science kits were ready for despatch.

Training

Seven ITI apprentices and one engineering diploma-holder apprentice are being trained in different trades every year. Related instruction classes for some trades are also being conducted in the Workshop Department.

Personnel from states and foreign countries on short visits to the Department were given the necessary exposure to the design and development aspect.

A team of three science educators from Bhutan was trained for two weeks in July 1983 in the design and development of science equipment. This programme was sponsored by UNICEF which had also sought consultancy services from the NCERT to design and prepare science teaching kits to meet the specific needs of Bhutan.

The NCERT played host to the inter-country study visit of a five-member team from five South-East Asian countries. In addition to their orientation on the activities of the Workshop Department, they were shown a few large and medium-scale private firms in Ambala manufacturing science equipment.

One UNESCO-sponsored workshop titled 'Development of Science Equipment from Local Resources for Teaching Science at Elementary Level and Functioning and Management of Workshop Manufacturing Science Equipment' was held from 15 to 30 December 1983. Twenty-two states/UTs sent participants. The panel of resource persons had two international experts, besides the NCERT faculty members.

Nineteen work experience teachers of Kerala were trained in the production of science equipment from 27 February to 7 March 1984.

The NCERT appointed a Review Committee to review the Science Club Kit and give recommendations. The Committee met on 20 February 1984.

Miscellaneous

The Workshop Department continued to look after the repair and maintenance of the fleet of NIE vehicles, hot and cold weather equipment, public address system, miscellaneous electrical and electronic gadgets, etc. Apart from the repair and maintenance activities, the work pertaining to the beautification of the Campus such as guide maps, indicators, fabrication of sheds, children's park equipment, etc. was undertaken by the Department.

10

Population Education

THE National Population Education Project entered its fourth year during 1983-84. In the first phase nine States and one Union Territory had joined the project in 1980-81. In the second phase the number rose to sixteen States and two Union Territories in 1981-82. By 1982-83 there were twenty-one States and seven Union Territories implementing this project. The fourth year was essentially a year of consolidation, where emphasis was on bringing about a qualitative improvement in its functioning and material development.

Significant Achievements of the Project

- The number of population education cells in the States and Union Territories rose from seventeen to twenty-seven.
- Twenty-two States and Union Territories had developed their syllabi in population education and incorporated those ideas and

- contents into the on-going school syllabi of a few selected subjects.
- Seventeen States and Union Territories had developed packages for training teachers, teacher-educators and school administrators.
 - The number of educational inspectors and supervisors oriented to population education rose to 6,404 from 3,076 last year.
 - The total number of teachers who received orientation in population education rose spectacularly from 50,000 to 3,14,352 as a result of special instructions issued by the National Steering Committee presided over by the Secretary to the Government of India, Ministry of Education and Culture. The orientation ranged from two to five days.
 - Twelve thousand pupil-teachers in elementary teacher training institutions were given orientation in population education in Madhya Pradesh.
 - Instructional material was being produced in eleven regional languages and the total number of titles so brought out rose from 156 in 1982-83 to 234 in 1983-84.
 - The total number of copies of these titles, both printed and cyclostyled ones, rose to 9,44,450 whereas this figure till 1982-83 was only 2,98,875.
 - Over two hundred and fifty slides on population education were prepared by the states on the model presented by the NCERT (264 slides) in 1982-83.
 - The states on their own developed 240 charts and 24 posters. They also prepared graphic aids, lecture cards, transparencies and audio-tapes for the training of teachers. A couple of states had used puppetry also for conveying the message of a small family norm. One state developed and staged a full-fledged drama on this subject.
 - The number of states that had initiated pedagogical research in population education had increased from five in 1982-83 to 13 in 1983-84. The number of topics rose from 17 to 34 during the period.

National-level Programmes

The major thrust of the activities at the Centre was to help the state project teams in improving the quality of materials at their level. For this purpose it had worked on three different fronts :

- (i) Development of sample materials.
- (ii) Distribution of a Training Package to the States.
- (iii) Preparation of a Battery of Evaluation Tools.

Development of Sample Materials

The Population Education Unit of the NCERT developed and circulated to the states the learning materials in population education for the non-formal sector (age 9-14). This was a result of two all-India workshops held at the Punjab Agricultural University, Ludhiana, and the Regional Institute of English, Bangalore.

Radio and television scripts on population education were developed in English and Hindi in two all-India workshops at Delhi and Pachmarhi. Participants and experts representing varied competencies relevant to each case, were invited from all over the country.

The NCERT has also undertaken a project to develop non-projective teaching-learning aids that can be used in ordinary classrooms.

Distribution of a Training Package to the States

The slides and taped commentary developed at the national level both in Hindi and English separately multiplied and 100 sets consisting of 264 slides and three audio-tapes were distributed to the states so that the teacher training programmes in the states could be woven around this training package. The states were also provided with a slide projector and a tape recorder each. The set was accompanied by a training manual. The impact of this strategy was visible from the fact that the states took up the training of teachers more confidently and in a big way during this year.

Preparation of a Battery of Evaluation Tools

Population Awareness Tests for three levels—A, B and C—have been finalized. These are meant for finding out population awareness among students and teachers as mentioned below :

Level—A Test : Students of high schools and teachers of primary schools.

Level—B Test : Secondary school teachers and graduates.

Level—C Test : Senior secondary school teachers, school administrators and project personnel.

The tests take into account not only the cognitive aspect but also conative and affective domains. The tests are accompanied by a manual giving detailed instruction for administering tests and scoring responses and consolidating the findings.

In addition, the NCERT has initiated the development of another series of tools that would help in evaluating various components of the programmes such as curriculum, instructional materials, textbook lessons, classroom and demonstration lessons by teachers, and training modalities. For this purpose, workshops were held at Varanasi and

tools were further tried out in a workshop held at Waltair. Action was taken to select the best materials from among those developed by the states. This resulted in promoting competitive spirit among the states to produce quality materials.

Inter-State Visit to Maharashtra

As a sequel to the decision taken by the National Steering Committee, all the Directors and Coordinators from Phase I and Phase II states were invited to observe very closely the modalities followed by the Government of Maharashtra in organizing massive training programme simultaneously at 170 centres covering 28 districts in a single week.

Extension of the Project to Secondary Teacher Training Institutes

The programme which was so far confined to schools only was, this year, extended to cover the secondary teacher training institutes in the country. It was decided to involve all the four Regional Colleges of Education and to develop them as resource centres. Also, a workshop was organized at Udaipur in August 1983 to develop common guidelines and sample curriculum outlines in Population Education for B.Ed. and M.Ed. courses. The activities of the RCEs in the area of population education have been reported in Chapter 8.

The National Steering Committee met as usual every six months. The Committee is headed by the Secretary, Ministry of Education and Culture, Government of India. The meetings were attended by State Education Secretaries, Project Directors, representatives of selected Central Ministries and important educational apex bodies. The Committee expressed satisfaction over the spontaneous response being received from teachers, school administrators and state authorities. It recommended that the targets in regard to the teachers to be oriented to this programme should be upgraded. It also felt that since the project had made a very good start, the efforts need to be continued in the next Five Year Plan also. The last meeting was held in November 1983.

Tri-partite Progress Review Meeting

All the three parties committed to this programme meet once a year to review the progress. The meeting was held on 2 September 1983 in which the Government of India, UNESCO and UNFPA representatives participated. The review of the activities led to the conclusion that it was one of the largest and most successful projects of its kind anywhere in the world. Experiences gained under this project are keenly

awaited by many developing or third world countries. The emphasis on working within the existing school system and its apparatus without creating new structures was the major point of appreciation.

The strategy of incorporating population education in to the existing school subjects, syllabi and textbooks was a special feature that impressed the UNESCO and UNFPA representatives. The orientation of textbook authors of various school subjects drew specific attention of these representatives. The Committee also recommended extension of the project in the next Five Year Plan.

Project Progress Review (PPR) Meetings

Four PPR meetings were held during the year under report.

- (i) PPR meeting to review progress made by Central Population Education Unit.
- (ii) PPR meeting to review the progress of Phase III states.
- (iii) PPR meeting to review the Progress of Phase I and Phase II states.
- (iv) PPR meeting to review the Progress of Central Population Education Unit.

The meetings were held in Delhi, Dharwar and Bhopal. The occasions were used to review the progress made and also to reschedule the activities along with budget estimates. The meetings were attended by the representatives of the Government of India, Ministry of Education and Culture, Ministry of Health and Family Welfare, UNESCO Regional Office, Bangkok, UNFPA (local representatives) and the NCERT, New Delhi.

The PPR meeting at Bhopal also discussed, among other things, guidelines for developing state population education projects to be incorporated in the Central Sector of the Seventh Five Year Plan.

Foreign Delegations

UNESCO Regional Office for Asia and Pacific selected the Population Education Unit of the NCERT for the purpose of attaching two senior State officials from the Republic of Vietnam, Mr. Vu Ngoc Binh, Secretary and Coordinator of National Population Education Project and Mr. Mai Xuan San, Director of National Population Education Project, for a period of one month in December 1983. They were given intensive training at the headquarters and then were also taken to the State Institute of Education, Allahabad, the Education Department, Lucknow, and to the schools in the neighbourhood of Delhi and Agra. The team was highly impressed with the strategies followed by the NCERT in implementing population education in India.

An eight-member delegation from Bangladesh spent eight days in Delhi, Haryana, Rajasthan and Uttar Pradesh. The team was appreciative of being able to see the programme in action in terms of curriculum development, preparation of instructional materials, organizing training programmes at various levels and evaluation techniques followed in the appraisal of the programme.

Under the UNESCO inter-country mobile training programme a composite team of fellows drawn from Pakistan, India, Nepal and Thailand visited India for a week. The team spent two days with the Central Unit in the NCERT and then visited Uttar Pradesh and Bihar projects to have an idea of actual implementation of the programme in the field.

An Afghan team consisting of eight members visited India in connection with adult education. They visited the Central Population Education Unit of the NCERT to have an idea of the educational component of Population Education.

A two-member high power delegation from Somalia visited the NCERT to acquaint themselves with the modalities and strategies of implementing the population education programme in India.

Participation in Inter-national Programmes

The NCERT was called upon to assist UNESCO in organizing a week-long Regional Seminar on the Coherence of Formal and Non-formal Population Education for Asia and the Pacific Region. The Seminar was organized in Bangalore from 16 to 23 May 1983.

Dr. A.L.N. Sarma, Reader, NCERT, participated in the Inter-country Mobile Training Programme from 27 November to 5 December 1983 and visited Thailand. He also toured Uttar Pradesh and Bihar along with the UNESCO team.

Monitoring and Coordination

As the project has now reached almost every part of the country, monitoring and coordination have acquired added significance. This is also very necessary in order to ensure qualitative improvement in the implementation of the programmes which is essentially a state's responsibility.

The NCERT staff frequently visited the states. Organization of various workshops, seminars, PPR meetings, and visits of foreign delegations also helped in this task.

11

Educational Evaluation

EVALUATION is an integral component of all educational exercises as it provides the necessary feedback for bringing about the desired changes in the approaches and strategies followed in conducting such exercises. Educational evaluation has to be objective-based, comprehensive, scientific and continuous. As a part of the programme of improving educational evaluation, the NCERT has been working on examination reform through activities in the areas of research, training and extension and development of sample evaluation materials. In this field the NCERT has been working in close collaboration with the Boards of School/Secondary Education.

Guidance material is developed in the form of a series of handbooks on evaluation and also unit tests in the various subject areas. Intensive training courses of Educational Evaluation and on a number of sub-themes in the area are organized. Consultative services are also

offered to a variety of agencies seeking them. The continuous development of publications further enriches the programmes.

Research

Analysis of External Examination Results for 1980 and 1981

Data were collected from the Boards of Secondary and Higher Secondary Education regarding the number of students who appeared, passed and obtained first division in 1980 and 1981 at the end of classes X, XI and XII. The compilation regarding the number of students who had obtained first division in Boards of Secondary and Higher Secondary Education in 1980 and 1981 was circulated among the Boards for verification. Most of the Boards have verified the data. The same would be analysed as soon as all boards have verified the data.

A Study of Practices in Paper-Setting and Evaluation of Scripts by Boards of Secondary/School Education

A study was taken up to study the paper-setting practices and evaluation of scripts by different State Boards of Education in the country. A questionnaire was prepared and sent to the Boards for the collection of data.

A Study to Determine Cut Scores for Screening of the Candidates for NTS Scholarships

A Study of the Items and Test Scores of NTS Tests, 1982, for Classes X and XII and Their Effect on Final Selection

Analysis plans for both the projects were being developed.

In-depth Study of Government of India Merit Scholarship Scheme in Approved Residential Schools

This study was undertaken at the request of the Ministry of Education to evaluate the various aspects of the Government of India Merit Scholarship Scheme in approved residential schools. A number of questionnaires were developed to study the various aspects. On the basis of the data received from scholars, their parents and various other agencies, a number of suggestions were made for the improvement of the scheme. The report was submitted to the Ministry of Education for their comments.

Social and Cultural Changes and Changes in Creative Functioning in Children

The project has been completed and the report was being finalized.

An Intensive Study of the Accomplishments of the Science Talent Search Scholars

Part I of the questionnaire was analysed in terms of background factors, parental attitudes, school/college perception, perception about the teacher, etc., of the talented. Analysis of Part II of the questionnaire was taken up and relevant literature was being reviewed.

Educational and Vocational Aspirations of Students of Class XII

The interview schedule was tried out in four senior secondary schools of Delhi with the help of local teachers. Analysis plan was under preparation.

Development

Development of Criterion-Referenced Tests in Environmental Studies at Primary Stage

As a part of this project, the NCERT syllabus of Environmental Studies (Science) for Class III was sequenced and learning units were identified. A working group was organized to develop major concepts and intended learning outcomes under various domains in different learning units. Criterion-referenced tests on each learning unit were prepared for pilot try-out.

Symposium on Educational Objectives

A two-day symposium on educational objectives in evaluation was organized on 1 and 2 November 1983 at the NIE Campus. Papers were presented and discussed. The contributors were requested to finalize their papers in the light of the suggestions.

Handbook on Evaluation in Life Sciences

A four-day working group to finalize the synopsis of the Handbook of Life Sciences was held at the NIE, New Delhi, from 17 to 20 January 1984. Fourteen experts in the subjects participated.

Handbook on Evaluation in Economics

The first draft of the handbook containing nine chapters had been prepared. It is being sent to 35 experts for comments. After receiving comments, it would be finalized and sent for printing.

Handbook on Evaluation in History

A preliminary meeting was organized from 6 to 10 February 1984 at New Delhi to discuss and finalize the synopsis of the Handbook of Evaluation in History. It was attended by nine experts from schools, colleges and the State Councils of Educational Research and Training.

Handbook on Evaluation in Geography

The manuscript of the Handbook of Evaluation in Geography was discussed in a meeting with experts from 19 to 24 March 1984 at the NIE Campus, New Delhi.

Handbook on Evaluation in English

A draft of the Handbook on Evaluation in English was developed. It was discussed by a group consisting of six experts in English in May 1983. The modifications suggested were incorporated in to the manuscript and it was sent for printing.

Unit Test in Civics for Classes IX and X

A workshop for developing Unit Tests in Civics for Classes IX and X was organized from 1 to 8 February 1984 at the NIE Campus, New Delhi. Unit Tests in Civics were developed. After a thorough review, these would be circulated among the various educational agencies for their use.

Unit Tests in Chemistry at the +2 Stage

A workshop for the development of Unit Tests in Chemistry for Class XI was conducted from 27 January to 3 February 1984 at the NIE Campus, New Delhi. During the workshop, which was attended by 26 participants, units tests in Chemistry for Class XI based on the NCERT textbook were developed. These were finalized and refined by a small working group in a meeting from 12 to 18 March 1984 at the NIE Campus.

Item Bank in English for Classes IX and X

A working group meeting was held from 21 to 25 February for vetting and finalizing the Item Bank in English language for secondary classes which was prepared in an earlier workshop. Three eminent teachers of English participated in the workshop.

Handbook on Evaluation in Social Sciences (Political Science) at the + 2 Stage

A few chapters of the handbook were developed.

Improvement of External Examinations of the Boards of Secondary School Education

The NCERT continued to work with the various boards of secondary education in the programmes of examination reform. This is briefly listed in the activities mentioned below :

Work with Rajasthan Board. The NCERT organized, in collaboration

with the Board of Secondary Education, Rajasthan, a workshop at Ajmer from 7 to 10 February 1984 to refine the materials developed in a workshop held at Jodhpur. Two unit tests in each subject were also developed—one for Higher Secondary and the other for Secondary Education. The Chairman, Board of Secondary Education, has agreed to publish the subject-wise units. The workshop was attended by 16 participants.

Work with Bihar Board. An orientation course in the techniques of paper-setting was organized for secondary schools at Jamshedpur from 21 to 28 March 1984. The teachers prepared objective-based questions in Mathematics and Science.

Work with J and K Board. Two working groups of paper-setters of the Jammu and Kashmir Board of Education were organized in the techniques of paper-setting in the subject areas of Science, Social Sciences and Humanities. Sample question papers were prepared. The Board has circulated them to the affiliated schools.

Work with Karnataka Board. Thirty-four paper-setters of the Karnataka Board were trained in the subjects of Physics, Chemistry, Biology and Mathematics in a seven-day workshop held at Bangalore. The trainees prepared specimen question papers. A report entitled 'Technology of Paper-setting' was brought out at the end of the training course.

Work with Madhya Pradesh Board. The existing and prospective paper-setters of the M.P. Board of Education were trained in the principles of developing balanced question papers, in an eight-day workshop organized in September 1983. Sample question papers were developed in the area of Social Sciences. The papers would be printed and circulated to the affiliated schools by the Board.

Training Courses

Intensive Training Course for Item Writers in Mathematics for Eastern Region

A fifteen-day training course in evaluation in Mathematics for the eastern region was held at the Technical Teachers Training Institute, Calcutta, from 15 to 29 February 1984. In all, 32 participants from Assam, Bihar, Manipur, Mizoram, Tripura and West Bengal participated. Besides orientation in educational evaluation, practical training was provided in the preparation of test items, unit tests and sample question papers.

Training Course in Educational Evaluation in Economics

An eight-day training course in evaluation in Economics was held at

the NIE Campus, New Delhi, from 13 to 20 February 1984. Twenty-three participants drawn from West Bengal, Bihar, Uttar Pradesh, Tamil Nadu, Goa, Maharashtra, Haryana, Punjab and Delhi attended the course. The course aimed at training key persons who would help the Boards in setting balanced question papers in the subject.

Intensive Training Course for Item Writers in Sciences for Southern Region

An intensive training course for item writers in sciences for the Southern Region was organized at Bangalore from 29 February to 9 March 1984. There were 38 participants from Goa, Karnataka, Kerala, Maharashtra, Pondicherry and Tamil Nadu. Besides lectures on various concepts relating to educational evaluation, various types of objective-based questions were framed.

Intensive Training Course for Item Writers in Mathematics for Southern Region

A twelve-day training course in evaluation in Mathematics for the Southern Region was held at Hyderabad from 29 March to 12 April 1984. In all, 29 participants from Andhra Pradesh, Kerala, Karnataka and Tamil Nadu attended the course. Besides orientation in evaluation, practical training was provided in the preparation of test items, unit tests and sample question papers in Mathematics.

Special Programmes

The NCERT organized a three-week training course in educational evaluation for senior officers of the Indian Air Force, at the request of the Directorate of Education, Air Force Headquarters, New Delhi. It was attended by 21 officers (Squadron Leaders and Wing Commanders) connected with the conduct of selection, trade certificate and promotional examinations at various levels in the Air Force. The objectives of the course were to identify the objectives of the different courses provided by the Air Force to the Airmen, and to prepare comprehensive sample question papers for these courses.

Consultancy

The NCERT provided an eight-week attachment programme to a UNESCO-sponsored Fellow from Sri Lanka who was working as adviser on evaluation in the UNDP Project. The training in India enable the Fellow to develop suitable insight into the processes and design of evaluation system with special reference to vocational subjects.

Assistance was given to the Open School of the Central Board of Secondary Education, Delhi, in the preparation of balanced question

papers in the subject of English for Class X. The papers were printed by the Board and circulated to the students for their guidance.

Assistance was also given to Science Branch, Delhi Administration, in June 1983 in training the participants for preparing objective-based test items in Physics, Chemistry and Biology. About 300 test items were prepared.

Publication

The following publications were brought out during the year under report :

- (i) A monograph on Improving Practical Examinations in Science.
- (ii) Unit Tests in English for Class XI.
- (iii) Unit Tests in English for Class XII.
- (iv) A monograph on Criterion Referenced Testing.
- (v) Statistical Data regarding First Divisioners in Boards of Secondary and Higher Secondary Education for 1980 and 1981.
- (vi) Educational Objectives in Evaluation.
- (vii) Educational Objectives and Specifications for Testing.
- (viii) Indepth Study of Government of India Merit Scholarship Scheme in Approved Residential Schools.
- (ix) Objective-based Teaching and Testing (Sample Teaching Learning Unit in Biology).

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Survey, Data Processing and Documentation

THE NCERT conducts surveys, provides data-processing services, disseminates information, and provides training to the state-level officers in charge of educational planning and officers in State Institutes of Education in the application of sample survey methods in education.

The data provided by the surveys help in the planning and location of schools in the areas not provided with schooling facilities. The survey is followed by planning educational facilities from the block level onwards.

The NCERT has a terminal link with a bigger computer located at the National Informatics Centre Headquarters, New Delhi. It is equipped with LSI-11 computer terminal and other data-processing machines helping it to considerably enhance data-processing capabilities and

computer use for various purposes. The terminal is equipped with LSI-11/10 processors having 320 K 16-BIT words memory.

EDUCATIONAL SURVEYS

Impact of Midday Meal Programme on Enrolment and Retention Rates at Primary Stage

The NCERT conducted a study on the impact of the CARE-supported midday meal (MDM) programme on enrolment and retention rates at the primary stage of education. The study attempted to assess the impact separately in respect of boys and girls and Scheduled Castes/Scheduled Tribes, and it covered the states of Andhra Pradesh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal.

Besides analysing the data from all the 12 states, the states were classified in to two clusters, namely, the states having the CARE-assisted as well as indigenous MDM programme and the states having only CARE-assisted MDM programme. The data considerations made it imperative to form another cluster by excluding the states of Uttar Pradesh and Maharashtra and also one district of Karnataka. Analysis of data was undertaken on all the clusters wherein the unit of measurement was the administrative district. The study also attempted to assess the impact of MDM programme on enrolment and retention rates in the states of Haryana and Karnataka separately by taking a block as unit of measurement. The data analysis involved step-down regression analysis, analysis of variance and co-variance.

The district level study indicated that the midday meal programme did have impact on enrolment rates. It was strongly reflected in the case of girls' enrolment. The block level study in Haryana and Karnataka not only corroborated the above findings, but also provided stronger bonds between enrolment and midday meal programme. Definite impact of MDM programme was indicated in the states with higher proportion of economically weak population. The evidence of impact of MDM programme on retention rates was not, however, as much conclusive as it was in the case of enrolment rates.

Study of Stagnation and Dropout Rate at Primary Stage

The sample study attempted to estimate stagnation and dropout rates at the primary stage separately for boys and girls, Scheduled Castes and Scheduled Tribes for rural and urban areas without probing into the causes. The methodology for estimating the rates was based on restructured cohort method. The study covered the following states:

1. Andhra Pradesh

2. Assam
3. Bihar
4. Jammu and Kashmir
5. Madhya Pradesh
6. Orissa
7. Rajasthan
8. Uttar Pradesh
9. West Bengal
10. Himachal Pradesh.

The state of Himachal Pradesh though not educationally backward, was included in the study at the request of the state government. The sampling design used in the study comprised multi-stage stratified sampling scheme. In order to control the errors due to mis-classification in the data, it was proposed to use on-the-spot sample checking of 10 per cent schools with the assistance of district level officers and of 1 per cent schools by the members of the research team of this unit along with the state officer in charge of the project. Data collection was completed in Bihar, Himachal Pradesh and Madhya Pradesh and it was in progress in Andhra Pradesh, Jammu and Kashmir, Orissa, Rajasthan, Uttar Pradesh and West Bengal. Data collection could not be undertaken in Assam due to delay in selection of schools by the state government.

Study of Educational Backwardness of Girls

The study was undertaken in eight states where the enrolment of girls at the primary stage lags far behind that of boys, with the objectives of finding out to what extent the different factors contribute to poor enrolment of girls and proposing suitable measures to achieve greater access for girls to education. The states selected are :

1. Andhra Pradesh
2. Bihar
3. Haryana
4. Jammu and Kashmir
5. Madhya Pradesh
6. Orissa
7. Rajasthan
8. Uttar Pradesh.

In all, 27 districts representing educationally backward regions in these states have been covered under the study. One district has been selected from each region on the basis of percentage of girls enrolled at the primary stage. Special features such as predominance of SC/ST population have also been taken into account. The study provides

insight into the problems of girls' education. The report is under preparation.

Sample Survey of Educational Facilities for SC/ST in Rajasthan

The study has two main components, namely, to assess the availability of educational facilities for elementary education in habitations predominantly populated by SC/ST and their utilization and to ascertain the reasons why children of these communities do not either join the school or drop out before completing the elementary education. Four blanks, namely, Habitation Information Form, School Information Form, Teachers Opinionnaire, and Interview Schedule were used for the collection of data. The study is confined to Bharatpur and Dungarpur districts of Rajasthan. Data have been collected and analysed.

DATA PROCESSING

The main activities in the area of data processing include transfer of data on cards/tapes, designing of the systems, development of computer programmes and processing of data on computer. Various types of statistical analysis, from simple to complex in nature, were carried out for a number of research projects undertaken by different departments/units of the NCERT. Like previous years, this year also, the results for the National Talent Search Examination 1983 for Classes XI and XII were prepared.

Consultancy and help were provided to researchers in the designing of their projects, application of different statistical techniques, development of plans of analysis and interpretation of results.

Seminar on Experimental Application of Sample Survey Methods for Collection of Educational Statistics

The seminar was organized in collaboration with the Ministry of Education and UNESCO to discuss the problems faced in data collection and compilation. It also considered the role of sample surveys in checking accuracy of data and in filling data gaps. Theoretical and practical issues in organizing large-scale surveys for the collection of educational statistics on the basis of the reports presented by those in charge of the project in the four states were discussed in the seminar, which was attended by 27 representatives from twenty States and Union Territories. In addition, there were participants from the Ministry of Education and Culture, the NCERT, the NIEPA, and the Educational Division of the Planning Commission, and representatives from UNESCO and ESCAP.

Training Course on Application of Sample Survey Methods in Education

The NCERT conducts every year 10/12 days' training course on Application of Sample Survey Methods in Education for the staff of SIE's/SCERT's and Planning Officers of Education Departments in various States and Union Territories. The fourth such course was organised at the Regional College of Education, Mysore, from 12 to 22 December 1983. In all, 18 representatives from 14 States and Union Territories attended this training course.

Publications

The following publications were brought out :

- (i) Role of Sample Surveys in Education.
- (ii) Impact of Midday Meal Programme on Enrolment and Retention Rates at Primary Stage. Two reports viz. a main report which gives results in detail and an abridged version, on the study were mimeographed.

LIBRARY AND DOCUMENTATION

The Library and Documentation Unit (LDU) continued to provide various services to its users. The details of the year under report are given below :

<i>Total No. of holdings</i>	124208
<i>Books added during 1983-84</i>	
Number of books purchased for LDU	2521
Number of books purchased for project of Departments	186
Number of books received gratis	244
Number of bound volumes of periodicals accessioned	364
Total number of books added	<u>3315</u>
<i>Periodicals</i>	
Periodicals subscribed	330
Periodicals received on exchange	20
Periodicals received gratis	161
Number of Newspapers received	16
Total	<u><u>527</u></u>

Documentation Services

The following documentation services were provided :

Accession List	10 issues
Current Contents	12 issues

Press Clippings prepared
Indexing of articles

1135
1 issue

Reprography

The LDU continued to provide extensive Photo-copying services and 7,000 copies were made and supplied to scholars and members of the faculty.

Exhibition of Books

An exhibition of books on Special Education was organized by the Unit in collaboration with the Department of Teacher Education. Over 500 latest books on the subject were displayed.

Circulation and Reference

Number of new members enrolled (NCERT staff members)	137
Number of external members enrolled	102
Temporary members on the roll	80
Total number of members	2,099
Number of users who availed consultation facilities	14,624

Extension of Library Hours :

On persistent demand from users, the working hours of the library were extended. It functions from 9 a.m. to 8 p.m. on all working days with effect from 1 July 1983.

Maintenance Services

Number of mutilated/damaged books rendered unserviceable weeded out and written off following the prescribed procedure	550
Number of books got bound	2,500
Number of periodicals got bound	343 Vols.

Stock verification being conducted in phased manner on the basis of *Shelf-List* was continued.

Publication

A publication titled 'Select Abstracts on Teachers' was compiled. The project was undertaken on the request of the National Commission of Teachers. It is a comprehensive document on the subject and carries 374 abstracts running into 336 pages.

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Research and Innovations

RESearch and support for research are important activities of the NCERT. Apart from the Departments/Units and the Regional Colleges of the Council undertaking research, the NCERT supports educational research by providing financial assistance to outside organizations. It also provides junior fellowships so that educational problems are investigated and a band of competent research workers is created in different parts of the country. Most of the research undertaken or supported by the NCERT is in identified areas of priority.

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

and RCEs are permanent invitees.

The main functions of the ERIC are :

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

To provide fellowships for undertaking research in education ;

To award publication grants for Ph.D. theses, monographs, etc., and

To disseminate research findings from time to time and to organize research conferences on educational research.

The research proposals that NCERT receives from its departments/units are first evaluated by a Screening Committee of external and internal members under the Chairmanship of the Joint Director. Evaluation of the proposals is generally made on the criteria of worthwhileness, adequacy of design, etc.

The research proposals received from other institutions and requests for publication grants are evaluated by eminent experts in different fields of specialization. Research at the doctoral level on educational problems is supported through junior research fellowships, both at the NIE and the RCEs.

Conferences/Seminars/Lectures

Under the NIE Lecture series eight speakers were invited. The talks given by them were on a wide range of topics. The names of these eminent persons and the topics on which they presented their views are given below.

<i>Speaker</i>	<i>Topic</i>	<i>Date</i>
Prof. Harry McMohan, New University of Ulster, Northern Ireland, UK	Micro Computers in Education	6 April 1983
Prof. J.P. Das, Centre for the Study of Mental Retardation, University of Alberta, Edmonton, Canada	Culturally Deprived or Learning Disabled Children	29 April 1983
Mr. Michael Aston, National Coordinator for Computer Based Learning, Department of Education and Science, Micro-electronics Education Programme, Hertfordshire, UK	Current Status of Micro Computers in Education	25 July 1983
Mr. David Squires, Adviser for Computers in Education for the County of Devon, UK	Computer-assisted Learning— A Review of Prospects	26 July 1983
Prof. Reatha Clark Kings, Metropolitan State University, Minneapolis (USA)	Individual Corporate Identity— What are Options and Initiatives ?	26 September 1983

Prof. Hugh Hawes, Department of Education, University of London	Education in Developing Countries—Curriculum Development	27 September 1983
Prof. Betty Ann Levy, Professor of Psychology in McMaster University, Canada	Reading Fluency in Children—Research Findings	17 November 1983
do.	Aiding Memory Development in Children	18 November 1983
Ms. Polly Hill, Polly Hill Associates, Ottawa, Canada	Creativity Centre for Children	28 December 1983

Completed Research Projects

The research projects completed during the year under report are listed in the table below. This is followed by brief accounts of the main findings of these projects.

<i>Title of the Project</i>	<i>Principal Investigator</i>
Effect of Mastery Learning Strategy (MLS) on Pupil Achievement	Dr. R.C. Hooda Indore
Problems of Girls studying in Coeducational Institutions of Varanasi Region	Dr. (Smt.) Kamala Rai Varanasi
Study of the Effects of Teacher Expectations on the Sociometric Status of Primary Grade Pupils	Dr. N.C. Dhoundiyal Almoṛa
Problems of Education of the Weaker Sections of Society with special reference to Weaker Sections in Baroda District	Dr. S D. Joshi Baroda
A Critical Study of the Single Teacher Schools and Plan for Improvement	Dr. M.G. Mali Gargoti, Kolhapur (Maharashtra)
Physics Education using Non-Formal Methods	Dr. K.N Singhal Udaipur
Development of Effective Teaching Methods for School Subjects	Prof. K.S. Gupta Calcutta

EFFECT OF MASTERY LEARNING STRATEGY (MLS) ON PUPIL ACHIEVEMENT

Principal Investigator : *Dr. R.C. Hooda*

The objectives of the investigation included, inter alia :

- (i) to study the effectiveness of MLS and conventional method of teaching in relation to pupil achievement in mathematics,
- (ii) to study pupil achievement in mathematics adjusted on intelligence, socio-economic status and pre-achievement in mathematics, taught through mastery learning strategy and conventional method,
- (iii) to study the change in attitude of pupils towards mathematics due to MLS.

The sample comprised 55 pupils in the age group 11-13 years, of two sections of Class VI of a boys' government middle school in Indore, from below average socio-economic strata. The experiment was confined to eight units in mathematics.

The study revealed : (i) The students taught through mastery learning technique showed higher gains in mathematics than those taught by the conventional method. (ii) Even when statistically adjusted for initial differences in intelligence, socio-economic status and pre-achievement, the treatment group performed significantly better. (iii) The self-concept and attitude towards mathematics did not show significant improvement over the period of treatment though the attitude towards mathematics of students taught through mastery learning showed higher gain scores. (iv) The mastery learning strategy for teaching mathematics was more effective in increasing non-verbal creativity, viz., fluency, flexibility, originality, elaboration and total score in non-verbal creativity. (v) Verbal creativity of students, namely, fluency, flexibility, originality and composite creativity improved significantly after being taught mathematics by mastery learning strategy.

PROBLEMS OF GIRLS STUDYING IN COEDUCATIONAL INSTITUTIONS OF VARANASI REGION

Principal Investigator : *Dr. (Smt.) Kamla Rai*

The major objectives were : (i) to find out the problems of adolescent girls studying in coeducational institutions in the areas of health and physical development, finance, living conditions and employment, social and recreational activities, social-psychological relations, personal-psychological relations, courtship, sex and marriage, home and family, moral and religion, adjustment to school and work, the vocational and educational future and curriculum and teaching procedure, (ii) to find out the problems of adolescent girls studying in segregated girls' institutions in the area, (iii) to compare the problems of coeducational and segregated institutional adolescent girls, (iv) to study the adjustment of adolescent girls in coeducational and segregated girls' institutions, (v) to find out the relationship between socio-economic status and adjustment problems of adolescent girls in coeducational and segregated institutions, (vi) to compare the adjustment problems of girls from different SES in coeducational and segregated institutions, and (vii) to find out rural-urban differences in problems and adjustment in co-educational institutions.

The sample comprised 1,016 and 912 girls from coeducational and segregated girls' high or higher secondary schools (Classes IX, X, XI and XII) of five districts of Varanasi region, namely, Varanasi, Ghazipur,

Jaunpur, Ballia and Mirzapur.

Some of the findings of the study were : (i) The three major problems faced by the girls in coeducational schools were in the areas of social and recreational activities, courtship, sex and marriage and finance, living conditions and employment. (ii) Girls in segregated girls' institutions encountered maximum problems in the areas of social and recreational activities, courtship, sex and marriage and home and family while they faced the least problems in the areas of social-psychological relations, curriculum and teaching procedure and moral and religion. (iii) Girls in coeducational institutions had significantly better home, health, emotional, school and total adjustment than those in segregated schools. (iv) Adjustment and socio-economic status were positively related. (v) Girls in segregated institutions of upper SES had poorer home and emotional adjustment than those of middle SES. (vi) Girls in segregated institutions of upper SES had poorer emotional adjustment than those of lower SES. (vii) The coeducational school girls of upper SES had better total adjustment and were better adjusted in the areas of home, health and social and emotional areas than those in segregated institutions. (viii) Girls of middle SES in coeducational institutions were better emotionally adjusted than those in segregated institutions.

STUDY OF THE EFFECTS OF TEACHER EXPECTATIONS ON THE SOCIO-METRIC STATUS OF PRIMARY GRADE PUPILS

Principal Investigator : *Dr. N.C. Dhoundiyal*

The study aimed at assessing the effects of teacher expectations on the sociometric status of pupils. The specific objectives were : (i) identification of populars and neglectees, (ii) experimental indication of populars and neglectees, (iii) assessment of the acceptance of experimentally induced positive and negative expectations by the teacher, (iv) assessment of the effect of experimentally induced positive and negative expectations on the sociometric status of populars and neglectees, (v) assessment of the effect of experimentally induced positive and negative expectations on the teachers' ratings of populars and neglectees in relation to certain student characteristics.

Children in Grades IV and V of 15 primary schools of Almora and Nainital were studied.

Some of the findings of the study were : (i) There was no significant effect of experimentally induced positive expectations on populars' sociometric status score, emotional expansion score, and teacher rating score. However, a significant effect was noted on social receptiveness score. In the case of neglectees, significant improvement was confined only to their teacher rating score. (ii) There was no significant

effect of induced negative expectations on emotional expansion score and teacher rating score of both populars and neglectees. The emotional expansiveness of both populars and neglectees was unaffected by the negative expectations of teachers. Negative induction of expectations resulted in significant improvement in social receptiveness of populars. (iii) Negative induction of teacher expectations significantly lowered their social receptiveness while there was no effect of negative induction of teacher expectations on the sociometric status of populars. (iv) Positive induction of teacher expectations was found to facilitate a significant improvement in the case of sociometric status, emotional expansiveness status and teacher rating score. Negative expectations, on the other hand, brought about an improvement in the sociometric status of Grade IV populars and an improvement in the social receptiveness status of Grade V populars; no variation across grade was revealed with regard to the teacher rating score of populars in the case of negative induction. (v) While positive induction of teacher expectations facilitated improvement in the sociometric status and social receptiveness status of high age populars, negative induction facilitated an improvement among populars of low age group. (vi) Sex of neglectees was not a significant factor in determining the effect of positive and negative teacher expectations on their social status. (vii) Age of a neglectee more than the grade to which he belonged was more significant in determining the effect of positive and negative induction of teacher expectation particularly positive induction on sociometric status and social receptiveness status. (viii) The level of negative induction acceptance by teachers influenced the effect of negative induction of teacher expectations on the teacher rating score of populars; it was not effective in creating an improvement differential across the two experimental groups of populars.

PROBLEMS OF EDUCATION OF THE WEAKER SECTIONS OF SOCIETY WITH
SPECIAL REFERENCE TO WEAKER SECTIONS IN BARODA DISTRICT

Principal Investigator : *Dr. S.D. Joshi*

In spite of the efforts by the state to provide equal opportunities to all citizens, a few sections of society have not been able to derive full advantage of the educational facilities offered. The study is an attempt (i) to identify the factors affecting the educational pursuit of the weaker sections, (ii) to determine the extent to which each of the identified factors affects the pursuit, and (iii) to suggest a scheme for renovation of education for this section of society.

The main findings were : (i) The level of education of the parents was low and in several cases nil; the parents were mainly wage-earners

without a steady source of income; the home atmosphere was not congenial for studies because of the limited facilities. (ii) The educated members of the village invariably left the village for jobs outside. Though the relationship with neighbours was good, the children of the weaker sections neither enjoyed their company nor received their help and encouragement in studies. (iii) School students aspired to study up to the SSC stage; they aspired to take up the father's occupation, namely, labourers in the fields. (iv) The school students were low on diffidence and rejection, with a high self-concept. (v) Students expressed a liking for school and teachers. They liked school in terms of timings of school and duration of periods, the place of school in their future life and preferred attending school to working in fields. They liked the teachers' attitude towards them, the co-curricular activities offered, classmates' relationship with them and their interest in studies and homework. (vi) Parents had a favourable attitude towards school and education in general, with a feeling that education made better citizens; they did not want their children to take up their occupations. Though parents could not provide academic help, they were eager to extend cooperation and encouragement in their children's education. (vii) Teachers felt that a separate education programme for children of the weaker sections would be helpful for both the groups. However, they accepted the interest shown by children of the weaker sections. (viii) According to the teachers, the problems in the way of learning of children of the weaker sections were : below-average intelligence, poor comprehension, limited experiences and low educational level due to poverty. (ix) On analysis of learning difficulties in Gujarati, arithmetic, science and social studies, children of non-weaker sections had few difficulties but as regards acquiring knowledge of agricultural activities in social studies, personal health and hygiene, and social health and hygiene in science, those in weaker sections faced fewer or equal difficulties.

A CRITICAL STUDY OF THE SINGLE TEACHER SCHOOLS AND PLAN FOR IMPROVEMENT

Principal Investigator : *Dr. M.G. Mali*

The major objectives of the investigation were : (i) to study the physical facilities of the single teacher schools, (ii) to study the extent of wastage and stagnation, (iii) to study the organizational pattern and teaching methods, (iv) to study the policy and working of the administration of zilla parishads, (v) to study the general difficulties faced, (vi) to try out the plan of ungraded unit to avoid wastage and stagnation, and (vii) to suggest suitable plan for the improvement of single teacher schools.

The study revealed : (i) Out of 98 schools in the taluka, only 6 had independent buildings for school use while 54 had sufficient buildings of which only 35 were hygienically sound. (ii) Only two schools had independent playgrounds. (iii) The 98 schools had 160 chalkboards of which only 80 were in a usable condition while only six schools had roll-up boards. (iv) Of the 98 teachers, only nine had a copy of the syllabus which they used while the rest of the teachers were not aware of its need; only 16 schools had an adequate number of textbooks. (v) Teachers were not willing to stay in such schools as they had either to stay away from their families or to spend a considerable amount on travelling to the school everyday. Though most of the teachers were trained, they were not adequately experienced to manage such schools efficiently. They were not aware of appropriate methods, were not able to give suitable assignments or keep other classes engaged while handling one group. The teachers did not know how to prepare a suitable common timetable for the four grades. (vi) Supervision in single teacher schools was non-existent or negligible as the inspecting staff avoid visiting such remote schools in villages where facilities are inadequate. (vii) Though most teachers had undergone a preservice training programme after high school/higher secondary school, none had any specific training for teaching in single teacher schools. (viii) Follow-up of 819 boys and 368 girls enrolled in Class I showed that only 227 boys and 45 girls completed Class IV in four years; 71.3 per cent passed out of Class I, the remainder dropped out; the situation was the same in Classes II, III and IV. (ix) The reasons for dropping out were failure and poor economic conditions besides social and religious reasons for the girls staying away from school. (x) The ungraded model adopted in the Primary Extension Centre attached to the G.K. Institute, Gargoti, was suggested as a model, wherein a variety of methods, namely, individual teaching-learning method, group method, graded teaching method and self-study were experimented upon after appropriate orientation and skill development in preparing suitable assignments. Besides a plan for physical facilities, it was also suggested that tests to judge the performance of students might be used.

PHYSICS EDUCATION USING NON-FORMAL METHODS

Principal Investigator : *K.N. Singhal*

The objectives of the project were : (i) to identify academic problems of science students and teachers at the higher secondary stage and the first year of college, and (ii) to suggest action-oriented programmes.

Academic problems of science students, in general, and physics, in

particular, at the higher secondary and the first year of college were identified through a questionnaire to teachers in schools, colleges and universities in Rajasthan and a few out-side the state. Cyclostyled material was distributed to the participants before the commencement of the programme. The first programme comprised eliciting reactions to questions on enrolment, standard of students syllabi, orientation of physics courses, teaching methods and techniques, utilization of facilities and publication of books. The second programme consisted of a series of competitions, intelligence tests and small investigatory experiments. The third programme comprised interdisciplinary talks on topics of common interest. A large number of answers to questions of a standard book were prepared and provided to students, teachers, lecturers, and professors in Rajasthan and outside so as to create interest in physics. The fifth programme comprised distribution of cyclo-styled material to teachers who were unable to attend short-duration courses because of non-availability of substitutes. In the sixth programme the beginnings of a library movement were made wherein books, particularly in Hindi, on topics of interest were displayed and then circulated for a period of one year. In the seventh programme talks on modern topics were arranged at schools besides bringing school students and teachers in close contact with colleges. Instead of arbitrarily changing the syllabi the responses of 250 students and teachers were communicated to academic bodies to enable evaluation of courses.

On the basis of conclusions drawn in the eight programmes, it was suggested that (i) competitions be held at district as well as state level to motivate students for a better understanding of physics, (ii) interdisciplinary talks by experts be arranged at least once a month, (iii) material comprising thought questions be provided to junior teachers and seminars be held once a year, (iv) short duration courses be held during vacations and holidays for selected students, and (v) formal methods be used alongside non-formal methods; the weaknesses of the former be reduced by adopting non-formal methods.

DEVELOPMENT OF EFFECTIVE TEACHING METHODS FOR SCHOOL SUBJECTS

Principal Investigator : *Prof. K. S. Gupta*

The purpose of the pilot study was to make a statistical investigation into the problem and to suggest effective behaviour dimensions of a teacher in order to evolve hypothesis of effective teaching methods to be subsequently tested through experiments.

For convenience, four average schools, two boys' and two girls', were considered from which 180 pupils of Class IX, comprising an equal

number of boys and girls, were selected. In order to arrive at a consensus on the teaching objectives of each of the seven subjects a seminar was organized. It was a survey type correlational study with cluster analysis in order to isolate possible behaviour dimensions of teachers.

The teaching objectives and method items were recast in the form of teachers' behaviour and eight five-point Likert type attitude scales were developed of which one scale comprised general teacher behaviour and the other seven for the various subjects.

The findings indicated : (i) The broad dimensions of general teacher behaviour were dynamism, meaningfulness and potential mobilization. (ii) For Bengali and mother tongue, the teacher behaviour dimensions were identified as language structure, thought concretization and appreciation. (iii) For mathematics, mathematical reasoning, practice facility and appreciation were identified. (iv) For physical sciences the behaviour dimensions identified were concretization, appreciation and scientific spirit. (v) Concretization and scientific spirit and appreciation were the dimensions identified as teacher behaviour for life science teachers. (vi) Teacher behaviour dimensions identified for geography were concretization and scientific insight and appreciation. (vii) The three clusters identified as teacher behaviours in history were concretization, social consciousness and subjective insight. (viii) For English as the second language the behaviours identified were thought concretization linguistic skill, language structure and appreciation.

Departmental Projects

A departmental project, entitled 'Indepth Study of the Government of India Scheme of Scholarships in Approved Residential Secondary Schools' was completed. Dr. K.V. Rao and Shri J.P. Mittal were the principal investigators. A brief report is given below.

INDEPTH STUDY OF THE GOVERNMENT OF INDIA SCHEME OF SCHOLARSHIPS IN APPROVED RESIDENTIAL SECONDARY SCHOOLS

Principal Investigators : $\left[\begin{array}{l} K. V. Rao \\ J. P. Mittal \end{array} \right.$

The study was an attempt to determine (i) the improvement in academic performance of the merit scholars, (ii) the extent of personality development of the children along with their national and social integration.

Some of the important findings of the study were: (i) There was considerable variation in the preliminary examination conducted by the respective States and Union Territories regarding number and, consequently, choice of subjects as well as duration of the papers, type

of questions and medium of examination. (ii) One-third of the approved schools did not have +2 stage. The majority of schools were English-medium schools, hardly any Hindi medium, while very few used a regional language other than Hindi, while some others had English medium as well as regional language classes. Consequently, the majority of students had difficulty in communicating and in following classroom instruction because of lack of language competency, resulting in poor adjustment and sometimes even dropping out. (iii) Though the Ministry of Education was to pay all approved expenditure, some schools charged for several facilities and, if these charges were not paid, by the scholar, he was deprived of the facilities; the parents faced difficulty in meeting the additional charges. (iv) Among the various reasons for dropping out besides change of medium, students gave reasons for poor academic performance study of a new language, involvement in co-curricular activities and lack of guidance from teachers. The personal reasons cited were ill health, inability to adjust to new environment, financial hardship, voluntarily leaving to join Class XI in an institution affiliated to state board so as to improve chances of admission to professional course or non availability of a stream in the institution or inability to procure seat in a particular stream. (v) Seventeen per cent scholars were not satisfied with the remedial teaching. Other problems were uncongenial atmosphere in the school, rigid discipline and, at times, indiscipline, poor teaching, inadequate physical facilities, overemphasis on co-curricular activities, style of living and additional fees. The dropouts felt they developed proficiency in games and sports, self-expression, self-confidence, self-discipline, good manners, sense of national and social integration and leadership qualities in school. (vi) Most parents including those of the dropouts, felt residential school life developed good study habits, good manners, self-discipline, positive attitudes, self-confidence, sociability and healthy living habits. (vii) Many principals felt the quality of selected candidates had declined over the years. They suggested that all approved expenses should be reimbursed by the Ministry, amount sanctioned for special coaching be increased, scholars be placed in schools with +2 stage, each school should have scholars from different states for a national atmosphere, scholars be placed after consultation with schools, the non-English medium scholars be placed in non-English medium schools and selection procedure be improved with the help of standardised tests.

New Projects

Nineteen research projects outside the Council and seventeen projects within the Council were approved for financial support under the

scheme. The list of the projects is given below.

<i>Title of the Project</i>	<i>Principal Investigator</i>
Significant Correlates of J & K High Schools showing constantly Above and Below Average Results at the Board Examination for the Last Five Years	Dr. S. M. Gupta Kurukshetra
An Evaluative Survey of Special Education Programme—Schools and Services for the Mentally Retarded in Andhra Pradesh	Dr. (Smt.) Dollie Shenoy Hyderabad
Analysis of Class Environment in Tribal Rural and Urban Settings with a view to study Its Effects on Learning Memory Attainment and Educational Interests	Dr. S. N. Upadhayay Raipur
A Study of the Effectiveness of Non-Formal Education Programme in Chittoor District	Dr. N. Venkatiah Tirupati
Socio-linguistic Study of Santali Language	Dr. D. P. Mukherjee Santiniketan
Study of Vocationalization of Education at +2 and +3 Stages in Commerce Streams (M.S.)	Shri H. V. Gokhle Nagpur
An Investigation into the Level of Academic Equipment of Primary School Teachers.	Dr. T. R. Sharma Patiala
A Comparative Study of the Relative Effectiveness of the Teaching Methods based on Motivation due to Competition and Motivation due to Initiative, Interest and Tendency to cooperate	Prof. S. B. Malhara Jalgaon
A Study of Learning Outcomes (In Terms of Objectives) in Mathematics	Dr. J. P. Srivastava Meerut
Evaluation of Continuous Valuation System of Examinations in Kendriya Vidyalayas	Shri R. S. Rao Sambalpur
Attitude of SC/ST Students towards Education, Teachers, Other Students and Institutions	Dr. (Smt.) K.K. Lillithama Trivandrum
Rural Enrichment Education Projects, Featuring Development of Alternate Model and Strategies of Self-Learning for the Rural Youth and Topics Relevant to their Life	Shri R. N. Joshi Bombay
Comparative Study of Profile and Adolescents with Different Talents in terms of Some Selected Variables	Dr. Arun K. Gupta Jammu
A Comparative Study of the Effects of the Individualized Instruction and Institutionalized Instruction in relation to the Achievement of Students in Music	Dr. Gouri Kuppuswami Mysore

<i>Title of the Project</i>	<i>Principal Investigator</i>
Analysis of Entry-level Characteristics and Assessment of Learning Needs and Interest of Non-formal Learners	Shri Achayutananda Nayak Fakirpur (Orissa)
Developing a Classroom Instruction Programme for Children with Learning Difficulties	Dr. (Smt.) P. Mohite Baroda
Interaction of Structures in Instructional Material with Creative Training	Dr. Sudesh Gakhar Chandigarh
Construction and Standardization of Two Sets of Diagnostic Tests, One in Bengali (Mother Tongue) and the Other in Mathematics for Use with Backward Children of Grades III, IV and V in West Bengal Schools	Dr. S. Acharya Calcutta
The Effect of Remedial Teaching on the Performance of High School Pupils in Algebra Units—a Mastery Learning Approach	Dr. B. V. Adkoli Goa
A Follow-up of the M. Sc. Education Students	Dr. (Smt.) Girija Mohd Miyani
A Study of Non-bookish Curriculum Content provided in Various Categories of Schools in and around Delhi	Dr. B. P. Gupta, Dr. K. P. R. Singh
Analysis of Conceptual Common Errors in Teaching Mathematics at the +2 Stage and Innovation of Easy Methods and Techniques as a Remedial Measure	Shri S. C. Das
An Exploratory Study on the Use of Teaching Aids for Developing Concepts among Handicapped Children (Deaf and Dumb)	Shri M. Sharma
A Study of Psychological Characteristics and Educational and Vocational Planning of Scheduled Caste High School Boys	Dr. J. S. Gaur
Development of Supplementary Reading Material on Mathematics on the Basis of Records Available in the State of Rajasthan for the Last Five Centuries	Dr. H. N. Gupta
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
An Experimental Model for Cooperative Remedial Centre in an Institutional Campus	Dr. B. Bhalchandra
Acceptance Awareness and Impact of RCE (Mysore) Programme	Dr. S. Dandapari Dr. D. S. Babu Dr. (Km.) Tapati Dutta

<i>Title of the Project</i>	<i>Principal Investigator</i>
A Study of the Interrelationship between Education of Scheduled Tribes and Their Socio-Economic Mobility.	Dr. B. P. Awasthi
A Critical Survey of History Teaching in Rajasthan	Dr. V. K. Raina
Development of Criterion Referenced Tests in Environmental Studies at the Primary Stage (for Classes III to V)	Dr. Pritam Singh
Curriculum Evaluation at 10+2 Stage in the Light of Instructional, Developmental and Social Objectives of Education—a Preliminary Study.	Dr. Baqer Mehdi
Survey of Research in Special Education in India	Dr. N.K. Jangira
A Study of Curriculum Load from Primary Stage to Secondary Stage of School Education	Dr. G.L. Arora
Effectiveness of Value Teaching Using Classifying Strategies in Developing Value Orientation of Student-Teachers	Dr. R.C. Das and Dr. L.C. Singh
Assessment of the Impact of Incentive Scheme on Enrolment and Wastage at Primary Stage	Dr. R.R. Saxena

Publication Grant for Ph.D. Theses/Monographs

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

<i>Title of the Project</i>	<i>Name of the Author</i>
An Investigation into the Faculty Participation in the Administration of Institutions Offering Professional Courses of Study	Dr. R.C. Srivastava Deptt. of Education Delhi University
Prathmik Vidyalayon Ka Adhyapikaon Ki Samajik Arthic Prishtbhumi Avom Unki Karya Santhushti	Dr. (Smt.) Karuna Shah Varanasi
A Study of the Educational Ideas of Rabindra-nath Tagore and Their Relevance to Contemporary Thoughts and Practices in Education.	Dr. S.S. Ray Santiniketan
Personality Characteristics of Problem Children	Dr. Shyam Krishna Gorakhpur
A Study of the Characteristics of Innovative Teachers of Secondary Schools in the State of Gujarat	Dr. Kishor M. Shah Gujarat

<i>Title</i>	<i>Name of the Author</i>
Consolidated Basic Hindi Vocabulary	Prof. Uday Shankar and Dr. J.N. Kaushik Kurukshetra
Fostering Cognitive Development in Primary School Entrants	Dr. (Smt.) T. Padmini Mysore
Locational Study of Educational Institutions— a Study of Educational Institutions	Dr. M.L. Makhija Dabok, Udaipur
The Nature of Teaching (monograph)	Dr. R.P. Singh NCERT
Influence of Education on Socio-Economic Status—Income Patterns and Education	Dr. B.M. Modi Ahmedabad
Breaking the Silence—a Handbook for Teachers of Young Deaf Children	Ms. Menaka Parthasarthy Madras
Naga Bhasha Bhashi Chhatron Ki Hindi Sikhne Ki Samasyaen	Dr. R.K. Kumar Mizoram

Approval for assistance of the Council was given for the publication of the following Ph.D. theses/monographs.

<i>Title</i>	<i>Name of the Author</i>
An Inquiry into the Administration of Primary Education under Montagu-Chemsford Reforms and Its Bearing upon the same in Post-Independence West Bengal	Dr. Biswa Rajan Purkait Hoogly (West Bengal)
The Problem of Official Language in India	Dr. K.L. Gandhi New Delhi
A Critical Study of Gandhiji's Educational Philosophy in the New Context.	Dr. Kamla Dwivedi Gorekhpur
Agricultural Education Systems—an Analysis Reform	Dr. M.P. Gupta Sambalpur
Time Perspective, Conceptional Tempo and Preference for Delayed Reward—a Developmental Study	Dr. (Smt.) Manju Srivastava Gorakhpur
A Sociological Study of Educational Development of Graduate Students of Kumaun University with special reference to Caste	Dr. (Smt.) Beena Shah Srinagar, (Garhwal)
The Progress of Secondary Education in Tamil Nadu during a Period of Twenty-five Years from 1950	Dr. S. Packiam, Tuticorin
Characteristics of an Indian Personality	Dr. (Smt.) Indu Dave Udaipur
A Psychological Study of Reading Ability in relation to Achievements	Dr. (Smt.) Probhojit Delhi

<i>Title</i>	<i>Name of the Author</i>
Impact and Programme of the Correspondence Education Programme of Madurai Kamaraj University	Dr. (Smt.) J.K. Pillai Madurai
Effect of Method of Stimulus Presentation on Person Perception	Dr. Mithai Lal Gupta Gorakhpur
A Study of the Development of Education among the Mizo Tribe of North Eastern India	Dr. K. P. Nath Aizawal
Development and Tryout of Multi-media Package on Effective Questioning in the Context of Micro-teaching	Dr. S. C. Shah Surat
Personality Variables (Traits and Needs) and Demographic Correlates (Sex, Area and SES) of Anxiety Level among College Students	Dr. R. S. Singh Deoria (U.P.)
A Comparative Study of the Effectiveness of Micro-teaching Technique with that of Traditional Technique of Learning in the Coeducational Secondary Schools of Delhi Urban Areas	Prof. M. R. Paliwal Bikaner
An Analytical Study of Inventoried Interest	Dr. P. S. S. Bhasin New Delhi
Personality and Academic Prediction	Dr. G. N. P. Srivastava Bhopal
An Evaluation of Achievement in Algebra of Class X Students in Delhi Schools with Reference to Categories of Guilford's Structures of Intellect Model	Dr. C. P. S. Chauhan Varanasi
Impact of Non-Graded Units upon Primary School Drop-outs	Dr. G. S. Pillay Madras
Development of Educational Policy in British India from 1854-1899	Dr. B. B. Agarwal Delhi
A Comparative Study of Administration of Selected Universities in India and Abroad	Dr. Virender Singh Udaipur

Educational Psychology

The research programmes in the area of Educational Psychology conducted in the Council have three major foci : (a) the learner, (b) the teaching-learning process, and (c) the teaching-learning situation. Priority has been assigned to the problems of the disabled, socially deprived and economically disadvantaged. A brief account of the various research projects is given below.

A Longitudinal Investigation into the Drop-out Process and Characteristics of Drop-out

This longitudinal study aims at examining how a variety of student and institutional characteristics are related to the dropping out of students from schools and also at suggesting control of the phenomenon of the drop-out. A paper entitled 'The Riddle of Dyslexia' was prepared and circulated. This being a longitudinal study, additional data mentioned below were collected.

- (i) Information by teachers on the scale 'Shikshak Nirdharan Mapni,
- (ii) Achievement marks for the year 1983-84 for Classes IV and V. These were entered in the cards and the mastersheets.
- (iii) Names of drop-outs.

The criteria for grouping subjects for case studies were prepared. Writing of case studies will continue.

Development of Criteria for Electing Stream and Courses within a Stream at Higher Secondary Stage

The report writing was in progress.

An Investigation into the Effectiveness of Vocational Exploration Programmes at the Secondary School Level for Vocationalization

This study aims at investigating the effectiveness of 'vocational exploration programme' at the secondary school level. It has two major parts : (i) Self-exploration and (ii) Vocational exploration.

A series of film shows were organized for these students. The films were meant to supply occupational information. Each film show was followed by discussion with the students. Arrangements were made to take the students on field trips, to factories, vocational training institutions, etc.

Understanding themselves individual profiles in respect of abilities and self reports on needs, maturity, leisure-time activities were interpreted by the subjects of the experimental group to gain knowledge about their 'self'.

Improving Cognitive Functions and Classroom Behaviour of Elementary Students by Contingency Management

The objective of the research project is to assess the efficacy of contingency management techniques in improving the cognitive functions and classroom behaviour of elementary students. Effective use of these techniques can motivate students to attain higher levels of school achievement and behaviour, thereby leading to qualitative improvement in school education. Post-experiment data have been collected.

Jeevan Vigyan Training through Preksha Dhyan

The project had been jointly undertaken by the Tulsi Adhyatam Nidam and the Directorate of Education, Rajasthan, to study the efficacy of training in Jeevan Vigyan through Preksha Dhyan (advocated by Acharya Tulsi). The Council had agreed to undertake the evaluative study. The investigation employed pre- and post-treatment-testing design. The effectiveness of Jeevan Vigyan training has been investigated in two ways : (i) by Field Study in 12 schools and (ii) by Intensive Study of 20 subjects in one school located at Jodhpur.

The number of the variables on which data have been collected includes eight psychological variables, four physiological variables and general health data. The data of the project were scored and coded and mastersheets were prepared. The data of Intensive Study had been analysed and report-writing was under way. The data of the General Study were being analysed on computers.

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Search for Talent

IDENTIFICATION and fostering of talent is an important national requirement. The NCERT organizes the National Talent Search Scheme with the main objective of identifying talented students at the end of Classes X, XI and XII and giving them financial assistance towards getting the best possible education so that their talent may develop and they may serve their respective disciplines as well as the country. As in the past, the Council conducted the 1983 National Talent Search Examination. With a view to increase the opportunities for the talented students, the Council increased the number of scholarships from 550 to 750.

The National Talent Search Examination was conducted on 8 May 1983 at 445 centres in India and one in a foreign country, i.e. in Bahrain. In all, 74,108 students appeared in the tests—42,964 for Class X, 5,744 for Class XI and 25,400 for Class XII. Seven hundred

and fifty students (including 75 SC/ST students) were selected for the award.

The details regarding state-wise number of National Talent Search candidates appeared (A), interviewed (I) and selected (S) during the year 1983 for classes X, XI and XII are given in the following table :

Sl. No.	State/ UT	X			XI			XII		
		A	I	S	A	I	S	A	I	S
1.	A.P.	2780	26	13	36	01	—	1561	13	08
2.	Assam	188	01	01	08	—	—	186	—	—
3.	Bihar	6868	144	77	10	—	—	2138	56	20
4.	Gujarat	1463	09	04	01	—	—	1047	05	03
5.	Haryana	574	03	02	385	17	10	326	04	—
6.	Himachal Pradesh	277	01	—	96	01	01	70	01	01
7.	Jammu and Kashmir	110	—	—	64	02	—	120	—	—
8.	Karnataka	1891	17	08	01	—	—	1076	24	09
9.	Kerala	1760	15	07	—	—	—	761	03	01
10.	M.P.	539	12	05	2016	24	09	138	06	03
11.	Maharashtra	5199	134	64	01	—	—	2262	43	19
12.	Manipur	30	01	01	—	—	—	39	—	—
13.	Meghalaya	68	—	—	—	—	—	23	—	—
14.	Nagaland	06	—	—	—	—	—	05	—	—
15.	Orissa	2308	22	11	250	18	06	1329	02	02
16.	Punjab	628	06	03	355	26	16	240	06	03
17.	Rajasthan	2720	34	20	2218	152	89	308	09	04
18.	Sikkim	20	—	—	01	—	—	11	—	—
19.	Tamil Nadu	2460	28	17	19	—	—	2463	25	15
20.	Tripura	27	01	01	—	—	—	26	—	—
21.	U.P.	5366	27	11	24	—	—	4317	37	22
22.	West Bengal	2074	31	14	03	—	—	1867	25	17
23.	Andaman and Nicobar Islands	51	01	—	—	—	—	58	—	—
24.	Arunachal Pradesh	39	—	—	—	—	—	13	—	—
25.	Chandigarh	409	08	07	224	45	19	186	05	01
26.	Dadra and Nagar Haveli	—	—	—	—	—	—	—	—	—
27.	Delhi	4809	177	109	32	01	—	4609	188	95
28.	Goa, Daman and Diu	106	—	—	—	—	—	62	01	01
29.	Lakshadweep	07	—	—	—	—	—	04	—	—
30.	Mizoram	08	—	—	—	—	—	07	—	—
31.	Pondicherry	159	—	—	—	—	—	143	01	01
32.	Foreign Country	20	—	—	—	—	—	05	—	—
		42964	698	375	5744	287	150	25400	455	225

Total Appeared=74108
Total Interviewed= 1440
Total Selected= 750

Preparation for Introduction of Revised Scheme

Preparations were made for the 1984 examination to be held on 13 May 1984. The 1984 examination would be held at 445 centres all over the country besides five centres abroad—in the UK, Tehran, Bahrain, Muscat and Nepal. In this connection steps were taken for the development of evaluation tools for the written examination. This examination is the last examination of the old pattern after which students of Classes XI and XII will not be eligible to take the National Talent Search Examination. As such, for the 1984 examination, students of Class XI under the 12-year pattern and students of Class X under the 11-year schooling have been permitted to appear in order to allow at least one chance for every eligible candidate to appear before the revised scheme comes into operation.

It has been decided that from the year 1985 the National Talent Search Examination will be decentralized. The selection for the award under the revised NTS Scheme shall be done at the end of Class X only in two stages. The first stage selection will be done by the states through written examination to be held sometime in October-November 1984, on the basis of which a stipulated number of candidates will be recommended to the NCERT for the second level test. The second level examination will be held during May 1985, to select the requisite number of awardees out of the candidates recommended by various states/UTs.

The second stage testing will be done by the NCERT at a limited number of centres. For discussing the various issues relating to the implementation of the revised scheme, a two-day conference of the Liaison Officers from various states was organized by the NCERT in April 1983. The various academic, administrative and financial implications were discussed at the conference. The NCERT is in constant touch with the states regarding the steps being taken by them for the implementation of the scheme. With a view to helping the states in training their Item Writers, the NCERT is conducting Orientation Workshops. Such workshops have already been held for the States and Union Territories of Punjab, Goa, Maharashtra, Karnataka and Delhi.

Improving the Written Examinations

To improve further the measurement value of the NTS Examination, scientific designs were worked out for the written examinations after having identified the major subject areas in each of the subjects in relation to predetermined objectives. In all, 34 designs were prepared—8 for Class X and 13 for Classes XI and XII.

Nurturing Talent

To nurture talented students, the NCERT organized five summer schools at various places for 79 under-graduate awardees studying basic sciences in various university departments. Similarly, five summer placement programmes were organized in different places for 13 post-graduate NTS awardees studying basic sciences in institutions of higher learning.

Disbursement of Scholarships

An amount of Rs. 79.15 lakhs was released as scholarship to about 2,700 NTS awardees.

Constitution of a Review Committee on NTS

A Review Committee under the chairmanship of Prof. Rais Ahmed, Vice-Chairman, UGC, has been set up with six members, to review the National Talent Scheme for its effective implementation during the Seventh Five Year Plan and onwards.

The first meeting with the Chairman was held in the month of February 1984 to finalize the terms of reference for the proposed Review Committee and for working out the operational strategy.

The second meeting of the Review Committee was held on 22 March 1984 to discuss and finalize the terms of reference and delineation of tasks related to various issues. The Committee discussed the various issues related to the extension of the scheme to more disciplines, prescription of syllabi for various subjects, increase in the number of scholarships, re-examination and rationalization of the rate of scholarship, reservation of scholarships on quota basis, use of additional testing devices for selection, improvement of the evaluation procedure for selection, nurturing of talent, etc.

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Extension and Working with States

EXTENSION work constitutes an important function of all the constituent Colleges, Departments and Units of the NCERT. It envisages, *inter alia*, working with the states, educational agencies, teachers' community, etc. While reporting about the work of the various Departments of the NCERT in the various preceding chapters, references have been made about the extension work. The Regional Colleges of Education and the Field Units of the Council help in promoting the extension programmes and innovation in order to improve instructional materials, classroom practices etc.

Under the programme of developing *Community Singing as a Mass Movement*, the NCERT has been organizing training camps on Community Singing for music teachers drawn from all parts of India, and thus taking the movement to children in schools in the country. The

following camps were organized under the scheme in various parts of the country during the year under report :

<i>Sl. No.</i>	<i>Name of the Venue</i>	<i>Dates</i>
1.	Pondicherry	10 to 19 May 1983
2.	Madras	16 to 25 May 1983
3.	Trivandrum	27 May to 5 June 1983
4.	Allahabad	5 to 14 July 1983
5.	Delhi	24 August to 3 September 1983
6.	Imphal	22 September to 10 October 1983
7.	Goa	4 to 13 January 1984
8.	New Delhi	8 to 18 February 1984

Recorded cassettes of 15 songs were distributed among the participants.

At a rally of more than 10,000 children, organized on the Children's Day in 1983, the children sang selected community songs in Assamese, Marathi, Tamil, Urdu and Hindi at the Jawaharlal Nehru Stadium, New Delhi. The NCERT contributed to this programme by first giving a training in community singing to 130 teachers of Delhi Administration and of Kendriya Vidyalaya Sangathan and then further guiding them in teaching these songs to children in their respective schools. A small booklet in Hindi and English on 'Let Us Sing Together', prepared by the NCERT, was also distributed at the rally.]

A book containing selected community songs in original scripts with their meaning and notations in Hindi and English was under preparation for distribution among teacher participants attending national integration camps organized by the NCERT.

Since 1974 the NCERT has been trying to involve the professional associations of teachers and voluntary organizations in bringing about quantitative expansion and qualitative improvement in school education. Orientation programmes are periodically organized for the office-bearers of the All-India Primary Teachers' Federation to acquaint them in the recent trends in elementary education.

Three orientation programmes for the office-bearers of the All-India Primary Teachers' Federation were organized at Patna, Udaipur and New Delhi, for a period of five days each, during the year 1983-84. In all, 400 teachers were invited from all over the country to participate in the programmes—200 at Patna, 100 at Udaipur and 100 at New Delhi. New strategies related to teaching-learning were elaborated during the course. Emphasis was laid on the role of elementary school teachers in the universalization of elementary education through formal and non-formal methods.

The *Ahmedabad Field Office* received as many as 52 proposals under the experimental project scheme for financial assistance to teachers in secondary and primary schools. Out of these proposals, 16 projects were approved and financial assistance was sanctioned to them during the year under report. The field office organized a five-day training programme in making teaching aids for primary schools at Kendriya Vidyalaya, Shaibagh, Ahmedabad, from 20 to 24 March 1984. Fifteen teachers, including five from the Union Territory of Dadra and Nagar Haveli, attended the programme. The office also organized a workshop on Moral Education and Human Values in collaboration with the Research and Training Centre of the Gujarat State Board of School Text-books from 26 to 30 March 1984. An exhibition of the NCERT publications was organized at Baroda on 5-6 January 1984. A research project on Vocational Needs and Interests of SC/ST Students and Providing Specific Guidance to the Students of Chikhli Taluka has been taken up for the benefit of the students of Class X of Chikhli Taluka in Bulsar district. Chikhli Taluka has a predominantly SC/ST population under this project. A seminar was organized on 13 February 1984 and a Vocational Guidance Mela and Exhibition was organized on 16 March 1984.

The *Allahabad Field Office* organized a workshop on Experimental Projects, which was attended by teacher-educators. Project designs were prepared during the workshop. The office also organized, in collaboration with the Board of Secondary Education, U.P. two workshops on the Improvement of Evaluation Procedures and Preparation of Question Papers in Science and Social Studies.

The *Bangalore Field Office* organized a series of meetings in various districts to explain the programmes of the Council. The office was also associated in the organization of an orientation course on Universalization of Primary Education for Inspectors of the Schools.

The *Bhopal Field Office* received 53 proposals for financial assistance under the programme of experimental projects in schools. Twenty-eight projects were approved by the Screening Committee and financial assistance was sanctioned to 13 institutions. The office is running 10 centres of non-formal education. Self-learning packages in Hindi were finalized for these centres. An ERIC research project on Population Education undertaken by the Field Adviser was making steady progress. Instructional material for Peer Group discussion had been developed and was being reproduced. In addition, the office organized a workshop for developing need-based Health Education Curriculum for Madhya Pradesh for Classes I to V and VI to VIII, from 2 to 6 February 1984 at Jabalpur.

The *Bhubaneswar Field Office* received 86 experimental project

proposals from primary school teachers and 13 from secondary school teachers. Financial assistance was given to 28 primary schools and 2 secondary schools to conduct experiments and innovative practices. A workshop on experimental projects was conducted for primary school teachers of backward districts of Ganjam, Phulbani, Kalahandi and Koraput. Twenty-nine elementary school teachers participated in the workshop and several worthwhile projects were drawn-up.

The *Calcutta Field Office* was associated in various programmes conducted in the region. These included the Regional Meeting of the Principals of Teachers' Training Institutes participating in project PEER in the Eastern Region; intensive Training Course for Item Writers in Mathematics (Eastern Region); NTS Interviews, etc.

The *Chandigarh Field Office* received a set of 26 proposals for assistance under the programme of experimental projects. The Screening Committee appointed by the Field Adviser finally recommended 10 projects and financial assistance was released to all the concerned schools. The office organized a workshop on Strategy for Large Classes from 17 to 19 February 1984, for the heads of high and higher secondary schools. The report of the workshop was published. The field office also organized a three-day workshop on Universalization of Elementary Education from 5 January, 1984 at Chandigarh. Thirty participants from Punjab, Haryana and Chandigarh participated. The participants discussed various problems and made recommendations for the universalization of elementary education. They recommended, *inter alia*, that non-graded teaching project might be given a fair trial in schools.

The *Gauhati Field Office* has a wide jurisdiction, which includes Assam, Manipur, Nagaland and Arunachal Pradesh. The office maintained liaison with the educational agencies in all these states and the Union Territory and helped in promoting the programmes of the Council.

The *Hyderabad Field Office* conducted a two-day orientation programme at Vizianagram to familiarize the teachers with the programme of experimental projects. Seventeen project proposals were developed in this workshop. The office also organized an orientation programme on SUPW for principals and teachers of schools from 5 to 6 March 1984.

The *Jaipur Field Office* submitted a proposal for exploration and compilation of mathematics material in Rajasthan over the last 500 years, for granting aid by the ERIC. The project was approved. Various types of materials were being obtained from libraries, museums and individuals. These include, *inter alia*, hand-written manuscripts of 'Padda Ganit', 'Sahukari Ganit', etc. The office also invited proposals

for assistance under the programme of experimental projects. The proposals received were scrutinized by a committee. Ten experimental projects were completed during the year.

The *Madras Field Office* conducted a three-day workshop for teachers on aspects of instruction and evaluation. It also organized a two-day workshop on aspects of science teaching for elementary school teachers and a five-day workshop on diagnostic and remedial teaching.

The *Patna Field Office* received 34 proposals under the programme of experimental projects. The Screening Committee constituted by the Field Adviser selected eleven proposals for grant-in-aid.

The *Pune Field Office* participated in the programmes of Toy-making Competition and the State-level Science Exhibition and provided assistance in various programmes of the Council.

The *Shillong Field Office* serves the states of Meghalaya, Mizoram and Tripura. The office assisted in the implementation of the various programmes of the Council, including, *inter alia*, NTS Examinations and State-level Toy Making Competition. The office also helped the States/Union Territory in their various programmes.

The NCERT established a new *Field Office at Simla* to serve the needs of Himachal Pradesh. It started functioning at Simla from 19 October 1983. The Field Office was involved in explaining the programmes of the NCERT in the state.

The *Srinagar Field Office* was associated in an important project of the State Government related to the introduction of 10 plus 2 pattern in the state. The Field Office assisted the State Board of School Education in finalizing secondary school syllabus in social sciences. The office was also associated in the implementation of the various programmes of the Council in the state.

The *Trivandrum Field Office* assisted in the organization of various programmes, viz, Orientation of Teachers of Lakshadweep, National Integration Camp at Varkala, Orientation of Career Masters, Workshop on Vacationization of Education, and Training of High School Teachers in the Formation of Social Science Clubs, etc.

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International Assistance and International Relations

AS an institution of national importance, the Council maintains contacts with UNESCO and other international organizations working in the field of education. For its efforts at improving the quality of education at the school stage, the Council receives assistance from international agencies like UNDP, UNESCO, etc. The Council 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 in so far as they relate to school education. The Council also functions as the secretariat of the National Development Group for the Asian Programmes for Educational Innovations for Development (APEID). The functions of the secretariat include, among others, the establishment of line of communication with the Directors of Education

and the Directors of SCERTs/SIEs and other associated centres of APEID, providing of information/documentation services, development and evaluation of various programmes as sponsored under the APEID and facilitating the implementation of innovative programmes assisted or sponsored by the APEID.

UNESCO/APEID

The Council participates in UNESCO's activities directly, through APEID, and by undertaking studies in various educational fields. Direct participation includes sponsoring of the Council's officers for participation in international conferences seminars, workshops, symposia, etc., as well as receiving foreign nationals for training in various fields of education. During the year, the following officers of the Council participated in the UNESCO-sponsored activities :

Deputation of Council's Officers Abroad

Shri S.H. Khan, Reader, Primary Curriculum Development Cell, participated in the UNESCO Sub-Regional Seminar on Further Training of National Officials and Specialists on Integration of the Curriculum at the Primary Level from 1 to 10 June 1983 at Dhaka (Bangladesh).

Dr. P. Das Gupta, Reader, Non-Formal Education, participated as a resource person in a Mobile Team Training in Curriculum Development in Asia under Japanese Fund-in-Trust arrangement, from 24 June to 29 July 1983 at Bangkok (Thailand).

Dr. A.N. Bose, Professor, Department of Education in Science and Mathematics, visited Bangladesh as consultant in Technical Assistance Study for Secondary School Science Education Project in Bangladesh, supported by the Asian Development Bank under ROEAP from 6 June to 5 August 1983 at Dhaka (Bangladesh).

Dr. D.C. Upreti, Reader, Regional College of Education, Bhopal, attended the International Conference on Community Education from 8 to 12 August, 1983 at Dublin.

Prof. A. Sharma, Head, Educational Psychology Unit, and Dr. B.P. Gupta, Reader, Curriculum Group, NCERT, participated in the APEID Technical Working Group Meetings on 'Meeting the Learning Needs of Children' at Bangkok from 6 to 12 September 1983.

Smt. Adarsh Khanna, Head, PCDC, NCERT, participated in the seminar on the concept of life long education, organized by UNESCO Institute for Education (UIE) at Hamburg, Germany from 12 to 15 September 1983.

Dr. J. Mitra, Reader, DESM, NCERT, participated in the UNESCO Regional Meeting on 'Science for All' at Bangkok from 20 to 26 September 1983.

Dr. P.L. Malhotra, Director, NCERT, participated in the UNESCO Regional Seminar on Textbooks and Reading Materials organized by the New Zealand National Commission for UNESCO at Wellington (New Zealand) from 4 to 12 October 1983.

Dr. (Smt.) Amrit Kaur, Reader, Regional College of Education, Ajmer, and Dr. S.C. Chaturvedi, Reader, Regional College of Education, Bhubaneswar, participated in the training in the UK in the area of teaching of the Handicapped/Special Education under the Colombo Plan from 4 October 1983 for six months.

Dr. A.B. Saxena, Lecturer, Regional College of Education, Bhopal, participated in the training in the UK for Diploma in Educational Studies (Environmental Studies) under the British Council's TCTP Programme from 28 September 1983 for a period of 10 months.

Shri S.K. Gupta, Lecturer, Regional College of Education, Bhopal, participated in training in the UK Associateship Study Course in Special Education under the British Council's TCTP Programme from 4 October 1983 for a period of nine months.

Dr. (Smt.) S. Mukhopadhyay, Lecturer, Regional College of Education, Bhopal, participated in the UK Associateship Study Course in Special Education under the British Council's TCTP Programme from 3 October 1983 for a period of 10 months.

Shri U. Prabhakar Rao, Chief Production Officer, Publication Department, NCERT, participated in the training Course in Educational Publishing for Children, organized by the Asian Cultural Centre in cooperation with the Japanese National Commission for UNESCO at Tokyo (Japan) from 27 September to 20 October 1983.

Dr. D. Lahiry, Reader, DESM, NCERT, participated in the UNESCO International Seminar on In-Service Training of Science Teachers at Bratislava (Czechoslovakia) from 17 to 21 October 1983.

Prof. A. K. Jalaluddin, Professor DESM, NCERT, participated in the Regional Seminar on Educational Research with Specific Reference to the Exchange of Research Outcomes in Asia and the Pacific at Tokyo (Japan) from 9 to 25 November 1983.

Dr. T. N. Dhar, Joint Director, NCERT, participated in the APEID Regional Meeting of those carrying out National Studies on Universalization of Education for Review, Bangkok, as a consultant at Bangkok from 9 to 23 November 1983. He also acted as a consultant in the meeting.

Dr. M. P. Rastogi, Lecturer, CAPE Group, NCERT, participated in the Regional Training Workshop on Planning and Management of Universalization of Primary Education Programme at Dhaka from 16 to 29 November 1983.

Dr. A. K. Dhote, Lecturer, Vocational Education Unit, NCERT, participated in the UNESCO-sponsored study visit programme to study work experience as part of general education in the school curriculum of the concerned countries. In Thailand, Japan and Republic of Korea from 14 October to 12 November 1983.

Smt. S. Bhattacharya, Reader, DESM, NCERT, participated as a resource person in the Sub-Regional Workshop for the Development of Training Materials in Selected Laboratory Techniques, Penang, Malaysia from 15 to 30 December 1983.

Dr. J. K. Mahapatra, Lecturer, Regional College of Education, Bhubaneswar, and Dr. A. C. Banerjee, Reader, Regional College of Education, Mysore, participated in the Sub-Regional Workshop for Development of Training Materials in Selected Laboratory Techniques, Penang, Malaysia from 19 to 29 December 1983.

Dr. A. K. Jalaluddin, Professor, DESM, NCERT, participated in the Training of Literacy Personnel under Basic Education Programme in Maldives as consultant for the workshop at Maldives from 26 December 1983 for one week.

Shri P. K. Bhattacharya, Head, Workshop Department, visited Philippines from 21 to 25 November 1983 and Thailand from 26 November to 1 December 1983 under Mobile Training Team in Science Education under Japanese Funds-in-Trust.

Dr. G. L. Arora, Reader, Curriculum Group, NCERT, participated in the Regional Workshop to Study Elementary Curriculum in Asia and Pacific, organized by NIER, Japan, in collaboration with UNESCO Regional Office, Bangkok, from 28 February to 15 March 1984.

Foreign Visitors to the Council

The Council organized the following visits for experts from other countries :

Dr. Bradley E. Niles, Director, Department of Extra-Mural, University of the West Indies, Barbados, visited the NCERT on 8 April 1983. He was acquainted with the activities and programmes of the Council.

Two WHO Fellows from Nepal, namely Mr. Dwarika Ram Shrestha and Mr. Gopal Prasad Shrestha, visited the NCERT from 11 to 15 April 1983 for a short training programme in the Department of Teaching Aids in the area of AV Education.

Prof. S. M. Taqweomul Haq, UNESCO Fellow from Pakistan, visited the NCERT on 27 and 28 May 1983 to study the operations of Teacher Training Institutions and Curriculum Development Centres, as a part of his programme in NIEPA.

Mr. Oleg Semenets, UNESCO Fellow from Ukraine, visited the NCERT on 13 June 1983 to study organization of Scientific Research in Psychological, Pedagogical and Sociological Aspects of Languages.

Dr. Anan Chankawee, Head of Research and Evaluation, Dean, Institute for the Promotion of Teaching Science and Technology (IPST), Bangkok, visited the NCERT from 23 June to 7 July 1983 for an attachment programme under APEID to study the NCERT's project on Science Talent Search.

Four UNESCO Fellows from Afghanistan, namely, Mr. Bharat Ali Atapoor, Mr. A. H. Samadi, Mr. M. R. Jahed and Mr. A. Q. Rahmani, visited the NCERT for a period of two months from 30 June 1983 for training in the field of Physics, Biology and Chemistry.

A group of 40 participants—31 from various States/UT's in India, four each from Sri Lanka and Bhutan and one from Mauritius—on a study visit to NIEPA, visited the NCERT on 5 July 1983 to familiarize themselves with the programmes/activities of the NCERT.

Mr. R.A. Brownsmith, UNESCO Consultant in Sri Lanka, visited the NCERT on 15 July 1983 to discuss the proposed fellowship training for project staff for quality improvement in general education in Sri Lanka to be provided in the NCERT under UNESCO assistance.

A three-member team from Bhutan consisting of Mr. G.R. Mohan, Mr. Phub Rinchhen and Miss Kesang Doma, visited the NCERT on 19 July 1983 for a period of one week, to attend a programme of Primary Science Kits in the Workshop Department.

Seven participants from Bangladesh, Mr. Anisur Rahman, Taimur Rahman, Mr. Abdul Hagua Khan, M. Abdul Majid, M. Majibur Rahman, Taher Miah, and Abdur Rajjgul, visited the NCERT from 19 to 23 July 1983 to study the process of universalization of primary education in India.

Seven participants from Bangladesh, Mr. A.P.M. Khalilur Rehman, S.M. Shamul Haque, S.S.A. Mannan, Abdul Rashid Khan, Kamal Uddin Ahmed Talukder, Sakhawat Hossain Khandokar, and Iqbal Ahmed, visited the NCERT from 15 to 21 August 1983.

Eight students and teachers, of different schools from Bahrain visited the NCERT on 4 August 1983. A meeting was addressed by the Joint Director to acquaint them about the activities and programmes of the Council.

Shri Paras Ram, a senior educationist from Fiji, visited the NCERT on 5 August 1983. He had a meeting with the faculty of the Department of Teacher Education, to acquaint himself with the Teacher Training Programmes of the Council.

Prof. Reatha Clerk King, President of the Metropolitan State University

Minneapolis, USA, visited the NCERT on 26 September 1983. She acquainted herself with the activities and programmes of the NCERT, and also delivered a talk on the innovative courses offered by the Metropolitan State University.

Mr. Hugh Hawes, University of London Institute of Education, London, visited the NCERT on 26-27 September 1983. He was acquainted with the programmes and activities of the NCERT.

Dr. Moti Lal Sharma, Education Specialist, Asian Development Bank, Manila, visited the NCERT on 10 October 1983 on Search Study in Education in India in the Survey Unit of the NCERT.

Dr. K.D. Premaratna, UNESCO Fellow from Sri Lanka, visited the NCERT for three months' training programmes in Teaching Aids and Curriculum Development with effect from 2 October 1983.

Mr. P.A.B. Perara, UNESCO Fellow from Sri Lanka, visited the NCERT for two months from 31 October 1983 for study in the area of Measurement and Evaluation.

Mr. T. Yokoo, Deputy Director General (NIER), Japan, visited the NCERT from 27 November to 2 December 1983 on a study visit to exchange views and study the system and programmes in higher education and teacher training as well as to observe elementary and secondary education activities in this country. He also visited the Technical Teacher Training Institute, Madras.

Mr. J. L. R. Putty, Education Officer Secondary School, Mahatma Gandhi Institute, Mauritius, visited the NCERT from 14 to 17 December 1983, under the UNESCO Study Programmes to study Science in higher secondary schools, namely, Biology and Agriculture.

Eight educators from Bangladesh visited the NCERT from 25 to 31 December 1983 to study population education programme. The team also visited the Regional College of Education, Ajmer.

Mr. Mai Yun Sen and Mr. Yu Majol Binh from Vietnam stayed at the NCERT from 28 November to 24 December 1983 under a UNESCO attachment programme in Population Education.

Mr. Y.P.W. Ferando, UNESCO Fellow from Sri Lanka, visited the NCERT from 13 December 1983 to 28 January 1984 for a 6-week training in Vocational Education.

Mr. Norikayu Osami, Senior Researcher, Section for Development of Teaching Aids and Materials Research Centre for Science Education, National Institute for Educational Research, Tokyo, attended the UNESCO-sponsored workshop on Development of Science Equipment from Local Resources for Teaching Science at Elementary Level, held at the NIE Campus, NCERT, from 15 to 24 December 1983.

H.E. Mr. Jackson M. Makwate, Minister of National Education, Tanzania, accompanied by H.E. Mr. Mioji Wesa Indarous, Deputy Minister of Education, Zanzibar, who were on a visit to India at the invitation of the Union Education Minister, visited the NCERT on 10 February 1984. A meeting of the visiting dignitaries with the Director of the Council was held in which senior faculty members were also present. The activities/programmes of the Council in school education were explained to the visitors.

Nine key persons from Mauritius Institute of Education visited the NCERT from 23 February 1984 to 18 April 1984 for eight weeks' training in Primary Curriculum Development Programme.

Mr. Osman Ali Jama, Director-General, Mr. Hussain Mohd., Director of Planning, Ministry of Education, Somalia, visited the NCERT on 28 and 29 February 1984 for a study programme.

NCERT as an Associated Centre of the APEID

The NCERT as an Associated Centre of the APEID hosted the following programmes :

A Working Group Meeting on Experimental Application on Sampling Methods to obtain statistics on education and control their quality was held at the NIE Campus, NCERT, from 19 to 23 April 1983.

An inter-country Training Workshop for the project of Mobile Training Team in Vocational and Technical Education under the Japanese Fund-in-Trust was held at the Regional College of Education, Bhopal, from 5 to 25 April 1983.

A Regional Seminar on the Coherence of Formal and Non-Formal Population Education Programme was held at Bangalore from 16 to 23 May 1983.

A National Pilot Training Workshop on Improvement of Chemistry Curriculum and Teaching Materials was held at the NIE Campus, NCERT, from 20 to 27 September 1983.

A National Workshop on Early Childhood Care and Education was held at the NIE Campus, NCERT, from 22 to 29 November 1983.

Mobile Training Team on Science Education under Japanese Funds-in-Trust—a Workshop on Development of Science Equipment from Local Resources for Teaching Science at Elementary Level was held at the NIE Campus, NCERT, from 15 to 24 December 1983.

A National Pilot Training Workshop of key persons in respect of learning problems of children, particularly of disadvantaged groups was held at the NIE Campus, NCERT, from 15 to 24 December 1983.

A National Workshop on Universalization of Education at the Primary Level was held at the NIE Campus, NCERT, from 20 to 21 December 1983.

A National Workshop on Special Education—Integrated Education of the Visually Handicapped—was held at the NIE Campus from 5 to 16 March 1984. Two experts from Thailand attended the programme as resource persons.

NCERT-UNESCO Projects

During the year under report the Council signed contracts with UNESCO for undertaking the following studies :

National Workshop on Early Childhood Care and Education.

National Case Study on 'Status of Recent Developments and New Trends in Teaching-Learning Methods and Techniques'.

Preparation of a National Study on Universalization of Education at the Primary Level, and conducting of a National Workshop for Review of the Study on Universalization of Education at the Primary Level.

Preparation of Experimental Module for Pre-service Training of Social Studies Teachers and Supervisors in Environmental Education for Secondary Schools.

National Training Workshop of Key Persons in respect of Learning Problems of Children, particularly of Disadvantaged Groups.

National Training Workshop for Teacher-educators, Supervisors and Senior Special Education Teachers.

Organization of Training Workshop on Curriculum and Instructional Material Development and Implementation of Various Evaluation Techniques relating to Business and Commercial Education.

Adaptation of a Manuscript entitled 'Environmental Problems in Cities ; an Experimental Education Module.

Organization of Training Workshop in Development of Science Equipment from Local Resources for Teaching Science at Elementary Level.

Regional Seminar on the Coherence of Formal and Non-formal Population Education Programme.

National Training Workshop on Improvement of Chemistry Curricula and Teaching Materials.

National Study on Work Experience in General Education in India.

Bilateral Cultural Exchange Programmes

The Council is one of the important implementing agencies of the bilateral cultural exchange programmes. Acting as an implementing agency, the NCERT participates in a two-way flow of ideas with foreign countries by sending its delegations to study innovative educational developments. The Council has also been exchanging educational materials, including textbooks, supplementary reading materials,

research monographs as well as films and film-strips with other countries under the provisions of the Cultural Exchange Agreements signed by the Government of India.

The details of the Council's Officers who were deputed abroad and the foreign visitors who visited India under the Cultural Exchange Programmes are given below.

Visitors to the Council

Mr. J.A. Lijembe, Deputy Director, Ministry of Education, Science and Technology, Kenya, visited the NCERT from 19 to 24 November 1983 to exchange experiences in the fields of Pre-school Education, Primary Education, Teacher Training and Curriculum Development under Article 5 of the Indo-Kenyan Cultural Exchange Programme for 1981-83.

A Soviet delegation comprising H.E. Prof. N.S. Egorov, Soviet Deputy Minister of Higher and Specialized Secondary Education, Mr. V.P. Kartsev, Director, MIR Publishing House, Moscow, Mr. A.K. Velitchev, Chief Editor of Progress Publishing House, Moscow, Mrs. S.V. Andreeva, Chief of the Department of the Ministry of Higher and Specialized Secondary Education, Moscow, and Mr. G.A. Orlov, Teacher, Institute for Foreign Languages, Moscow, visited the NCERT on 24 December 1983. The delegation had come to India for attending the 14th meeting of the Indo-Soviet Textbook Board from 19 to 28 December 1983.

Deputations

Dr. R.C. Das, Dean (A) NCERT, was deputed to People's Democratic Republic of Yemen (PDRY) from 21 to 28 September 1983 to exchange experiences in the field of secondary education, to establish contacts and to identify areas for collaboration with PDRY under item 1 of the Indo-PDRY Cultural Exchange Programme 1980-82 (as extended for 1983).

Dr. A.K. Mishra, Head, Vocational Education Unit, NCERT, was deputed to the USSR from 11 to 22 October 1983 to study vocational training in the USSR under item 40 of the Indo-USSR Cultural Exchange Programme for 1983-84 as a member of five-member delegation led by the Educational Adviser (Tech.), Ministry of Education.

Dr. (Smt.) Asha Bhatnagar, Reader, EVG Unit, Dr. M.V. Ramji, Reader, Regional College of Education, Bhubaneswar, Shri S. Balakrishnaiah, Lecturer, Regional College of Education, Mysore, visited the USSR for two weeks from 11 November, 1983 as members of the

six-member Indian delegation led by Shri A.J. Pawar, Professor and Head, Educational Research SIE, Pune, to study Vocational Education, Correspondence Education, Out-of-School Activities under items 32 and 35 of the Indo-USSR Cultural Exchange Programme for 1983-84.

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Publications

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 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 educational conferences, proceedings of seminars, etc.
6. Information pamphlets, booklets, brochures, folders, etc.

7. Educational journals.

During the year under report, 254 publications of all categories were brought out :

<i>Category of Publication</i>	<i>No. of titles</i>
First edition textbooks/workbooks/prescribed supplementary readers	5
Reprints of textbooks/workbooks/prescribed supplementary readers	183
Textbooks/workbooks for other government agencies	10
Research monographs/reports and other publications	40
Periodicals (issues)	16
Total	254

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

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, New Delhi, who are the Council's National Distributors, and whose Sales Emporia situated at New Delhi, Calcutta, Bombay, Madras, Patna, Lucknow and Hyderabad cater 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 above-mentioned sale and distribution arrangements, orders for the supply of 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 266 direct orders was received and complied with—12 from Kendriya Vidyalayas, 13 from Sainik Schools, 22 from Central Schools for Tibetans, 190 from other schools (including orders from booksellers in Andhra Pradesh and Karnataka), and 29 from the schools and District Education Officers of Arunachal Pradesh. Textbooks were also supplied directly by the Council to the Directorate of Education, Sikkim, for the session 1984-85. In addition, nine textbook titles in English, Hindi and Urdu for Classes IX-X were supplied in bulk directly by the Council to the Jammu and Kashmir Board of School Education, and five textbooks in Mathematics for Classes XI-XII were supplied in bulk to the Council for Higher Secondary Education, Government of Orissa.

Participation in Book Fairs/Exhibitions

The NCERT exhibited its publications at the following book fairs/

exhibitions :

Children's Book Fair
Rafi Marg. New Delhi

Organized by the Children's
Book Trust in September 1983

Hindi Pustak Mela
Third World Vishwa Hindi Sammelan
Indraprastha Stadium
New Delhi

Organized by the National
Book Trust, India, in October
1983

First National Children's Book Fair
Calcutta

Organized by the National
Book Trust, India, in Novem-
ber 1983

National Science Exhibition
Lucknow

Organized by the NCERT in
November 1983

Workshop on School Feeding, Nutrition and
Education
Coimbatore

Organized by UNESCO in
December 1983

14th National Primary Education Conference
Patna

Organized by the National
Primary Education Confer-
ence in January 1984

Sixth World Book Fair
New Delhi

Organized by the National
Book Trust, India, in February
1984

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

Exhibition of Indian Books, Beijing
China

April 1983

International Book Exhibition
Ankara

April 1983

15th Singapore Festival of Books
Singapore

September 1983

4th Moscow International Book Fair
Moscow

September 1983

Malaysia Book Fair
Malaysia

September-October 1983

Exhibition of Indian Books
Tehran

September-October 1983

35th Frankfurt Book Fair
Frank Furt

October 1983

2nd Middle East Book Fair
Behrain

December 1983

16th International Book Fair
Cairo

January-February 1984

Exhibition of Indian Books
Rang oon

March 1984

Sale

During the year, receipts from the sale of the NCERT publications amounted to Rs. 2,36,91,292.00. Publications worth \$225.60 and £13.15 were also sold to various parties abroad. In addition, the

NCERT received an amount of U.S. \$357.63 from M/s Teiko-KU Shoin Co. Ltd., Japan, on account of payment of royalty for the book *The Story of Civilization*.

Copyright Permission to State Governments and Other Agencies

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

Himachal Pradesh

Secretary
H.P. Board of School
Education
Simla

Permission to reproduce 'Rogon Ki Roktham' and 'Dharti Se Chand Tak' from *Aao Padhen Aur Samjhen* in their Hindi Reader 'Him Balk Mala Book V'

Madhya Pradesh

M.P. Board of School
Education
Bhopal

Permission to reprint and distribute the Council's '*Kavya Bharati, Gadhya Bharati* and *Kahani Sankalan* for use by the students of classes IX-X in Madhya Pradesh

Maharashtra

Maharashtra State Board of
Secondary and Higher Secondary
Education
Pune

Permission to publish and distribute *Workbook in Book Keeping for Class XII*, the manuscript of which was jointly prepared by the faculty members of RCE Bhopal and Mysore

Journals

The journals occupy the pride of place in the NCERT's publishing activities. They cater to a wide range of readers, from primary school teachers to research workers.

The Primary Teacher (English) and *Primary Shikshak* (Hindi) acquaint practising teachers and administrators with the educational policies being decided and pursued at the Central level. They also inform them about the innovative ideas and practices in the area of elementary school education and give meaningful and relevant materials for direct use in the classroom. Both the journals are quarterly.

The Indian Educational Review provides a medium for dissemination of the findings of educational research and for exchange of experience among research workers, scholars, teachers and others working in the field of educational research. The *Review* is a quarterly publication.

The Journal of Indian Education provides a forum for teachers, teacher-educators and research workers, and encourages original and critical thinking in education through discussion of current educational problems and views. It is a bi-monthly journal.

The *School Science* is a quarterly journal of science education. It serves as an open forum for the discussion of various aspects of science

education, its problems and prospects, and the individual science experiences of teachers and students.

Bharatiya Adhunik Shiksha, a new journal launched in July 1983, intends to fulfil the long-felt demand of educationists, research scholars and policy-makers who work through the Hindi medium. The emphasis in this journal is on research-based articles and scholarly exposition of current educational themes. The journal is a quarterly and is produced along the lines of the *Journal of Indian Education*.

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

<i>The Primary Teacher</i>	July 1982, October 1982
<i>Primary Shikshak</i>	April 1982, July 1982
<i>Journal of Indian Education</i>	November 1982, January 1983, March 1983, May 1983 and July 1983
<i>Indian Educational Review</i>	April 1983, July 1983 and January 1984
<i>School Science</i>	March 1982, July 1982 and September 1982
<i>Bhartiya Adhunik Shiksha</i>	July 1983

To streamline the working of the Journals Cell and to help remove the backlog, the council introduced structural changes and made the Journals Cell a self-contained unit. Further, the academic and editorial staff of the Journals Cell was also strengthened.

The *Indian Educational Review*, *School Science* and *Journal of Indian Education* have acquired an international status and have subscribers in the following countries :

England, Canada, Singapore, Japan, France, the USA, Thailand, Bahrain, Dubai, Oman, Malaysia, Denmark, the USSR, West Germany, New Zealand, Iraq, Kuwait, Holland and Burma.

These journals are also being despatched to educational institutions in Thailand, Switzerland, Australia, Japan and Bangla Desh under a exchange programme.

In August 1983, the *Indian Educational Review* was selected for inclusion in the International Bulletin of Bibliography on Education published by UNESCO International Bureau of Education, Geneva. At the invitation of Louisiana State University in Shreveport (USA) the NCERT participated in a display of journal literature organized by the University's Department of Education at the 34th Annual Convention of the South Western Philosophy of Education Society in November 1983.

PUBLICATIONS LIST (excluding periodicals)
Textbooks, Workbooks and Prescribed Supplementary Readers

S.No.	Title	Month of Publi- cation	Year of Publi- cation
1	2	3	4
CLASS I			
<i>Textbooks</i>			
1.	Bal Bharati Bhag I (R.P.)	January	1984
2.	Let's Learn English Book I (S.S.) (R.P.)	May	1983
3.	Mathematics for Primary Schools Book I (R.P.)	March	1984
<i>Workbooks</i>			
4.	Abhyas Pustika Bal Bharati Bhag I (R.P.)	April	1983
5.	Workbook to Let's Learn English Book I (S.S) (R.P.)	March	1984
CLASS II			
<i>Textbooks</i>			
6.	Bal Bharati Bhag II (R.P.)	March	1984
7.	Let's Learn English Book II (S.S) (R.P.)	May	1983
8.	Let's Learn English Book II (S.S.) (R.P.)	January	1984
9.	Mathematics for Primary Schools Book II (R.P.)	April	1983
10.	Mathematics for Primary Schools Book II (R.P.)	January	1984
<i>Workbooks</i>			
11.	Abhyas Pustika Bal Bharati Bhag II (R.P.)	January	1984
12.	Workbook to Let's Learn English Book II (S.S.) (R.P.)	March	1984
CLASS III			
<i>Textbooks</i>			
13.	Bal Bharati Bhag III (R.P.)	March	1984
14.	Mathematics for Primary Schools Book III (R.P.)	January	1984
15.	Environmental Studies for Class III Part I (R.P.)	May	1983
16.	Environmental Studies for Class III Part I (R.P.)	March	1984
17.	Paryavaran Adhyayan for Class III Bhag I (R.P.)	March	1984
18.	Environmental Studies for Class III Book II (R.P.)	March	1984
19.	Paryavaran Adhyayan for Class III Bhag II (R.P.)	March	1984
<i>Workbooks</i>			
20.	Abhyas Pustika Bal Bharati Bhag III (R.P.)	December	1983

R.P. indicates a reprint edition

S.S. indicates the special series in English Readers.

1	2	3	4
CLASS IV			
<i>Textbooks</i>			
21.	Bal Bharati Bhag IV (R.P.)	March	1984
22.	Mathematics for Primary Schools Book IV (R.P.)	May	1983
23.	Mathematics for Primary Schools Book IV (R.P.)	January	1984
24.	Environmental Studies Part I (R.P.)	April	1983
25.	Paryavaran Adyayan Bhag I (R.P.)	April	1983
26.	Paryavaran Adhyayan Bhag I (R.P.)	March	1984
27.	Paryavaran Adhyayan Bhag II (R.P.)	February	1984
<i>Workbooks</i>			
28.	Abhyas Pustika Bal Bharati Bhag IV (R.P.)	December	1983
29.	Workbook for English Reader Book I (S.S.) (R.P.)	May	1983
30.	Workbook for English Reader Book I (S.S.) (R.P.)	March	1984
CLASS V			
<i>Textbooks</i>			
31.	Bal Bharati Bhag V (R.P.)	March	1984
32.	English Reader Book II (S.S.) (R.P.)	May	1983
33.	Mathematics for Primary Schools Book V (First Edition)	June	1983
34.	Mathematics for Primary Schools Books V (R.P.)	December	1983
35.	Social Studies Book III—India and the World (R.P.)	March	1984
<i>Workbooks</i>			
36.	Abhyas Pustika Bal Bharati Bhag V (R.P.)	May	1983
37.	Abhyas Pustika Bal Bharati Bhag V (R.P.)	December	1983
38.	Abhyas Pustika Swasti Bhag I (First Edition)	May	1983
39.	Abhyas Pustika Swasti Bhag I (R.P.)	March	1984
40.	Workbook for English Reader Book II (S.S.) (R.P.)	May	1983
41.	Workbook for English Reader Book II (S.S.) (R.P.)	March	1984
<i>Prescribed Supplementary Readers</i>			
42.	Read for Pleasure Book II (R.P.)	March	1984
CLASS VI			
<i>Textbooks</i>			
43.	Bharati Bhag I (R.P.)	May	1983
44.	Swasti Bhag II (R.P.)	March	1984
45.	English Reader Book III (S.S.) (R.P.)	May	1983
46.	English Reader Book III (S.S.) (R.P.)	March	1984
47.	Mathematics for Middle Schools Book I (R.P.)	May	1983
48.	Ganit Madhyamik Schoolon Ke Liye Bhag I (R.P.)	January	1984
49.	Lands and People Part I (R.P.)	June	1983
50.	Desh Aur Unke Niwasi Bhag I (R.P.)	April	1983
51.	History and Civics Part I (R.P.)	April	1983
52.	History and Civics Part I (R.P.)	March	1984

1	2	3	4
53.	Itihas Aur Nagrik Shastra Bhag I (R.P.)	April	1983
54.	Itihas Aur Nagrik Shastra Bhag I (R.P.)	March	1984
55.	Learning Science Part I (R.P.)	May	1983
56.	Learning Science Part I (R.P.)	March	1984
57.	Aao Vigyan Seekhein Bhag I (R.P.)	April	1983
58.	Steps to English I English Reader for Class VI (First Edition)	May	1983
CLASS VII			
<i>Textbooks</i>			
59.	Bharati Bhag II (R.P.)	May	1983
60.	Mathematics for Middle Schools Book II Part I (R.P.)	March	1984
61.	Mathematics for Middle Schools Book II Part II (R.P.)	May	1983
62.	Mathematics for Middle Schools Book II Part II (R.P.)	March	1984
63.	Ganit Madhyamic Schoolon Ke Liye Pustak II Bhag II (R.P.)	April	1983
64.	History and Civics Part II (R.P.)	June	1983
65.	Itihas Aur Nagrik Shastra Bhag II (R.P.)	April	1983
66.	Lands and People Part II (R.P.)	June	1983
67.	Desh Aur Unke Niwasi Bhag II (R.P.)	June	1983
68.	Learning Science Part II (R.P.)	April	1983
69.	Learning Science Part II (R.P.)	March	1984
70.	Aao Vigyan Seekhein Bhag II (R.P.)	May	1983
<i>Prescribed Supplementary Readers</i>			
71.	Naya Jeevan (R.P.)	March	1984
72.	Read for Pleasure Book IV (R.P.)	March	1984
CLASS VIII			
<i>Textbooks</i>			
73.	Bharati Bhag III (R.P.)	May	1983
74.	Swasti Bhag IV (R.P.)	April	1983
75.	Mathematics for Middle Schools Book III Part I (R.P.)	April	1983
76.	Mathematics for Middle Schools Book III Part I (R.P.)	March	1984
77.	Ganit Madhyamic Schoolon Ke Liye Pustak III Bhag I (R.P.)	April	1983
78.	Mathematics for Middle Schools Book III Part II (R.P.)	May	1983
79.	Mathematics for Middle Schools Book III Part II (R.P.)	March	1984
80.	Ganit Madhyamic Schoolon Ke Liye Pustak III Bhag II (R.P.)	May	1983

1	2	3	4
81.	English Reader Book V (S.S.) (R.P.)	April	1983
82.	History and Civics Part III (R.P.)	May	1983
83.	History and Civics Part III (R.P.)	March	1984
84.	Itihas Aur Nagrik Shastra Bhag III (R.P.)	March	1984
85.	Lands and People Part III (R.P.)	April	1983
86.	Lands and People Part III (R.P.)	March	1984
87.	Desh Aur Unke Niwasi Bhag III (R.P.)	May	1983
88.	Desh Aur Unke Niwasi Bhag III (R.P.)	March	1984
89.	Learning Science Part III (R.P.)	April	1983
90.	Aao Vigyan Seekhein Bhag III (R.P.)	May	1983
<i>Prescribed Supplementary Readers</i>			
91.	Trividha (R.P.)	April	1983
92.	Trividha (R.P.)	January	1984
93.	Read for Pleasure Book V (R.P.)	May	1984
94.	Read for Pleasure Book V (R.P.)	March	1984
<i>Workbook</i>			
95.	Abhyas Pustika Swasti Bhag IV (First Edition)	April	1983
CLASS IX			
<i>Textbooks</i>			
96.	Mathematics Part I ('A' Course) (R.P.)	May	1983
97.	Mathematics Part I ('A' Course) (R.P.)	March	1984
98.	Ganit Bhag I ('A' Course) (R.P.)	April	1983
99.	The Story of Civilization Vol. I (R.P.)	July	1983
100.	Man and Environment (R.P.)	June	1983
101.	Manushya Aur Vatavaran (R.P.)	August	1983
102.	Science Part I ('B' Course) (R.P.)	May	1983
CLASSES IX-X			
103.	We and Our Government (R.P.)	April	1983
104.	Hum Aur Hamara Shasan (R.P.)	May	1983
CLASS X			
105.	Mathematics Part II ('A' Course) (R.P.)	May	1983
106.	Mathematics Part II ('A' Course) (R.P.)	March	1984
107.	India on the Move (R.P.)	May	1983
108.	The Story of Civilization Vol. II (R.P.)	July	1983
109.	Sabhyata Ki Kahani Bhag II (R.P.)	May	1983
110.	Sabhyata Ki Kahani Bhag II (R.P.)	March	1984
111.	Steps to English—5 : English Reader ('B' Course) (R.P.)	March	1984
CLASS XI			
112.	Hindi Pratinidhi Ekanki (R.P.)	April	1983
113.	English Reader Part I (Core) (R.P.)	March	1984
114.	English Supplementary Reader Part I (Core) (R.P.)	June	1983

1	2	3	4
115.	Five One-Act Plays (R.P.)	May	1983
116.	Sanskrit Bhasha Evam Sahitya Ka Sankshipt Itihas (R.P.)	June	1983
117.	Rangini (R.P.)	June	1983
118.	Mathematics Book I (R.P.)	June	1983
119.	Ganit Bhag I (R.P.)	April	1983
120.	Mathematics Book II (R.P.)	June	1983
121.	Ganit Bhag II (R.P.)	April	1983
122.	Chemistry Part I (R.P.)	May	1983
123.	Chemistry Part I (R.P.)	March	1984
124.	Biology Part I (R.P.)	May	1983
125.	Biology Part I (R.P.)	March	1984
126.	Ancient India (R.P.)	April	1983
127.	Ancient India (R.P.)	March	1984
128.	Medieval India Part I (R.P.)	April	1983
129.	Medieval India Part I (R.P.)	March	1984
130.	Madhyakalin Bharat Bhag I (R.P.)	March	1984
131.	Foundations of Political Science (R.P.)	May	1983
132.	Political System (R.P.)	April	1983
133.	Political System (R.P.)	March	1984
134.	Elementary Statistics (R.P.)	April	1983
135.	Evolution of Indian Economy (R.P.)	April	1983
136.	Bhartiya Arthvyavastha Ka Vikas (R.P.)	May	1983
137.	Bhautik Bhugol Ke Adhar (R.P.)	May	1983
138.	Field Work and Laboratory Techniques in Geography (R.P.)	April	1983
139.	Geography Workbook (R.P.)	April	1983
140.	Bhugol Abhyas Pustika (R.P.)	May	1983
141.	Bharat Ka Samanya Bhugol Bhag I (R.P.)	April	1983
142.	General Geography of India Part I (R.P.)	May	1983
143.	Psychology—An Introduction to Human Behaviour (First Edition)	June	1983
CLASSES XI-XII			
144.	Parijat (R.P.)	March	1984
145.	Chayanika (R.P.)	May	1983
146.	Chayanika (R.P.)	March	1984
147.	Physics (R.P.)	August	1983
148.	English Reader II (Core) (R.P.)	May	1983
149.	English Reader II (Core) (R.P.)	March	1984
CLASS XII			
150.	Nibandh Bharati (R.P.)	March	1984
151.	Vividha (R.P.)	March	1984
152.	A Course in Written English (R.P.)	March	1984
153.	English Supplementary Reader Part II (Core) (R.P.)	May	1983
154.	Akhyanika (R.P.)	May	1983

1	2	3	4
155.	Mathematics Book III (R.P.)	May	1983
156.	Ganit Bhag III (R.P.)	April	1983
157.	Mathematics Book IV (R.P.)	April	1983
158.	Ganit Bhag IV (R.P.)	May	1983
159.	Mathematics Book V (R.P.)	May	1983
160.	Ganit Bhag V (R.P.)	June	1983
161.	Ganit Bhag V (R.P.)	March	1984
162.	Chemistry Part II (R.P.)	May	1983
163.	Biology Part II Vol. I (R.P.)	May	1983
164.	Biology Part II Vol. II (R.P.)	April	1983
165.	Medieval India Part II (R.P.)	April	1983
166.	Madhyakalin Bharat Bhag II (R.P.)	March	1984
167.	Modern India (R.P.)	April	1983
168.	Indian Constitution and the Government (R.P.)	April	1983
169.	Bhartiya Samvidhan Aur Shasan (R.P.)	April	1983
170.	Indian Democracy at Work (R.P.)	May	1983
171.	National Accounting (R.P.)	April	1983
172.	An Introduction to Economic Theory (R.P.)	April	1983
173.	Human and Economic Geography (R.P.)	April	1983
174.	Manav Evam Arthik Bhugol (R.P.)	May	1983
175.	Geography of India Part II (R.P.)	April	1983
176.	Bharat Ka Bhugol Bhag II (R.P.)	May	1983
177.	Child Psychology (R.P.)	June	1983
<i>Urdu Textbooks</i>			
CLASS I			
178.	Riyazee (Mathematics) Book I	April	1983
CLASS VI			
179.	Hisab (Mathematics) Part I (R.P.)	September	1983
180.	Tareekh Aur Ilm-e-Shahriyat Part I (R.P.)	September	1983
181.	Mumalik Aur Unke Bashinde Part I (R.P.)	September	1983
CLASS VIII			
182.	Hisab (Mathematics) Book III Part I (R.P.)	August	1983
CLASS IX			
183.	Riyazee (Mathematics) Part I (R.P.)	October	1983
184.	Science Part I ('B' Course) (R.P.)	June	1983
185.	Insan Aur Mahaul (R.P.)	July	1983
186.	Tahzeeb Ki Kahani Vol. I (R.P.)	July	1983
CLASSES IX-X			
187.	Hum Aur Hamari Hukumat (R.P.)	May	1983
CLASS XI			
188.	Qadeem Hindustan (R.P.)	January	1984

1	2	3	4
<i>Textbooks/Workbooks for Other States/Organizations</i>			
189.	English Reader Book II for the Open School (First Edition)	April	1983
190.	Arun Bharati Bhag I (R.P.)	July	1983
191.	Abhyas Pustika Arun Bharati Bhag I (R.P.)	July	1983
192.	Arun Bharati Bhag II (R.P.)	August	1983
193.	Abhyas Pustika Arun Bharati Bhag II (R.P.)	June	1983
194.	Gadhya Bharati (R.P.)	March	1984
195.	Kavya Bharati (R.P.)	March	1984
196.	English Reader Book VI (S.S.) (R.P)	April	1983
197.	English Reader Book VI (S.S) (R.P.)	March	1984
198.	Saora Bhasha Ki Praveshika (First Edition)	July	1983
<i>Supplementary Readers</i>			
199.	Theatre Ki Kahani (Urdu)	September	1983
200.	Science and Man	February	1984
201.	Poems—Subramanian Bharati (English)	April	1983
202.	Poems—Subramanian Bharati (Hindi)	April	1983
<i>Research Monographs and Other Publications</i>			
203.	Learning to Earn	April	1983
204.	SUPW Source Book Vol. III	April	1983
205.	Kala Sambhandhi Vyavsaya	April	1983
206.	Padhne Ko Kaisay Sudharein	April	1983
207.	Khel Kshetra Ke Vyavsaya	April	1983
208.	Prabhavkari Adhyayan Kaisay Karein	May	1983
209.	Anya Vyaktiyon Ke Sath Mil-Jul Kar Kaisay Rahein	May	1983
210.	Teacher's Guide to Non-formal Education Programme (age-group 9-14 years)	May	1983
211.	Psychology of the Child and the Curriculum	May	1983
212.	Hamare Shikshak	May	1983
213.	Jeev Shastriya-Evam-Vanaspati Shastriya Vyavsaya	May	1983
214.	Audit Report 1981-82	June	1983
215.	Research on Examinations in India	June	1983
216.	National Seminar on Population Education	July	1983
217.	National Bibliography on Population Education	July	1983
218.	Lekha Pariksha Report 1981-82	August	1983
219.	Unit Tests in English for Class XI	August	1983
220.	Nai Kiran (Urdu Primer) for Non-formal Education	August	1983
221.	Karobari Hisab Part I (Urdu) for Non-formal Education	August	1983
222.	The Teacher and Education in Emerging Indian Society	September	1983
223.	Unit Tests in English for Class XII	September	1983
224.	Parho Aur Barho—Urdu Primer for Boys	September	1983
225.	Nai Roshni—Urdu Primer for Girls for Non-formal Education	October	1983
226.	Nai Kiran—Primer Guide for Non-formal Education	October	1983

1	2	3	4
227.	Playway Activities in Primary Schools	October	1983
228.	National Science Exhibition for Children 1983	November	1983
229.	The Effect of Environmental Process Variables on School Achievement (5½ to 11 years)—The Report of Varanasi Centre	November	1983
230.	The Structure and Working of Science Models 1983	November	1983
231.	Criterion Referenced Testing—a Monograph	November	1983
232.	Study of World Problems in Schools, June 1982-March 1983 India Report	November	1983
233.	NCERT Annual Report 1982-1983	December	1983
234.	NCERT Varshik Report 1982-1983	December	1983
235.	Developmental Norms of Indian Children (2½ to 5 years)—Part IV Language Development	February	1984
236.	Teaching of Science in Secondary Schools	March	1984
237.	Education, Social Values and Social Work—the tasks for the New Generation	March	1984
238.	Guidelines for Educational and Psychological Test Reviews	March	1984

18

Administration, Finance and Welfare Activities

THE NCERT Secretariat continued to perform its function of house-keeping in accordance with the rules, regulations and procedures of the Council. It provided the necessary support to the various constituents of the Council for their effective and efficient functioning.

Administrative and Welfare Activities

As a measure of staff welfare, the Council Secretariat continued to provide facilities for sports and games, and encouragement for cultural activities.

The Third Inter-Regional Colleges of Education and NIE Staff Tournament was organized at the Regional College of Education, Ajmer, from 13 to 19 January 1984. The competition was for Kabbadi, Volleyball, Table Tennis, Basket Ball and Badminton.

The teams from the four Regional Colleges of Education and the NIE participated. More than 130 players took part in these games. They evinced keen interest and played in the spirit of comradeship. The tournament proved a great success.

Keeping in view the pressing needs of the employees of the NCERT at Delhi, it was decided to construct 104 more staff quarters of Types I, II, III, IV and V. A shopping complex with a provision of 24 shops and a post-office has also been approved to meet the local needs of the employees and the residents of the NIE Campus.

It has been decided to provide a lift and 10 more rooms in the NIE Guest House. The plans and cost estimates for all these works were approved by the NCERT and funds were released to the CPWD.

Special efforts were made to improve and beautify the campus of the NCERT. Special measures were taken to bring more land under horticulture, develop some parks and grow more trees on various spots on the campus. A big children's park has been developed and steps have been taken to develop a mini park.

The campus of the NCERT has been judged the second best in the whole of Delhi by the Horticulture Department of CPWD. The Council has a plan to grow additional one thousand trees on the NIE campus.

With the active help and cooperation of the Municipal Corporation of Delhi, an additional two-inch water connection has been given to the NCERT campus by which the problem of drinking water has eased.

The Council has decided to work out a detailed plan for organizing the Silver Jubilee Celebrations of the NCERT in the first week of September 1986. Different committees have been formed to plan and work out details.

The NCERT had already introduced the LIC Group Insurance Scheme for the benefit of Categories 'B', 'C' and 'D' officers of the NCERT with effect from 1 April 1982. As Category 'A' officers of the Council had subsequently renewed their request for the introduction of such a scheme for their benefit as well, steps were taken to negotiate with the LIC for introduction of this scheme for them. This scheme has been introduced for Category 'A' officers of the Council with effect from 1 April 1984.

Use of Hindi

The Hindi Cell of the NCERT accomplished the following tasks during 1983-84 for the progressive use of Hindi for official purposes.

Development and Distribution of Material. The Cell procured the following books and distributed them among various departments and units of the Council.

- (i) Official Language Act, 1963—Hindi and English editions.

- (ii) Dr. Bulke's comprehensive English-Hindi Dictionary—110 copies.

Survey. The Cell conducted a survey to determine the winner department of the NCERT for the running shield for the maximum use of Hindi in official work. The survey included two questionnaires in which information was to be filled on 22 points.

Advice and Guidance. The Cell helped and advised the departments and the administrative sections in writing the notings and letters in Hindi, translating material from English to Hindi and preparing departmental tools in Hindi.

Consultancy and guidance was provided in translating from Hindi to English certain proceedings concerning disciplinary action by the U.P. Government, and in the preparation of the research tools in Hindi.

A student of IIT, New Delhi, was helped in determining Hindi equivalents of English words in computer science and cooperation was given to the research students of Indian Statistical Institute, New Delhi, in finding out the correct Hindi pronunciation of certain Hindi words.

Recruitment of Staff. Three posts of Translators were created in the Council. Steps were being taken to recruit suitable candidates for the posts.

Schemes for Rewards. A Running Shield and a Certificate of Appreciation are awarded to the Unit of the Council which makes the maximum use of Hindi in official work during a year. The shield and the certificate were awarded to Establishment Section No. 4 during the year under report.

The employees of the Council were encouraged to take part in All-India Hindi Typing, Hindi Stenography, Hindi Writing (noting) and Drafting competitions organized by the Kendriya Sachivalaya Hindi Parishad. The Cell worked as a Liaison Office between the Ministry of Home Affairs and the Ministry of Education.

'Shiksha Shodh' in Hindi was registered as the telegraphic address of the Council.

The NCERT made an appeal to its staff to make maximum use of Hindi in their work.

Information concerning the Council for submission to the Committee of Parliament on Official Language was collected. It was presented by the Director, NCERT, before the Committee on 26 October 1983.

Three quarterly meetings of the Official Language Implementation Committee were held. Quarterly and yearly programmes were prepared. Six programmes for 1984-85 were prepared. With the completion of these programmes, the Council employees will attain efficiency in Hindi typing, Hindi stenography and Hindi noting and drafting.

Employees not knowing Hindi will be trained through correspondence courses. A Separate library file will be maintained for the compilation of English-Hindi equivalents, sentences, phrases, etc. A survey of the work done in Hindi in the Council will be undertaken on the basis of which arrangements will be made to furnish information regularly to the Ministries of Education and Home Affairs (Official Language Department).

Finance

Consolidated Receipts and Payments Account of the NCERT for the year 1983-84 is given in the following table.

CONSOLIDATED RECEIPTS AND PAYMENTS ACCOUNTS FOR THE YEAR 1983-84

<i>Receipts</i>	<i>Amount (Rs.)</i>	<i>Payments</i>	<i>Amount (Rs.)</i>
Opening Balance	1,00,50,354.00	<i>Pay of Officers</i>	
		Non-Plan	1,05,34,109.00
		Plan	4,87,918.00
			1,10,22,027.00
Grant-in-aid from the Government of India, Ministry of Education		<i>Pay of Establishment</i>	
Non-Plan	9,11,98,684.00	Non-Plan	92,54,496.00
Plan	2,51,34,567.00	Plan	3,86,641.00
	11,63,33,251.00		96,41,137.00
Grants and Refunds pertaining to Specific Grants (List attached)	6,29,66,768.00	<i>Allowances and Honoraria</i>	
		Non-Plan	2,36,85,163.00
		Plan	11,83,224.00
			2,48,68,387.00
<i>Receipts relating to Non-Plan</i>			
Rent of the Council Building	10,63,519.00	<i>Travelling Allowances</i>	
		Non-Plan	10,56,378.00
		Plan	54,838.00
			11,11,216.00
Interest on Loan/STI	1,38,928.00	<i>Other Charges</i>	
		Non-Plan	1,27,63,673.00
		Plan	6,38,326.00
			1,34,01,999.00
Recovery of Overpayment	10,71,366.00	<i>Programme</i>	
Interest on GPF/CPF Investment	20,62,126.00	Non-Plan	5,34,28,624.00
		Plan	82,63,172.00
			6,16,91,796.00
		<i>Scholarship/Fellowship</i>	
Sale Proceeds of Books and Periodicals	2,36,54,346.00	Non-Plan	7,24,355.00
		Plan	4,39,555.00
			11,63,910.00
Sale of Science Kits	3,92,713.00	<i>Equipment and Furniture</i>	
Fees and Charges	6,11,681.00	Non-Plan	5,82,671.00
		Plan	20,28,991.00
			26,11,662.00
Leave Salary and Pension Contribution	1,43,561.00	<i>Land and Building</i>	
Royalty	87,215.00	Non-Plan	31,92,240.00
		Plan	1,72,34,417.00
			2,04,26,657.00

CGHS	38,441.00	<i>Miscellaneous Payments</i>	
Miscellaneous Receipts	19,82,649.00	Pension and Gratuity	11,75,624.00
		Advertisement	2,37,430.00
		<i>CGHS</i>	
<i>Receipts—Plan</i>		Non-Plan	3,82,977.00
Miscellaneous Receipts	30,00,000.00	Plan	26,719.00
			4,09,696.00
		House Rent	6,318.00
		Audit Fee	72,710.00
		Interest on GPF/Council Contribution on CPF	32,42,025.00
		Leave Salary and Pension Contribution	28,803.00
		Bad Debts	15,210.00
		<i>Other Payments</i>	
		Non-Plan	88,283.00
		Plan	13,181.00
		Expenditure on the Specific Grants (List attached)	5,09,63,713.00
<i>Recoveries of Loans and Advances</i>		Motor-car/Scooter Advance	1,11,515.00
Motor-car and Scooter Advance	1,43,880.00	Other Conveyance Advance	43,551.00
Other Conveyance Advance	47,613.00	House Building Advance	31,94,055.00
House Building Advance	12,59,454.00	Fan Advance	1,500.00
Fan Advance	(—) 8,546.00	Festival Advance	2,23,332.00
Festival Advance	2,16,804.00	TA/Advance Pay on Transfer	63,282.00
TA/Advance Pay on Transfer	37,289.00	Miscellaneous Advance	5,000.00
Flood Advance	(—) 33,972.00	Warm Clothing Advance	1,000.00
Warm Clothing Advance	542.00	Canteen Advance	(—) 6,000.00
Permanent Advance	8,000.00	Permanent Advance	10,100.00
Other Miscellaneous Advance	45,736.00		
<i>Funds and C.D.S. Accounts</i>		GPF	48,37,151.00
GPF	75,20,044.00	CPF	12,68,786.00
CPF	31,53,253.00	CDS	3,02,835.00
CDS	1,32,459.00		

Deposits

Earnest Money and S.D.	4,23,460.00
Caution Money	87,362.00
Other Deposits	4,75,373.00
Group Insurance Scheme	2,56,880.00
GPF/CPF Investment	36,34,400.00
Short-term Investment	4,15,00,000.00
Suspense	19,931.00

Remittances

CDS Remittance	5,642.00
GPF/CPF Remittance	1,14,084.00
PLI Remittance	94,183.00
Income-tax Remittance	3,93,705.00
Miscellaneous Remittance	36,735.00
SO Remittance	17,47,640.00
Periodical Remittance	10,63,58,253.00
Transit	10,64,48,253.00
Death Relief Fund	34,418.00
CTS Remittance	1,00,752.00

90,000.00

39,14,02,292.00

Earnest Money and S.D.	3,95,781.00
Caution Money	57,095.00
Other Deposit	3,85,049.00
Group Insurance Scheme	1,79,587.00
GPF./CPF Investment	41,21,500.00
Short-term Investment	4,15,00,000.00
Transfer to GPF/CPF Funds	41,24,000.00
Suspense	95,503.00

CDS Remittance	5,601.00
GPF/CPF Remittance	1,27,899.00
PLI Remittance	32,452.00
Income-tax Remittance	4,00,623.00
Miscellaneous Remittance	2,40,948.00
SO Remittance	16,56,894.00
Periodical Remittance	10,63,58,253.00
Transit	10,63,67,853.00
Death Relief Fund	38,087.00
CTS	80,015.00

9,600.00

37,20,47,178.00

Closing Balance	1,93,45,514.00
Transit	9,600.00

1,93,55,114.00

39,14,02,292.00

Consolidated Receipts and Payments of Specific Grants During 1983-84

		<u>Receipts</u> <u>Rs.</u>	<u>Payments</u> <u>Rs.</u>
1.	UNICEF Special Funds	38,86,404.93	20,82,782.36
2.	Ministry of Education and Culture for PEU		
	Grant	1,03,00,000.00	
	Refunds	1,11,370.15	
		1,04,11,370.15	88,17,000.12
3.	UNESCO—Organizing of Working Group Meeting on Experimental Application of Sampling Methods to Collect Educational Statistics (Cont. No. 685,071)		
	Grant	29,930.00	
	Refunds	8,469.64	
		38,399.64	19,000.00
4.	UNESCO—Joint Innovative Project on Meeting of Educational Needs of Young People without Schooling or Incomplete Schooling	—	7,150.00
5.	UNESCO—Implementation and Evaluation Material in Contemporary World Problems		
	Refund	504.00	6,634.50
6.	APEID—UNESCO Study Group Meeting in Pre-school Education (Cont. No. 118.57)		
	Grant	16,488.00	
	Refunds	6,683.38	
		23,171.38	15,800.00
7.	UNICEF—A Study of Education of Backwardness of Girls in 8 Selected States		
	Refund	1,097.75	25,532.30
8.	UNESCO—Inter-Country Training Workshop for the Project of Vocational and Technology Education under Japanese Fund (Cont. No. 508.532L)		
	Grant	67,308.90	67,175.00

9.	UNESCO—Regional Seminar Conference of Formal and Non-Formal Education to be held at Bangkok	Grant	39,465.00		
		Refund	2,073.49	41,538.49	32,310.94
10.	UNESCO—Graphic Communication	Grant		4,995.00	—
11.	USAID—Midday Meals	Refund		31,306.00	42,668.90
12.	Specific Grant from UNESCO—Preparation of Regional Guide for Identification and Elimination of Sex Stereo-type in and from Education Programme and Textbook Programme (514.621)			15,090.00	3,664.50
13.	UNESCO—Placement of UNESCO Fellow from Afghanistan in Training in the Field of Physics, Chemistry, Biology for a Period of Two Months	Grant	40,000.00		
		Refund	5,306.28	45,306.28	25,397.30
14.	UNESCO—National Training Workshop on Improvement of Curriculum Teaching Material (Cont. No. 507.305)	Grant	20,130.85		
		Refund	1,207.20	21,364.78	24,684.00
			26.73		
			<u>1,233.93</u>		
15.	UNESCO—Study Visit Programmes to Various Institutions in India for Bangladesh 15 August 1983 to 21 August 1983	Grant	25,000.00		
		Refunds	2,560.35	27,560.35	5,000.00
16.	UNESCO—\$ 1000—Study on Fascination of Science Education in Country	Grant		10,167.75	6,850.00

17.	UNESCO—Preparation of Experimental Model In-service Training on Teachers and Supervisors in Environmental Education in Primary Schools (514.006)			
		Refunds	65.38	2,050.00
18.	Specific Grant received from Dr. Prem Kasaji, Executive Director, RCE I and Development, Tribhuvan University, Kathmandu		932.35	932.35
19.	UNESCO—Attachment Programme in respect of Dr. A. Chankwee to NCERT			
		Grant	843.90	—
20.	UNESCO—Upgrading Basic Science related to Vocational and Technical Education—Regional Training Course in Maths. (Cont. No. 507.5383)			
		Refunds	30,146.62	—
21.	UNESCO—Programme of Inter-country Study Visit for Science Equipment Design and Development			
		Grant	4,975.00	
		Refunds	2,684.31	4,975.00
22.	UNESCO—Workshop Training Activities in Biology Education Follow-up for Training Material			
		Refunds	130.55	
		Adjustment grant	1,604.20	
			(—) 1,473.65	9,970.00
23.	UNDP—For Quality Improvement in General Education in Srilanka Training Programme for Shri Prem Mitra/Shri P.A.B. Perasa/Shri M.P.Z. Fernandez in Department of Teaching Aids			
		Grant	35,000.00	
		Refunds	1,807.87	36,807.87
24.	UNESCO—National Study on Work Experience in General Education in India			
		Grant	13,452.00	2,273.30
25.	UNESCO—Experimental Module for Pre-service Training of Social Studies Teachers in Environmental Education in School			
		Grant	4,975.00	—

26. Ministry of Education and Culture for INSAT Programme for CET		3,82,02,000.00	3,75,36,290.20
27. UNICEF—Received from UNICEF for INSAT Programme for CET		82,00,000.00	—
28. UNESCO—Pilot Project Technology Education			
	Grant	66,470.00	66,470.00
29. UNESCO—National Study on Universalization of Education at Primary Level			
	Grant	52,356.02	
	Refunds	21,566.79	73,922.81
30. UNESCO—National Training Workshop of Key Persons in respect of Learning Problem of Children particularly Disadvantaged Group			
	Refunds	15,706.80	46,700.00
31. UNESCO—Reimbursement of Expenditure for conducting Workshop		25,150.00	30,000.00
32. UNESCO—Attachment Programme in Population Education for Two Vietnamese Educators		2,012.00	—
33. UNESCO—Experiment Model In-service Training Teachers and Supervisors in Environmental Education for Primary School (Cont. No. 514.000)		15,090.00	—
34. CSIR—for Payment to Dr. (Mrs) Zeenat Rasheed		9,100.00	5,500.00
35. ICSSR—Publication Ph.D. Research Abstracts in India Education		5,000.00	—
36. UNESCO—Workshop Special Education Japanese Fund (117.252)			
	Grant	26,624.06	—
37. UNESCO—Workshop Training Activities in Biology Education of Fellows for Reproduction of Models for Try-out in Evaluation (525.039)			
	Grant	5,324.82	—

38. UNESCO—Reimbursement of Expenditure on conducting Workshop Childhood Care Education (507/352 : 3)	37,413.10	37,413.10
39. UNESCO—Studies of Universalization of Education for Age group 6-14/15		
Grant	960.15	7,989.00
40. UNESCO—Study Low Cost	—	798.16
41. Ministry of Education and Culture for Programme for Community Singing	15,63,000.00	15,63,000.00
42. Ministry of Education and Culture—Comparative Study of Teachers Profiles in Their Rural and Urban Setting in Elementary School System	—	5,419.90
43. Specific Grant received from Ministry of Education for conducting Programme for Vocational Education	—	4,19,810.73
	<u>6,29,66,767.92</u>	<u>5,09,63,712.66</u>

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 both in the field of education and educational innovations. The intimate contact of professional educational organizations with institutions and teachers/educators is a good catalyst for educational transformation in the country. Keeping this in view, the NCERT has been operating a scheme of financial assistance to professional educational organizations for the last few years on the lines of the scheme which was prevalent in the Ministry of Education and Social Welfare.

The major details of the scheme 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 publication of 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 the 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 a 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 state level be entertained.
- (iii) It should be open to all citizens of India without distinction of region, 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 roll on the date of application.
- (viii) It should not be run for profit to any individual or a body of individuals.

Activities

- (i) Under this scheme the following 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 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, workshops, especially 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 the 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 grant 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)] | =Rs. 1,500—800 |
| | =Rs. 700 |

Procedure for Applying

- (i) The PEOs should submit their applications in the prescribed application forms 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 the case of requests for grants for the publication of journal/other materials, copies of previous issues of the journals/previous publications.
- (e) An audited statement of accounts of the organization for the previous year along with a utilization certificate duly signed by the President/Secretary of the Association and the Auditors (Chartered Accountants, etc.)

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 a PEO to carry one advertisement of the NCERT without charges.
- (ii) In the case of grants for annual conferences the organization should associate some representatives 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 purposes other than those for which the grant was given without prior sanction of the NCERT. Should the institution/organization cease to exist at any time 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 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.

**Grants given by the NCERT to Professional Educational Organizations
during 1983-84 for Organizing Conferences**

<i>Sl. No.</i>	<i>Name of the Organization</i>	<i>Purpose</i>	<i>Amount Sanctioned</i>
1.	Indian Academy of Social Sciences, 555-E, Mumfordganj, Allahabad	8th Indian Science Congress	Rs. 6,000
2.	National Institute of Public Co-operation and Child Development 5, Siri Institutional Area, New Delhi	Afro-Asian Conference	Rs. 5,000
3.	Indian Association of Educational Planning and Administration, New Delhi	5th Commonwealth Regional Conference	Rs. 5,000
4.	National Parent-Teacher Association, New Delhi	10th Annual Conference	Rs. 5,000
5.	All India Secondary Teachers Federation, Mahantyapara, Cuttack	All India Conference	Rs. 4,000
6.	Integrated Education Rehabilitation and Research Centre for Handicapped, Shakarpur, Delhi	Annual Conference	Rs. 4,000
7.	Dr. Zakir Husain Educational and Cultural Foundation, 7, Race Course Road, New Delhi	Annual Conference	Rs. 5,000
8.	Indian Association for Pre-school Education, Lady Irwin College, Sikandra Road, New Delhi	19th Conference	Rs. 4,000

**Grants given by the NCERT to Professional Educational Organizations
during the Year 1983-84 for Publication of Journals**

<i>Sl. No.</i>	<i>Name of the Organization</i>	<i>Title of Journal</i>	<i>Amount Sanctioned</i>
1.	All India Science Teachers Association, C/o. Non-formal Education, NIE, New Delhi	Vigyan Shikshak	Rs. 1,500
2.	Bangiya Bijnan Parishad, P-23, R.R. St., Calcutta	Jnan-O-Bijnan	Rs. 3,500
3.	English Language Teachers Association of India, 3, First Trust Link St., Mandavelipakkam, Madras-28	English Language Teaching	Rs. 5,000
4.	SITU Council of Educational Research, Madras-28	Experiments in Education	Rs. 3,000

5.	Association for Improvement of Mathematics Teaching, 25, Fern Road, Calcutta	Indian Journal of Mathematics Teaching	Rs. 4,000
6.	Association for the Promotion of Science Education, 3, First Trust Link St., Mandavelipakkam, Madras-28	Junior Scientist	Rs. 4,500
7.	Indian Association for Pre-school Education, Lady Irwin College, New Delhi	Balak	Rs. 2,500
8.	Indian Physics Association C/o Tata Institute of Fundamental Research, Bombay	Physics News	Rs. 5,000

Appendix B

Location of Field Advisers in the States

- | | |
|--|---|
| 1. Field Adviser (NCERT)
3-6-69/B/7, Aavanti Nagar
Bashir Bagh, Hyderabad | Andhra Pradesh |
| 2. Field Adviser (NCERT)
Zoo Road, Gauhati | Assam, Arunachal Pradesh,
Manipur and Nagaland |
| 3. Field Adviser (NCERT)
Kankarbag
Patrakar Nagar, Patna | Bihar |
| 4. Field Adviser (NCERT)
Kothi No. 23, Sector-8 A
Chandigarh | Chandigarh, Haryana and Punjab |
| 5. Field Adviser (NCERT)
I-B, Chandra Colony
Behind Law College
Ahmedabad | Gujarat, Dadra and Nagar Haveli |
| 6. Field Adviser (NCERT)
Laxmi Bhawan
Near Sanjauli Chowk
Simla | Himachal Pradesh |
| 7. Field Adviser (NCERT)
Nizam Manzil
Sher-i-Kashmir Colony
Sector-2, Qamarwari
Srinagar | Jammu and Kashmir |
| 8. Field Adviser (NCERT)
621, Eighty Feet Road
II Block, Rajajinagar
Bangalore | Karnataka |
| 9. Field Adviser (NCERT)
SIE Building, Pooja Pura
Trivandrum | Kerala and Lakshadweep |
| 10. Field Adviser (NCERT)
MIG-161 Saraswati Nagar
Jawahar Chowk, Bhopal | Madhya Pradesh |
| 11. Field Adviser (NCERT)
128/2, Kothrud, Karve Road
Pune | Maharashtra, Goa, Daman and Diu |

- | | |
|--|--|
| <p>12. Field Adviser (NCERT)
Boyce Road, Laitumkhra
Shillong</p> | <p>Meghalaya, Mizoram and Tripura</p> |
| <p>13. Field Adviser (NCERT)
Homi Bhabha Hostel
RCE Campus
Bhubaneswar</p> | <p>Orissa</p> |
| <p>14. Field Adviser (NCERT)
A-33, Prabhu Marg (West)
Tilak Nagar, Jaipur</p> | <p>Rajasthan</p> |
| <p>15. Field Adviser (NCERT)
32, Hindi Prachar Sabha St.
T. Nagar, Madras</p> | <p>Tamil Nadu and Pondicherry</p> |
| <p>16. Field Adviser (NCERT)
555-E, Mumfordganj
Allahabad</p> | <p>Uttar Pradesh</p> |
| <p>17. Field Adviser (NCERT),
P-23 CIT Road, Scheme-55
Calcutta</p> | <p>West Bengal, Andaman and
Nicobar Islands and Sikkim</p> |

Appendix C

The NCERT Committees

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. Smt. Sheila Kaul
Union Minister for Education
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. Smt. Serla Grewal
Secretary
Ministry of Education
Shastri Bhavan
New Delhi |
| (iv) Four Vice-Chancellors of Univer-
sities, one from each Region,
nominated by the Government of
India | 4. Prof. S. Hamid
Vice-Chancellor
Aligarh Muslim University
Aligarh
5. Shri R.K. Kanbarkar
Vice-Chancellor
Shivaji University
Kolhapur
6. Prof. B.S. Ramakrishna
Vice-Chancellor
Hyderabad University
Hyderabad
7. Dr. V.K. Sukumaran Nair
Vice-Chancellor
Kerala University
Trivandrum |

- (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 the case of Delhi the Chief Executive Councilor, Delhi (or his representative)
8. Education Minister
Andhra Pradesh
Hyderabad
 9. Education Minister
Assam
Dispur
 10. Education Minister
Bihar
Patna
 11. Education Minister
Gujarat
Ahmedabad
 12. Education Minister
Haryana
Chandigarh
 13. Education Minister
Himachal Pradesh
Simla
 14. Education Minister
Jammu and Kashmir
Srinagar
 15. Education Minister
Kerala
Trivandrum
 16. Education Minister
Madhya Pradesh
Bhopal
 17. Education Minister
Maharashtra
Bombay
 18. Education Minister
Manipur
Imphal
 19. Education Minister
Meghalaya
Shillong
 20. Education Minister
Karnataka
Bangalore
 21. Education Minister
Nagaland
Kohima
 22. Education Minister
Orissa
Bhubaneswar
 23. Education Minister
Punjab
Chandigarh

24. Education Minister
Rajasthan
Jaipur
 25. Education Minister
Tamil Nadu
Madras
 26. Education Minister
Government of Tripura
Agartala
 27. Education Minister
Sikkim
Gangtok
 28. Education Minister
Uttar Pradesh
Lucknow
 29. Education Minister
West Bengal
Calcutta
 30. The Chief Executive Councillor
Delhi Administration
Delhi
 31. Education Minister
Government of Goa, Daman and
Diu
Panaji (Goa)
 32. Education Minister
Mizoram
Aizal
 33. Education Minister
Government of Pondicherry
Pondicherry
 34.
 35. Shri P.K. Thungan
Deputy Minister of Education
Ministry of Education
Shastri Bhavan
New Delhi
 36. Director
National Council of Educational
Research and Training
Sri Aurobindo Marg
New Delhi
 37. Dr. N. Vedamani Manuel
Professor and Head of Department
of Education
Kerala University
Trivandrum
 38. Prof. V.G. Kulkarni
Tata Institute of Fundamental
- (vi) All Members of the Executive Committee not included above

Research, Homi Bhabha Centre
for Science Education
Homi Bhabha Road
Bombay

39. **Shri B.M. Joshi**
Principal
Shree M.M. Pupils' Own School
and Sharda Mandir
Swami Vivekanand Road, Khar
Bombay
40. **Shri M.S. Dixit**
Principal
Hiralal V N Inter College
Chhibramau
Farrukhabad (U.P.)
41. **Dr. T.N. Dhar**
Joint Director
National Council of Educational
Research and Training
New Delhi
42. **Prof. P.N. Dave**
Central Coordinator
UNICEF Assisted Projects
National Council of Educational
Research and Training
New Delhi
43. **Dr. J.S. Rajput**
Principal
Regional College of Education
Shyamla Hills
Bhopal
44. **Dr. (Smt.) Shākuntala Bhattacharya**
Reader
Department of Education in
Science and Mathematics
National Council of Educational
Research and Training
New Delhi
45. **Shri P.K. Patnaik**
Joint Secretary (SE)
Ministry of Education
Shastry Bhavan
New Delhi
46. **Shri Man Mohan Singh**
Financial Adviser, NCERT and
Ministry of Education
Shastri Bhavan
New Delhi

- (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 (DGHS), New Delhi
ex officio
- (d) Deputy Director-General
Incharge of Agricultural
Education, ICAR, Ministry of
Agriculture, New Delhi
ex officio
- (e) Director of Training, Directo-
rate General of Training and
Employment, Ministry of
Labour, New Delhi
ex officio
- (f) Representative of Education
Division, Planning Commis-
sion, New Delhi
ex officio
- (viii) Such other persons, not exceed-
ing six, as the Government of
India may, from time to time,
nominate. Not less than four of
these shall be school teachers.
47. Chairman
Central Board of Secondary
Education
17-B, Indra Prastha Estate
New Delhi
48. Commissioner
Kendriya Vidyalaya Sangathan
Nehru House
4-Bahadur Shah Zafar Marg
New Delhi
49. Director
Central Health Education Bureau
(DGHS)
Nirman Bhavan
New Delhi
50. Deputy Director-General
Incharge of Agricultural
Education
ICAR, Ministry of Agriculture
Dr. Rejendra Prasad Road
New Delhi
51. Director of Training
Directorate General of Training
and Employment
Ministry of Labour
Shram Shakti Bhavan
Rafi Marg
New Delhi
52. Educational Adviser
Planning Commission
Yojana Bhavan
Parliament Street
New Delhi
53. Shri S. Ramaswamy
Head Master and Correspondent
T.V.S. Iyengar Higher
Secondary School
Madurai (Tamil Nadu)
54. Shri Kedar Nath Singh
Science Teacher
K.K. Vidya Mandir
P.O. Dharawarh
Distt. Vaishali
Bihar
55. Smt. Salma Firdous
Principal
Higher Secondary School
Kotabi Bagh
Srinagar

(ix) Special invitees

56. Shri Bir Singh
Divisional Superintendent of
Education
Jabalpur Division
Jabalpur (M.P.)
57. Dr. N.K. Upasani
Hony. Professor
Education Department
S.N.D.T. University
Bombay
58. Dr. (Km.) M. Dollie Shenoy
1-2-212/6/1, Gagan Mahal Road
Dumalguda
Hyderabad
59. Secretary
Council of Indian School
Certificate Examination
Pragati House, 3rd Floor
47-Nehru Place
New Delhi
60. Secretary
National Council of
Educational Research
and Training
New Delhi

EXECUTIVE COMMITTEE

- (i) President of the Council who shall be the *ex-officio* President of the Executive Committee
 - (ii) (a) The Minister of State in the Ministry of Education who shall be the *ex-officio* Vice President of the Executive Committee
 - (b) A Deputy Minister in the Ministry of Education nominated by the President NCERT
 - (c) Director of the Council
1. Smt. Sheila Kaul
Minister of State
Ministry of Education
Shastri Bhavan
New Delhi
 2. Shri P.K. Thungan
Deputy Minister of Education
Ministry of Education
Shastri Bhavan
New Delhi
 3. Dr. P.L. Malhotra
Diretor
National Council of
Educational Research and
Training
New Delhi

- (d) Secretary, Ministry of Education *ex officio*
- (iii) Chairman of the University Grants Commission Member *ex officio*
- (iv) Four educationists with known interest in school education (two of whom shall be school teachers) nominated by the President
- (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 Departments, nominated by the President of the Council
4. Smt. Serla Grewal
Secretary
Ministry of Education
Shastri Bhavan
New Delhi
5. Smt. Madhuri R. Shah
Chairman
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi
6. Prof. V.G. Kulkarni
Project Director
Tata Institute of Fundamental Research
Homi Bhabha Centre for Science Education
Homi Bhabha Road
Bombay
7. Dr. N. Vedamani Manuel
TC/15/1369
Vazhuthacaud
Trivandrum
8. Shri B.M. Joshi
Principal
Shri M.M. Pupils' Own School and Sharda Mandir
Swami Vivekanand Road
Khar
Bombay
9. Shri M.S. Dixit
Principal
Hiralal VN Inter College
Chidramau
Farrukhabad (U.P.)
10. Dr. T.N. Dhar
Joint Director
National Council of Educational Research and Training
New Delhi
11. Prof. P.N. Dave
Central Coordinator
UNICEF Assisted Projects
National Council of Educational Research and Training
New Delhi
12. Dr. J.S. Rajput
Principal
Regional College of Education
Shyamla Hills
Bhopal

- | | |
|--|--|
| | 13. Dr. (Smt.) Shakuntala Bhattacharya
Reader
Department of Education in Science
and Mathematics
National Council of Educational
Research and Training -
New Delhi |
| (vii) One representative of the
Ministry of Education | 14. Joint Secretary (Schools)
Ministry of Education
Shastri Bhavan, New Delhi |
| (viii) One representative of the
Ministry of Finance, who shall
be the Financial Adviser of the
Council | 15. Shri Man Mohan Singh
Financial Adviser, NCERT
Ministry of Education
Shastri Bhavan
New Delhi |
| | 16. Secretary
National Council of Educational
Research and Training
New Delhi |

ESTABLISHMENT COMMITTEE
(Under Regulation 10 of the Council)

Valid upto 10th June 1986

- | | |
|---|---|
| (i) The Director, NCERT
<i>Chairman</i> | 1. Dr. P.L. Malhotra
Director
NCERT
<i>Chairman</i> |
| (ii) The Joint Director
NCERT | 2. Dr. T. N. Dhar
Joint Director
NCERT |
| (iii) A nominee of the Ministry of
Education to be nominated by
the President | 3. Shri Y. N. Chaturvedi
Joint Secretary (SE)
Ministry of Education
Shastri Bhavan
New Delhi |
| (iv) Four educationists to be
nominated by the President
of whom at least one is a
scientist | 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, Panjab 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 |
| (v) One representative from the
Regional Colleges of Educa-
tion to be nominated by the
President | 8. Dr. S. N. Dutta
Principal
Regional College of
Education
Ajmer |
| (vi) One representative of the
National Institute of Educa-
tion, Delhi, to be nominated
by the President | 9. Shri S. H. Khan
Reader
PCDC
NCERT
New Delhi |
| (vii) Two representatives, one
each from the regular aca-
demic and non-academic
staff of the Council elected
from amongst their category
in the manner prescribed in
Appendix to this Regulation | 10. Shri R. P. Saxena
Lecturer
Regional College of
Education
Bhopal |
| | 11. Shri Probodh Kumar
UDC
NCERT
New Delhi |
| (viii) Financial Adviser, NCERT | 12. Shri Man Mohan Singh
Financial Adviser
NCERT
Ministry of Education
Shastri Bhavan
New Delhi |
| (ix) Secretary, NCERT
(<i>Member Convenor</i>) | 13. Shri C. Ramachandran
Secretary
NCERT
New Delhi
<i>Member Convenor</i> |

FINANCE COMMITTEE UNDER RULES 62 OF THE COUNCIL
(Valid up to 26 September 1986)

- | | |
|--|---|
| (i) The Director of
NCERT
<i>ex officio</i> | 1. Dr. P. L. Malhotra
Director, NCERT
New Delhi |
| (ii) Financial Adviser
<i>ex officio</i> | 2. Shri Man Mohan Singh
Financial Adviser, NCERT
Ministry of Education and Culture
Shastri Bhavan
New Delhi |
| (iii) Joint Secretary (SE)
Ministry of Education
and Culture | 3. Shri P. K. Patnaik
Joint Secretary (SE)
Ministry of Education and Culture
Shastri Bhavan
New Delhi |
| (iv) Secretary, NCERT
<i>Member Convenor</i> | 4. Shri J. Veera Raghavan
Adviser (Education)
Planning Commission.
New Delhi |
| | 5. Dr. P. C. Mukherjee
Pro-Vice-Chancellor
University of Delhi
Delhi |
| | 6. Shri C. Ramachandran
Secretary
NCERT
New Delhi |

BUILDING AND WORKS COMMITTEE

- | | | |
|--|-------------------|---|
| 1. Director, NCERT
<i>ex officio</i> | Chairman | 1. Director, NCERT |
| 2. Joint Director
NCERT
<i>ex officio</i> | Vice-
Chairman | 2. Joint Director, NCERT |
| 3. Chief Engineer
CPWD or his
nominee | Member | 3. Shri M.L. Kalra
Superintending Surveyor of
Works (Food), CPWD
I.P. Bhavan
Indraprastha Estate
New Delhi |
| 4. A representative of
the Ministry of Finance
(Works) | Member | 4. Shri A.K. Saxena
A.F.A. (Works)
Ministry of Works and Housing
Room No. 340, 'C' Wing
(IIIrd Floor) |

			Nirman Bhavan New Delhi
5. The Consulting Architect of the Council	Member	5.	Shri I.D. Rustogi Senior Architect (MDZ)-IV Nirman Bhavan New Delhi
6. Financial Adviser of the Council or his nominee	Member	6.	Shri Man Mohan Singh Financial Adviser, NCERT Ministry of Education Shastri Bhavan New Delhi
7. A nominee of the Ministry of Education	Member	7.	Joint Secretary (Schools) Ministry of Education Shastri Bhavan New Delhi
8. A Civil Engineer of Standing (nominated by the President)	Member	8.	Shri R.A. Khemani Chief Engineer Delhi Development Authority Vikas Bhavan Annexe Indraprastha Estate New Delhi
9. An Electrical Engineer of Standing (nominated by the President)	Member	9.	Shri T. Krishna Murthy Superintending Engineer Delhi Central Electric Circle-1 (5th Floor), CPWD I.P. Bhavan Indraprastha Estate New Delhi
10. A member of the Executive Committee nominated by the Committee	Member	10.	Shri S.H. Khan Reader PCDC, NCERT New Delhi
11. Secretary, NCERT	Member	11.	Secretary, NCERT

PROGRAMME ADVISORY COMMITTEE

1. Director, NCERT	Chairman
2. Joint Director, NCERT	Vice-Chairman
3. Prof. C.L. Kundu Faculty of Education Kurukshetra University Kurukshetra (Haryana)	Member
4. Prof. N. Malla Reddy Faculty of Education Osmania University Hyderabad	do.

5.	Prof. (Smt.) Vimal Agarwal Faculty of Education Lucknow University Lucknow (U.P.)	Member
6.	Prof. S. Narayan Rao Department of Psychology Sri Venkateswara University Tirupati	do.
7.	Director State Council of Educational Research and Training Mahendru Patna	do.
8.	Director State Institute of Education Solun (H.P.)	do.
9.	Director State Council of Educational Research and Training Meghalaya, Mawkhar Main Road Shillong	do.
10.	Director State Institute of Educational Research and Training Udaipur (Rajasthan)	do.
11.	Director State Council of Educational Research and Training 6, D.P.I. Compound, College Road Madras	do.
12.	Head Department of Measurement and Evaluation NCERT	do.
13.	Head Department of Education in Science and Mathematics NCERT	do.
14.	Head Department of Education in Social Science and Humanities, NCERT	do.
15.	Head Department of Teacher Education NCERT	do.
16.	Head Workshop Department, NCERT	do.
17.	Head Publication Department, NCERT	do.
18.	Head Department of Teaching Aids, NCERT	do.

19.	Head Comprehensive Access to Primary Education Group, NCERT	Member
20.	Head Curriculum Group, NCERT	do.
21.	Head Non-formal Education Group NCERT	do.
22.	Head Educational and Vocational Guidance Unit NCERT	do.
23.	Head Child Study Unit, NCERT	do.
24.	Head SC/ST Education Unit, NCERT	do.
25.	Head Educational Psychology Unit NCERT	do.
26.	Head Women Education Unit NCERT	do.
27.	Head Population Education Unit NCERT	do.
28.	Head Extension Unit NCERT	do.
29.	Head Planning Coordination and Evaluation Unit NCERT	do.
30.	Head Vocationalization of Education Unit and SUPW Unit, NCERT	do.
31.	Head Survey and Data Processing Unit NCERT	do.
32.	Head Library and Documentation Unit NCERT	do.
33.	Head National Talent Search Unit NCERT	do.
34.	Head Primary Curriculum Development Cell NCERT	do.
35.	Head Journals Cell, NCERT	do.

36.	Principal Centre for Educational Technology NCERT	Member
37.	Prof. K.N. Saxena Department of Teacher Education NCERT	do.
38.	Prof. A.K. Jalaluddin Department of Education in Science and Mathematics, NCERT	do.
39.	Prof. (Smt.) S. Shukla Centre for Educational Technology NCERT	do.
40.	Principal Regional College of Education Bhubaneswar	do.
41.	Principal Regional College of Education Ajmer	do.
42.	Principal Regional College of Education Bhopal	do.
43.	Principal Regional College of Education Mysore	do.
44.	Prof. A.N. Maheshwari Regional College of Education Mysore	do.
45.	Prof. K.C. Panda Regional College of Education Bhubaneswar (Orissa)	do.
46.	Prof. N. Vaidya Regional College of Education Ajmer	do.
47.	Prof. STV Vovind Acharyulu Regional College of Education Shyamla Hills Bhopal (M.P.)	do.
48.	Prof. Anil Vidyalankar Department of Education in Social Sciences and Humanities, NCERT	do.
49.	Shri Tilak Raj, DTA	do.
50.	Dr. K.V. Rao Department of Measurement and Evaluation	do.

EDUCATIONAL RESEARCH AND INNOVATIONS COMMITTEE

1.	Director Joint-Director	} Patrons
2.	Dean (Research)	

3. Dean (Academic)
4. Dean (Coordination)
5. Member-Secretary, ERIC
6. Heads of all Departments of the NIE
7. Principals of Regional Colleges of Education and Joint Director, Centre for Educational Technology.
8. Two persons from the State Institutes of Education nominated by the Director, NCERT :
 - (i) The Director, State Council of Educational Research and Training, Aliya Primary School Campus, Opp. Andhra Pradesh Sports Council, Hyderabad.
 - (ii) The Principal, State Institute of Education, Jorhat, Assam
9. Eight persons from universities/research institutes of other appropriate agencies nominated by the President of the NCERT :
 - (i) Dr. Partha N. Mukherji, Professor, Indian Statistical Institute, Sansanwal Marg, New Delhi
 - (ii) Dr. T.B. Naik, Director, Tribal Research and Training Institute, Gujarat Vidyapeeth, Ahmedabad (Gujarat)
 - (iii) Prof. A.L. Nagar Delhi School of Economics, Delhi University, Delhi
 - (iv) Prof. Agha Ashraf Ali, Dean and Head, Postgraduate Department of Education, Kashmir University, Hazratbal, Srinagar (Jammu and Kashmir)
 - (v) Prof. (Smt.) V. Aggarwal, Professor and Head, Department of Psychology, Lucknow University, Lucknow (U.P.)
 - (vi) Dr. R. Srinivasan, Professor of Education, Laxmi College of Education, Gandhigram, Distt. Madurai, Tamil Nadu
 - (vii) Dr. B.K. Roy Burman, Senior Professor, Council for Social Development, 53 Lodi Estate, New Delhi
 - (viii) Prof. B.R. Kamble, Head, Department of History, Shivaji University, Kolhapur (Maharashtra)
10. Permanent invitees—10 Professors nominated by the Director, NCERT

ADVISORY COMMITTEE FOR ENVIRONMENTAL EDUCATION

1. Head Convenor
Department of Education in Science
and Mathematics
2. Head
Department of Teacher Education and
Principal, Centre for Educational Technology
3. Head
Department of Education in Social Sciences and
Humanities and Population Education Unit
4. Head
Child Study Unit
5. Head
Primary Curriculum Development Cell

6. Head
Comprehensive Access to Primary
Education Group (CAPE)
7. Head
Vocationalization of Education
Unit and SUPW Unit
8. Head
SC/ST Education Unit
9. Head
Planning Coordination and Evaluation Unit
10. Head
Department of Teaching Aids
I.P. Estate,
New Delhi
11. Principal
Regional College of Education
Ajmer
or his nominee
12. Principal
Regional College of Education
Bhubaneswar
or his nominee
13. Principal
Regional College of Education
Bhopal
or his nominee
14. Principal
Regional College of Education
Mysore
or his nominee
15. Dr. M.S. Khaparde
Professor (Programme)
16. Shri G. Guru
Reader, Vocationalization of Education
Unit and SUPW Unit
17. Dr. B.D. Atreya
Reader, Department of Education
in Science and Mathematics
18. Dr. Utpal Malik
Project Coordinator for UNICEF Project on Health
Nutrition and Environmental Sanitation
Department of Education in Science and Mathematics
19. Head, Curriculum Group

• LIBRARY ADVISORY COMMITTEE

1. Prof. B.S. Parekh (Dean—A)
2. Prof. A.K. Jalaluddin
DESSH

Chairman
Member

3.	Prof. P.N. Dave Head, CAPE Group	Member
4.	Prof. Anil Vidyalkar DESSH	do.
5.	Prof. C.H.K. Misra ¹ Member-Secretary (ERIC)	do.
6.	Prof. (Smt.) S. Shukla Centre for Educational Technology	do.
7.	Dr. (Km.) S. Bisaria Head, Women Education Unit	do.
8.	Dr. M.S. Khaparde Professor (Programmes)	do.
9.	Professional Senior Library and Documentation Unit	do.
10.	One representative of Library Association	do.
11.	Head, Library and Documentation Unit	Convenor

COORDINATION COMMITTEE FOR CURRICULUM DEVELOPMENT

1. Head, Department of Education in Social Sciences and Humanities
2. Head, Department of Education in Science and Mathematics
3. Head, Department of Teacher Education
4. Head, Women's Education Unit
5. Head, Comprehensive Access to Primary Education Group
6. Head, SC/ST Education Unit
7. Head, PCDC
8. Head, Vocationalization of Education Unit
9. A representative of the Planning Coordination and Evaluation Unit
10. Prof. Anil Vidyalkar
11. Head, Curriculum Group (Convenor)
12. Principals of Regional Colleges of Education or their nominees

COORDINATION COMMITTEE FOR EDUCATIONAL TECHNOLOGY

1. Head, Department of Teaching Aids
2. Head, Department of Education in Social Sciences and Humanities
3. Head, Department of Education in Science and Mathematics
4. Head, Department of Teacher Education
5. Head, Extension Unit : FAS concerned with Educational Technology Progress in the States
6. A representative of the Planning, Coordination and Evaluation Unit
7. Principal, Centre for Educational Technology (Convenor)
8. Prof. (Smt.) S. Shukla, CET
9. Principals of Regional Colleges of Education or their nominees

COORDINATION COMMITTEE FOR MEASUREMENT AND EVALUATION

1. Head, Department of Education in Social Sciences and Humanities
2. Head, Department of Education in Science and Mathematics
3. Head, Department of Teacher Education
4. Head, Educational and Vocational Guidance Unit
5. Head, Educational Psychology Unit
6. Head, Curriculum Group
7. Head, Primary Curriculum Development Cell
8. Head, Comprehensive Access to Primary Education Group
9. Head, Child Study Unit
10. Prof. (Smt.) S. Shukla, Centre for Educational Technology
11. A representative of Planning, Coordination and Evaluation Unit
12. Head, Department of Measurement and Evaluation (Convenor)
13. Principals of Regional Colleges of Education or their nominees

COORDINATION COMMITTEE FOR NON-FORMAL EDUCATION

1. Head, Comprehensive Access to Primary Education Group
2. Head, Primary Curriculum Development Cell
3. Head, SC/ST Education Unit
4. Head, Extension Unit
5. Head, Women Education Unit
6. Head, Curriculum Group
7. Head, Department of Measurement and Evaluation
8. A representative of the Planning, Coordination and Evaluation Unit
9. Shri A.A.C. Lal
10. Prof. K.G. Rastogya (Convenor)
11. Principals of Regional Colleges of Education or their nominees
12. Head, DESSH
13. Principal, CET
14. Head, DTA
15. Head, DTE

COORDINATION COMMITTEE FOR TEACHER EDUCATION AND OTHER PROGRAMMES

1. Head, Department of Education in Social Sciences and Humanities
2. Head, Department of Teaching Aids
3. Head, Educational and Vocational Guidance Unit
4. Head, Comprehensive Access to Primary Education Group
5. Head, Child Study Unit

6. Principal, Centre for Educational Technology
7. Head, Department of Measurement and Evaluation
8. Head, Educational Psychology Unit
9. Head, Planning, Coordination and Evaluation Unit
10. Head, Vocationalization of Education Unit
11. Professor (Programmes)
12. Head, Department of Education in Science and Mathematics
13. Head, Primary Curriculum Development Cell
14. Head, Department of Teacher Education (Convenor)
15. Principals of Regional Colleges of Education or their nominees

**ADVISORY COMMITTEE FOR THE QUARTERLY JOURNAL
*SCHOOL SCIENCE***

- | | |
|--|----------|
| 1. Prof. B.N. Udgaonkar
Tata Institute of Fundamental
Research
Homi Bhabha Road
Bombay | Chairman |
| 2. Prof. G.N. Ramachandran, FRS
Indian Institute of Science
Bangalore | Member |
| 3. Prof. (Smt.) Archana Sharma
Department of Botany
University of Calcutta
Calcutta | Member |
| 4. Prof. P.T. Narshiman
Department of Chemistry
IIT
Kanpur | Member |
| 5. Prof. U.N. Singh
Vice-Chancellor
Allahabad University
Allahabad | Member |
| 6. Prof. C.L. Anand
North-East Hill University
Shillong | Member |
| 7. Dr. R.G. Lagu
Project Coordinator
Homi Bhabha Centre of Science Education
Tata Institute of Fundamental Research
Homi Bhabha Road
Bombay | Member |
| 8. Shri S.P. Ambasta
Editor
<i>Science Reporter</i>
Council of Scientific and Industrial Research
New Delhi | Member |

- | | |
|--|---------------|
| <p>9. Shri Samarjit Kar
Assistant Editor
<i>Science Culture</i>
92, Acharya P.C. Road
Calcutta</p> | <p>Member</p> |
| <p>10. Shri J.C. Daniel
Editor
<i>Journal of Bombay Natural
History Society</i>
Hornbill House
Shahid Bhagat Singh Road
Bombay</p> | <p>Member</p> |
| <p>11. Prof. A.N. Bose
Dean (Coordination)
NCERT
New Delhi</p> | <p>Member</p> |
| <p>12. Head,
Journals Cell
NCERT</p> | <p>Member</p> |
| <p>13. Head,
Publication Department
NCERT</p> | <p>Member</p> |
| <p>14. Head,
DESM
NCERT</p> | <p>Member</p> |
| <p>15. Dr. M.S. Khaparde
Professor (Programmes)
NCERT</p> | <p>Member</p> |
| <p>16. Dr. D. Lahiry
Reader, DESM
NCERT</p> | <p>Member</p> |

Appendix D

**Major Decisions taken by the Committees
during 1983-84**

EXECUTIVE COMMITTEE

THE 60th and 61st meetings of the Executive Committee of the Council were held on 2 July and 22 November 1983, respectively.

During the discussion on the subject of books on moral education, the Director informed the Committee that in order to expedite the work on moral education, a small group comprising Dr. R. M. Kalra, Professor of Education in the NIE, Dr. Sheshadri, Professor of Education, RCE, Mysore, and Dr. S.T.V.G. Acharyulu, Reader, RCE, Bhubaneswar, had been constituted to whom the work of preparing the books on moral education would be entrusted. The work would be taken up in collaboration with the Indian Council for Philosophical Research. The Executive Committee decided that this work should be completed within six months positively.

The Committee decided that the number of NTS scholarships should be increased from 550 to 750 with effect from the examination held in May 1983. The Committee also decided that the number of scholarships for Scheduled Caste and Scheduled Tribe candidates should be increased proportionately.

While the Committee appreciated the reduction of price effected in the case of five books, it suggested a thorough re-examination of the pricing formula adopted by the NCERT for determining the prices of textbooks. The Executive Committee authorized the President to take an appropriate decision on pricing formula after its re-examination had taken place.

The Committee considered the report of the one-man committee set up for the review of cadre and promotional policies existing in the Council and approved the proposals for removing stagnation among non-academic employees in Groups C and D, including sanction of selection grades in respective posts for the employees who had completed 14 years of service in particular grades and grant of special

increments to those who had been stagnating for the last two years at the maximum of their grades.

The Committee decided that since the Council was generally following the staff pattern available in the Central Secretariat for non-academic staff, the posts of Superintendent/Special Assistant should be converted into S.O./A.P.C. in a phased manner. -

The Executive Committee decided that the UGC scheme of merit promotion for academic staff as applicable to the Central Universities would be followed by the Council. The benefits of the scheme would be given with effect from 1 January 1983. In implementing this scheme all the academic staff of the NCERT, including RCEs, will be taken together and treated as one unit.

The Executive Committee approved that the maximum of 15 days of academic leave in a year should be granted. In special cases, the Director might grant additional leave of five days in a year.

The Committee approved that scholarship of Rs. 400 per month may be given to NTS awardees at the second degree level in Engineering and Medicine.

While reviewing the progress report of the work done under the programme of evaluation of textbooks from the standpoint of national integration, the Executive Committee felt that special efforts were required to expedite the work in all the states. It was decided that zonal level task forces should be set up to review the progress of work and also to have a second look at the books already reviewed by the state governments.

FINANCE COMMITTEE

The 60th and 61st meetings of the Finance Committee were held on 21 July and 18 November 1983, respectively.

The Committee advised that the internal audit should be properly planned and follow-up action on audit reports pursued vigorously. The Committee also desired that such progress reports may be submitted to it from time to time in future also.

The Committee decided that the post of Medical Officer in the Regional Colleges of Education may be equated to Junior Class I post of CGHS and officers who are taken on deputation may be paid their own scale of pay plus deputation (duty) allowance and non-practice allowance as per rules.

The Committee approved the revised rates of remuneration for the conduct of National Talent Search Examination.

The Finance Committee approved the revision of salary scales of the library staff of the NCERT on UGC pattern for universities and colleges

with effect from 1 April 1980 subject to the condition that the Government instructions on the subject were strictly followed in the matter of qualifications of the persons to be given the revised scales and the procedures of appointment.

The Finance Committee approved the proposal for constructing a godown with a total plinth area of 1,35,000 sq. ft. in a phased manner at a total cost to the tune of Rs. 2,21,79,000. The first phase will be for approximate area of 90,000 sq. ft. at the cost of Rs. 1,47,80,000. The construction will, however, be taken up in convenient phases, subject to availability of funds.

The Committee observed that there should be concerted efforts for increasing the receipts of the Council particularly through the sale of its publications and textbooks. The need for having more outlets for selling the textbooks was also stressed.

The Committee approved the proposal for the creation of the post of Asstt. Headmasters in the scale of pay of Rs. 650-1200 in the D.M. Schools attached to the Regional Colleges of Education.

The Committee approved the proposal regarding the rates of payment of fee/honorarium etc. to various categories of artists, performers, writers, reviewers, technical/production crew and other TV media and other personnel whose services are used for the production of educational TV programmes in the Centre for Educational Technology.

The Committee approved the proposal for a large Conference Room to accommodate 100 to 120 participants. It was observed that the funds should, however, be found out of the savings from the budget.

ESTABLISHMENT COMMITTEE

The 15th and the 16th meetings of the Establishment Committee were held on 13 May 1983 and 28 March 1984, respectively.

The Establishment Committee recommended that the merit promotion scheme which had been accepted for teachers of Delhi and other Central Universities may be adopted for the academic staff of the NCERT.

The Establishment Committee recommended for approval the method of recruitment for the post of Stenographer Gr. III involving the dispensing with of the condition of passing the written test on the lines of the changes made by the Government of India.

The Establishment Committee recommended the removal of the assessment stage in the pay scale of Lecturers.

The Committee approved the proposal regarding interchangeability of the post of P.S. to the Director with that of Special Assistant Gr. I (designated as Asstt. Programme Coordinator).

The Committee recommended that the benefits of Study Leave Rules as applicable to the academic staff of the Council may be extended to the Professional Senior/Junior library staff in the Council.

The Committee approved the proposal regarding the grant of special pay to Head Chowkidar and Gatekeeper.

BUILDING AND WORKS COMMITTEES

A meeting of the Building and Works Committee was held on 30 July 1983. The Committee approved the following proposals :

1. Extension of Library Buildings in the Regional Colleges of Education, Ajmer and Bhopal.
2. Construction of a shed for the Automobile Section of the Workshop Department at the NIE Campus.
3. Providing a lift and two rooms on each of the five floors of the NIE Guest House.
4. Construction of 104 quarters on the NIE Campus.
5. Construction of a Tubewell on the NIE Campus.
6. Extension of Girls' Hostel at the Regional College of Education, Bhopal.
7. Construction of a convenient shopping centre and community hall on the NIE Campus.
8. Construction of 10 'B' Type Quarters and 10 'C' Type Quarters on the Campus of Regional College of Education, Mysore.
9. Reconstruction of Toilet Block of Kirti Niketan Hostel of the Regional College of Education, Bhopal.

The Committee suggested that the Field Officers of CPWD should conduct periodical checks of all the buildings including residential areas at least once in a month.

THE ANNUAL GENERAL BODY MEETING

The 20th Annual General Body meeting of the NCERT was held on 23 December 1983 under the Chairmanship of Smt. Sheila Kaul, Minister of State for Education and President of the NCERT.

In her opening remarks, the President of the NCERT mentioned that though considerable progress had been made, the priority task of educational development cannot be accomplished without the concerted and sustained efforts of all agencies, particularly the state governments who were primarily responsible for the implementation of programmes in school education. She suggested that the states may take advantage of the commendable work done by the Council in the

development of curriculum, syllabus, textbooks and other instructional materials. She also informed that the Council was involved in the implementation of the programme of community singing launched by the Ministry, which had been identified as a powerful vehicle for the promotion of national integration. The President stressed the importance of value orientation of education and expressed her pleasure that the work initiated by the Council in this regard was progressing steadily. A high-level committee on education and values had been set up by the Council under the chairmanship of D.S. Kothari. It was expected that some books on moral education on which work has already been initiated would become available soon.

The President stressed the need to consider the possibility of having common textbooks in schools. She said that in subjects like Sciences and Mathematics, universality of content should facilitate the adoption of common textbooks. Even in such subjects as History, Civics, Geography, etc., one could think of 'core content' which could become part of the instructional programme of all schools, irrespective of their location. An illustration of such a core could be the history of freedom struggle which should become an area of compulsory study in all schools of this country. Once an agreement was reached on this issue, it should be possible to develop collaborative mechanisms for jointly developing textual materials for common use.

The President also stressed the need to expose children to information that is available from various sources. For this purpose, she added, an interest in reading has to be generated among children. Self-learning is as much important as, or more important than, classroom learning. An innovative project entitled, 'Reading to Learn' is being launched by the Council. The objectives of this project are to develop in children a taste for books, to prepare them for self-learning and also to produce and make interesting reading materials available to them. The modalities of this project are being worked out under the personal supervision of the Director, NCERT. It is also proposed to involve state-level agencies for the development of interesting reading material in Hindi and regional languages for children.

The General Body approved the draft Annual Report of the Council for 1982-83 as presented to it by the Executive Committee.

During the course of discussion, the following suggestions were made in the General Body.

- (i) The commendable work which had been done so far in the field of education had not really reached the classroom. There is need to think of a new kind of planning and coordinated effort for this purpose with the NCERT playing a key role. The analogy of the experience in agricultural

extension which had facilitated the flow of research findings from agricultural research institutions to farmers could be kept in consideration.

- (ii) The members were generally of the view that the states had benefited a lot from the UNICEF-assisted projects implemented through the NCERT and that these should be continued during the Seventh Plan also. It was, however, suggested that in order to have a multiplier effect, these projects might be implemented on a wider scale and the financial outlays may be suitably raised.
- (iii) The history of freedom struggle should be incorporated at different levels of school education and assistance in this regard could be provided by the NCERT. This task should be completed as a time-bound programme. This was a collective responsibility and could not be accomplished by the Government of India or the NCERT alone.
- (iv) Some courses regarding education of the disabled children prepared by the National Institute of Visually Handicapped could be utilized by the NCERT, while developing and implementing the programme of integrated education of the disabled children.
- (v) Sufficient importance should be given to local and regional level contribution while teaching history of freedom movement. The material dealing with regional contribution which might be incorporated in textbooks should be adopted only after it had been screened at the national level.



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