



एन सी ई आर टी  
NCERT

# NCERT Annual Report 1982-83

Early Childhood Education  
Research and Innovations  
Search for Talent  
Universalization of Elementary Education  
Population Education  
Curriculum, Textbooks and Documentation  
Educational Evaluation  
Survey, Data Processing and Documentation  
Education and Work  
Education of the Disadvantaged  
Supplementary Readers  
Training of Teachers and Other Personnel  
International Assistance and International Relations  
Extension and Working with the States  
Educational Technology and Aids  
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Reading to Learn  
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Education and Work

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**ANNUAL REPORT**  
**1982-83**

# ANNUAL REPORT

## 1982-83

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एन सी ई आर टी  
NCERT

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

*December 1983*  
*Agrahayana 1905*

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## **ACKNOWLEDGEMENTS**

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

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# 1

## NCERT Role and Structure

### Role and Functions

**T**HE National Council of Educational Research and Training (NCERT) was established on 1 September 1961 by merging a number of specialized institutions like the Bureau of Educational and Vocational Guidance (1954) ;

the National Institute of Basic Education (1955) ; the National Institute of Audio-visual Education (1959) ; the Directorate of Extension Programmes for Secondary Education (1959), etc., which the Government of India had set up for providing academic support for improving the quality of school education in India.

The Council is an autonomous organization registered under the Societies Registration Act (1860) and 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. 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 States and State-level institutions, organizations and agencies in developing and implementing programmes for the *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 or the National Council of Teacher Education.

### *Research*

In educational research, the NCERT's effort is to initiate, promote and direct programmes and activities designed to bring about desirable changes in the educational system to promote quality in research having relevance to the educational system and to provide and develop leadership in educational research in India.

The NCERT also provides financial assistance for research to outside organizations. Junior and senior research fellowships are awarded so that educational problems are investigated and a band of competent research workers created. Facilities for financial and academic interactions are available to individual research scholars, school teachers, university faculties and educational research institutions. The Council also provides financial assistance for the publication of good Ph.D. theses.

The NCERT conducts educational surveys from time to time for providing data on educational facilities and needs. It has a computer terminal for the storing, retrieval and processing of data.

### *Development*

Development activities in education constitute an important aspect of the Council's work. The development of curricula, textbooks, teachers' guides, students' workbooks, and supplementary teaching/learning materials to suit the needs of the changing pattern of school education are undertaken as on-going programmes. The NCERT develops quality instructional materials, teaching aids and science kits, laboratory equipment, educational films, video-cassettes, radio scripts, and work on the improved methods of teaching and evaluation.

The NCERT undertakes experimental programmes in the area of non-formal education so that sufficient experience becomes available for adopting innovative approaches to educational development. It assists States in conducting vocational surveys, developing curricula and instructional materials for courses introduced as part of the vocationalization of educational programme.

### *Training*

The NCERT provides innovative pre-service and in-service teacher training through its Regional Colleges of Education which are equipped with good laboratories, libraries and instructional facilities. The important features of these courses are : the integration of subject-content and methodology of teaching ; long-term internship of student-teachers in actual classroom setting ; and participation of students and faculties in community work.

Acting as the academic secretariat of the National Council for Teacher Education since 1973, the NCERT conducts studies on the status of teacher education and surveys of teacher education institutions ; in-service courses for teacher-educators, and correspondence lessons. Universities are assisted to revise their B.Ed./M.Ed. syllabi. The centres of continuing education provide in-service training.

The correspondence courses run by the NCERT for untrained teachers of elementary and secondary schools help remove the backlog of untrained staff. The contact programmes supplement correspondence courses.

### *Extension*

The NCERT works extensively with the extension services departments and centres established in teacher training colleges and schools throughout the country with the purpose of providing assistance to teachers on a continuous basis. The Council's Regional Colleges and field units encourage extension programmes/innovations in order to improve classroom teaching and practices.

The Council initiates significant programmes with a view to improving the organizational climate and practices of school system in India. It organizes courses, orientation programmes, seminars, competitions, and conferences of counsellors, career-masters, teacher-educators, inspectors, supervisors, principals and heads of educational institutions.

The extension programmes relate to intensive improvement projects, good school practices, encouragement for innovations, national seminars of key personnel, national conferences of state officers and national exhibitions of materials. All the 22 States and 9 Union Territories of India are covered in such extension activities.

### *Publications and Dissemination*

The NCERT publishes textbooks for Classes I-XII. It also brings out other input and non-print materials as a part of its total effort to improve the quality of school education in the country. The NCERT textbooks, workbooks and teacher's guides are models of their own kind and emerge from the research and development work conducted by its constituents. Published in English, Hindi and Urdu, the NCERT textbooks are used in a large number of schools in different States and Union Territories. These books are available to all States for adoption or adaptation..

For the dissemination of educational information, the NCERT publishes four journals : (i) *The Primary Teacher*, published both in English and Hindi, aims at giving meaningful and relevant material to primary school teachers for direct use in the classroom, (ii) *The School Science* serves as an open forum for discussion of various aspects of science education, (iii) *The Journal of Indian Education* provides a forum for encouraging original and critical thinking in education through discussion of current educational issues and (iv) *The Indian Educational Review*, contains research articles and provides a forum for research workers.

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 continuous 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 in the Constitution of India for the award of 550 talent scholarships (including 50 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 their agencies the Council nominates its faculty members for participating in international conferences, seminars, workshops, symposia, etc. The Council also arranges for 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 for the Council. The Union Education Minister is its President and Education Ministers of all the States and Union Territories are 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.

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 the following officers occupied these positions—

Dr. Shib K. Mitra—Director—up to 18 August 1982

Dr. T.N. Dhar—Joint Director

—Acting Director from 19 August 1982 onwards

Shri V.K. Pandit, IAS—Secretary

The Council runs—

The National Institute of Education,

Regional Colleges of Education (4), and

Field Units (16).

#### *National Institute of Education*

The National Institute of Education, New Delhi, has 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. Education 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 undertakes research and development work in areas ranging from the production of instructional films to radio broadcasts and related educational materials. It also organizes 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).  
 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.

Sixteen 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
Srinagar	Trivandrum

The organizational structure of the Council is shown below.

**Structure of the NCERT**

*NCERT*

<i>Secretariat</i>		<i>Constituent Units</i>		
Establishment Section	Accounts Branch	Regional Colleges of Education (RCE's)	Centre for Educational Technology (CET)	Field Advisers (F.A.'s) located at
Programme Section		Ajmer		Ahmedabad
Recruitment Section		Bhopal		Allahabad
RCEs Unit		Bhubaneswar		Bangalore
Campus and Welfare Section		Mysore		Bhopal
Committees and Parliament Section				Bhubaneswar
General Section				Calcutta
Purchase Section				Chandigarh
Vigilance				Gauhati
Public Relations				Hyderabad
				Jaipur
				Madras
				Patna
				Pune
				Shillong
				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 Teaching Aids	National Talent Search Unit Planning, Coordination and Evaluation Unit
Department of Education in Social Sciences and Humanities	Publication Department	Library and Documentation Unit
Department of Teacher Education	Workshop Department	Vocationalization of Education Unit Primary Curriculum Development Cell
Educational Psychology Unit		Journals Cell Extension Unit
Department of Measurement and Evaluation		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  
DACEP

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# 2

## Highlights of the Year

**E**STABLISHED in 1961, the NCERT completed twenty years and entered the third decade of its research, development, training and extension activities for the qualitative improvement of school education. These activities are undertaken by its various departments in the National Institute

of Education, the Regional Colleges of Education and the Field Units in collaboration with State departments of education, State-level institutions, universities and other institutions/organizations concerned with educational development. During the year the Council concerned itself with a number of programmes of direct benefit to the school system. Some of the highlights of the year are summarized in the programmes as follows.

### **Curriculum Development**

A committee was constituted to work out details about the scheme of community work as an area of school curriculum. The committee had a number of meetings. It is likely to prepare a comprehensive document to be brought out in the form of a brochure on community service.

### **Social Sciences and Humanities**

The NCERT syllabuses and textbooks for Classes IX-X and the writing of Urdu language textbooks were taken up for the first time by the NCERT. An Urdu committee was appointed for the purpose with Prof. Gopi Chand Narang as Chairman with five other members.

### **Environmental Education**

The programmes in this area included orientation workshops for teaching science through environment effectively; a seminar on Environment Management Organization; development of a textbook on environmental studies; and display materials on environmental education.

### **Value Orientation**

A project on the role of science in value orientation of education has also been initiated with the purpose of developing modalities and materials for inculcating desirable values in students and teachers. The committee which has been constituted will explore the relationship between science and values and devise means to make science education an instrument in the development of values in children.

### **Science and Mathematics**

Under an agreement between the Government of India, Ministry of Education and the British Council, the NCERT is implementing the two

projects—All India Science Education Project and All India Mathematics Education Project—on behalf of the Ministry of Education. Under these projects, 18 fellowships in science and 23 in mathematics are being made available to different States and Union Territories for advanced training of their secondary school teachers and teacher-educators in the United Kingdom.

### **National Science Exhibition**

The twelfth National Science Exhibition was organized at Calcutta from 10 to 16 November 1982. The theme for this year's exhibition was Science and Community Development. More than 420 school children and teachers participated in the exhibition, and 160 models were exhibited. The emphasis in the exhibition was on electronics, satellites science models, space exploration, etc.

### **Science Club Kits**

The NCERT developed a science club kit containing 50 items of handtools, instruments, multipurpose tools, consumables and first aid. The kit has been developed to enable students and teachers to prepare science exhibits for display. Science club kits were gifted to thirteen States. A workshop was organized for training key persons from the States, in the use of the tool kit.

### **Girls'/Women's Education**

The UNICEF-assisted research project on educational backwardness of girls has been continuing, since 1981, in eight States, i.e. Andhra Pradesh, Bihar, Uttar Pradesh, Rajasthan, Haryana, Orissa, Jammu & Kashmir and Madhya Pradesh. The main objective of the study is to estimate the enrolment and wastage rates among girls, to identify the causes of non-enrolment and drop-out among girls in the age-group 6-14, and to suggest remedial measures. In all, 27 districts are being covered in the eight States.

### **Textbook Evaluation**

The programme of evaluation of textbooks was initiated by the NCERT in 1981 by evaluating school textbooks, in the subjects of history and languages from the viewpoint of national integration. Guidelines and tools for evaluation have been prepared. A procedure for carrying out the programme has been evolved. The State Governments

have identified the agencies in their States to undertake the programme. An evaluation of the NCERT textbooks in History, Hindi, English and Sanskrit was also undertaken.

### **UNICEF Projects**

The UNICEF projects, which aim at the decentralized formulation of syllabus in relation to local needs, preparation of instructional materials on topics which are of immediate relevance to communities, development of competencies among teachers to provide education to out-of-school children in non-formal settings, implementation of strategies for developing the school as a focal institution for community development, are being implemented with the collaboration of the State Departments of Education and State-level Institutions.

### **Curriculum Renewal**

Primary education curriculum-renewal is one of the UNICEF projects, which is being implemented in 30 States and Union Territories in the country. At the national level, the NCERT monitors the project and provides guidance to the States/U.T.s. Programmes in series have been organized in languages, environmental studies, health education, mathematics, creative expression and socially useful productive work in Maharashtra (7-22 June 1982); Gujarat/Goa (25-30 June 1982); Haryana (2-7 July 1982); Rajasthan (12-17 July 1982); Punjab (19-25 July 1982); and Bihar (26-31 July 1982).

### **Nutrition/Health Education**

The UNICEF-assisted project on Nutrition, Health Education, and Environmental Sanitation was initially undertaken by five States—Punjab, Madhya Pradesh, Tamil Nadu, Gujarat and West Bengal. This year, seven more States—Haryana, Maharashtra, Uttar Pradesh, Assam, Bihar, Rajasthan and Karnataka—have initiated activities in this area.

### **Early Childhood Education**

Training programmes, each of one-month duration, were organized wherein teacher-educators from pre-primary and primary teacher training institutions were equipped with requisite knowledge, understanding, skills and attitudes for working with young children. The participants came from Maharashtra, Orissa, Rajasthan, Tamil Nadu, Bihar and Karnataka.

## **Monitoring and Evaluation of Universalization of Elementary Education**

Tools for monitoring and evaluation of universalization of elementary education programme in India were developed and a pilot try-out done in Uttar Pradesh, Andhra Pradesh and Gujarat. These are now proposed to be experimentally tried out in Jammu & Kashmir, Rajasthan and Orissa. The tools cover both formal and non-formal systems of education.

### **Scheduled Castes Education**

In June 1982, a meeting of the sub-committee on the development of curriculum for scheduled castes/scheduled tribes was organized in Delhi. A working group meeting was organized in New Delhi from 1 to 10 September 1982 to prepare instructional material for Santhal children of West Bengal. Another meeting was organized in New Delhi from 6 to 10 September 1982 to finalize a primer for Class II for children of Saora tribe of Orissa.

### **Universalization of Elementary Education/Non-formal Education**

A conference of Officers-in-charge of non-formal education in nine backward States—Uttar Pradesh, Andhra Pradesh, Bihar, Orissa, Rajasthan, West Bengal, Jammu & Kashmir, Madhya Pradesh and Haryana—was organized in Delhi from 5 to 7 August 1982. The purpose was to review the status of the implementation of non-formal education programme. The problems faced by different States were also discussed in detail.

### **Socially Useful Productive Work**

Orientation of key persons in socially useful productive work was conducted for Gujarat, Maharashtra, Madhya Pradesh, Lakshadweep, Kerala, Tamil Nadu, Andhra Pradesh and Karnataka. Orientation is given through lectures, discussions, and performance of S.U.P.W. activities.

### **Vocationalization of Education**

Orientation programmes on the vocationalization of education were organized for the principals and key personnel from Gujarat, Delhi, Andhra Pradesh and Tamil Nadu. Short-term teacher training

programmes in vocational subjects were organized in Tamil Nadu, Maharashtra, Karnataka, Andhra Pradesh and Goa. These programmes covered technology, commerce, agriculture and para-medical fields.

### **Teacher Education**

The NCERT is constantly engaged in the revision and modification of the syllabus for teacher training at all levels and is in constant dialogue with the university departments of education. The universities of Nagpur, Aurangabad and Bombay were helped in revising their B.Ed. syllabus. UNESCO Regional Seminar for officials and specialists in the training of teachers and other educational personnel belonging to the Asian and Pacific region in education was organized on the introduction of productive work in Delhi for Asia and the Pacific during 5-14 April 1982. The seminar was attended by participants from eleven countries.

### **Centres of Continuing Education**

The NCERT has been collaborating with the State Governments in operating the centres of continuing education which are located in various institutions in the States. The expenditure on the in-service training of teachers, organized by these centres, is equally shared by the State Government and the NCERT. So far 97 centres have been established.

### **Integrated Education for Disabled Children**

The Council has decided to establish facilities in the four Regional Colleges for the training of teachers for educating the disabled. A crash course of six months' duration has also been designed to train some of its faculty members as teacher-educators who in their turn will undertake the training of teachers. Each Regional College of Education will provide teacher training specializing in one area of special education.

### **Regional Colleges**

The Regional Colleges of Education in Ajmer, Bhopal, Bhubaneswar and Mysore conducted regular pre-service courses, in-service training, extension activities, correspondence courses and certain special programmes. The colleges offer innovative and integrated programmes of teacher education. Degrees are awarded by the universities to

which the colleges are affiliated. The colleges are residential institutions with the facility for 50% of the students being offered scholarship on the basis of merit.

### **Educational Psychology**

The NCERT undertook training of key personnel in the use of psychological tests for understanding the child and providing need-based education. Eight-day supervised practicum courses were planned for fifteen participants per course for teacher-educators. Certain key personnel were also trained in the application of behaviour modification technology in school setting, during practical courses of eight to ten days each. Also, there were enrichment courses on learning for teacher-educators. The national test development library in NCERT added more standardized tests to its collection.

### **Educational and Vocational Guidance**

The twenty-first Diploma Course in Educational and Vocational Guidance had thirty-three trainees. Of these, three were deputed candidates and the remaining thirty non-official candidates from nine States. Seven of these trainees were scheduled castes. Twenty-five trainees, including seven belonging to the scheduled castes, were awarded a stipend of Rs. 250 per mensem.

### **Educational Technology**

The NCERT put up 50 prototype educational television programmes during the year. These programmes are meant for primary school teachers of rural areas in Andhra Pradesh and Orissa and are of 20 minutes' duration each. Originally meant for being beamed through INSAT, the programmes are submitted through the ground stations. On an average, 600 villages in each of the States were benefited by the programmes.

### **Teaching Aids**

A workshop for the development of scripts for films and video programmes for INSAT was organized during 11-13 May 1982. It was attended by 15 participants including science teachers, scientists, writers of children literature and media specialists.



## **National Population Education Project**

The major purpose of this project is to develop awareness of population problem among the younger generation so that, when they grow up, they would show more responsible parenthood. The project institutionalizes population education in the existing school system without making it a separate subject. UNESCO has been rendering technical guidance in its implementation.

## **Examination Reform**

The NCERT offered assistance to Madhya Pradesh, Orissa, Sikkim and Tamil Nadu and to the Central Board of Secondary Education in their respective examination reform ventures. Publications on Criterion Reference Testing, Evaluation in Elementary Schools, Readings in Evaluation and on Practical Examinations were developed. Brochures on Unit Tests in History and Geography have been printed. A study on Open-book Examinations was completed.

## **National Talent Search**

Every year the NCERT awards 550 scholarships, including 50 exclusively for students belonging to scheduled castes/tribes. For this purpose, it administers tests in all the languages recognized in the Constitution of India. Final year students of Classes X, XI and XII take these tests in May every year. Awardees can pursue studies up to Ph.D in science, mathematics, and social sciences or take up professional courses in areas like engineering or medicine. This year 83,320 students appeared in the national talent search examination for Classes X (46,365), XI (8,988), and XII (27,967) in 439 centres.

## **Survey and Data Processing**

The main report of the Fourth All-India Educational Survey, containing 982 pages, was brought out. It provides States/U.T.'s with information on existing educational facilities, enrolments and teachers for the different stages of school education for the year 1978-79. A study, suggested by USAID, on the impact of midday meal programme on enrolments at the primary level was undertaken. Thirteen States where the midday meal programme is in operation, have been covered in this study. Development of district educational plans, on the basis of the Fourth All-India Educational Survey, have been taken up.

## **Research and Innovations**

Various NCERT officers have completed some of their continuing research projects while undertaking some others. The Educational Research and Innovations Committee (ERIC) also continued to support a number of research projects. Eighteen research projects were completed during the year. Nine Ph.D. theses were published.

## **Extension Work**

Sixteen field units of the NCERT in Ahmedabad, Allahabad, Bangalore, Bhopal, Bhubaneswar, Calcutta, Chandigarh, Gauhati, Hyderabad, Jaipur, Madras, Patna, Pune, Shillong, Srinagar and Trivandrum provided assistance to teachers on a continuous basis to improve classroom teaching and practices so that organizational climate could be improved. Extension programmes related to intensive experimental projects, good school practices, encouragement for innovations, exhibition of materials and such other extension activities.

## **National Integration Project**

Twelve national integration camps for school children and teachers were organized to foster the spirit of national integration. A major development in this area was the organization of teachers' camps where the basic objective is to train them in community singing. Teachers thus trained are expected to develop community singing in their schools so that it becomes a mass movement. The NCERT is providing taped cassettes of national integration songs in different languages to all teachers who participate in these camps.

## **International Contacts**

A number of NCERT officers were deputed to participate in UNESCO's activities during the year. A large number of foreigners visited the Council in different areas.

The NCERT continued to work as an Associated Centre for the APEID and undertook bilateral cultural exchange programmes.

## **Educational Journals**

The NCERT brought out (i) *Indian Educational Review* (four

quarterly issues); (ii) *Journal of Indian Education* (six bi-monthly issues); (iii) *Primary Teacher* (four quarterly issues each in English and Hindi); and (iv) *School Science* (four quarterly issues); and has started (v) *Bhartiya Adhunik Shiksha*.

### **National Seminar on Educational Journalism**

A national seminar on educational journalism was organized at the National Institute of Education, New Delhi, from 28 to 29 January 1983 in which 24 participants from different parts of the country participated and presented their papers on different topics.

### **Publications**

During the year 181 publications were brought out including first edition textbooks (6); reprints of textbooks (117); textbooks for other agencies (19); research reports (24); and periodical issues (15).

### **CAPE Research**

Research projects funded by UNICEF under the Comprehensive Access to Primary Education (CAPE) have been undertaken to (i) determine the efficacy of learning episodes developed under the CAPE; (ii) investigate the teaching methods used by the developmental agencies for community education programmes and their relevance to teaching methods at the CAPE learning centres; (iii) study the expectations of developmental agencies from the primary school teachers in the implementation of rural development programme; and (iv) study the effects of various factors in typography on reading efficiency and learning among children of age-group 9-14.

### **Task Force to Consider Restructuring of NCERT**

One of the major developments which took place during the year was the constitution by the Government of India of the Task Force on the NCERT. The Task Force was constituted on the recommendation of the 48th report of the Public Accounts Committee. In pursuance of this recommendation of the Public Accounts Committee, the Government of India in the Ministry of Education and Culture decided to set up a Task Force with the following terms of reference :

- (i) A critical assessment of the role performed by the NCERT in terms of the long- and short-term objectives laid down for it in its Memorandum of Association.
- (ii) To review the recommendations made by the earlier committees, notably the ones named by the Public Accounts Committee, with a view to determining their relevance and significance for the Council's future development.
- (iii) To suggest an optimal organizational structure for the Council with a view to enabling it to meet the emerging challenges of future educational development in school education, particularly from the point of view of improving its efficiency and productivity.
- (iv) In the light of the above, to suggest the overall management and decision-making structures and processes for the Council.

The composition of the Task Force is as under :

- (i) Dr. (Smt.) Madhuri R. Shah *Chairman*  
Chairman  
University Grants Commission
- (ii) Dr. V.G. Kulkarni *Member*  
Project Director  
Tata Institute of Fundamental Research  
Homi Bhabha Centre for Science Education  
Bombay
- (iii) Prof. Satya Bhushan *Member*  
Vice-Chancellor  
Jammu University  
Jammu Tawi
- (iv) Shri P.K. Umashanker *Member*  
Education Commissioner  
Government of Kerala  
Trivandrum
- (v) Dr. Shib K. Mitra *Member*  
Director  
NCERT

- |       |   |                  |
|-------|---|------------------|
| (vi)  | Shri J.A. Kalyanakrishnan<br>Financial Adviser<br>Ministry of Education & Culture         | <i>Member</i>    |
| (vii) | Joint Secretary (Schools)<br>Ministry of Education & Culture<br>(Department of Education) | <i>Secretary</i> |

# 3

## Early Childhood Education

**I**N pre-school education, the NCERT undertakes programmes for the development of indigenous approaches and instructional materials, training of personnel, evaluation of ongoing activities, and development of toys, pictures, books, audio-tapes etc. In children's

media laboratory, set up with UNICEF assistance, the NCERT endeavours to develop and discover inexpensive, non-formal and effective media of educational value for children in the age-group 3-8. A major component of this programme is the training of teacher-educators, pre-school teachers and supervisors. This project is implemented in six States—Maharashtra, Orissa, Rajasthan, Bihar, Karnataka and Tamil-Nadu.

### **Training of Teacher-educators**

A one-month training programme in Early Childhood Education for teacher-educators of *Maharashtra and Orissa* was organized at the NIE Campus from 15 April to 14 May 1982. The objective was to focus attention on the child and on the role of the teacher in fostering the child's 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. The participants were encouraged to prepare related materials. Further, the course was enriched by two-panel discussions, a few special lectures and field visits to Bal Bhavan, Dolls Museum and SOS village. Fifteen persons from Maharashtra and eight from Orissa participated in the programme.

A one-month training programme in Early Childhood Education was held for the teacher-educators of *Rajasthan* at the NIE Campus, New Delhi, from 14 June to 13 July 1982. Twenty-seven persons, 26 from Rajasthan and one from Punjab, as a special case, participated in the programme. The participants were acquainted with the methods and techniques of early childhood education. They are expected to train the pre-primary teachers of 65 pre-primary centres.

Another one-month training programme in Early Childhood Education for the teacher-educators of *Bihar and Maharashtra* started on the 14 July at the NIE Campus, New Delhi. Forty-two participants were trained in this programme.

Similar training programme was held for the teacher-educators of *Tamil Nadu* by Gandhigram Trust at Gandhigram from 1 July to 30 July 1982. Nineteen persons participated in the programme. The course content included theory as well as practical activities on methods and techniques of Early Childhood Education.

Another similar programme started at Coimbatore in *Karnataka* from 19 July 1982 to 18 August 1982 at Sri Avinashoingam Home Science College.

### **Orientation Programme in Children's Media**

A six-day orientation programme in children's media was organized for the State-level resource persons at the National Institute of Education, NCERT, New Delhi, from 1 March to 6 March 1982. The programme, the first of a series, was conducted for Maharashtra, Rajasthan and Orissa, which have joined the Early Childhood Education project. The main objective was that the participants oriented at the central level in different aspects of children's media would, subsequently, be able to conduct in-service training programmes for teacher-educators and teachers of their respective States. With this in view the States were requested to depute one specialist each in Early Childhood Education, Child Development, Children's Literature, Children's Music, Children's Illustration, Audio Tape Production and Photography.

A similar orientation programme for Bihar and Tamil Nadu was organized at the NIE Campus from 28 June to 3 July 1982. Each State deputed a team of six participants. Also a team of six resource persons of Karnataka was oriented in children's media at the NCERT Campus from 20 September to 24 September 1982.

### **Training of Teachers from the Tribal and Remote Areas with Focus on Low-cost Play Materials**

A training programme was organized at Calcutta for the teachers of the remote areas of West Bengal from 20 January to 29 January 1983.

Arunachal Pradesh Training Programme for teachers of Vivekananda Kendra was held at Jairampur, Arunachal Pradesh, from 19 to 23 April 1982.

### **Workshops on Script-writing for Audio Programmes for Children**

A workshop on script-writing for audio programmes for young children was organized from 31 August 1982 to 9 September 1982. The objective of the workshop was to develop scripts in Hindi for audio programmes with focus on writing for children between 3 and 6



years of age. Seventeen persons from Delhi, U.P. and Rajasthan participated in the workshop. The group included writers for young children, producers of audio programmes for children of pre-primary and primary schools.

In all, 21 scripts were developed on a variety of topics like insects, forms of water, milk and milk products, musical instruments, sources of light, story of bread, child's observation of his environment, sound discrimination, wild animals, shapes and seasons, etc. It is proposed to develop audio programmes based on these scripts.

### **Instructional Material for Teacher-educators in Early Childhood Education**

A workshop in connection with the development of instructional materials for teacher-educators was organized from 29 November to 4 December 1982. Ten manuscripts which had been developed were discussed. The participants included ten authors and four resource persons, of whom three were from teacher training institutions. Suggestions for the revision of the manuscripts were given to the authors and they were asked to submit the finalized versions.

### **Seminars**

A seminar for producers and educators on audio programmes for pre-school children was organized on 18 October 1982 at the NCERT campus. The objective was to discuss planning, development and production of audio programmes for pre-school children, to review the recommendations made at the 1981 seminar and to discuss the follow-up action. Five papers were presented in the seminar.

A seminar was organized from 8-10 April 1982 on the theme of children's literature. The main objective of the seminar was to focus attention on the need for developing literature for pre-school children keeping in view their abilities and interests. It aimed at establishing a dialogue among writers, illustrators and publishers who are concerned with the development and production of literature for pre-school children. Eighteen persons from different parts of the country attended the seminar.

### **Evaluation of the CML Materials**

A study which aimed at evaluating CML materials, was initiated on

20 May 1982 in the tribal areas of Bastar District. The sample, which consisted of 144 children from the twelve *anganwadis* of ICDS project, Tokapal, was divided into two groups—experimental and control. Pre-testing was done on various cognitive and language tasks. Information was also collected about their socio-economic background, personal health, hygiene, etc. An eleven-day workshop was conducted for the *anganwadi* workers working in the six experimental group *anganwadis* at Tokapal to orient them in the use of different CML materials and the playway method in general. The workers were given practice in conducting various activities. After the intervention programme, post-testing was done on the same sample in the Bastar District. The second part of the project was conducted on the *balwadi* children from the Khanpur Block in Delhi. This also involved pre-testing, intervention and post-testing on the urban slum that is Khanpur Block in Delhi.

### **Cognitive Development of Indian Children of 2½ to 13 Years**

This is a developmental study on the Piagetian model of (i) casual thinking, (ii) conservation, (iii) relations, (iv) concept of space, time, movement and speed, and (v) sensory motor structures. The study has been undertaken with a view to developing in India theory of cognitive development in which curriculum development can take place. The work on the project was started in October 1978. Data, following a cross-sectional-cum-longitudinal design, are being 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 work is at the report-writing stage.

### **Art Experiences in Education**

This project aims at providing art experiences to the deprived group for their overall advancement. For this purpose Bal Bharti School, New Delhi, was taken as the coordinating centre. The school for the deaf and dumb children at Nizamuddin and the school for the blind children and children of Bhati Village were exposed to art experiences, personal cleanliness and hygiene, and nutrition. The project envisages extension of the work to teachers and holding of an exhibition of children's work.

## Children's Media Laboratory Activities

### *(a) Play Material Project*

The aim of this project is to demonstrate how effective learning can take place by using folk toys and other inexpensive locally available materials. The project has four aspects: (a) to conduct a systematic survey of the play materials and games available in the State, (b) to explore the educational potential of these toys and to develop a manual for teachers, (c) to suggest lines on which these toys need improvement, and (d) to devise new toys out of locally available materials. A workshop on play materials project was held at the Nursery Teachers Training College, Allahabad, from 3 to 5 March 1983. The workshop concentrated mainly on obtaining feedback on the manuscript of the manual prepared for the teachers of Uttar Pradesh.

A manual on the play materials for the teachers of Andhra Pradesh has been printed. Besides giving a brief description of the traditional and low-cost play materials available in Andhra Pradesh the manual suggests activities which can be taken up in the classroom using these materials and their educational potential.

### *(b) Print and Graphic Materials*

The following materials have been printed for children :

Art work for 10 memory cards has been completed. The objective is to facilitate the observation and memory in children.

Illustrations for four conversation charts have been prepared. The main objective is to help facilitate verbal expression in young children. Two board games, are on language development—*Bhasa Ki Udan* to facilitate language development and the other on balanced diet *Paushtik* in young children, have been printed. Both the games are colourfully illustrated and are played like other board and dice games.

### *(c) Audio Programmes*

This activity includes monitoring and evaluating the appropriateness of the existing broadcasts of the All India Radio for young children and to develop prototypes of programmes for young children in the age group 3 to 8 years. A three-day orientation programme was held at Calcutta for the monitors of the project on the monitoring

of children's programmes telecast from Calcutta Doordarshan from 12 October 1982. Six monitors and one supervisor along with the Honorary Director of the project attended the orientation programme. Another orientation programme in radio monitoring was conducted at the State Institute of Education, Allahabad, on 20 and 21 August 1982 for three monitoring panels, viz., urban slum, urban and rural groups. Suggestions were given to improve the programme and to make them popular.

Two audio programme in Punjabi and two in Marathi of 15 minutes' duration each are ready. Each consists of a story, a game, and free conversation.

*(d) Projected Aids*

A slide-cum-tape programme on *Chai Ki Kahani* has been produced. It has 45 slides and an audio tape in Hindi. The programme explains the process of making tea and the sources of various ingredients with the help of a song and the slides.

*(e) Slide Tape Programme*

The photographic part for the slide tape programme on *Sand Play*, has been completed. Staff members of Child Study Unit provided consultancy to the ICDS project.

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

The project is undertaken in two phases : first at the State level and later at the national level. At the State level, the programme was carried out by the Field Advisers of the NCERT in their respective areas. From each State toys were evaluated by a committee of three judges and prizes were awarded. Seventeen persons, one each from different States/U.T.s, participated in the three-day programme. During the workshop the participants prepared toys on the spot based on the guidelines furnished by the Child Study Unit of the NCERT. Toys were adjudged by a panel of three judges.

An exhibition of toys prepared during the State-level toy-making competitions as well as the national competition was also arranged as part of the programme.

# 4

## Universalization of Elementary Education

**T**HE NCERT's efforts at the universalization of elementary education are diverse and include research, development, training and extension programmes. Activities are undertaken with a view to providing experiences which will increase access to formal education and at the

same time promote the organization of non-formal education for those who desire to enrol themselves in the formal system and also for those who drop out prematurely from it. The former is attempted by undertaking curriculum renewal activities and the latter by developing suitable instructional programmes and learning materials.

The following UNICEF-aided projects, each directed to a specific aspect of the strategy to promote universalization of elementary education, continued to be implemented with the collaboration of State Education Departments and State-level institutions like SIE's, SCERT's and training institutions.

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

While activities under the first three are discussed in this chapter, the other two are dealt with in other sections.

### **Comprehensive Access to Primary Education**

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/U.T.s so as to enable the children attending these learning centres to receive credit/certificate 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 the 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/U.T.s participating in the project. A few States and Union Territories commenced the project activities in 1979, a few in 1980, a few in 1981 and a few in 1982. 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 under report included the following :

Training course for teacher-educators of TTIs/ITTCs and in-service teachers on the methodology of developing learning episodes;

Training course for teacher-educators of TTIs/ITTCs on the methodology of processing the learning episodes ;

Orientation course for teacher-educators of TTIs on the methodology of developing learning materials for learners having low or no reading ability and on the methodology of integrating competencies related to different subject areas and disciplines into the learning episodes ;

Orientation course for Education Officers at the district and block levels on the planning and management aspects of the project CAPE ;

Training course for art teachers/artists on the methodology of developing illustrations for learning episodes ;

Screening and selection of draft learning episodes for processing ;

Processing draft learning episodes ; and

Production/publication of learning episodes.

### *Physical Targets Achieved*

Thirty SIEs/SCERTs/DSERT/SIERT and 980 elementary teacher training institutes (TTIs)/in-service teachers training centres (ITTCs) in the country are involved in the implementation of the project CAPE. During 1982-83, about 40 Regional Decentralized Resource Centres (SIE/SCERT) team members were trained in the methodology of developing and processing learning episodes. Four hundred and seventy-three teacher-educators of TTIs and 806 in-service teachers were trained in the methodology of developing learning episodes while 1,165 teacher-educators of TTIs/ITTCs were trained in the methodology of processing learning episodes. Five hundred and eighty one teacher-educators of TTIs/ITTCs 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 four district- and block-level Education Officers were oriented in the planning and management aspects of the project CAPE and 223



art teachers/artists were trained in the methodology of developing illustrations for learning episodes. Thirty-eight workshops were conducted for screening and selecting the draft learning episodes developed by teacher trainees/teacher-educators of TTIs and by in-service teachers. Five hundred and seventy-five teacher-educators of TTIs were associated with this process. During the same period, 56 workshops, involving a total number of 1,092 teacher-educators of TTIs/ITTCs, were conducted for the processing and refinement of the learning episodes selected for publication. About 400 models developed by the teacher-trainees/teacher-educators of TTIs and in-service teachers have been processed for publication and 119 learning episodes (in the form of capsules) were published by the States of Andhra Pradesh, Bihar, Madhya Pradesh, Orissa, Tamil Nadu and Uttar Pradesh.

### **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, more than 180 teachers' training institutes (TTIs) have

been selected to participate in the project. Two thousand four hundred and sixty nine primary schools are participating in the project. In these schools the total enrolment of children is more than 4,00,000. About 11,000 teachers are working in these schools.

The following work is involved under the Primary Education Curriculum Renewal Project :

Development of an innovative curriculum plan.

Development of detailed syllabi for the primary classes.

Development of relevant and need-based instructional materials (textbooks, workbooks, teachers' guides, 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.

### *Instructional Materials*

The participating States and the Union Territories are developing instructional materials in a phased manner. However, due to various reasons, they are at different stages in the development of instructional materials of various classes and their try-out in the project schools.

During the year the participating States/U.T.s developed 296 instructional materials (textbooks, workbooks, teachers' guides) in their respective regional languages.

### *Orientation of the Project Staff*

The NCERT organized 25 orientation programmes on various aspects of the PEER project for the staff of the SPCDCs and the supervisory TTIs. Two hundred and seventy-five persons participated in these programmes. The participating States and the Union Territories organized about 424 orientation programmes for the project school teachers and supervisory staff. Approximately 11,800 persons participated in these programmes.

### *Guidance to the States*

Besides organizing orientation programmes, PCDC, NCERT, provided guidance to the State teams in many ways. The SPCDC teams of

Nagaland, Haryana, Andaman and Nicobar Islands, Meghalaya, Madhya Pradesh, Himachal Pradesh and Rajasthan were provided with guidance in developing the manuscripts of instructional materials (textbooks, workbooks, teachers' guides) and/or their evaluation. Short-term consultancy services were also provided to Tripura, Uttar Pradesh, Maharashtra, Andaman and Nicobar Islands and Goa.

#### *National-level Meeting of the Project Coordinators*

A meeting of the coordinators of the PECR project was conducted at the NCERT Campus, New Delhi, during 3-10 November 1982. In this meeting, the progress of the project was reviewed and plans of action of the States and Union Territories for the year 1983 finalized. Besides this, the coordinators made several important recommendations for the smooth implementation of the project.

#### *Infrastructure for Curriculum Renewal Programme in the States|U.T.s*

The process of curriculum development under PECR project in each State is a joint or cooperative venture of the members of the SPCDC, staff of the TTI's and the project schools, subject experts and authors drawn from various educational institutions, etc. Thus, the implementation of the PECR project has helped to create an infrastructure for curriculum development in each State and Union Territory thereby generating a self-sustaining process of curriculum development.

It is through the implementation of PECR project that some of the States like Sikkim, Nagaland, Meghalaya and Union Territories like Andaman and Nicobar Islands, Pondicherry, Chandigarh and Lakshadweep are now developing their own curricula and instructional materials for the primary stage of education. It is hoped that the development of relevant and need-based curricula for children would give a fillip to the programme of universalization of elementary education.

#### *Present Position of Wider Infusion of the Curricula into the State Education System*

The participating States and Union Territories have developed a phased programme of development of new curricula. The instructional materials being produced under the PECR project are tried out in the project schools. Necessary correction and modification in the

instructional materials are incorporated on the basis of feedback thus received. Simultaneously, steps are being taken for wider infusion of the new curricula into the State education systems.

The Education Departments of the States and the Union Territories have been advised to create suitable mechanism for keeping, on a continuous basis, close liaison with the work of the PECR project, specially with a view to considering the question of adoption or wider infusion of the curricula being developed under PECR project into the State education system. Himachal Pradesh, Maharashtra, Nagaland, Orissa, Rajasthan, Sikkim and Tamil Nadu and the Union Territories of Andaman and Nicobar Islands and Mizoram have taken concrete steps for wider infusion of the instructional materials produced under PECR project into their education systems. A brief account of the steps taken by these States/U.T.s towards wider infusion of the new curricula is as follows :

The Government of *Himachal Pradesh* has taken a policy decision to nationalize, from 1983, textbooks of primary classes. In pursuance of this decision, the Board of School Education has decided to adopt the instructional materials developed by the SIE, Solan (Himachal Pradesh) under the PECR project from the academic year 1983-84. Textbooks have been published for use in the schools of the State.

*Maharashtra* has adopted the Minimum Learning Continuum (developed under the PECR project at the national level) as the basis for evolving syllabi in various subjects for the primary classes. The curriculum for Classes I to IV for the entire State has been revised and the draft curriculum has been submitted to the State Government for approval. The State Education Department has adopted for wider use the Teacher's Handbook in Environmental Studies for Classes I and II developed during the first phase of the project.

The Education Department of *Nagaland*, has taken a policy decision to adopt for use in all the primary schools of the State the instructional materials being developed under the PECR project.

The Board of School Education, *Orissa*, has adopted for wider use in all the primary schools of the State the Teacher's Handbooks for Classes I and II developed during the first phase of the PECR project. The curriculum framework developed under the PECR

project during the expansion phase has also been introduced in all the primary schools of the State with slight modification.

The Education Department of *Rajasthan* has decided to adopt or adapt for wider use the curriculum and the instructional materials developed by the SCERT, Udaipur, under the PECR project. For this purpose a Review Committee has been constituted. The Committee would get the PECR project instructional materials reviewed and modified to suit the needs of the primary schools in the State.

Under the PECR project, the Education Department of *Sikkim* has initiated the process of developing its own instructional materials (for primary classes) suited to the local needs and conditions. The State Government has decided to use the instructional materials being developed under the PECR project in all the primary schools of the State from the year 1983.

The Tamil Nadu State Education Department has adopted for wider use textbooks in mathematics for Classes I and II developed by the SCERT, Tamil Nadu, under the PECR project.

The Education Department of *Andaman and Nicobar Islands* uses in its schools the instructional materials from the neighbouring State etc. Under the PECR project, a phased programme has been drawn up for the development of instructional materials suited to the local needs and conditions. The instructional material work developed under the project in all the primary schools from the year 1983.

The following instructional materials developed under the PECR project in *Mizoram* have been adopted by the Mizoram Board of School Education for use in all the primary schools in the Union Territory :

Language textbooks in Mizo for Classes I to V.

Textbooks in Environmental Studies (social studies) for Classes III to V.

### *Research*

During the year 1982-83, the PCDC initiated a series of descriptive research studies. These studies are of three types, viz., status studies,

case studies and historical studies. The six status studies are as follows :

An introduction to the PECR project schools in India, their setting, pattern and functioning.

Physical facilities at the project schools.

Nature of equipment, reading and play materials available at the project schools.

Curricular and co-curricular activities at the project schools with special reference to SUPW and art activities.

Social class background of the students of the project schools.

Status of the teachers of the project schools.

Besides the 30 case studies of the selected project schools in 13 States and two Union Territories, studies have been undertaken with a view to finding out the impact of the project on the holding power of the school. A historical study of the primary curriculum development in India (1882-1982) has also been undertaken. All these studies are in progress.

*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 two streams of thought has been completed :

Hindu Yoga Sadhana Stream of Thought.

Psycho-analytical Stream of Thought.

The study of the literature on the Gandhian educational thought is likely to be completed by May 1983.

*A Study in the Comprehensibility of Language used in the Science, Social Studies and Language Textbooks at Primary Level.* The main

objective of the project was to see (a) whether or not the language used in the textbook of a particular grade is comprehensible to the children of that grade ; (b) the relationship between the language of the learner i.e. the spoken and written language of the child and the language used in the textbooks.

The study was conducted on the textbooks of Grade III of Rajasthan. The tests like Cloze Test, MCQ and Comprehension Test were prepared and standardized in all the three subjects mentioned above. The spoken and written language of the third grade children from rural as well as urban areas was collected. The tests were given to equal number of children in rural and urban areas taking into consideration equal number of boys and girls. The final sample was of 500 children. The report of the study has already been prepared.

It has been observed that there is a significant difference between the language used in the textbooks and the language of the learner. The study will help the textbook authors in improving its language aspect to bring it closer to the spoken and written language of children.

*A Study of the Effect of Psychological Factors on the Comprehensibility of Language used in Science, Social Studies and Language Textbooks at Primary Level.* This study is an extension of the study. 'A Study in the Comprehensibility of Language used in the Science, Social Studies and Language Textbooks at Primary Level'. The major objective of the study is to see the effect of intelligence (verbal and non-verbal) and of socio-economic status on the comprehensibility of language used in the textbooks.

Close tests were prepared and standardized for measuring the comprehensibility of language in all the three subject areas. Comprehensibility tests, intelligence test and Socio-Economic Status Scale have already been administered on a sample of 400 children of Grade III in Rajasthan and data have been collected. The scoring of these tests is being done. The report of the study is likely to be ready by the end of the year 1983.

*Children's Literature—Preparation and Evaluation.* What should be the nature and quality of literature our children should be exposed to so as to make them better citizens with a firm and rounded personality ? The

above-mentioned book published by the NCERT tries to grapple with this problem. It is a collection of papers presented in a seminar organized by the NCERT. The papers discuss the principles and procedures for the preparation and evaluation of children's literature. The seminarists included eminent editors of children's magazines, authors of children's books from different languages and educationists of repute.

The papers advocate the use of imaginative illustrations which help to motivate the child. The printing should be attractive so as to capture the child's imagination. Value-oriented literature is essential to infuse into children a sense of righteousness. The book also offers suggestions and tools for the evaluation of children's literature.

*Improving Textbooks through Research.* This mimeographed brochure deals with the place of textbooks in Indian school system and the deficiencies from which our textbooks suffer. A large number of textbooks are prepared and produced every year to meet the demands of consumers in our country and the entire production is carried out by the State Textbook Boards/Corporations/Bureaus, NCERT and private publishers. Except for NCERT where the textbooks are generally tried out before final publication, hardly any other agency has its research cell for the purpose. This brochure emphasizes the need of research to improve the textbook as the main tool for teaching and learning in our country. The problems of research should be identified in the areas of presentation of textual material, illustrations, exercises, national integration, creative learning, etc. In the brochure some research problems in different subjects for the improvement of textbooks have also been suggested.

### **Developmental Activities in Community Education and Participation**

#### *Objectives of the Project*

A project on Developmental Activities in Community Education and Participation (DACEP) is being implemented by the Council with the UNICEF assistance. 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 promise that children's education to be



meaningful has to proceed concurrently with gradual changes and modifications of their socio-economic environment. This can be achieved through education and stimulation of the community at large, which implies that the educational needs not only of pre-school and out-of-school children but also of drop-outs and mothers are effectively and efficiently met.

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

The project is in line with the Government of India's comprehensive programme of non-formal education. The programme and activities developed under the project meet the broad objectives of improving the 'life and living' of the people through their willing participation and provide 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 very 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 tries to ensure the development of positive attitude of the community members for education. Children who have dropped out from school and also those who have never gone to school are helped through non-formal education to re-enter the mainstream of education. Educational programmes for women include training in pre-natal and ante-natal care, child-care and nutrition, some economic

activities, home management, etc. The educational programmes for the pre-school children help them to develop proper attitude and interest for schooling. Care is taken for 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 those who have dropped out from school. Children are expected to acquire knowledge and skills in academic aspect of education and also develop expertise with regard to socially useful productive work and their family occupations. It may also help children to enter the formal stream of education, if they so desire.

The programmes for the adults—both men and women—aim at providing knowledge and skills of reading and writing and developing in them 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/U.T.s 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/U.T.s and two community centres were opened in each of the remaining States/U.T.s 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-eight of these centres had come into existence up to December 1982. Besides eight more

centres have been approved to be set up in Tamil Nadu, Madhya Pradesh and Orissa in which the honorarium of community workers is to be borne by the State Governments.

A variety of patterns of non-formal education for different target groups covered under the project are being developed in all the States/U.T.s. 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 the feedback data.

Four orientation courses for project coordinators and community workers of the participating States/U.T.s have so far been organized during the year 1982-83. 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. 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 adapted for wider use in State's non-formal education programmes.

#### *Monitoring of the Project*

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

#### *Evaluation of the Project*

An internal evaluation of the project is proposed to be completed by the end of 1983. The tools for evaluation have been developed at the NCERT level and are being made available to the States/U.T.s for adoption/adaptation. An external evaluation of the project is also proposed to be arranged during the year 1983.

## **Non-formal Education**

The Council took up the work regarding non-formal education in July 1976. The major thrusts in this area have been directed towards conducting research, developing conceptual and instructional materials, organizing conferences and orientation programmes and disseminating information through NFE Newsletter. The Council also established 228 experimental non-formal education centres through its Regional Colleges of Education and Field Offices. These centres were started gradually. Originally they were meant for two years only. Later, they were extended up to May 1982.

During 1982-83, the NCERT accomplished the following tasks in the area of non-formal education.

### ***Research***

The Council took up the research project on *Compilation and Linguistic Analysis of Hindi Vocabulary*. The report on the project was prepared and circulated to various persons and institutions. The study is concerned with the spoken and written vocabulary of children and the vocabulary used in textbooks. The objectives of the study are to compile the spoken and written vocabulary of rural and urban children and that used in textbooks of all subjects for Classes I to V prescribed in the Hindi-speaking States and to analyse the vocabulary structurally, grammatically and semantically. The study was conducted in two phases, viz., compilation of vocabulary and analysis of vocabulary. The oral and written vocabulary was collected from 1,920 children from 96 schools located in 22 districts of various States and Union Territories, viz., Bihar, Haryana, Himachal Pradesh, Madhya Pradesh, Rajasthan, Uttar Pradesh, Delhi and Chandigarh.

The oral and written vocabulary was compiled with the help of questionnaires in respect of Classes I to V, urban and rural areas and sex. The number of words, thus compiled, is 15,197. The data have been presented in terms of total number of words, their frequencies, mean and percentage. The list includes 6,034 words with the frequency of more than ten and 9,163 words with the frequency of less than ten. A master list of 15,000 words with 12 types of frequencies running into 600 pages is being cyclostyled. One more master list and 41 category-wise lists will also be prepared.

### *Survey of the NCERT's Experimental Non-formal Education Centres*

Two hundred and twenty-eight experimental non-formal education centres were organized by the NCERT from December 1978 to May 1982. These centres were meant for different socio-economic groups. The programme was meant for imparting literacy and numeracy to out-of-school children and also covered various aspects, viz., health and hygiene vocation, SUPW and environmental education. An assessment of the experience of these experimental centres was taken up by the Council.

The report on the assessment gives information on the concept and objectives of non-formal education, motivation of students, selection and training of teachers and supervisors of the centres, instructional materials, instructional programmes, community cooperation, cooperation of developmental agencies, teaching of craft, etc.

*Identification of various Approaches and Strategies of Non-formal Education.* The tenure of the project is two years. It was initiated in April 1982. The project aims at identifying various approaches and practices of non-formal education and is confined to Hindi-speaking States. The related literature has been studied and analysed. Questionnaires have been prepared. They have been sent to non-formal education centres in the States and data have been collected and analysed. Some teachers and supervisors have also been interviewed. On the recommendation of experts five questionnaires have been prepared. Now the data will be collected through these questionnaires, which will help in finalizing the report.

*Evaluation of Non-formal Education Instructional Material.* This project aims at developing tools for the evaluation of the instructional materials developed for non-formal education centres. The present study will be confined to Hindi-speaking States only. The relevant materials from various States have been collected and analysed. The first draft of the tool has been prepared. The report on the project will be available during the next financial year.

### *Non-formal Education at the Middle Level (VI-VIII)*

The Council has taken up a project to develop syllabus and instructional materials for non-formal education at the middle school level. The project started in November 1982. The programme involves

analysis of instructional materials at the middle level, both formal and non-formal education, identification of a core syllabus, identification of life-skills and the requirements of the children likely to be enrolled in non-formal education centres, identification of competencies to be developed in the children at the middle level, development of instructional materials following both integrated and subject approaches, development of manual and guide materials for the teachers of non-formal education centres.

A workshop was organized in January 1983 in which representatives from Bihar, Rajasthan, Madhya Pradesh, Uttar Pradesh, Haryana, Himachal Pradesh and Andaman and Nicobar Islands participated. Syllabi and instructional materials of the above-mentioned States were analysed and core components and life contexts of out-of-school children were identified. Guidelines for the development of integrated lessons were also developed.

### *Training*

A training programme was organized from 21-26 March 1983 by the Council for the second-level workers from the nine educationally backward States. Representatives from the nine States and five voluntary organizations participated. The main focus of the training programme was to see what approaches and strategies were being adopted for the teaching of natural sciences, social sciences, mathematics, language and SUPW at the primary level. The programme resulted in the status papers on the teaching of various subjects at the primary level.

A training programme for the teachers of non-formal education centres established by the Municipal Corporation of Delhi was organized at the request of its Education Department, from 15-20 October 1982.

Two training programmes were organized for the Education Officers of the Department of Education of Andaman and Nicobar Islands from 14-21 December 1982 and in March 1983.

## **Monitoring and Evaluation of Universalization of Elementary Education**

### *Pilot Try-out of Tools*

The project was undertaken in one district each of the States of

Uttar Pradesh, Andhra Pradesh and Gujarat. It was started in February and was completed in September 1982. The programme aimed at the try-out of the tools of monitoring and evaluation of universalization of elementary education with particular reference to non-formal education centres in these States. The districts selected in the three States with the help of the State authorities were Allahabad in Uttar Pradesh, Nalgonda in Andhra Pradesh and Sabarkantha in Gujarat.

In each of the three States planning-cum-training and orientation monthly review meetings and quarterly review meetings were organized in a phased manner in each district and at the block headquarters of these districts in the period under report. Nine hundred and seventy instructors/supervisors/State-level functionaries were involved in twenty-one meetings held from April to September 1982. In these meetings functionaries at different levels of the administrative hierarchy were exposed to the tools and procedures of the try-out. Instructors were trained in filling the proformas. A meeting of the concerned officials of the three participating States was held at the NIE Campus, New Delhi from 21-23 September 1982. The tools were reviewed and necessary amendments were made on the basis of the experience of the try-out. The recommendations were duly incorporated in the tools and procedures.

#### *Application of Tools of Monitoring and Evaluation*

A National Seminar on the Monitoring and Evaluation of Universalization of Elementary Education was organized during 3-6 November 1982, in which eleven senior officers from different States/Union Territories participated. The participants presented report of the status of elementary education in both formal and non-formal sectors in their respective States. They also discussed a revised version of the tools of monitoring and evaluation. As a follow-up, it was decided (in consultation with the State authorities) to apply the revised tools in the States of Rajasthan, Jammu & Kashmir and Orissa, which are educationally backward States. The district of Udaipur (Rajasthan), Badgam (Jammu & Kashmir) and Nayagarh (Orissa) have been selected in consultation with the respective State Departments of Education for the application of the tools. In the month of March 1983, the Council organized three meetings—one State-level planning meeting and two block-level orientation meetings in Udaipur district.

# 5

## Education of the Disadvantaged

**T**HE NCERT conducts research with a view to finding out the problems that affect the education of children belonging to the disadvantaged sections, particularly the scheduled tribes and the scheduled castes. It also prepares curricula and



instructional materials for use by such students, organizes training programmes for key personnel for tribal areas, and produces supplementary reading materials for disadvantaged pupils.

During the year under report a number of research and development programmes were undertaken by the Council. The programmes have helped in the identification of problem areas, the development of textual materials and the training of a cadre of key personnel.

### **Research**

The following studies were undertaken/completed during the year :

*(i) A Study of Methods, Processes and Practices of Non-formal Education Programme for Tribal Students*

The report of the study was completed. The study was undertaken in five States—Andhra Pradesh, Gujarat, Madhya Pradesh, West Bengal and Rajasthan.

*(ii) A Study of the Nature and Extent of Community Participation and Its Effectiveness in Educational Development of Scheduled Tribes in Nagaland.*

Field work for the project was undertaken in fifteen schools and the tribal community living around these schools in Kohima district of Nagaland during the year under report. Data were analysed and tabulated and the report of the project is nearing completion.

### **Curriculum and Textual Material**

*Preparation of Textbooks in Tribal Dialects*

The NCERT has initiated a programme of preparation of primary-level textbooks for tribal children of different States. Under this programme the primer for Saora children of Class I of Koraput and Ganjam districts of Orissa was finalized. The manuscript of the primer was prepared during the preceding year. The primer is being printed and will soon be available to Saora students.

*Analysis and Development of Curriculum for Tribal Students*

The NCERT has taken up the programme of analysing the existing

curriculum and developing a modified and suitable curriculum for tribal children at the primary stage for Andhra Pradesh.

*Preparation of Instructional Material for Non-formal Education Centres located in Tribal Areas*

During the year under report the NCERT organized a working group meeting of experts for preparing instructional material for Santal students of non-formal education centres of West Bengal. The working group meeting was held during 1-10 September 1982 at the NIE, NCERT, New Delhi, and was attended by 11 experts in writing the said material. Part of the total instructional material was prepared.

*Preparation of a Training Package for Teachers of Non-formal Education Centres in Tribal Areas*

The programme is aimed at providing a training package to the teachers of non-formal education centres in tribal areas. The package will contain topics on various aspects of life and culture of the tribal people and their educational problems and also some demonstration lessons for teachers to be followed by them during their teaching in the non-formal education centres. Various topics and demonstration lessons were assigned to the experts in respective fields. A meeting of the sub-committee on Curriculum Development for Scheduled Castes and Scheduled Tribes was held at the NIE, NCERT, New Delhi on 11 June 1982 to formulate strategies for the development of curriculum, preparation of textbooks, etc., for scheduled castes and scheduled tribes.

**Training**

*Orientation Course for District Education Officers from Tribal Areas*

Orientation courses for the District Education Officers from tribal areas were organized at the NIE, NCERT, New Delhi. One course was organized during 17-31 January 1983. Twelve persons from six States—Orissa, Madhya Pradesh, Maharashtra, Tripura, Tamil Nadu and Arunachal Pradesh—participated in the course. The second course was organized during 14-28 February 1983 in which ten persons from five States—Andhra Pradesh, Karnataka, Gujarat, Mizoram and Dadra and Nagar Haveli—participated. The objective of the courses was to orient the District Education Officers in the tribal life and culture and the latest trends in educational development.

### *Orientation Courses of Key Personnel of Non-formal Education Programme in Tribal Areas*

Two orientation courses for key personnel of non-formal education programme in tribal areas were organized during the year 1982-83, for acquainting the key personnel with the tribal life and culture, the problems of tribal education, the organisation of non-formal education centres, etc. One course was organized during 15-21 September 1982 in which 18 persons from five States—Kerala, West Bengal, Rajasthan, Madhya Pradesh and Maharashtra—participated. The second course was held during 15-21 March 1983 and was attended by 22 persons from Bihar, Gujarat, Himachal Pradesh, Orissa, West Bengal, Rajasthan, Madhya Pradesh and Maharashtra.

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

A training course for teacher-educators of secondary teacher training institutions located in tribal areas was organized during 22-28 March 1983 at the NIE, NCERT, New Delhi. The objective of the course was to train teacher-educators in the Tribal life and culture as well as in the problems of tribal education. The course was attended by eight persons from Kerala, Maharashtra, Madhya Pradesh, Gujarat, West Bengal and Meghalaya.

### **Other Programmes**

A paper on Alternative Structures for Universalizing First Level of Education with emphasis on Disadvantaged Groups was prepared for UNESCO. The paper was finalized in a meeting held on 23 November 1982 at the NCERT and sent to UNESCO, Bangkok.

A study team visited Arunachal Pradesh, during the year under report, to study the educational structure there.

# 6

## Curriculum, Textbooks and Supplementary Readers

**E**FFORT to upgrade curricula and syllabi and prepare textbooks for all classes continued to receive attention. As in the previous years the emphasis was on developing a package of materials for use by students and teachers. The package included textbook, workbook

and teacher's guide. The Council also continued to bring out supplementary reading material for enriching the knowledge of school-going children. Permission was given to State governments to adopt/adapt textbooks published by the Council. Some books were also translated into regional languages.

### **Curriculum Development and Research**

A Committee on community work as an area of School Curriculum had been constituted by the NCERT (a) to work out details about the scheme of community work as an area of school curriculum ; and (b) to prepare a comprehensive document to be brought out in the form of a brochure on community service. The Committee has completed the task of preparation of a provisional framework through a number of phases. In the first phase (1981-82), various dimensions of the problems were discussed by the Committee. In the second phase, a series of field-level group discussions were held by the Chairman of the Committee with teachers, students and guardians of Shiksha-Satra, the school founded by Rabindranath Tagore in a rural setting. During the next phase, a broad-based national workshop was organized at Udaipur for working out various dimensions of community work as an area of school curriculum. On the basis of the outcome of the work done during these three phases, the NCERT has brought out a brochure titled *Community Work as an Area of School Curriculum—A Framework*, which deals with various aspects of the programme, viz. concepts, need, objectives, content and implementation. The framework is expected to provide an adequate basis for working out further details of community work as an area of school curriculum for the common school system.

#### *Coordination Committee for Curriculum Development*

A Coordination Committee for Curriculum Development, with its secretariat located in the NCERT, was constituted with the following objectives in view :

To indicate the types of programmes concerning the school curriculum which the various constituents of the NCERT should undertake.

To ensure that there is no duplication in the programmes concerning the school curriculum undertaken by various constituent of the NIE.

To develop a mechanism to interact with RCEs and such State/ Union Territory-level institutions as SCERT, SIEs, etc.

To periodically review and evaluate the departmental programmes concerning the school curriculum.

To recommend for approval departmental programme proposals concerning the school curriculum.

To discuss and decide about the proposals received from outside the NCERT regarding the school curriculum.

During 1982-83 the Committee had its 6th, 7th and 8th meetings wherein, apart from the evaluation of 109 on-going and new project proposals for 1983-84 submitted by various constituents of the NIE, the Committee discussed the issues pertaining to better coordination among the constituents of the NIE working in common area(s) streamlining the procedures of planning and processing project proposals, measures to make the Committee more functional, guidelines and priorities for selecting programmes/projects related to the school curriculum and pursuing the progress made in the light of the recommendations of the Committee.

#### *Effective Use of School Curriculum*

The project, which is of an experimental-cum-developmental nature, was initiated in 1978 with the aim of preparing a strategy which would help the primary school teachers in gearing effectively the school curriculum to the achievement of developmental objectives of education, viz., development of the child as a learner, as a person, as a citizen and as a worker.

During the developmental phase of the project (1981-82) the project team was engaged in the production of appropriate material pertaining to (i) the developmental objectives of education at the primary level, (ii) the psychological aspects of the child that a teacher should take care of at the primary level, (iii) teaching-learning strategies, (iv) teaching skills, (v) the use of immediate environment, (vi) curriculum content analysis, (vii) the curriculum content not based on books, (viii) the evaluation of pupil development, (ix) teacher behaviour for better pupil development, and (x) the monitoring of teachers' performance.

The experimental phase of the project initiated during the year 1981-82 was completed in 1982-83. The analysis of the data is nearing completion after which it would be possible to undertake the dissemination phase of the project in the light of the findings of the experimental phase.

### *Weightage given to Different Areas of School Curriculum in Various States*

The NCERT conducted a study to ascertain weightage given to different areas of school curriculum from Class VI to Class X in eight States and Union Territories, namely, Andaman and Nicobar Islands, Assam, Delhi, Himachal Pradesh, Mizoram, Punjab, Rajasthan and Tamil Nadu. The weightage of a subject has been studied in terms of marks allocated in the annual examination and time allocated to it in the school time-table. The main findings of the study are :

Academic subjects are given considerably more weightage, both in terms of time allocation for its teaching and marks allotment.

Out of the academic subjects, compulsory subjects are given more weightage both in terms of time allocation and marks allotment in comparison to the elective subjects.

Different States give varying weightage to different curriculum areas, either from the point of view of time allocation or marks allotted.

From the examination point of view, mother tongue and English are given more weightage in comparison to all other subjects.

Science is given less weightage from the view-point of time allocation in the lower classes but is given more weightage in higher classes.

There is no linkage between the weightage given to different subject areas from the point of view of time allocation and the weightage from the point of view of examination marks.

The subjects which are given first priority from the point of view of time allocation are not necessarily given the same priority from the examination point of view.

### *Implementation of Curriculum under 10+2 Pattern of Education*

The project aims at making a status study of curriculum implementation in three States and one Union Territory, namely, Tamil Nadu, Gujarat, Maharashtra and Delhi. The study is likely to provide feedback to curriculum planners for the improvement of existing curricula. During 1982-83, data were collected from the sample States with the help of data-gathering tools developed for the study. On-the-spot study was also made in some selected schools in the four States. The data are presently being tabulated and analysed.

### *Curriculum Load at the Secondary Stage*

The project entitled "Comparison of Curriculum Load at the Secondary Stage" was completed during the year. The study was conducted in respect of three States and one Union Territory, namely, Kerala, Maharashtra, Haryana and Delhi. The main findings of the study are :

- (i) In Delhi, at the secondary stage, the existing curriculum in English, Mathematics and Hindi (A-Course) is considered to be negligibly heavy while the curriculum in Science and Social Sciences is considered as 'somewhat heavy' by the teachers. The combined load of five subjects has come out to be 'Negligibly heavy'. None of the five academic subjects has a 'heavy' curriculum. The level of difficulty in respect of all the five subjects is 'average'.
- (ii) In Maharashtra, the existing curriculum for Classes IX and X in the subject of English and Social Studies is considered to be 'negligibly heavy', while the curriculum in Marathi, Science and Mathematics is considered to be 'somewhat heavy'. None of the five subjects has a 'heavy' curriculum. The combined load of the five subjects has also come out to be 'somewhat heavy'. The level of difficulty in respect of all the five subjects except Biology as a part of Science is 'average'. The Biology portion of Science has been considered to be 'easy'.
- (iii) In Haryana, at the secondary stage, the present curriculum in all the five subjects, namely, English, Hindi, Science, Mathematics and Social Studies is 'negligibly heavy'. The combined load of the five subjects has also come out to be 'negligibly heavy'. The level of difficulty in respect of the course content of all the five subjects has been adjudged as 'average'.



- (iv) In Kerala, at the secondary stage, the curriculum in English, mother tongue, Mathematics and Social Sciences is 'somewhat heavy' while the curriculum in Science has been considered to be 'negligibly heavy'. The combined load of the five subjects has also come out to be 'somewhat heavy'. The difficulty level in respect of the course content of all the five subjects has been considered to be 'average'.
- (v) Teachers tend to give more prominence to 'knowledge' objectives than to 'developmental' objectives. The basic orientation of their teaching is to prepare the students for the annual examination.
- (vi) The amount of home work assigned by the teachers far exceeds the limit of the optimum desirable time for home work.

#### *Curriculum Resource Centre and Bulletin*

The Curriculum Resource Centre maintains report with various educational agencies in India and abroad. Important information and material from various curriculum agencies within the country and abroad have been compiled in a usable form for the benefit of curriculum workers and researchers. The Centre brings out special brochure from time to time. During the year 1982-83, a brochure entitled *Select Annotated Bibliography on School Curriculum* was brought out.

*The Curriculum Bulletin* a quarterly publication, entered its third year of publication in 1982-83. The usual four issues of the Bulletin were brought out during the year. Besides Book Reviews, Research Abstracts, Curriculum News, the four issues during the year carried articles like "Curriculum Transaction for National Integration", "Social Needs and School Curriculum" and "Education for Survival", by eminent educationists.

A consolidated volume incorporating selected articles from the first seven issues of the Bulletin entitled "Reflections Curriculum", is in the press.

During the year 1982, Hindi version of the title *Psychology of the Child and the Curriculum* was brought out.

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

Enhancing the role of arts in formal and non-formal education at the primary level is the title of a research-cum-development project which aims at systematically developing a classroom teaching-learning strategy in the arts and integrating it with other subjects on the basis of "process-experience" approach to teaching. At the initial stage, ten local primary schools have been selected for developing teaching units with the purpose of integrating arts with other school subjects. A meeting of teachers of these schools and other experts was held in January 1982, wherein four sample teaching units (two each for Classes III and IV) were developed and analysed in respect of expected competencies, behavioural objectives and suggested art activities.

Two workshops-cum-orientation meetings of teachers and headmasters were organized in October and December 1982. In these workshops, the curriculum contents of Classes III and IV for the months of December/January were analysed. Orientation of teachers in related practical arts activities e.g. rubbings, free drawings and paper cuttings, clay-modelling, creative print making, simple mask making, creative dramatization, puppetry, etc., which were used for the teaching of Hindi, Mathematics, Environmental/Social Studies, was conducted. Three level evaluation programmes, viz., (i) front line evaluation, (ii) process evaluation and (iii) product evaluation or summative evaluation, were discussed in detail. The classroom teaching based on the use of arts/creative activities with a view to assessing the effectiveness of the new teaching-learning enrichment programme, will take place some time in August/September 1983.

The NCERT has also been working on other arts projects concerning the development and implementation of arts curriculum and instructional materials.

Under the project entitled "Developing Draft Curriculum in Different Areas of Arts at Different Stages of Education", a workshop for developing visual arts courses at the +2 stage was organized during March 1983. The draft of visual arts courses will be finalized during 1983-84 with the help of experts.

Under another project entitled "Preparation of Instructional Materials for Teachers and Students in Various Arts at Different Levels of Educa-

tion", a working group meeting was held to prepare a draft on educational puppetry and to review some of the new proposals for a booklet on materials/media and techniques for creative arts activities, during March 1983. The two drafts will be finalized during 1983-84 along with illustrations and reproductions of children's art works.

## SOCIAL SCIENCES AND HUMANITIES

### **Programmes in Civics**

About a year ago, the Indian National Commission for Cooperation with UNESCO, Ministry of Education and Culture, Government of India, had signed a contract with UNESCO about field implementation and evaluation of material on contemporary world problems, namely, human rights, disarmament and new international economic order. On behalf of the Indian National Commission for Cooperation with UNESCO, the NCERT agreed to implement the project during the academic year 1982-83. The NCERT set up a Project Working Committee to design guidelines for content, methodology, management and evaluation of the project and a Task Force for implementing the project. The project was implemented in four selected schools of Delhi, namely, Delhi Public School, Jamia Millia Islamia Higher Secondary School, Springdales School and Lady Irwin School. The project was completed in the month of March 1983 and the final report on the project has been submitted to the UNESCO Office, Bangkok.

### **Programmes in History**

Under the auspices of the Board of Secondary Education in Jammu and Kashmir and the Council's Field Advisor's Office, two workshops were organized for the history teachers of the secondary classes in May and October 1982. All the members of the faculty worked as resource persons in the training programmes in which the participants were introduced to the course content prepared by the Council for Classes IX-X, which has been adopted for the schools in Jammu and Kashmir from 1982.

Under the sponsorship of the Kendriya Vidyalaya Sangathan a workshop was organized for having a fresh look at the Social Studies syllabuses at the primary and middle level.

For introducing the Council's syllabus and textbooks for the +2

level a workshop was organized at Jammu jointly by the Board of Secondary Education of Jammu and Kashmir and the Council's Field Adviser's Office. It was decided in the workshop that, along with the Council's syllabus, a chapter on the local history should also be taught in Classes XI and XII in Jammu and Kashmir.

A collection of Subramaniya Bharati's poems was translated into English and Hindi, on the occasion of Bharati's birth centenary. A selection of his poems translated into Hindi and English along with the original Tamil poems has been compiled with the help of a few outside scholars. Both the English and the Hindi versions have already been published.

A monograph on Maulana Abul Kalam Azad, prepared by an outside scholar, has reached the NCERT. It will be edited.

The project entitled "India's Struggle for Independence through Visuals and Documents" is being given a final shape.

### **Programmes in Geography**

Planning for the preparation of "Physical Geography Textbooks for +2 Stage" was taken up and a workshop was organized in NCERT from 21 to 25 March 1983 to prepare its draft outline.

The updating of "India on the Move" for Classes IX-X has been completed.

The work on the project "Picture Book on Australia" continued.

Under the auspices of the Board of Secondary Education in Jammu and Kashmir and the Council's Field Adviser's Office, two orientation workshops were organized for the geography teachers of secondary classes in May and October 1982 at Jammu and Srinagar respectively.

The project on "Preparation of a Set of Charts on Physical Geography" continued. The first set of 20 charts has almost been finalized.

The first draft of the project on guidance in the use of field studies in Geography is nearing completion and will be finalized in a workshop to be held in the near future.

The project "Importance of Illustrations in Geography Textbooks" is

receiving finishing touches. Maps and illustrations for this project have been completed.

Preliminary work has been initiated for the project on "Comparative Study of Geography Syllabuses of Middle, Secondary and Higher Secondary Classes of Different States of India."

### **Programmes in Economics**

The NCERT organized a workshop to develop Teaching Units in Evolution of Indian Economy—a textbook for Economics for Class XI. The workshop developed about ten units to make the course on Indian Economy more interesting, using the latest data. About 25 persons from schools, teacher training colleges, universities and boards etc, participated in the workshop.

The NCERT has undertaken a collaborative project—Productivity Education in Schools. Its first publication, *No Limits to Development*—a brochure on Education for Productivity, has been released recently. The brochure highlights the philosophy and concepts of productivity and its various dimensions. The theme of education for productivity in the brochure has been discussed from several angles and in the final analysis comes to the conclusion that "productivity and development are directly linked with man—his visions, his goals and purposes, his motives".

The NCERT has undertaken a project on the Status of Economics Teaching in Various Secondary Boards. In this connection a schedule was prepared and mailed to State authorities. A good number of replies have been received and the Boards which have not so far replied have been contacted through Field Advisers to supply the necessary information. After receiving the schedules, data will be processed.

### **Programmes in English**

The NCERT prepared the following books for the Open School :

English Reader Book I	}	Textbooks
English Reader Book II		
Stories and Tales	}	Supplementary Readers
Stories and Legends		

The syllabus in English for Classes I and II for Arunachal Pradesh has also been developed and finalized; so has the textbook for Class I for Arunachal Pradesh.

The manuscript of Readings on Language and Language Teaching has also been finalized. The book contains excerpts on 'Reading' taken from latest books on Languages and Methodology. The pieces have been adopted and a variety of thought-provoking exercises have been included.

About 40 key persons in English attended an orientation programme in July 1982. They were to act as resource persons for the training programmes which SIE subsequently organized for trained graduate teachers. The focus of the programme was on a discussion of the contents of *Steps to English—Book V*, textbook supplementary reader and workbook prepared by the NCERT and prescribed by the CBSE for Course B.

A series of talks to 200 trained graduate teachers using Class X books was organized.

### **Programmes in Hindi**

Orientation course for the postgraduate teachers (Hindi) of the Central School, northern zone was organized at BHEL, Hardwar, from 1 June 1982 to 10 June 1982. Fifty-six teachers participated in the course and were acquainted with enriched literary and linguistic content and the latest trends of teaching methodology.

A workshop to finalize the draft of supplementary reader entitled "Uttarakhand Ki Yatra" was organized at the University of Madurai from 14 to 19 September 1982. The entire manuscript was finalized with the help of the 'author' travelogue writers, teachers and academicians. The manuscript is being edited for publication.

A workshop to revise and improve *Bharati Part I* (Hindi Reader for Class VI) was held at Teachers Training College, Kamachcha, Varanasi, from 23 to 29 November 1982. The whole book was discussed in detail and finally some lessons were dropped, while some of them were shortened and sharpened; only a few lessons were to replace the old ones.

An orientation course for the Hindi teachers of Arunachal Pradesh was held at SIE, Changland, from 15 to 24 December 1982. Fifty-eight

participants were given orientation in the methods of analysing lessons, selecting teaching points and the teaching thereof in actual classroom situation. A few demonstration lessons were also organized.

A high power meeting of Advisory Board, Vidyarthi Sahitya Kosh, was held at the NIE Campus on 2 and 3 March 1983. In the light of the suggestions of the Advisory Board a workshop of Hindi teachers, litterateurs, linguists and teacher-educators, was organized at the NIE Campus from 31 March to 4 April 1983 to select the items to be included in the *Kosh*.

### *Hindi and Mother Tongue*

Supplementary materials have been prepared for Class I based on the textbook *Bal Bharati—Part I*. These materials will be published in the form of small booklets, folders and wall-charts. These materials, which are specially designed to be read along with the textbook, can provide more opportunities for reading practice as the stories, episodes and poems are written using only those words which have been introduced in the lessons of *Bal Bharati*. These materials fulfil the need for more materials as there are not many books written in Hindi for this particular stage which are interesting and simple in language and style.

These materials have been prepared keeping in view not only the language development but the physical, emotional, social and psychological needs of children and their interests in their immediate surroundings. The selection of materials is such that it inculcates in children the values of cooperation, cleanliness, courage, courtesy, good manners, discipline, friendship, honesty, sharing, kindness to animals, obedience, teamwork, team spirit, truthfulness, love for others, etc.

The first draft of the supplementary readers for Classes II to V has also been completed. It is awaiting a review by experts and teachers. This is a kind of enrichment material to develop the habit of reading among the children of primary grades.

The writing of books for the first three classes of the primary stage has been designed. Book I is in the finalization stage.

### *Hindi as Second Language*

The NCERT has been developing textbooks and workbooks for

teaching Hindi as the second language for Arunachal Pradesh. A textbook and a workbook for Class I and a textbook for Class II have been published by the NCERT and prescribed by the Directorate of Public Instruction in all the schools of Arunachal Pradesh. The workbook for Class II is in the press. Work on the third book in the series is in progress.

### *Moral Education*

After organizing a national discussion on the basic issues in moral education and developing guidelines for developing curriculum in this area, the NCERT has developed a draft curriculum in Moral Education for middle and secondary classes. Curriculum for the primary classes, which will be more activity-based, will be developed in a workshop and the whole draft will be finalized by the middle of the academic year 1983-84. Work on the preparation of suitable instructional materials for different age-groups will then be taken up.

### *Instructional Material for Women*

The NCERT undertook to prepare a set of materials for the rural women in Haryana in collaboration with the State Resource Centre, Haryana. In order to prepare need-based teaching—learning material, an on-the-spot survey was organized to identify the needs and areas of interest of rural women. Due to this field survey, writers are exposed to the real situation of rural women. It helps them to identify vocabulary and subject areas also. The first draft of the material has been prepared in four workshops. This will include the following :—

Primer (For literacy and numeracy)

Instructor's Guide

Workbook (for teaching writing)

Collection for stories (for creating awareness)

In collaboration with the Directorate of Panchayat and Social Welfare, Government of Madhya Pradesh, the NCERT has undertaken to develop teaching-learning material for tribal and backward-class women. For preparing need-based teaching-learning material, surveys are organized where interviews and discussions are conducted. So far



two workshops in Bastar and Barhampur have been organized and first ten lessons have been developed. Workbook lessons have also been prepared for teaching writing. Poems and stories have been written for creating social awareness.

Faculty members attended orientation programmes organized by the SRC, Haryana, at Rohtak in May 1982 and at Indore in November 1982. These were organised by the Directorate of Panchayat and Social Welfare. In these orientation programmes new approach to reading and writing was explained along with the use of material prepared by the Council.

## SCIENCES AND MATHEMATICS

### Environmental Education

During 1982-83 the NCERT made a further thrust in the use of environment for teaching science. A regional workshop on teacher training in environmental education was organized with the support of UNESCO from 3 to 16 March 1983. The workshop was organized—

to familiarize teacher-educators with the content of a series of teacher training modules in environmental education prepared by UNESCO;

to explore efficient and economic ways for a local adaptation and use of teacher training modules;

to explore the possibilities and identify institutions for local adaptation of the modules; and

to exchange information and expertise in the development of environmental education in the sub-region.

The workshop was attended by participants from Afghanistan, Sri Lanka, Bangladesh and India.

In the course of the workshop the following documents supplied by UNESCO were thoroughly discussed :

Strategies for Developing Environmental Education Curriculum.

Strategies for the Training of Teachers in Environmental Education.

Modules I and II for Pre-service and In-service Teachers Training and Training of Supervisors for Primary School Level.

Modules III and IV for Pre-service and In-service Teacher Training in Environmental Education for Secondary Schools.

Module VI for Pre-service and In-service Training of Social Science Teachers and Supervisors for Secondary Schools.

Country and State reports were presented by the participants. Field trips were also organized to get a first-hand experience of the environmental problems of Delhi.

Under the project Development of a Module for In-service Training of Teachers and Supervisors in Environmental Education for the Primary Level, the module was prepared at the NCERT by a team of authors and sent to UNESCO for comments. This module was later presented at the sub-regional workshop.

Under the project Development of Textbooks in Environmental Studies for Classes III and IV, a workshop was held at the State Institute of Education, Arunachal Pradesh, Changlang, from 3 to 12 January 1983. Primary school teachers of government schools participated in the workshop in which Class III textbook in Environmental Studies, Part II, was modified to suit the requirements of schools in Arunachal Pradesh.

Under the project Orientation Programme in Environmental Studies for Key Persons from States, two workshops were organized. The first workshop was for key persons from the States and Union Territories of the northern and eastern regions. The venue of workshop was Government Central Pedagogical Institute, Allahabad. It was organized from 5 October to 14 October 1982 and 16 persons participated in it. The second workshop for south and west was organized at Sarvajana Higher Secondary School, Peelamedu, Coimbatore from 15 to 25 February, 1983. Sixteen persons participated in the workshop.

The broad objectives of the workshops were to acquaint the participants with (a) the state of primary school science teaching in environmental studies in different States/Union Territories, (b) the materials and programmes of the NCERT, and (c) EVS approach and to orient them in the strategies of teacher training.

## Programmes in Physics

A series of experiments to develop experimental skills have been prepared under the project Preparation of a Model Laboratory Manual in Physics for Classes XI and XII. A workshop was held at Ahmedabad to try innovative experiments for developing various skills and abilities.

Under the project Guidelines for Physics Projects, a workshop was held at the SCERT, Delhi, from 23 to 26 March, 1983 to develop new projects to add to the existing projects. This will enable Class XII students to select a suitable project and to complete it.

Work continued on Individually Guided System of Instruction (IGSI) for Class XI Physics course. The system comprises self-paced, individualized, guided self-study and is being tried out in Class XI of physics course. Twenty-one physics units covering Class XI syllabus of CBSE have been published. In addition, a booklet giving guidelines for implementing IGSI has also been published. One hundred and five mastery assessment tests in the above-mentioned physics units have also been prepared. Work on Class XI mathematics has also been started and the outline of 22 mathematics units under the project has been developed.

For the project Grade Placement of Concepts in Topics of Concentric Nature in Physics, analysis of the feedback was made and modified evaluation items were readministered to different schools. The feedback received was again analysed.

Under the project Revision of Curriculum for +2 Stage, a workshop was organized from 28 March to 2 April 1983. The workshop was participated in by 32 persons from universities, State Institutes of Science Education, Regional Colleges of Education and schools. A project paper based on the feedback received through various channels on the first edition of physics textbooks was prepared for consideration of the participants. A draft revised syllabus was developed in the workshop. Some low-cost experiments/demonstrations in the teaching of Physics were developed. The NCERT developed a low-cost version of the barometer using a small quantity of mercury. It was displayed at the National Science Exhibition held in Calcutta.

## Programmes in Chemistry

Under the project Revision of Class XI Chemistry Textbook, a detailed study of the content/concepts was made in terms of their feasibility in the school system. Questionnaires were sent to the practising teachers and the students. The textbook was also reviewed by subject experts from university departments. The feedback received from schools, experts' opinions and evaluation results were discussed in a workshop organized from 2 to 5 August 1982. The finding will be utilized for revising Class XI Chemistry textbook.

Under the project Analysis of Chemistry Syllabi of various States and Union Territories at Senior Secondary Level, the Chemistry team developed a format for analysing the syllabi. The major objectives of the project were :

- to find out the weak and the strong points of the States'/U.T.'s syllabi ;
- to identify the approach of teaching chemistry ;
- to identify inter-disciplinary interface in the area of Chemistry ; and
- to provide guidelines to the States/U.T.s to improve the syllabi in terms of updating and innovating.

A core syllabus that should be taught at senior secondary level for catering to the needs of academic and professional course after the +2 stage was also suggested. Towards this end, a workshop was organized from 14 to 18 February 1983, which was attended by State experts involved in curriculum development and Chemistry experts from colleges and university departments.

Under the project Revision of Class XII Chemistry Textbook, a similar procedure as in the case of Class XI was adopted. A workshop was organized from 14 to 18 March 1983 to finalize the quantum of content/concepts for Class XII Chemistry textbook.

Under the project Development of Concept-centred Experiments for +2 Stage Chemistry, experiments considered relevant for effective teaching of Chemistry at the +2 stage were designed and tested in the laboratory. An experimental edition was brought out on content-centred experiments for try-out in schools. Major emphasis, while

developing these experiments, has been on the feasibility in terms of cost, physical facilities and availability of materials in the school situation. Experiments were also designed for difficult and abstract concepts. The booklet containing all these experiments is titled, "Concept-centred Experiments of Class XI Chemistry—Part I".

The NCERT also participated in a workshop on locally produced low-cost equipment for Chemistry teaching organized by UNESCO in collaboration with the UGC at the Chemistry Department of the Panjab University, Chandigarh, from 7 to 9 January 1983.

Under the project Experimental Project in Chemistry for Classes XI and XII, a report of the orientation programme of key personnel of States/U.T.s was finalized and edited for publication.

Under the project Development of Guidelines for the Evaluation of Pupils' Performance in Experimental Courses of +2 Chemistry, the manuscript of the guidelines was finalized and sent for printing.

### **Programmes in Biology**

An indepth study of Biology curriculum for Classes III to XII was conducted to examine vertical and horizontal sequence of concepts and their linkages. A workshop was held from 21 to 28 March 1983 to examine linkages of Biology curriculum with Biology related to vocational courses at the +2 level. Analysis of Biology curriculum *vis-a-vis* the CBSE vocational courses of Home science, Agriculture and Para-medical groups have been undertaken with the help of participants from different States, universities and colleges offering medical courses at the degree level.

Under the project Training Activities in Biology Education—Follow-up of Sub-regional Workshop on Biology Education in Asia for Preparing Teacher Training Materials, five modules were prepared, namely, (i) The Genetic Code, (ii) Genetic Engineering, (iii) Understanding Proteins, (iv) Enzymes and how they act, and (v) Wild Life Conservation.

### **Programmes in Mathematics**

The +2 syllabus in Mathematics was analysed for the purpose of preparation of supplementary reading materials in the light of

requirements of professional courses in Mathematics. A workshop was organized from 21 to 25 March 1983 to review the materials prepared in Algebra and Statistics. The workshop was attended by university, college and school teachers and IIT experts. The suggestions received will be utilized in preparing revised draft of the materials.

Two workshops were organized under the project Evaluation of Classes VI and VII Textbooks and preparation of Teachers' Guide, from 21 to 26 February 1983. The syllabus being used for Classes VI and VII was extensively reviewed in this regard. Evaluation of the two textbooks was undertaken earlier and the reports were also considered in the workshop. Suggestions were also received for the preparation of Teachers' Guide. The findings of the workshop will be utilized at the time of the preparation of new series of textbooks and teachers' guides at the middle school level.

The book titled *Objective-based Test Items in Mathematics for Class IX* was published in the course of the year.

Under the project Individually Guided System of Instructions in Mathematics, the outline of 22 units in Class XI Mathematics has been developed.

### **Integrated Science Curriculum**

The Script for the film "Science—a Part of Life" was revised by the group and the shooting of the film was undertaken in October 1982 in a village secondary school at Dala in Gurgaon District.

A research project Indepth Study of the Implementation of Integrated Science Curriculum in Schools was undertaken. Workshops were held involving 13 experimental schools of Delhi. In these workshops and a follow-up meeting, Integrated Science Textbook of Classes VI and VII was reviewed. Teachers of Delhi were trained for developing test items, pupils' activities and demonstration activities relevant to the Integrated Science Curriculum. The material developed by the teachers was reviewed and discussed and will be finalized shortly.

A composite teachers' guide for *Learning Science*, Parts I, II and III, has been printed and will be released shortly.

## **All India Science Education Project (AISEP) and All India Mathematics Education Project (AIMEP)**

Under an agreement between the Government of India, Ministry of Education, and the British Council Division of the British High Commission, DESM, NCERT, is implementing the two projects on behalf of the Ministry of Education.

Under the AIMEP, 23 teachers were selected for the year 1982-83 from Kerala, U.P. and KVS to undergo a nine-month training course in advanced methods of mathematics education. The selected teachers were given a brief orientation at the NIE on 12 October 1982 before their departure to the U.K.

Under AISEP, post-training workshops in Physics, Chemistry and Biology were organized in Bihar. The teachers who returned from the U.K. after being trained in advanced methods of science education were used as resource persons at these workshops. The objective of organizing these workshops was to promote a multiplier-effect of the training imparted in the U.K. Similar workshops are proposed to be organized in Orissa using the Orissa teachers who were sent for similar training to the U.K.

Twenty fellowships in Science (Physics, Chemistry and Biology) and twenty-three in Mathematics are being made available to different States and Union Territories of India for the year 1983-84. A new tool for selecting teachers under the two programmes has been developed by the department. Work on the selection of teachers has been started.

Under the project Health and Physical Education, a core national syllabus on Health and Physical Education for the elementary school stage has been developed. For higher classes it has been suggested that the component relating to Health and Physical Education should be merged with other curricular disciplines.

### **National Science Exhibition and State-level Science Exhibition**

The 12th National Science Exhibition for Children was organized jointly by the NCERT and the Government of West Bengal at Calcutta from 10 to 16 November 1982. The exhibition was inaugurated by Smt. Sheila Kaul, Union Minister of State for Education and Culture.

The theme of the 1982 Science Exhibition was Science and Community Development. More than 400 school children and teachers participated in the exhibition from 28 States/U.T.'s and KV's. Two hundred and ten models were exhibited in the exhibition.

The sub-themes in the exhibition were :

Resource and recycling ;

Local problems and their solutions ;

Inexpensive substitutes for common materials and equipment ; and

Food preservation.

Models on "Aids for the Handicapped", "Science is Fun" and "Teaching Aids in Science and Mathematics" were also displayed. Five exhibits were chosen by BITM for display for a period of one year. Two booklets were brought out on the occasion, namely, *Structure and Working of Science Models, 1982* and *List of Exhibits*.

Professor M. Das Gupta of the Calcutta University delivered a lecture on Twenty-five Years of Space Exploration. The participants were also taken round the BITM, Botanical Garden and Birla Planetarium.

Twenty-six States and Union Territories organized State-level Science Exhibitions. The theme for the State-level Science Exhibitions was Science and Technology for Productivity, in keeping with the national declaration to observe 1982 as the Year of Productivity.

A workshop to train State resource personnel in the use of Science Club Kits was held from 14 to 28 March 1983 in collaboration with the NCERT. Thirteen States and U.T.'s participated in the programme. Practical training in carpentry, metal-working, simple electrical and electronic work was provided.

#### **Instructional Material Centre**

The NCERT has started a wall magazine. Four sets of displays were put up in English and Hindi on the following four themes :

Atoms in India ;

Environmental Education and NCERT ;

Wild Life ; and



Water Pollution.

World Environment Day was celebrated on 5 May 1982.

*Wild Life* Week was organized from 5 to 11 October 1982 in which interested project schools were also associated. Films were screened, a seminar was organised, and interesting material was displayed.

The IMC also undertook field work on the following occasions :

An exhibition in April-May 1982 on environment for parliamentary forum on environment at the Mavalankar Hall, New Delhi.

Annual conference of the All India Science Teachers Association of Hyderabad from 10-12 January 1983.

UNESCO conference on the Preparation of Training Materials for Environmental Education, from 3 to 16 March 1983.

Setting up a Science Corner in the Rural Secondary School at Dala in Gurgaon District.

The following seminars/lectures were also organized :

A lecture on Comets by Dr. Alhayankar, Director, Osmania University, Hyderabad, was arranged in IMC on 1 March 1983.

A seminar on Reasoning in Science Education was organized with the help of two experts, Dr. Spooner and his colleague from East Caroline University, U.S.A., from 22 to 27 January 1983.

### **Assistance to States and Organizations**

The NCERT continued to assist States in curriculum development, preparation of text materials and teacher training. Consequent on a decision by the Jammu and Kashmir State to adopt the NCERT Science and Mathematics course in Classes 9 and Class 10, two orientation courses for key persons from Jammu and Kashmir region were organized in Jammu and Srinagar, respectively. Physics, Chemistry, Biology and Mathematics experts from the NCERT assisted the State education authorities to organize these programmes.

The NCERT staff members assisted the education department of Kerala in developing a list of science equipment required for practical work in schools.

The State of Arunachal Pradesh was assisted by the NCERT staff to prepare a textbook for environmental studies for Classes I and II.

The staff members from the mathematics unit of the NCERT attended a workshop in mathematics organized by the Central Board of Secondary Education and assisted the Board in developing a curriculum for national development mathematics.

Consultancy services were provided by the IMC to several educational organizations including the education department of Bangladesh on Metric/SI system of unit.

### **Nutrition, Health Education and Environmental Sanitation**

In addition to the four old Centres at Baroda, Coimbatore, Jabalpur and Ludhiana, in Gujarat, Tamil Nadu, Madhya Pradesh and Punjab, respectively, ten new centres have been established during the year 1982. These centres are located in Andhra Pradesh, Assam, Bihar, Haryana, Karnataka, Maharashtra, Mizoram, Orissa, Rajasthan and Uttar Pradesh.

Most of the new centres have nearly completed the baseline survey on which would be based the relevant curriculum development process. Some of them are at the curriculum development stage.

A significant development in the proposed plan of action for the project for the rest of the MP period has been that the messages for the school children, as well as those for the community they come from, will be taken to both the target groups simultaneously—not one after another, as was done earlier.

During 1982 the old centres were busy with revision and refinement of instructional materials for pupils and of the guidebooks for the teachers. Each State was also supposed to introduce the programme in 300 schools in 1982 and train teachers of those schools.

Following were the activities completed by the old centres during 1982 :

#### ***Baroda Centre***

Workshop for the revision of the curricular materials.

Training of remaining teacher-educators supervisors.

Orientation Programme for the Principals of TTIs and Key personnel.

*Coimbatore Centre*

- Development of revised syllabus for primary schools.
- Determination of priority areas and activities.
- Training of remaining science educators by BTIS.
- Workshop for the evaluation of instructional package.
- Workshop for the revision of instructional materials.
- Workshop for editing revised instructional materials.
- Orientation Course for the method teachers.
- Workshop to review the textual materials for the primary school teachers.

*Jabalpur Centre*

- Training of left-out science educators.
- Workshop for the evaluation of instructional package.
- Workshop for the revision of instructional materials.
- Workshop for editing revised instructional materials.

*Ludhiana Centre*

Orientation of remaining science teacher-educators/ supervisors and Principals of TTIs.

It has been proposed that the NHEES Centre at Baroda, Coimbatore, Jabalpur and Ludhiana, which started functioning in 1976, would, in addition to carrying on their own programmes and activities, function as resource centres for the NHEES projects in the neighbouring State/ U.T.s.

## WOMEN'S EDUCATION

The Council has been undertaking various research, developmental and training programmes promoting universalization of girls' education and enhancing the status of women through school curriculum. Some

of the major activities undertaken during the year under report were as follows :

### **Research**

In the sphere of research, the Council continued to undertake a number of projects concerned with universalizing girls' education for improving their quality of life. These included :

Need-based, ecologically determined and change-oriented.

Educational system for a nomadic community (continuing)

Identification of regional local need-based vocations for girls and women for the vocationalization of education (continuing).

Determinants of under-achievement in Mathematics for girls including socially handicapped girls (continuing).

"Aspirations and Actions for Better Quality of Life" a UNESCO study, was undertaken by Prof. R.K. Mukherjee in collaboration with NIEPA and Head, Women Education Unit. The study primarily aimed at strengthening the research methodology in the sensitive area of aspirations and actions for better quality of life. The study has been completed.

### **Development**

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

A workshop on Development of Teaching Aids in Mathematics for Primary Stage, held from 17 to 22 January 1983, developed various kinds of teaching aids on number concept and geometry related to our daily life situations drawn from the surroundings of the child, with a view to helping pupils, specially girls, for better clarification of basic concepts and motivate their interest in mathematics. The teaching aids developed are multipurpose, and cover many concepts of number system, simultaneously. Moreover efforts have been made to make these aids inexpensive and readily available to teachers.

Preparation of evaluation tools for evaluating language textbooks and supplementary readers from the viewpoint of the status of women. Two workshops, one at Uttar Kashi (from January 1983)

another at Mussoorie from 15 to 19 March 1983, were held to develop criteria for evaluating the textual material and supplementary readers.

A course frame in action model for women's studies at undergraduate level has been developed. This has been adopted by the Women's Development Studies Group of the Kanpur University. A Reorientation Programme for the Course Coordinators of various colleges of Kanpur University was organized in December 1982.

A vetting group meeting was held from 26 to 28 August 1982 for the Development of B.Ed. Syllabus for Teaching Sociology at the School Level. Participants were drawn from all over the country and represented eminent school teachers, educators, and university professors in the area of sociology.

A vetting group meeting of eminent sociologist and school teachers to finalize the textual material in sociology for Classes XI and XII was organized by the Unit from 7 to 11 March 1983, at the NIE Campus. Two titles namely "Indian Society" and "Problems of Indian Society" were vetted.

The work on the preparation of "Regional Guide for Identification of Sex-stereo Types in Educational Programmes and Textbook" has been taken in hand for UNESCO.

Slide-cum-tape programme on Status of Women through the Mathematics Curriculum got completed.

### **Training and Extension Programmes**

A programme to orient elementary school teachers of Rajasthan, Bihar, Uttar Pradesh and Madhya Pradesh on "Status of Women through Curriculum—a Teachers' Handbook" was held at the Government Elementary Teacher Training College, Ratu, Ranchi, from 4 to 6 January 1983. The highlight of the programme was the inclusion of around 200 teacher trainees in the programme.

Orientation of elementary school teacher, educators and key persons on the handbook on "Status of Women through Curriculum" from the Hindi-speaking belt and Western Region, was held from 14 to 17 March 1983. Teacher-educators from Goa, Maharashtra, Gujarat and Delhi were given orientation in this programme.

International Women's Day was celebrated on 8 March 1983. On this occasion the NCERT organized two lectures, by eminent scholars in women studies, viz., Dr. Devaki Jain and Miss Susheela Bhan on "Problems of Education and Employment of Women" and "Researches in Women Studies" respectively.

The NCERT provided consultancy service to the Gujarat State Board of School Textbooks for establishing a research and training centre for curriculum development and textbooks.

The NCERT also provided consultancy to NIEPA on "education for the future".

## EVALUATION OF TEXTBOOKS

Consequent upon the recommendations of the National Integration Council and the Minority Commission, the Ministry of Education, Government of India, has undertaken the programme of evaluation of textbooks from the standpoint of national integration. The Secretary, Ministry of Education and Culture addressed a letter in February 1981 to the Education Secretaries of the States/U.T.s requesting them to undertake the programme of evaluation of textbooks. To begin with, the programme is confined to the scrutiny of school textbooks in the subject of History and Languages. The programme has been decentralized and States and Union Territories have been asked to undertake the programme at their own level. The NCERT has been directed to coordinate the programme and prepare guidelines and tools for evaluating the textbooks. The NCERT prepared the first draft of guidelines for evaluating the textbooks in History and Languages. The drafts were vetted by the Expert Committees nominated by the Minister of Education. The guidelines were discussed in a conference of the officers incharge of the programme in various States and Union Territories held at the NCERT, New Delhi, in the month of September 1981. The guidelines were adopted in the conference with slight modifications. A suggested procedure for carrying out the programme was also finalized in the conference. The guidelines and tools for evaluating the textbooks and the suggested procedure were sent to the agencies in the States and Union Territories made responsible for the programme of evaluation of textbooks.

So far, all the States, except West Bengal, have agreed to undertake the programme. All the Union Territories, except those which use the textbooks of the NCERT or of neighbouring States, have also agreed to take up the programme. The programme is at various stages of progress in the States/Union Territories. The States of Punjab, Himachal Pradesh and Gujarat, and the Union Territories of Mizoram and Delhi and the CBSE have revised their textbooks for some classes to be introduced from the academic session of 1983-84. The textbooks are likely to be revised from the academic session of 1983-84 in the Tamil Nadu, Uttar Pradesh and Goa. The Expert Committees have finalized the reports in the States of Haryana, Karnataka, Orissa, Tripura, Bihar and the Assam Board of Secondary Education. The States/U.T.s of Andhra Pradesh, Madhya Pradesh, Kerala, Jammu and Kashmir, Manipur and Sikkim have accepted the programme but the progress is slow. Meghalaya has reported that since the curriculum is under revision the programme is not taken up.

At the instance of the Ministry of Education, the NCERT has also undertaken the programme of evaluation of its textbooks in History and languages. The Expert Committee meetings were organized in the month of September 1982. The final reports have been sent to the concerned departments for necessary action.

# 7

## Education and Work

**T**HE NCERT develops instructional and guidance materials in socially useful productive work and vocationalization of education, which provide major means of linking school education with economic development. The criteria for selecting work activities are their educational value,



productivity, and social usefulness. Three phases of work experiences are the exploration of the world of work, experimentation with materials and work practice.

The NCERT actively participates in developing syllabi for several vocational courses at the senior higher secondary stage (+2) Classes XI-XII and in revising such syllabi of different States. A series of orientation programmes in vocational education for different functionaries are organized. A large number of short-term teachers' training programmes in different vocational subjects are also conducted. The implementation of vocationalization of education programmes is regularly evaluated through on-the-spot studies, seminars and conferences. The NCERT works with more than 1,300 institutions in India, offering vocational courses at the higher secondary stage.

### **Socially Useful Productive Work**

A good deal of ambiguity seems to prevail regarding SUPW which is often linked with several work-oriented educational schemes like Work Experience, Craft, Basic Education, etc. With the result that it is yet to be implemented in a systematic manner in many States. Orientation of key persons entrusted with the responsibility to implement SUPW in States, therefore, becomes of vital significance, if it is to be accorded central place in school curriculum as envisaged by the Review Committee.

#### *Orientation Programmes*

Keeping this in view, the NCERT organized four orientation programmes on SUPW as below :

- (i) For key person and teachers of Lakshadweep at Androth (17-19 April 1982).
- (ii) For key persons of Madhya Pradesh, Maharashtra and Gujarat at Bhopal (27-31 August 1982).
- (iii) For key persons of four States of the southern region at Bangalore (16-20 September 1982).
- (iv) For key person of Bihar at Patna (24-28 November 1982).

The NCERT also extended its expertise to Nagaland and Delhi Administration in the conduct of two and four orientation programmes,

respectively, of SUPW during May 1982 and February-March 1983, respectively.

The key persons were exposed not only to all possible aspects of implementation of SUPW, but were also involved in the conduct of several activities during these programmes. After the orientation programmes the participants appeared to appreciate the concept and philosophy of SUPW and were more confident to implement it in the way suggested by the Review Committee.

### *Source Book on SUPW*

The NCERT has developed four volumes of Source Book on SUPW enlisting detailed activities for Classes I to X. These books provide model plan of introducing various SUPW activities from all major work areas suitable to pupils of different classes. Since there was no instructional material on SUPW catering to the needs of the post-secondary classes, the NCERT organized a workshop at the NIE, New Delhi, from 15 to 22 February 1983 to develop instructional material on SUPW. Experts from different fields participating in the workshop identified a number of SUPW activities suitable for this stage of school education and described them in a step-by-step self-explanatory way so that they could be implemented under average school conditions without difficulty. The source book remains to be edited and will be soon made available to schools.

### **Vocationalization of Education**

Vocationalization of education aims at making students more employable by developing in them essential skills and expertise. This serious task is entirely entrusted to vocational teachers who, by and large, shoulder this responsibility well. Such instances are, however, also not uncommon where vocational teachers, despite their sincerity and enthusiasm, often fail to deliver the desired results in vocational training. Apart from this, qualified vocational education teachers also feel the need to update their knowledge through periodic refresher or training courses. Such courses assume even greater significance in the context of the fact that most of the vocational education teachers do not have any pre-service training especially designed for the vocational stream at the +2 level.

### *Short-term Teachers' Training*

It is with a view to updating vocational expertise and competencies in teachers and acquainting them with the philosophy of the scheme of vocationalization of education that the NCERT organizes short-term training programmes for teachers in various vocational areas in appropriate institutions of specialized learning utilizing the best available resource persons. During 1982-83, the following short-term teachers' training programmes were conducted :

1. *Commerce* : at SV University, Tirupati, from 17 May to 15 June 1982.
2. *Technology* : at CTI, Guindy, Madras, from 17 May to 12 June 1982.
3. *Home Science* : at Shri Avinashlingam Home Science College, Coimbatore, from 26 May to 22 June 1982.
4. *Agriculture* : at Marathwada Agriculture University, Parabhani, from 1 to 28 June 1982.
5. *Para-Medical* : at Bowring and Lady Curzon Hospital, Bangalore, from 1 to 28 June 1982.

Vocational education teachers from different States were brought together to these training courses and were given intensive training in their respective vocations. The training is likely to improve the vocational education in the country as teachers are better equipped with knowledge and expertise after the short-term training programmes.

### *Orientation Programmes*

For the success of any educational scheme it is necessary that the functionaries responsible for its implementation are thoroughly acquainted with the philosophy behind the scheme. State education officials, heads of institutions and officials of the Boards of Education are the key persons who are expected to implement the scheme of vocationalization of education in their respective States in accordance with the guidelines contained in various national documents. At the request of the States, the NCERT periodically organizes such orientation programmes for key persons. Following orientation programmes were conducted by the NCERT during 1982-83 for States already

running vocational courses as well as for those planning to introduce vocational stream at the +2 level in the near future :

1. For the principals of multipurpose schools of Gujarat at Gandhi Nagar from 21 to 23 April 1982.
2. For key persons of Andhra Pradesh at Hyderabad from 28 to 31 July 1982.
3. For the principals of CBSE-affiliated schools at Delhi from 17 to 19 August 1982.
4. Two orientation programmes for key persons of Tamil Nadu at Trichy and Madurai from 28 to 31 August and 2-5 September 1982, respectively.

The participants of these orientation programmes were exposed to all aspects of implementation of the scheme of vocationalization of education through lecture-cum-discussion method. The programmes brought to surface various difficulties and problems in the implementation of the scheme, and probable solutions thereof were also discussed in the programmes.

The programmes are expected to generate better awareness and confidence in the key persons who, in turn, will strive to implement the scheme in its right perspective.

### *Instructional Materials*

Vocational courses in the country at the +2 level were started under conditions of near-total absence of any sort of instructional material for vocational students. The situation remains more or less static even after the passage of six years since the introduction of vocational stream. The NCERT has taken a bold initiative to ameliorate the situation by developing a series of instructional-cum-practical manuals in all major vocational areas utilizing the expertise of specialists having first-hand practical experience in the vocations. Following workshops were organized to develop instructional materials in the vocational areas of—

- (i) Agriculture—at A.P. Agriculture University, Hyderabad, from 25 November to 6 December 1982 where four manuals on

water management, farm machinery meteorology and crop production were developed.

- (ii) Technology—at the NIE, New Delhi, from 1 to 10 December 1982 where one manual on automobile servicing was developed. The manual was finalized in a subsequent review workshop conducted also at Delhi from 24 to 26 March 1983.
- (iii) Home Science—at the Institute of Home Economics, New Delhi, from 7 to 14 December 1982 where a manual on food preservation was developed.
- (iv) Para Medical—at the NIE, New Delhi, from 24 to 31 December 1982 where test items and question bank of medical laboratory technology were developed.
- (v) Commerce—at RCE, Bhopal, from 24 January to 1 February 1983, where three manuals on banking, office practice and accountancy and auditing were developed.

The instructional-cum-practical manuals contain details of important operations which are invariably performed in the vocations concerned and it is necessary for vocational students to master the 'why' and 'how' of such operations. Three manuals in the area of crop science developed during the previous year have already been mailed to schools in different States for a try-out and to subject experts for their critical comments.

The feedback and comments received so far bear testimony to the immense utility of the manuals to vocational students. The manuals have been not only acclaimed by students and teachers of vocational stream, but also by university lecturers and professors as those are useful to even B.Sc. (Agriculture) students. The development of instructional material has made a significant contribution to the improvement of vocational education in the country. The NCERT will continue this developmental work for other vocational courses also.

#### *Handbook for Survey Workers*

Launching the scheme of vocationalization of education in any State is expected to be preceded by district vocational surveys so that only the need-based courses are started in appropriate institutions. With district vocational survey, the NCERT organized a seminar-cum-workshop to develop Handbook for Survey Workers from 6 to

11 November 1982, where survey work so far done in the country was reviewed, original survey tools were revised and the revised guidelines were finalized, which will be made available to intending survey workers very soon. The Handbook for Survey Workers will definitely result in better qualitative surveys, which in turn will pave the way for a meaningful vocational education at the +2 level in the States.

#### *Consultancy Work*

The NCERT regularly extends its expertise and cooperation to various State agencies to conduct different programmes at their request for the promotion of vocational education. The NCERT had several meetings with State education officials, foreign delegates and other dignitaries at the NIE as also in their respective States and held detailed discussions about the vocationalization of education. The notables amongst them were the Punjab Educational Reform Commission, Tamil Nadu, Gujarat, Andhra Pradesh, the National Institute of Educational Planning and Administration, etc.

# 8

## Training of Teachers and Other Personnel

**E**QUIPPED with laboratories, libraries and instructional facilities, the four Regional Colleges of Education, under the NCERT, which are located at Ajmer, Bhopal, Bhubaneswar and Mysore, are primarily concerned with innovative pre-service and in-service teacher training. The

important features of these courses are the integration of subject-content and methodology of teaching; long-term internship of student-teachers in actual classroom setting; and participation of students and faculties in community-work.

The NCERT has acted as the academic secretariat of the National Council for Teacher Education since 1973. The Teacher Education Department in the NCERT conducts research studies on the status of teacher-educating and in-service courses for teacher-educators and keeps liaison with the State Boards of Teacher Education to bring about improvements in teacher education. The universities are assisted to revise their B.Ed. syllabi. The centres of continuing education which the NCERT has established with the collaboration of the States provide in-service training on a continuing basis.

The Correspondence-cum-Contact courses organized by the NCERT for untrained teachers of secondary schools help to remove the backlog of untrained teachers. The contact programmes supplement correspondence courses by providing the teachers with the facility for consultation with the faculty of the colleges, laboratory work and supervised practice teaching.

### **Teacher Education Training Workshops**

#### *Workshop of Secondary Science Teacher-educators*

Workshop of secondary science teacher-educators and authors was organized at the NCERT campus from 30 March to 7 April 1982. It was organized in two phases. The first phase was devoted to the discussion of the feedback obtained from the teacher-educators teaching Biological and Physical Sciences on the book *Teaching of Science in Secondary Schools*. This phase was conducted from 30 March to 7 April 1982. Twenty-five science teacher-educators and 15 members of the project team along with two British experts participated to obtain the feedback from teacher-educators. The second phase of the programme was attended by the project team members and British experts to effect the changes suggested by teacher-educators.

#### *Orientation Training in the Teaching of Educational Psychology in Secondary Teacher Training Colleges*

This programme was organized at the State Institute of Education, Srinagar, from 11 October to 20 October 1982, to discuss the approach



and the method of teaching Educational Psychology. About 34 university professors and teacher-educators participated in the workshop. The approach and the method of teaching Educational Psychology as given in the Textbook on Educational Psychology for Secondary Teacher Education developed by the NCERT were discussed. In this book the psychological principles and their applications to the actual classroom conditions and Indian situation have been stressed.

#### *Workshop to Orient Secondary Teacher-educators of Eastern Region*

A six-day workshop to orient the secondary teacher-educators of the eastern region in the use of the textbook "Teaching of Curriculum and Evaluation" developed according to the NCTE guidelines, was organized at the Regional College of Education, Bhubaneswar, from 3 January to 8 January 1983. Twenty-three teacher-educators belonging to various States of the eastern region participated. The contents and methodology adopted in the new textbook and the course outline of the textbook developed by the Department of Teacher Education were discussed.

#### *Orientation Programme in Socially Useful Productive Work and Community Work*

This programme in SUPW and community work in teacher education for the key persons in the north-eastern regions was conducted at the Hindi Teachers Training College, North Gauhati, from 5 November to 10 November 1982. The trained key persons are expected to be utilized by the States concerned to train teacher-educators at the elementary and the secondary levels in the areas of SUPW and community work. Twenty-three participants were drawn from Assam, Meghalaya, Manipur, Mizoram, Nagaland, and Andaman and Nicobar Islands.

#### *Orientation Course for Education Officers/Deputy Directors of Education*

The State of Gujarat is the third most urbanised and the second most industrialized State in the country. Industrialisation of the State has resulted in large concentration of slum population in all urban centres, especially in Ahmedabad, Surat, Ankleswar, Bhavnagar, Rajkot, Baroda, Navasari, Jamnagar, etc. In order to enable the education officers of municipal school boards in Gujarat to meet effectively the educational problems of children in slum areas, an orientation course in special programmes for the education and welfare of slum children was organized

from 26 to 30 December 1982 at Shreyas Samarpan, Baroda, in collaboration with the Municipal School Board, Baroda. During the five-day discussion, the participants were acquainted with the phenomenal growth of urban slums in recent years, the socio-economic and cultural background of slum-dwellers, the characteristics and needs of their children including their strength and deficiencies in the framework of the present-day educational arrangements, the problems of life and education in slum areas and the special programmes which can be undertaken for the education and welfare of slum children and their parents. The participants also presented reports of the special facilities and programmes being undertaken by their respective municipal boards for the welfare and education of the slum children. Lastly, in the light of the material and human resources at their disposal in their municipal school boards, they prepared short-term plans for equalizing educational opportunities for slum children from the viewpoint of provision of educational facilities, their adequate utilization and comparable outcomes of education.

*Orientation Course for Teacher-educators on Teacher and Education in the Emerging Indian Society*

The NCERT in collaboration with the Education Department of Andhra University organized an orientation course for teacher-educators from the State of Andhra Pradesh at Waltair (A.P.) from 31 March to 5 April 1983 on the main theme of first core course, viz., Teacher and Education in Emerging Indian Society. This is the first core course in the new scheme of teacher education programme at all levels based on the NCTE's framework. This is the course in which the basic fundamentals—philosophical and sociological—relevant to the present structure of our society in respect of teachers' preparation programme, have been emphasized. The programme was attended by fifteen teacher-educators from 12 secondary teacher training institutions in the State.

The main thrusts in the course were that all the utopian ideas of the past and present Indian philosophy of life should not be reflected in the future scheme of teacher education, particularly in the core paper of the new B.Ed. scheme based on the NCTE model. The past heritage, culture, traditions and customs that have relevance to our present national development should be incorporated in teacher

education. Finally, unity in the diversified social, cultural and religious life of the country should be stressed. For this purpose, democratic, moral and secular values (e.g. love, brotherhood, tolerance, etc.) should be given importance.

#### *Training in Microteaching for Elementary Teacher Education*

Orientation training course in microteaching for elementary school teacher educators of the eastern region was held at the Regional College of Education, Bhubaneswar, from 24-29 January 1983. The purpose of the course was to acquaint teacher-educators with the concept and procedure of microteaching. Participants were given training in planning micro-lessons and teaching them to micro-classes using one of the core teaching skills at a time. They were also given training in observing micro-lessons. The concept of integration of teaching skills was also explained and organizational strategies were discussed. In all, 41 teacher-educators attended the course.

#### *Revision of B.Ed. Syllabus*

A few workshops and a seminar were organized in connection with the revision of the B.Ed. syllabus on the lines recommended by the NCTE Curriculum—a Framework. The first workshop was held at the State Institute of Education, Pune, during 14-27 April 1982 to revise the B.Ed. syllabus of the universities of Nagpur, Aurangabad and Bombay. Sixty-three senior teacher-educators including the principals from 17 districts of the State were invited.

The second workshop was organized from 12 July to 16 July 1982 at Bansthali Vidyapeeth, Rajasthan, for the revision of the B.Ed. syllabus of the University of Rajasthan. Principals and senior teacher-educators concentrated on the recommendations of the NCTE Curriculum—a Framework, especially regarding content-cum-methodology and practice teaching.

The third workshop was held at the State Institute of Education, Pune, from 6 to 9 September 1982 to revise the B.Ed. syllabus of the universities of Kolhapur, Pune and S.N.D.T. It was also attended by the principals of secondary training colleges and the staff of the university departments of the concerned universities.

The fourth workshop was organized from 22 to 27 November 1982 at Punjabi University, Patiala, to revise the B.Ed. syllabus of Jammu

and Kashmir, Punjab, Haryana and Himachal Pradesh universities. It was attended by 28 senior principals, professors and senior lecturers from the concerned colleges/universities.

Another programme for the revision of the B.Ed. syllabus of Gujarat University, Bhavnagar University, Saurashtra University and Gujarat Vidyapeeth was organized from 13 to 17 December 1982 at the University School of Psychology, Education and Philosophy, Gujarat University, Ahmedabad. It was attended by 27 senior teacher-educators and principals of training colleges. Changes of far-reaching importance were incorporated in the existing syllabus. The revised syllabus shall be placed before the respective Board of Studies for their approval.

A workshop was organized at the M.B. Patel College of Education, Vallabh Vidyanagar, for the revision of the B.Ed. syllabus of Gujarat Universities from 23 to 27 March 1983. Twenty-four senior professors and principals attended the workshop. Discussions were held and reports were prepared by the participants. A considerably positive impact is expected for improving the quality of teacher education.

A seminar was organized from 2 November to 5 November 1982 in connection with Teacher Education in Physical Education at the college of Physical Education, NBS Mahavidyalaya, Bishnupur, Bankura District, West Bengal. Eleven secondary school teacher-educators of Physical Education in West Bengal attended the seminar. The syllabi of Physical Education in secondary teacher's training institutions and secondary schools of West Bengal were discussed.

#### *Annual Conference of the Directors of SIEs/SCERTs*

The annual conference of the Directors of SIEs/SCERTs was organized at the NIE Campus, NCERT, New Delhi, from 7 to 9 March 1983. It was attended by twenty-one Directors/Senior representatives of SIEs/SCERTs. They presented their annual reports and discussed the following topics to be taken up as common programmes :

Inculcation of social and ethical values at the school stage and teacher education stage; and Integrated education of the handicapped.

### *Seminar regarding Programmes for Teacher-educators*

This programme is designed to promote innovative programmes, to stimulate teacher-educators to write about the experience they have gained through experimentation in their work and through study and creative thoughts about educational problems in different aspects of teacher education. It also provides the means through which the result of experimentation, research and creative thinking by teacher-educators can be presented to other teacher-educators. Papers are invited from principals, teacher-educators and coordinators of teacher training institutions in India. The papers submitted by the teacher-educators for the Ninth All India Competition of Seminar Readings Programmes (1982-83) through the SIEs/SCERTs were evaluated on 22 and 23 February 1983. Nine papers of secondary teacher-educators and seven papers of elementary teacher-educators were selected for award. A meeting of the awardees was organized at the NIE Campus from 24 to 26 March 1983 to discuss the award-winning papers. An award of Rs. 500 in cash and a merit certificate was given to each of them. The awardees were taken around Delhi on an educational tour in the afternoon of 25 March 1983.

### **Studies**

A study of social cohesion in elementary teacher training institutions and its relationship with their efficiency was completed. The following studies are in progress :

Development of Tools for Admission to Secondary Teacher Education Institutions.

A Study of the Relationship of Self-concept, Attitude, and Adjustment with Achievement of SC/ST Student-teachers and Non-SC/ST Student-teachers.

A Comparative Study of Teacher Profiles in the Urban and Rural Setting in the Elementary School System.

Status of Teachers in India.

Development of Measuring Tools for Working with Community.

A Study of Role Expectations of the Primary and Secondary Teachers in relation to Working with Community with a view to develop Teacher Education Programme.

Development of Norms for the Secondary Teacher Education Institutions.

A Comparative Study of the Private Cost of Teacher Preparation in Institutions under Different Managements for the Two Levels—Secondary and Primary—a Trend Study in Economics of Education.

Effect of Skill-based Student-Teaching (SBST) and Teaching Model-based Student Teaching (TMBST) on the Teaching Competence of Student-teachers.

### **Publications**

While the publications *Teaching of Science in Secondary Schools* and *Core Teaching Skills—Micro-Teaching Approach* (English) have been brought out, the following are in process :

Curriculum and Evaluation (for secondary teacher-trainees).

Educational Psychology (for secondary teacher-trainees).

Content-cum-Methodology of Teaching of Mathematics for Secondary Teacher Training Institutions.

Teacher and Education in the Emerging Indian Society (secondary level).

Third National Survey of Secondary Teacher Education in India.

Content-cum-Methodology of Teaching of Mathematics for Elementary Teacher Training Institutions.

Samanya Adhyayan Kaushal.

The manuscripts of the following books are ready for publication :

Psychology for the Elementary Teacher (textbook for Elementary Teacher Education level).

Studies and Investigation on Teacher Education in India (1976-80).

Teaching of Science in Elementary Schools.

Innovative Practices in Secondary Teacher Education Institutions, Vol. IV.

## **Centres for Continuing Education**

During 1982-83, 99 centres were in existence in various States/ Union Territories. Out of them, three CCEs in Haryana and one CCE of MCD, Delhi, dropped out of the scheme. Seventy centres are functioning effectively while the remaining 25 centres (excluding the three CCEs of Haryana and one CCE of Delhi) are not functioning satisfactorily.

Recently, two CCEs have been established in Gujarat and four in West Bengal (by replacing the five old CCEs). One new CCE at Mandi (Himachal Pradesh) has been sanctioned by the Council. It may start functioning in the next financial year.

So far, grants to 52 CCEs in various States/Union Territories have been released by the Council.

The functioning of the centres has been evaluated and a report prepared, which is under consideration.

## **National Council for Teacher Education**

The NCTE functions through the following academic committees :

Committee for Pre-School and Elementary Teacher Education.

Committee for Secondary and College Teacher Education.

Committee for Training of Teachers for Special Schools meant for Physically Handicapped and Mentally Retarded.

Steering Committee of the NCTE.

These Committees meet once in a year and make recommendations, which are sent to the concerned institutions/agencies of different States, U.T.s and universities for information.

The NCTE or its committees also appoint sub-committees/working groups to consider in detail specific problems in the context of implementation of their recommendations. The paragraphs that follow give in brief a report of the work done by various committees during the year under report.

### *Pre-School and Elementary Teacher Education Committee*

A meeting of the Committee for Pre-School and Elementary Teacher Education was convened on 29 October 1982 at the office of the

Field Adviser, Bangalore, for considering the inclusion of value-oriented education in teacher education programme at this level. The report of this meeting has been finalized.

### *Secondary and College Teacher Education Committee*

A meeting of the Secondary and College Teacher Education Committee was held in February, 1982. A special meeting of the Secondary and College Teacher Education Committee was held on 25 January, 1983 to consider the inclusion of value-oriented education in teacher programme. The committees it constituted and the work done by them is discussed below.

(a) *Problems of Implementation of the NCTE Curriculum* : A meeting of this working group was held on 15 September 1982 to discuss the questionnaire for the preparation of a paper for the National Council on Teacher Education—Curriculum Framework, with a view to identifying the difficulties in its implementation. Data are being collected.

(b) *Future-oriented Teacher Education* : A meeting of the sub-committee was held on 23 September 1982 to determine the issues for the national seminar on future-oriented teacher education.

(c) *Committee on Correspondence Courses in Teacher Education* : A meeting of the sub-committee was held on 25 January 1983 to consider alternative strategies to correspondence courses in teacher education.

### **Seminars**

A national seminar on Future-oriented Teacher Education was held at the NCERT Campus, New Delhi, from 21 to 23 March 1983. The main objective of the seminar was to deliberate on various aspects of education and on the shape of teacher education in the coming years. Papers were presented on Education and Society—the Emerging Scenario, Methods and Techniques of Education for the Future, Changing Profiles of the Teacher, and Futurology in M.Ed. Course. Three groups, namely, Elementary Education and Elementary Teacher Education, Secondary and Higher Secondary Education and Teacher Education, and Postgraduate Teacher Education and Preparation of Educational Planners and Administrators were constituted. They discussed various aspects such as changes required in the methods



and techniques of education to provide equal educational opportunity to all at low cost, technological inputs to reinforce the existing system so that it can meet the demands of the future, pedagogic aspects necessary for training of para-educational personnel, new inputs for postgraduate courses in teacher education, training of educational planners and administrators to plan and administer education for the future and the new organizational innovations required for the existing formal system.

The seminar made a number of recommendations. Among others they included :

- (a) Well-equipped resource centres should be set up where facilities available could be shared by a group of schools and teacher training institutions.
- (b) Self-learning will have to be used as an important tool for education, particularly for the age group 9 to 16.
- (c) It would be necessary to use mass media, particularly the radio and the television and printed material to make available educational facilities to all segments of population, particularly the disadvantaged sections of the society.
- (d) Teacher training institutions should orient student-teachers in establishing contacts with different social agencies like panchayats and other grassroot—level extension workers.
- (e) Experimental projects may be taken up in adopting new techniques and methods of education.
- (f) Need-based in-service education of teachers may be provided by using self-learning techniques and distant education methods.
- (g) Since future education has to be provided increasingly to the handicapped children in the general school, special equipment needed for their education should be made available to teachers.
- (h) Schools may be given freedom and responsibility to evolve and improve their own curriculum.
- (i) Centres for creativity should be established for children.

- (j) Both formal and non-formal approaches to school have to be followed.
- (k) A talent search scheme for teachers should be initiated to attract talented persons to the teaching profession.
- (l) Value-orientation should find a prominent place in teacher education at all levels.
- (m) Special courses at the postgraduate level should be offered in educational technology.
- (n) The Open System and the Open University should be encouraged with the development of instructional materials of good quality.

*UNESCO Regional Seminar for National Officials and Specialists on the Training of Teachers and Other Educational Personnel for the Introduction of Productive Work in Education*

The NCERT organized, in collaboration with UNESCO, a seminar for Asia and the Pacific from 5 to 14 April 1982 at New Delhi. It was attended by representatives from 11 countries, namely, Afghanistan, Australia, Bhutan, Bangladesh, China, India, Indonesia, Maldives, Nepal, Pakistan and Thailand. The primary purpose of the seminar was to work out the implications of introducing productive work in education. The programme included presentation and discussion of the following UNESCO documents :

Strategies for Developing an Environmental Education Curriculum.

Strategies for the Training of Teacher in Environmental Education.

Module I for Training of Pre-service Primary Teachers and Supervisors in Environment Education.

Module II for In-service Education of Primary Teachers and Supervisors.

Module III for Training of Pre-service Secondary School Teachers in Science.

Module IV for Training of In-service Education of Secondary School Teachers in Science.

## **Teacher Training in Special Education**

A meeting of the Committee on Teacher Preparation for Special Schools for the Physically Handicapped and Mentally Retarded Children was organized on 8 July 1982 in NCERT. The Committee's resolutions in relation to the NCERT are as under :

- (a) The NCERT effort will be confined to research in special education and development of curriculum and instructional materials and methodology of teaching for the same. Each Regional College of Education should provide teacher training specializing in one area of special education.
- (b) Conducting research in priority areas may be related to the education of the blind so that proper methodologies can be developed for teaching them. It was suggested that the NCERT can take up this work by and by when appropriate structure is set up in the NIE and the Regional Colleges of Education.

On the recommendations of this Committee the following working groups have been formed : (i) Working Group for the preparation of Norms for Teacher Training Institutions for the Deaf; and (ii) Working Group for the preparation of Norms for the Training Institutions for the Blind. The first Working Group met in October and developed curriculum and norms for teacher training institutions for the deaf. The second group for the training institutions for the blind will meet in the near future.

## **State Boards of Teacher Education**

The fourth annual conference of the SBTEs was organized at RCE, Bhopal, on 29 and 30 July 1982. It recommended that even the Regional Colleges of Education should stop the summer school-cum-correspondence courses leading to the B.Ed. degree, because some other universities also had started such correspondence course and the standards were deteriorating. It also suggested that extension services centres should lay more stress on visiting the schools, demonstrating some model teaching and giving guidance to the teachers on the spot rather than organizing in-service education courses.

## **Tenth Meeting of the Steering Committee**

The tenth meeting of the Steering Committee of the National Council for Teacher Education was organized on 10 February 1983 at the NIE Campus, New Delhi. It was attended by 12 members.

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

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

### *Enrolment*

The College enrolled 364 students for the regular B.Ed., M.Ed., First year B.Sc. (H/P) B.Ed. and Second year B.Sc. (H/P) B.Ed. courses of the college in the following streams :

B.Ed. (Science)	81
B.Ed. (Agriculture)	31
B.Ed. (Commerce)	37
B.Ed. (English)	32
B.Ed. (Hindi)	40
B.Ed. (Urdu)	32
M.Ed.	17
Ist Yr. B.Sc. (H/P) B.Ed.	73
IInd Yr. B.Sc. (H/P) B.Ed.	21
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	364
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### *Summer School-cum-Correspondence Course*

The enrolment in B.Ed. was 148.

### *Results*

Two hundred and thirty-two untrained teachers of the northern region appeared in July 1982 at the B.Ed. Summer School-cum-Correspondence course examination after getting four months' teaching and 10 months' correspondence course.

### *Extension Service Department*

The Extension Services Department (ESD) 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. During the session 1982-83, the following programmes were organized :

(a) *A conference of Honorary Directors and Coordinators of Extension Service departments in the region was organized at Patiala (Government College of Education, Patiala) from 14 April 1982 to 17 April 1982. The objective of the conference was to discuss various aspects of extension activities in regard to the syllabus prepared by the NCTE for the training of extension workers. Twenty-one Honorary Directors/Coordinators and resource persons attended the conference.*

(b) *A workshop on Orientation Programme of Key Persons for lesson writing was organized at Government C.P.I. Allahabad, from 19 October 1982 to 23 October 1982. The object of the workshop was to train the key persons for writing correspondence lessons. Forty key persons attended the workshop.*

(c) *A workshop on the Teaching of Science in Secondary Schools: Try-out of the book (STEP) was organized at the Regional College of Education, Ajmer, from 16 to 20 December 1982. The objective of this workshop was to get suggestions about the material of the book on Science Teaching on various chapters of Physics, Chemistry, Biology and Science Teaching in general. Eight teacher-educators attended the workshop.*

(d) *An Orientation Conference of Principals/Headmaters and Teachers of Cooperative Schools was held in the College on 28 and 29 December 1982. The purpose of the conference was to introduce student-teachers of the College to the cooperating teachers and heads of the institutions where they were to do their internship in teaching.*

(e) *A workshop on the Teaching of English Grammar at the Secondary level was organized for teacher-educators at the College from 7 March 1983 to 12 March 1983. The objective of the workshop was to train the participants in the latest methods and techniques of teaching English Grammar and to develop instructional materials for secondary schools. Two teacher-educators attended the workshop.*

(f) *A workshop on Research Methodology and Experimental Designs was organized at Sohanlal College of Education, Ambala City, from 14 to 19 March 1983 with the objective of training teacher-educators in basic statistics needed for research workers. Forty-four teacher-educators attended the workshop.*

(g) *A workshop on Strengthening some important areas in Book-keeping and Accounting for Commerce Teachers* was organized at the College from 21 March 1983 to 26 March 1983. The objective of the workshop was to update the knowledge of the participants in some complicated areas in Book-keeping and Elements of Commerce. Forty-three teachers attended the workshop.

*ERIC Project* : There has been substantial progress in the ERIC project—the Determination and Development of Schemes of Thought in Science during Adolescence. The project fellow attached to the project submitted her thesis on “The Exclusion of Variables during Adolescence” for the Ph.D. degree to the Rajasthan University. The entire work is up-to-date and stands documented. Two papers on the Growth of Logical Thinking in Science during Adolescence and Controlled Experimentation during Adolescence are nearing completion. At the M.Ed. level, opportunity also became available to explore some Piagetian motives among delinquent pupils.

#### *Department of Agriculture*

The following classified activities were conducted by the Department of Agriculture.

*Teaching* : Regular teaching programme in the following courses was undertaken: (a) one year B.Ed. courses with specialization in teaching Agriculture, (b) Second year B.Sc.(H/T) B.Ed., 4-year integrated course with Agriculture Practices, (c) B.Ed. (SSCC) Agriculture.

*Research* : The demonstration and research trials were conducted on the instructional farm on the College for the benefit of students and farmers of the community. The cultivation, during the winter season, of green fodder, proved to be quite successful for this arid zone.

*Development Activities* : An orchard was developed on the instructional farm to meet the instructional requirement of Fourth year Science students. 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. An intensive programme of the beautification of the campus was undertaken through the development of new lawns and flora and modification in the existing lay-out of gardens.

*Extension Activities* : Guest lectures of agriculture scientists were organized for the professional growth of staff and students. Periodic

seminars were arranged for the staff and students. The staff of the Department of Agriculture also cooperated with the local Krishi Gyan Kendra which is part of the Agriculture University, Udaipur, to organize an exhibition for the benefit of farmers and to act as experts to declare prizes for farmers. One issue of the *Journal of Work Experience and Vocational Education in Agriculture* of the National Association of Agriculture Teacher (NAAT) was edited, published and distributed to the members as part of extension activities of the Department.

#### *Department of Science*

The 1982-83 session started with the I and II year classes of the four-year B.Sc. (Hons./Pass) B.Ed. course and the regular one-year classes of B.Ed. (Science) and M.Ed.

The projects in hand with Shri D.N. Agarwal on the teaching of Chemistry and Shri S.C. Jain on the assessment of rural talent scholarships continued during the session.

Dr. M.P. Bhatnagar attended a meeting at Mysore in connection with the preparation of a common curriculum for the four-year B.Sc. B.Ed. course now running in all our colleges.

Dr. C.A.P. Rao presented research papers in an All India symposium on environmental pollution at Aurangabad from 9 to 11 December 1982.

*CAPE Report* : The CAPE team of this College comprising Shri S.S. Srivastava, Shri B.N. Lal, Dr. B.S. Raizada and Dr. H.C. Jain participated as resource persons in the following workshops/programmes organized by the northern States of India :

Workshops on CAPE and its philosophy.

Lectures on the concepts of capsules, modules and learning packages.

Practical guidance in the preparation of capsules and modules based on the local specific problems.

Lectures on the structures of the objectives and feedback questions of the learning materials.

Processing and finalization of the materials prepared by the teacher-educators of the TTIs and the State Institutes of Education of the northern States of India (Present Phase : 1982-83).

## **Regional College of Education, Bhopal**

The Regional College of Education, Bhopal, caters to the educational needs of the aspiring teachers of the States of Madhya Pradesh, Maharashtra, 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..

### *Courses*

The College continues to run the following courses :

- B.A., B.Ed. (Four-year integrated course with English as special subject)
- B.Sc., B.Ed. (Four-year integrated course)
- B.Ed. (One-year Languages, Science and Commerce)
- B.Ed. (Elementary Education)
- M.Ed. (With specialization in Science Education Teacher Education, Educational Administration and Guidance)
- M.Ed. (Elementary Education)
- B.Ed. (Summer School-cum-Correspondence course)

During the session seven students from Uganda joined the college.



The enrolment in these courses during the year is given below :

Name of the Course	MP		MS		GUJ		Goa		Other States/Countries	Total		Grand Total	No. of Students appeared	Total number of Students who passed the Examination
	G	W	G	W	G	W	G	W		G	W			
B.Ed. (Lang.)	27	3	11	7	6	—	—	—	—	44	10	54	53	48
B.Ed. (Sc.)	19	2	11	4	7	—	1	—	—	38	6	44	39	37
B.Ed. (Com.)	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.Sc. B.Ed. I Year	64	4	2	—	—	—	—	—	1	67	4	71	66	54
B.Sc. B.Ed. II Year	49	1	1	—	—	—	—	—	—	50	1	51	50	36
B.A.B.Ed. I Year	26	1	—	—	—	—	—	—	6	32	1	33	32	26
B.A.B.Ed. II Year	21	3	—	—	—	—	—	—	—	21	3	24	23	21
M.Ed. (Ele.)	5	—	—	—	—	—	—	—	—	5	—	5	3	3
M.Ed.	10	—	—	—	—	—	—	—	—	10	—	10	10	7
B.Ed. (SSCCC)	52	22	62	6	53	11	30	9	—	197	48	245	Result awaited	
Total	300	41	101	36	72	20	33	9	7	513	106	619	356	311

Abbreviations used : MP—Madhya Pradesh; MS—Maharashtra; GUJ—Gujarat; G—General Category; W—Weaker Sections of the Society; Lang.—Language; Sc.—Science; Com.—Commerce; Ele.—Elementary; SSSCC—Summer School-cum-Correspondence Course.

The College had noted with concern that enrolment from the States other than Madhya Pradesh, viz. Maharashtra, Gujarat and the Union Territories of Goa, Daman and Diu, and Nagar Haveli was not satisfactory. Action was therefore taken to improve the response from the States and the Union Territories for enrolment of students. Application forms were made available at the Field Adviser's office, Pune, as additional facility for the students enrolling from the State. The State Governments of Maharashtra and Gujarat had also deputed Special Officers for this purpose.

### *Extension Programmes*

Besides regular courses the College organized the following in-service programmes during the year : ~

S. No.	Title	Duration	Venue	No. of Persons	
				Invited	Attended
1	2	3	4	5	6
1.	Orientation Programme for Elementary Teacher Educators in Activity Approach	6 days (12 to 17 July 1982)	Bhopal	38	27
2.	Workshop on Preparation of Learning Cards for Primary Level	6 days (15 to 20 July 1982)	Bhopal	25	19
3.	Orientation of Elementary Teacher-educators to the Core Training Programme	10 days	Bhopal	39	37
4.	Orientation Programme for Middle School Teacher-educators through Process Approach in Teaching Chemistry	8 days (16 to 23 Aug. 1982)	Bhopal	30	16

5.	Orientation of Secondary School Teacher-educators with the Piagetian Psychology	6 days (23 to 28 Aug. 1982)	Bhopal	38	13
6.	Workshop on Instructional Material in Social Sciences for Class XI	10 days (23 Aug. to 1 Sept. 1982)	Jabalpur	30	21
7.	Workshop on Development of Writing Skills in Gujarati Language for Teacher-Educators and Teachers of Gujarat State	6 days (2 to 7 Sept. 1982)	Vallabh Vidya Nagar	25	10
8.	Workshop for Teacher-educators on Try-out of the book "Science in Secondary Schools"	4 days (22 to 25 Feb. 1983)	Bhopal	44	10
9.	Workshop on Teaching Biology through Demonstration and Laboratory Methods for Method Masters of the Region	8 days (10 to 17 Sept. 1982)	Bhopal	44	9
10.	Orientation Programme in Teaching of Geography for Population Education Concept	6 days (13 to 18 Sept. 1982)	Bhopal	32	16
11.	Workshop in Orientation of Educational Technology for the Teachers of Training Colleges of Maharashtra, Gujarat and Goa	10 days (13 to 22 Sept. 1982)	Nasik	30	15

12.	Workshop on Preparation of Workbook of <i>Bal Bharati</i> 'Urdu' Standard I for Maharashtra	10 days	Bhopal	30	17
13.	Orientation Programme of Elementary Teacher-educators in Environmental Approach in Teaching	6 days (14 to 19 Feb. 1983)	Bhopal	39	21
14.	Workshop-cum-Orientation Course in Science for Higher Secondary School Teachers of Gujarat	8 days (7 to 14 March 1983)	Vallabh Vidya Nagar	49	44
15.	Workshop on the New Techniques and Innovations in Teaching Methods of Gujarati Poetry for the Teacher-educators of Gujarat	6 days (18 to 23 March 1983)	Bhopal	25	6

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In addition to the extension programmes mentioned above a number of programmes organised by different departments of the NIE were also held at the College in which the faculty of the college participated.

Special attention is being given by the College to this area, and programmes of training teacher-educators and teachers for the disabled are being planned.

#### *Continuing Centres of Education*

Necessary guidance and help was extended to the continuing centres of education of the region and the following programmes were held exclusively for the personnel of these centres.

<i>S. No.</i>	<i>Title</i>	<i>No. of Participants</i>
1.	Orientation of Headmasters and Senior Resource Persons of Continuing Centres of Education of Secondary and Higher Secondary Schools on Leadership in Education	32
2.	Orientation Programmes for Resource Persons of Continuing Centres of Education—Practicals in Physics/Chemistry/Biology; N.T.S. Programme; Design for Experimental Projects and Audio-visual Aids	19

The state-wise break-up of the In-service Programmes organized during the year is as under :

<i>Sl. No.</i>	<i>Details</i>	<i>No. of Prog.</i>	<i>No. of persons invited</i>	<i>No. of persons attended</i>	<i>Man-days</i>	
					<i>(i) Target</i>	<i>(ii) Achieved</i>
1.	M.P.	4	124	77	924	578
2.	Maharashtra	1	30	27	300	270
3.	Gujarat	3	99	60	692	458
4.	Specific for Gujarat, Maharashtra and Goa	3	110	56	780	456
5.	Regional	6	235	122	1566	808
Total		17	598	322	4262	2570

#### *Projects*

The College undertook the following projects in different subject areas :

<i>Sl. No.</i>	<i>Title of the Project</i>	<i>Principal Investigator/ Investigator</i>
1.	A Research Study for Identification of Teaching Skills and Training Strategy for implementing Environmental Approach at Primary Level	Dr. J.S. Rajput
2.	Developing Instructional Material for the Promotion of Creative Thinking and to determine Its Effectiveness	Prof. S.N. Tripathi
3.	A Study of Life in Fresh Waters leading to the Preparation of a Handbook for Biology Teachers	Dr. (Mrs.) Chandra Lekha Raghuvanshi
4.	Development of Tools and Techniques to find out Equivalence between the Achievement of Students in Non-formal Centres and Formal Schools	Dr. J.S. Rajput
5.	Identification of Instructional Skills and Development of Instructional Material for Non-formal Centres	Dr. J.S. Grewal
6.	A Study of Flora of Bhopal to Produce Resource Material for Biology Teachers of Madhya Pradesh	Dr. P.K. Khanna
7.	A Study of Piagetian Concrete Operational Groupments in Middle Childhood	Mr. A.C. Pachauri
8.	Impact of Teacher Training (B.Ed. Degree) through Correspondence Course on Upward Mobility of Teachers in Western Region—a Comparative Study	Dr. D.C. Upreti
9.	Study of Current Status of Teacher Education in Western Region	Dr. J.S. Rajput
10.	Quality Improvement Programme for Teachers of Social Science for Middle and Primary Schools of Bhopal	Mr. S.C. Saxena (E.T. Cell)

### *Academics*

The College is devoting two hours per week for the improvement of integrated teaching. In this programme the entire faculty of the College is involved.

#### Academic Achievements

- (1) Smt. Sarla Rajput was awarded Ph.D. by the University of Bhopal on "Role of the Chief Minister in State Administration" (a case study of Madhya Pradesh).
- (2) Mrs. A. Grewal was awarded Ph.D. on "A Study of Hypothesis-making and Hypothesis-testing Abilities in Science in relation to Intelligence, Creativity and Socio-economic Status".

#### Academic—off the Campus

1. Dr. P.K. Khanna, Reader, Department of Botany, attended the Regional Workshop for Key Personnel concerned with out-of-School Scientific Activities by Young People from 24 August 1982 to 2 September 1982 at Bangkok. The workshop was sponsored by the Science Society of Thailand in collaboration with the Asian Centre of Educational Innovations for Development (UNESCO).
2. Dr. J.S. Rajput, Principal, visited the U.S.S.R. for two weeks during September 1982 as a member of cultural delegation from India under the Indo-Soviet Cultural Exchange Programme, 1981-82.
3. Dr. J.S. Rajput and Dr. J.S. Grewal attended during October 1982 the International World Conference on Man-Environment Impact, held at Toronte, Canada, and presented a paper on "Current Educational Research Programme in Environmental Education in India".
4. Dr. U.S. Prasad and Mr. R.N. Nemade of the Department of Commerce visited Japan and Thailand in connection with the Asian Conference on Commerce Education held at this College during the month of April 1983.

#### *Demonstration School*

The Enrolment and the result position of various classes for the session 1982-83 are as under :

<i>Class</i>	<i>No. of students appeared</i>	<i>No. of students passed</i>	<i>Percentage</i>
I	82	Promoted to higher classes as per policy decision of the NCERT	
II	78		
III	72		
IV	75		
V	81	62	76%
VI	82	71	86%
VII	80	60	75%
VIII	60	57	93%
IX	67	51	76%
X	55	47	85%
XI	20	18	90%
XII	20	16	80%

### *Professional Growth*

Seven teachers attended the seminars/workshops and courses organized by the NCERT and Shri Ram Krishna Vidyalaya, Coimbatore.

Eight teachers are registered for the Ph.D. in various disciplines.

### *First Inter-Demonstration School Meet*

Out of 25 students, who participated in different programmes, 24 students won prizes in various items and secured second rank in over-all performance.

### **Regional College of Education, Bhubaneswar**

During the period under report, the Regional College of Education, Bhubaneswar, trained 940 pupil-teachers and teachers in service through regular teacher-training programmes.

Seventy-four teachers and teacher-educators were also oriented through different short-term training courses. The D.M. School



attached to the college provided quality education to 956 students from the primary to the +2 stage.

#### *Pre-Service Training Programmes*

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

- (a) A four-year integrated course leading to B.Sc. (Hons.) B.Ed. and B.A. (Hons.) B.Ed. degrees for +2 level students.
- (b) A one-year course leading to B.Ed. (Secondary) degree for graduates and postgraduates in arts, science, and commerce.
- (c) A one-year course leading to B.Ed. (Elementary) degree for graduates and postgraduates in arts and science.
- (d) A one-year course leading to M.Ed. degree for those having a Bachelor's Degree in Education.
- (e) A two-year course leading to M.Sc. (Life Science) Ed. degree for science graduates.

The two tables given below show the results of the college at the university examination for the year 1981-82 and enrolment in different courses for the year 1982-83 :

#### **Results of University Examination for the Year 1981-82**

<i>Sl. No.</i>	<i>Name of the Course</i>	<i>No. of students enrolled</i>	<i>No. of students appeared</i>	<i>Results of University Examinations</i>			<i>Total</i>	<i>Per-centage</i>
				<i>I Dvn.</i>	<i>II Dvn.</i>	<i>III Dvn.</i>		
1.	B. Ed.	180	175	2	118	—	120	68.6
2.	M. Ed.	32	31	Result has not yet been published by the University.				
3.	M.Sc. (Life Sc.)	32	30	—do—				
4.	I Year B.Sc. (Hons.)	80	70	—	—	—	40	57
5.	I Year B.A. (Hons.)	60	48	—	—	—	48	100

### Enrolment in Different Courses for the Year 1982-83

<i>Sl. No. Name of the Course</i>	<i>Enrolment</i>
1. I Year B.Sc. B.Ed.	84
2. II Year B.Sc. B.Ed.	55
3. I Year B.A. B.Ed.	32
4. II Year B.A. B.Ed.	45
5. One Year B.Ed. (Science) Secondary	96
6. One Year B.Ed. (Arts) Secondary	72
7. One Year B.Ed. (Commerce)	20
8. One Year B.Ed. (Science) Elementary	8
9. One Year B.Ed. (Arts) Elementary	12
10. M.Ed.	24
11. I Year M.Sc. Ed. (Life Science)	20
12. II Year M.Sc. Ed. (Life Science)	21
<b>Total</b>	<b>469</b>

#### *In-service Training Programmes*

These programmes, organized with a view to improving the efficiency of teachers who are already in service, included (a) summer school-cum-correspondence course, and (b) extension programmes.

*Summer School-cum-Correspondence Course* : The course leading to the B.Ed. degree of the Utkal University is exclusively meant for untrained graduate and postgraduate teachers with at least five years' teaching experience in a recognized elementary/middle/high/higher secondary school in the eastern region. Including the sub-centre in Imphal, 451 teachers were enrolled in the course.

*Extension Programmes* : The College organized five short-term training courses of 4 to 20 days' duration to orient teachers and teacher-educators in the latest developments in the content and methodology so as to enable the participants to make classroom teaching interesting and effective. Seventy-four teachers and teacher-educators of the eastern region were benefited by these programmes. Details of these programmes are given on the next page.

**Extension Services Programmes, 1982-83**

<i>Sl. No.</i>	<i>Title of the Programmes</i>	<i>Types of Participants</i>	<i>Dates and Duration</i>	<i>No. of Participants</i>
1.	Workshop on SUPW	SUPW teachers of secondary schools	18-24 January 1983 (7 days)	7
2.	Research Methodology for Teacher Educators	Secondary teacher-educators.	1-15 December 1982 (15 days)	14
3.	Education of Exceptional Children	Primary teacher-educators	1-19 February 1983 (19 days)	16
4.	Linguistics and Language Teaching in Hindi	Hindi teachers of secondary training schools	20-25 November 1982 (6 days)	26
5.	Workshop on Identifying Rural-based Themes for INSAT film production (Orissa)	Elementary teachers teaching Science and Humanities	26-29 November 1982 (4 days)	11

### *Special Programme*

The college organized a seven-week Regional Training Course in Mathematics on behalf of UNESCO from 5 July 1982 to 20 August 1982. The major objectives of this course were to upgrade Mathematics syllabi and implement them in the school curricula, especially in technical and vocational education.

Twenty teachers of secondary, technical and vocational schools, supervisors and Mathematics curriculum framers of Afghanistan, Bangladesh, Bhutan, Laos, Maldives and Nepal joined this course. The study of Rural Talent Search Scheme introduced by the Government of India was completed and a report submitted.

### *Demonstration Multipurpose School*

A Demonstration Multipurpose School is attached to the College. The School functions as a practising school for 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 School is affiliated to the Central Board of Secondary Education, Delhi. The total number of students on the rolls was 1,023 during the session 1981-82.

### **Enrolment**

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	<i>K.G.</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>	<i>VII</i>	<i>VIII</i>	<i>IX</i>	<i>X</i>	<i>XI</i>	<i>XII</i>	<i>Total</i>
<i>No. of Students</i>														
1981-82	28	79	78	79	80	117	83	79	117	108	89	52	34	1023
1982-83		78	79	72	67	93	109	83	78	104	115	50	49	967

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## Results

### *All India Sec.|Hr. Sec.|Senior Examinations*

		<i>Appeared</i>	<i>Passed</i>
1975-76	All India Hr. Secondary 1976	48	47
1976-77	All India Hr. Secondary 1977	74	68
	All India Secondary 1977	65	65
1977-78	All India Secondary 1978	67	64
1978-79	All India Secondary 1979	80	77
	All India Senior 1979	50	44
1979-80	All India Secondary 1980	75	75
	All India Senior 1980	46	43
1980-81	All India Secondary 1981	75	73
	All India Senior 1981	36	34
1981-82	All India Secondary 1982	88	82
	All India Senior 1982	34	26
1982-83	All India Secondary 1983	88	87
	All India Senior 1983	34	30

### **Regional College of Education, Mysore**

#### *Pre-service Programmes*

The College continued to offer the following pre-service courses in Teacher Education in the year 1982-83 :

(i) *M.Sc. Ed. Mathematics|Physics|Chemistry* : These four-semester postgraduate courses were instituted in 1974, and have been developed to prepare a cadre of teachers competent in the postgraduate level content in the given subject and in the integration of the content with relevant pedagogical aspects of the subject. In spite of many problems connected with the acceptance of innovative courses of this nature, the products have been well received for employment as postgraduate teachers/lecturers and also for higher studies.

(ii) *M. Ed.* : This is a two-semester course with a common syllabus with the M.Ed. course of the University of Mysore, with specialisations like Elementary Education. The University has approved introduction of Educational Technology and Educational Administration as additional specializations from the academic session 1983-84.

(iii) *B.Sc.Ed.* : This is a eight-semester integrated course covering B.Sc. degree level content and B.Ed. level pedagogical courses for preparing teachers of Science/Mathematics. The course has been recognized as equivalent to B.Sc. and B.Ed. degrees by the Association of Indian Universities and many other institutions in the country for employment of teachers as well as for higher studies.

(iv) *B.A. Ed.* : This is an eight-semester course revised from the academic session 1981-82 on the same lines as the B.Sc. Ed. course for preparing teachers of English and History.

(v) *B.Ed. (Summer-cum-Correspondence Course)* : The course was instituted in 1966 with the objective of clearing the backlog of untrained secondary school teachers in the southern region. This objective has almost been realized.

The course-wise enrolment is indicated below.

#### Enrolment Position, 1982-83

Course	Approved Intake	Year			
		I	II	III	IV
M.Sc.Ed. (Chemistry)	20	22*	14	—	—
M.Sc.Ed. (Mathematics)	20	13	13	—	—
M.Sc.Ed. (Physics)	20	13	13	—	—
M.Ed.	20	19	—	—	—
B.Ed. (Secondary)	140	123	—	—	—
B.Ed. (Primary)	20	16	—	—	—
B.Ed. (SSCC)	250	203	—	—	—
B.Sc.Ed.	60	58	46	54	47
B.A.Ed.	30	31	19	—	—

The University of Mysore has permitted intake of 25 so as to stabilize admission at 20.

The following table indicates the course-wise results of the examinations conducted by the Mysore University.

**Results of University Examination, April 1982**

<i>Course</i>	<i>No. appeared</i>	<i>No. Passed</i>	<i>No. of Ordinances</i>
1	2	3	4
M.Sc.Ed. (Chemistry) I Year	14	14	—
II Year	18	17	1
M.Sc.Ed. (Mathematics) I Year	13	9	4
II Year	15	13	2
M.Sc.Ed. (Physics) I Year	16	6	10
II Year	19	10	9
M.Ed.	17	15	2
B.Ed. (Secondary)			
Science/Maths	70	639	7
English/History	36	33	3
B.Ed. (Primary)	17	17	—
B.Ed. (SSCC)	220	183	37
B.Sc.Ed. I Year	48	31	17
II Year	54	43	11
III Year	47	36	11
IV Year	50	44	6
B.A.Ed. I Year	22	14	8

As will be seen, some students are not able to clear some of their subjects in a single attempt. This does not constitute a 'failure'. According to the stipulation of these courses, which are run on the semester scheme, students are given an opportunity to take examination in certain courses after remedial instruction so that ultimately they



qualify themselves to pass the course. The nature of the course is such that the students have to undergo advanced professional study of various subjects and it takes them time to adjust to the requirements of these courses. But as they proceed from the first year onwards, they show improved performance.

#### *In-service Programme*

The College conducted in-service programmes for teachers of the southern region. The nature of the programmes is identified on the following lines :

- (i) The implementation aspect of the policy and curricular framework developed by the NCERT ;
- (ii) Programmes suggested by the State Departments of Education of the region ; and
- (iii) Programmes developed by the faculty on the basis of their perceptions of different areas of school education.

*The B.Ed. syllabus of the Mysore University* is being revised on the lines suggested by the NCTE.

At the request of Mysore University a conference of colleges of education affiliated to the University was held in the College on 7 and 8 April 1982. Twenty-nine principals and teacher-educators participated. The experience of the Regional College of Education in the implementation of the NCTE syllabus was made available.

As a follow-up of this programme, the College conducted another conference of principals from 27 March to 29 March 1983 to finalise the B.Ed. syllabus. Twenty-five principals of colleges of education affiliated to Mysore and Mangalore universities including some from the universities of Bangalore, Karnataka and Gulbarga participated.

*Internship in Teaching* is a very important aspect of the teacher training programme of the College. To orient the heads and teachers of cooperating schools a conference was arranged with the faculty of the College before the commencement of the internship programme. During this conference the participants were oriented to the objective-based approach to teaching and evaluation, student teaching assessment and the role of the cooperating schools. Demonstration lessons, both by student-teachers and the faculty of the College, were arranged.

*Pre-internship Conference* for the B.Sc.Ed. internship in teaching programme was held in this College from 12 to 14 July 1982. Twenty-two heads and teachers of cooperating schools participated.

*An Orientation-cum-Refresher Course on Evaluation* for the faculty of the College was held in this College from 7 to 9 July 1982. Fifty members of the faculty participated.

An Orientation programme on *Modern Trends in Teaching of English for the Subject Inspectors of English* in Karnataka was held in this College from 22 to 26 November 1982. In addition to orienting the participants a proforma for supervision of English teaching was developed.

At the request of the Director, State Council of Educational Research and Training, Tamil Nadu, a *workshop on Evaluation and Preparation of Test Items in Teacher Education in the Developing Indian Society and Educational Psychology and Child Study for Elementary Teacher Educators* was held in this College from 3 to 7 January 1983. Twenty-one teacher educators participated.

At the request of the Commissioner and Special Secretary, Education, Karala, the College reviewed the *Science and Mathematics syllabus* of the State presented for Classes I to X, from 14 to 23 February 1983. A draft revised syllabus was prepared and recommended for further consideration. Fifteen experts from Kerala and Tamil Nadu assisted the College faculty.

As a follow up of the *Regional Seminar on Family Life Education* held last year, a workshop was held in this College during 24 to 27 February 1983 to finalize the syllabus and course of study in Family Life Education for Teacher Training Programmes at the elementary, secondary and postgraduate levels. Thirteen teacher-educators participated.

*Micro-teaching* is becoming an important aspect of teacher training programmes in the country. The State Institute of Education, Kerala, had decided to adopt this approach in the elementary teacher training institutions in Kerala. At their request an orientation course in Micro-teaching for elementary teacher-educators was held during 7 to 11 March 1983, at Ramavarmapuram, Trichur, Kerala. Thirty-six teacher-educators participated.

A similar programme for the lecturers of Colleges of Education affiliated to the universities of Mysore and Mangalore and some in Karnataka was held in this College during 23 to 25 March 1983. Twenty-five teacher-educators participated. The Department of Teacher Education, NCERT has produced a textbook on teaching science in secondary schools for the science methods masters. With a view to getting the feedback on the materials from teacher-educators of selected colleges of education in the region and for trying out the material during the next academic year, an orientation programme was held in this College during 8 to 12 March 1983. Nine teacher-educators from Andhra Pradesh and Tamil Nadu participated.

The table given on the next page gives a synoptic view of the in-service programmes conducted by the College during this year.

**In-service Programmes conducted during the Year 1982-83**

<i>Title of the Programme</i>	<i>Duration</i>	<i>Dates</i>	<i>Number attended</i>	<i>Area covered</i>
1	2	3	4	5
Conference of Principals of Colleges of Education affiliated to Mysore University, on NCTE framework	2 days	7-8 April 1982	29	Karnataka
Pre-internship Conference of Cooperating Teachers for B.Sc. Ed. Internship in Teaching Programme	3 days	12-14 July 1982	22	Regional
An orientation Programme on Evaluation for the Faculty of the College	3 days	7-9 July 1982	50	RCEM
Orientation Programme for Subject Inspectors of English of Karnataka on Modern Trends in Teaching of English	5 days	22-26 November 1982	16	Karnataka
Workshop on Evaluation and Preparation of Test Items in Teacher Education in the Developing Indian Society and Educational Psychology and Child Study for the Elementary Teacher-educators	5 days	3-7 January 1983	30	Tamil Nadu

Pre-internship Conference of Cooperating Teachers	3 days	10-12 January 1983	50	Regional
Workshop on Review of School Science Syllabi for Classes I to X for Kerala	10 days	14-23 February 1983	15	Kerala
Workshop on the Review and Finalization of Courses and Syllabi on Family Life Education	4 days	24-27 February 1983	13	Regional
Orientation on Content-cum-Methodology for Teaching Science Methods for Teacher Educators of the Southern Region for trying out STPP Material on Teaching of Science	5 days	8-12 March 1983	9	Regional
Workshop on Micro-teaching for Elementary Teacher-educators of Kerala	5 days	7-11 March 1983	36	Kerala
Orientation Course in Micro-teaching for Teacher-educators of Mysore and Mangalore Universities	3 days	23-25 March 1983	23	Karnataka
Workshop on Revision of B.Ed. Syllabus of Mysore University	3 days	27-29 March 1983	31	Karnataka

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### *Research Projects (On-going)*

The following research projects are on hand :

Relationship between Lesson Kinetic Structure and Learning Outcomes in School Science—Dr. G. Raju

Identification of the Areas of Deficiencies in Secondary School Physics Teaching and Finding Ways and Means to Help Them—Dr. Somnath Datta

Devising and Implementing a Strategy for the Development of Accelerated Reading with Comprehension in English—Mrs. Lakshmi Aradhya

Developing Programmed Instructional Material for School Biology—Mr. R.K. Bharatiya

Designing a Prototype Physics Laboratory for Higher Secondary School/Junior Colleges on the Basis of Indigenously Available Components, Expertise and Know-how—Dr. A.N. Maheshwari

Physics Resource Material, Volume III—Physics Faculty

Intellectual Developmental Levels of Piaget and Its Relationship to Secondary School Curricular Content Matter—Dr. G. Raju

An Experimental Model for a Cooperative Remedial Centres in an Institutional Campus (RCE, Mosore) Mr. B. Phalachandra, Guidance Counsellor

Acceptance, Awareness and Impact of RCE Programmes (RCE, Mysore)—Dr. S. Dandapani/Dr. D.S. Babu

### *Activities relating to the Area of Educational Technology*

Some of the educational games developed by a team of interested workers at the College were demonstrated to the project coordinators of the various States during the workshop held at New Delhi from 24 to 28 August 1982. Dr. M.S. Murari Rao, Dr. K.N. Tantry, Dr. P.C. Eapen, Dr. G. Raju, Dr. N.B. Badrinarayan, Shri S. Raghavendra Bhatta, and Shri P.V. Satyanarayana Murthy actively worked in the area of instructional games in this college.

A film on Micro-teaching and some educational films relating to Physics and Chemistry based on PSSC and CHEM study curricula were

purchased to strengthen our instructional programmes. A micro-computer trainer has also been commissioned for the use by our students and staff.

#### *Activities relating to the Project 'CAPE'*

A training programme on the methodology of preparing learning episodes was organized by the CAPE team from 10 to 19 June 1982. The participants were the teachers of the Demonstration Multipurpose School of the College.

Dr. G. Raju, a member of the CAPE team, acted as a resource person in a workshop held at Madras from 20 to 26 June 1982 for the purpose of processing and refining learning episodes prepared by the students of the teacher training institutions of Tamil Nadu.

Shri P.V. Satyanarayana Murthy participated as a resource person in a workshop for re-processing and content editing of learning episodes developed by teacher-educators and student-teachers of TTI's of Andhra Pradesh, held at Hyderabad from 1 to 7 July 1982.

The members of the CAPE team of the College participated as resource persons in a workshop held in Mysore during 20 and 24 September 1982 for the purpose of reviving and finalizing learning episodes developed earlier. The CAPE team members of Andhra Pradesh and some teacher-educators of the TTI's participated in the workshop.

A training programme on the methodology of preparing learning episodes was organized by the CAPE team members of RCE, Mysore, for the benefit of one-year B.Ed. (primary) students of the RCE from 20 to 24 November 1982.

All the CAPE team members attended a meeting held at the NIE, New Delhi, from 24 to 28 August 1982 for the project coordinators of the CAPE Project in the States to review the progress of the project.

#### *Faculty collaboration on NCERT/State Programmes*

Dr. M.S. Murari Rao, Dr. C. Seshadri and H.K. Venkatarangachar attended a three-day State-level conference conducted by the Karnataka Association of Teacher-educators from 18 to 20 February 1983.

Dr. S. Dandapani, Reader in Education, has presented a paper on "Concept of Educational Technology" at the Annual Conference held at Osmania University, Hyderabad, during the first week of February 1983.

Shri N.N. Prahalada, Lecturer in Education, presented a paper on "Curriculum Development and Its Implementation at Elementary Stage" for the office-bearers of All India Primary Teachers Federation held at RCE, Mysore from 18 to 22 March 1982.

Dr. B.K. Satyanarayana, Lecturer in Hindi, acted as a resource person in the workshop on Methodology of Teaching Hindi for the Hindi Teachers of Madikeri district, organized at the Government Junior College, Madikeri.

Shri S. Raghavendra Bhatta, Lecturer in Kannada, participated in the workshop for the Preparation of Teacher's Guide in Population Education for the secondary-level organized by DSERT, Bangalore, at (i) Udupi on 15 and 16 September 1982 and (ii) Shimoga on 10 and 11 November 1982.

Dr. A.N. Maheshwari, Professor of Physics, organized the VI High Energy Physics Symposium held under the auspices of the Department of Atomic Energy, Government of India on the campus of the Regional College of Education, Mysore, from 6 to 11 December 1982. The conference was attended by 150 physicists from India and abroad.

Shri R.K. Bharatiya, Reader in Botany, attended the workshops to identify competencies etc. to teach Biology in school organized by the NCERT at New Delhi during October 1982 and from 31 March to 8 April 1983.

Shri Y.K. Gupta, Lecturer in Commerce, participated in the programme conducted by the NCERT on training vocational teachers in Commerce held at Coimbatore.

Shri V. Krishna Kumar participated in the training programme conducted by the NCERT for vocational teachers in Commerce at Tirupati.

#### *Academic and Other Recognitions*

Dr. A.K. Sharma, Principal, acted as a resource person in the Regional Design Workshop on Chemistry Curriculum and Teaching Materials, sponsored by UNESCO at Jeonbuy National University, Jeonju, South Korea.

Dr. A.N. Maheshwari, Professor of Physics and Head of the Department of Science/Technology, has been awarded Research Associateship of the International Centre of Theoretical Physics, Trieste, Italy.



Dr. C. Seshadari, Reader in Education, was invited as a Visiting Fellow by the Centre for Advanced Study in Education (CASE) University of Baroda to deliver five talks.

Dr. S.L. Bhyrappa, Reader in Education, was given literary award by the Karnataka Government on the Republic Day.

Dr. G. Raju, Reader in Zoology, has gone to Maldives under UNESCO Consultancy Mission.

Dr. N.B. Badrinarayan, Lecturer in Mathematics, attended an International Conference on Soroban Education held at Kyoto, Japan.

Shri P.V. Satyanarayana Murthy, Lecturer in Telugu, was awarded the title of "Natyavadhana Kalapurana" for his Natyavadhana performance at Tiruthanni.

Shri K.P. Sankaran, Lecturer in Malayalam, was given the literary award by the Kerala Sahitya Academy.

Shri N.N. Prahallada, Lecturer in Education, was given the award for excellence in journalism by the United Writers Association, Madras.

#### *College Library*

The library has a membership of 947 students and 295 staff members. With a total of 24,905 books issued out during the current year, the average number of books loaned per day comes to 71. It is estimated that 78,723 students visited the library and approximately 2,17,225 books were used within the library. This comes to 790 books per day on an average.

The library has an extensive collection of books and journals covering different disciplines. During the current year, 1,839 books have been added at a cost of Rs. 28,095.68. This brings the total number of books in stock to 48,217 their value being Rs. 9,17,930 approximately.

As in the previous year the library is obtaining 127 periodicals at an approximate cost of Rs. 29,090 as against Rs. 27,000 last year. Of these 65 are foreign periodicals. In addition, the library is getting 20 periodicals as gift. The library is also subscribing to 12 newspapers and 21 magazines for general reading at a cost of Rs. 4,500 approximately.

#### *Demonstration School*

The year 1982-83 was a hectic one for the Demonstration on School, Mysore. The multitude of co-curricular activities, which have become the

annual feature, got a head start with the inter-high school Kannada Debate on 19 August 1982. Twenty schools participated in this event. The Shield was won by the students of Multipurpose Higher Secondary School, T'Narsipur and the Runner's Cup was won by the St. Mary's School. Our students brought the Shield from Kollegal excelling at the Kannada debate hosted by them. One more shield secured was from Ramakrishna Vidyashala at the English Debate Competition. Many individual prizes were won by our students in English and Kannada debates hosted by the local schools.

For the first time, debate and mono-acting competitions were held in the school for higher secondary school students.

General knowledge competitions arranged by the Ramakrishna Vidyashala and the Bhagini Seva Samaja were attended by our students who won shields from both the schools. In the seminar, essay-writing, quiz and general knowledge competitions sponsored by the Karnataka Vigyana Parishad in the month of October, our students excelled in all the areas by securing many individual prizes and the shield earmarked for the general knowledge competition.

The inter-high school music competitions arranged by our school had to be extended by one more day because of the unprecedented participation of students from the local schools.

The Wild Life Week celebrated in the month of September catered to all sections of pupils among the local schools through painting, essay-writing, exhibition, quiz and seminar programmes for enriching the knowledge about wild life among students. A visit to the Mysore Zoo to study the animal maintenance procedure and an overnight excursion to Nagarhole enabled the students to gather first-hand information about animals.

The sad demise of Shri T.N. Gopalakrishna at the beginning of the academic year gave a set-back to the physical education programme of the School. As a consequence, the inter-high school athletics competition had to be cancelled. However, the Inter-High School Athletics, Vivek Kumar Memorial Cricket Tournament and the NCC Annual Training Programme went off according to the schedule. The trekking expedition arranged for the NCC cadets to the Chamundi Hills on 30 January 1983 was very successful. A short excursion of six days' duration to places like Madras and its surroundings was arranged in the month of October. A long excursion of 13 days' duration covering the coastal fringe of

the south India in the month of December was also arranged. The participants really enjoyed the programme.

The First Inter-Demonstration School Meet for six days from 13 to 18 December 1982 was almost a dream come true. Twenty-five selected students from each of the four Demonstration Schools, took part in the meet. A six-day schedule was planned and implemented. Forty-five items—both competitive and non-competitive—were provided for in the meet. The overall performance of our students enabled our school to win the shield. The Runner's Cup was shared by the Bhubaneswar and the Bhopal teams. The AIR featured a few selected items of the meet in the Yuvavani programme which was broadcast later. The fact that our school was adjudged the best school in Mysore City and that it secured a shield for the year 1982-83 sums up the achievement of our school.

On the whole, the academic year 1982-83 was full of students' activities which enabled the students to keep themselves busy and deeply involved in many competitions.

The table given below gives an analysis of the results of Classes I to XII.

#### Results of Classes I-XII

<i>Class</i>	<i>No. of students appeared</i>	<i>No. of students passed</i>	<i>Percentage</i>
I	81	72	89.0
II	84	72	85.7
III	87	77	88.5
IV	86	72	82.5
V	92	82	89.1
VI	87	81	93.0
VII	88	87	98.6
VIII	88	76	86.4
IX	77	67	87.0
X	75	74	98.7
XI	32	25	78.1
XII	7	5	71.4

## **Educational Psychology**

### *Training Course in Administration of Psychological Tests and Interpretation of Test Scores for Teacher Educators*

The short-term object 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 students' intelligence, interest and personality traits. 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 1982-83, the following three courses were organized:

<i>Name of the States</i>	<i>Venue</i>	<i>Date</i>	<i>No. of Participants</i>
Assam, Meghalaya, Nagaland, Manipur, Mizoram, Tripura	Gauhati	1-11 November 1982	13
Orissa	Delhi	27 December 1982 to 2 January 1983	11
Bihar and M.P.	Delhi	21-28, February 1983	16

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

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

Teachers emphasize instruction and are usually oblivious of the learner. No doubt they have some notions about the learning process but they do not seem to recognize that their students come with some minimal readiness, growth and entry behaviours which can be fruitfully exploited by the teacher in teaching-learning situation of the classroom. Also, their principles of reward and reinforcement are ignored in the management of the learning situation. A ten-day course on this theme was held for Karnataka and Andhra Pradesh from 7 March to 16 March 1983. Nineteen teacher-educators attended the course.

*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 process of children. It is, however, generally found that he or she does not have the know-how of the principles of reinforcement which may be required for effective management of the classroom. To enrich knowledge of learning and development processes of young children in the age group 6 to 11 years, a course was organized for Assam, Meghalaya, Tripura, Arunachal Pradesh, Mizoram, Manipur, Nagaland and Bihar from 4 October 1982 to 13 October 1982.

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

This year the NCERT organized one workshop on behaviour modification for the elementary teacher-educators. The workshop focussed on the theoretical as well as practical aspects of behaviours modification in the elementary school setting. The objective was to acquaint the teacher-educators with the theory and practice of behaviour modification; to expose them to practical application; and to train them in some simple techniques easily applicable in the classroom setting. A number of practical sessions with children in the classroom setting demonstrated the way the problems could be handled in school.

This was the third workshop in the series planned for elementary teacher-educators. The workshop was attended by eighteen teacher-educators, eleven from Bihar and seven from Madhya Pradesh.

The NCERT has on hand developmental projects for providing reference material in psychological testing; improving instructional materials for the teaching of psychology; and providing guidance in adjustment in the school, home and in general.

*National Test Development Library*

The National Test Development Library (NTDL) set up by the Council serves as (i) a reference test library, (ii) an information centre for psychological tests, (iii) an agency for providing critical review of all published tests, and (iv) an institution to identify gaps in test development. It is guided by an Advisory Committee which has top psychometricians of the country as its members. The Library has till date procured

403 published tests and 233 unpublished tests developed or used as part of Ph.D. programmes.

The NTDL brought out three bulletins and reprinted *Standards in Educational and Psychological Tests*, with the permission of the American Psychological Association. This pamphlet will be very useful to test constructors in constructing tests and to test users evaluating tests.

A highlight of the year was the cooperation and interest of 40 eminent psychometricians, professors of psychology, and professors of education in critically reviewing tests. They represented 30 universities and institutes of national importance. The cooperation received and the reviews prepared by them will go a long way in exercising quality control on the test development. The critical reviews of 50 tests—29 in the area of Personality and 21 in the area of Intelligence—will be published after editing in the form of a Mental Measurement Book.

*Development of a Manual of Psychology Experiments and Practicum for Classes XI and XII*

The NCERT is developing two manuals containing direction and other related information in respect of various practicals that have been provided in the curriculum of psychology at the school level. One of these caters to the students of Class XI and the other one to the students of Class XII. In a workshop of teachers and experts in the subject area, the first drafts of these manuals were reviewed. Suggestions received for their modification are being incorporated.

*Psychology Textbook for Class XI*

“An Introduction to Human Behaviour” was published this year. Thus, it fulfils the needs of a textbook for Psychology at the +2 stage.

*Psychological Services Centre*

Set up to cater to the needs of school-going children with regard to their adjustment, learning, personality, selection of courses and ultimately to give therapeutic and informational services, the Centre is busy procuring various materials and equipment. During the year seven students registered themselves, of which six were taken up for detailed diagnosis.

### *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 the syllabi of Psychology as taught at the senior secondary stages of school education in various States in detail. Towards this end, the project aims at collecting the syllabi of Psychology from various States, analyzing the syllabi, making suggestions for the improvement of these syllabi and preparing an improved and updated draft syllabi for the States.

### **Educational and Vocational Guidance**

Two studies, namely, "A Study of Motivation of B.Ed. Correspondence Course Students" and "Effects of Yoga on Students of Central Schools", were completed and the reports of the same were submitted.

A study of the educational and vocational planning, academic achievements and selected psychological and home background variables of tribal high school students in and around Shillong (Meghalaya) commenced on 1 April 1982. The work on the study was in progress during 1982-83.

The work of the development of Guidance Laboratory including its Occupational Information Corner, which is an on-going activity of the NCERT, continued during the year.

Development of Guidance programme for girls of secondary schools was taken up. The work involves development of a bibliography on the subject and study of the actual educational and vocational needs, problems and preferences of girls in schools. A questionnaire were prepared and administered to students of Classes IX and XI in a government school. Some class talks were also planned to be tried out in the same school in connection with the aforesaid programme.

A developmental study on "Application of Micro-counselling Technique to Develop Communication Skills in Counsellor Trainees" has been taken up to identify basic communication skills involved in the counselling process and work out training strategy based on the micro-counselling technique to train counsellors.

Work on the development of "A Handbook for Career Teachers" was also undertaken during this year.

The twenty-first Diploma Course in Educational and Vocational Guidance was held. Thirty-three trainees completed this course. Of these, three were deputed from the Governments of Karnataka, Manipur

and by the Bureau of His Holiness the Dalailama. The remaining thirty non-official candidates were from nine States/Union Territories, namely Delhi—8, Haryana—3, Punjab—2, Chandigarh—1, Uttar Pradesh—8, Maharashtra—4, Jammu and Kashmir—1, Kerala—1 and Orissa—2.

Seven of these trainees (including one from the last year) were Scheduled Caste candidates. Twenty-five trainees, including seven Scheduled Caste, were awarded a stipend of Rs. 250 per month. The course consisted of intensive theoretical instruction and practical training to make the trainees adequate beginning counsellors who may be able to man State-level agencies, training colleges and secondary and senior secondary schools in the country.

Two courses in guidance were organized for the Vocational Guidance Officers and Wardens of residential units of the Church of South India Council for Child Care. These training courses were held at Bangalore during November-December 1982.

Two orientation programmes in guidance were organized for the District Education Officers of a State and a Union Territory, namely, Rajasthan and Delhi. The number of D.E.O.s from Rajasthan and Delhi who participated in the programme was 36 and 18 respectively.

A short orientation in guidance was provided to the Counsellor-In-charge, Assam, during this year. An orientation in guidance services was organized for an Officer from Zambia. He was given necessary know-how regarding the various techniques and organization of school guidance services.

Necessary guidance as well as materials were supplied to all those school guidance units which asked for this kind of developmental help.

A refresher course in guidance for faculty members of the universities and secondary teacher training colleges was organized during the year.

A paper entitled "Psychological Backwardness—Causes and Consequences" was prepared and presented during this year by a faculty member in a seminar on Social Defence held at the AIIMS, New Delhi.

A paper entitled "Vocational Guidance Programme at School Level" was presented by a faculty member during this year at an International Conference of Asian Region jointly organized by the International Labour Organization (ILO) and the Central Institute for Research, Training and Employment Services (CIRTES), Pusa, New Delhi.



A booklet in Hindi entitled *Padhne Ko Kaise Sudharen* under the Pupils' Guidance series was published by the Council.

A faculty member acted as a resource person in an All India Seminar on Vocational Training of Women organized by the Labour Ministry in collaboration with the International Labour Organization.

A faculty member provided consultancy to the Manpower Division of the Planning Commission, Government of India, by way of preparing two papers entitled "Guidance and Counselling Services in Schools *vis-a-vis* Promotion of Self-Employment" and "Guidance for Self-Employment" for the use of National Level Guidance Committee.

A faculty member provided consultancy to the Coordinator of Educational Research, Guidance and Occupational Information Centre, Fundacao Carlos Chagas, Prof. Francisco Morato, 1505 Sao Paulo, Brazil, regarding completed researches and materials developed in the area of guidance in India.

A staff member provided consultancy to the Genetic Unit, Department of Paediatrics, AIIMS, New Delhi, in connection with the project entitled "Effect of Intervention Programme on Socially and Culturally Deprived Children with special reference to Cognitive and Personality Factors".

Consultancy was also provided for the development of proformas to be used by AIIMS, New Delhi, in the context of genetic and psycho-sexual counselling work.

The NCERT helped the National Institute of Labour, New Delhi, by way of evaluating the report of one of their studies entitled "Mental Health of Disadvantaged Workers".

The work of evaluation of the orientation programme in guidance for the District Education Officer of Rajasthan was carried out through some follow-up work.

# 9

## Educational Technology and Aids

**T**HE NCERT undertakes the preparation of projected and non-projected aids to support teaching/learning activities. Experimental films are made as prototypes. Multi-media packages are also prepared. Educational programmes for transmission through the radio and

the television are produced. The Central Film Library lends, on an average, about 10,000 educational films annually to about two lakh educational institutions all over India.

## EDUCATIONAL TECHNOLOGY

### Workshops/Seminars/Training Courses

A workshop to produce prototype material on the application of *E.T. in Adult Education* was held at the Literacy House, Lucknow, from 31 March to 5 April 1982. The participants of the workshop were drawn from various fields of adult education, like linguists, writers, artists and instructors. As a result of this workshop a handbook entitled "Proudh Shikshan : Nai Prerak Vidhain" has been prepared. The U.P. Government has adapted/adopted *Proudh Shikshan : Nai Vidhi Nai Vidha* brought out earlier in multi-media package for use in their adult education centres. The Government has also brought out a poster on symbols in the environment for awareness, functionality, social education, health and family welfare based on the same book.

In collaboration with the Directorate-General, Doordarshan, New Delhi, a *training course for user teachers/custodians* of INSAT TV villages was undertaken. This was done in two phases. In the first phase, State-level resource persons of the State departments of education were oriented in TV utilization. The resource persons thus trained are expected to train in batches the actual user teachers/custodians by holding similar camps in their respective States.

The first batch of 24 key personnel from Orissa was oriented in effective utilization of TV services in a two-day training camp held at the NCERT from 22 to 23 June 1982. It was followed by another training course for key personnel numbering twenty-six from Andhra Pradesh, which was held from 25 to 26 June 1982. The State personnel comprised lecturers of SCERT's Deputy Inspectors and Headmasters of schools.

The NCERT is working on a project *Development of Course Material in Continuing Education for Weavers of Nandnagari*, a resettlement colony in east Delhi. The main objective of this project is to develop improved instructional material in dyeing, designing, weaving and other related issues with the development of need-based handloom technology, i.e. marketing of the finished product, cooperative and

finance to get credit to carry on their day-to-day business. Another important objective of the project is to develop system design approach to solve the problems of vocational group, i.e. weavers.

After organizing six workshops, a draft of the prototype instructional material was developed in a format of three booklets, entitled "Nai Rang Nae Rekhain"; "Dijaenain and Dijaenain" and "Bunkar Sahayak". These are written in simple language and in self-instructional style. They are expected to enhance the various kinds of skills of handloom technology.

Keeping in view the large number of illiterate and semiliterate weavers a number of cassette programmes and slide-cum-tape programmes have been developed.

The NCERT is now in the process of developing support material consisting of design sample books, dye shade cards, colour combination, etc. After the entire multi-media package is ready, it will be tried out in Nandnagari. An evaluation will also be carried out after the try-out.

With a view to designing and developing the *techniques of distance learning systems*, the NCERT has been working towards (a) the improvement of management and organization of the existing systems, and (b) The training of personnel in the production of distance learning materials. Towards this end, the NCERT conducted a five-day workshop on the Development of Guidelines for Evaluation of Response Sheet Assignments, at the Panjab University. Thirteen persons, representing various universities, participated. They evolved some meaningful guidelines in this respect which are being circulated to all concerned.

*An Orientation course-cum-workshop for the Correspondence Lesson Writers* in Political Science, Economics and English was held from 3 to 12 November 1983 at the Punjabi University in collaboration with the Directorate of Correspondence Courses, Punjabi University. The participants were oriented in the techniques and skills of writing for distance education. They evolved a number of model lessons in each subject, which are also being brought to the notice of all concerned.

The NCERT conducted a *training course for script writers for educational radio* at Imphal, Manipur, from 8 to 22 November 1982.

Twenty-five teachers and writers for children were trained. The training course was conducted at the State Institute. The radio programmes, depending upon these scripts, are likely to be broadcast from the AIR, Imphal.

A workshop for the orientation of teachers for the application of educational technology in teaching-learning techniques of adult education was organized at Jaipur in collaboration with I.G., Prisons, Jaipur, from 21 to 26 February 1983.

The NCERT organized from 3 to 16 February 1983 a 15 days' *orientation course in educational technology for teacher-educators* for the States of eastern region at the Regional College of Education, Bhubaneswar. In all 15 teacher-educators from West Bengal, Bihar and Orissa attended. The participants were familiarized with the concept and application of E.T. in classroom teaching. They were given practice in the writing.....programmed learning material, preparation of synopsis for correspondence lessons, writing and handling of projected and non-projected technological aids. Field visits to the language laboratory and the Doordarshan Kendra were arranged. The participants were then given orientation in the utilization and evaluation of media programmes.

A workshop for the *development of learning materials* for upgrading functional skills of adults specially women and tribals was organized at the Xavier Institute of Social Services, Ranchi from 4 March 1983 to 8 March 1983.

As a result of a series of three workshops, a handbook on seven skill development programmes entitled "Amdani Barhane Ke Dhandhe" was developed at the instance of the Directorate of Adult Education, Government of Bihar. The handbooks are on bee-keeping, soap-making, harvesting, artificial insemination, extraction of Papin, reeling of thread from tussore cocoons, extraction of oil from lemon grass and eucalyptus.

In the multi-media project for adult education a resource book entitled "Gaon Se Prakhand Tak" was prepared for Ranchi area. It gives a list of functionaries available at the village and the block levels and a brief resume of their work. Learning material has also been prepared on certain schemes of States as well as the Central Government, which would be of benefit to the learners and instructors of adult education centres.

Consultancy was provided to the U.P. Government for preparing a manual for the training of instructors of adult education and to the Directorate of Adult Education for preparing a slide-cum-tape programme on teaching-learning techniques for use by instructors.

### **INSAT ETV Service and Other Activities**

The INSAT ETV service for selected primary schools of Orissa and Andhra Pradesh began from 16 August 1982. The first day's programme capsuled by the NCERT went on the air according to the schedule decided earlier.

The integrated transmission schedules for Orissa and Andhra Pradesh have been finalized in consultation with the Doordarshan Kendras, Cuttack and Hyderabad. *Programme capsules for telecast* were despatched to the Doordarshan Kendra, Delhi, for transmission via INSAT from 15 August 1982.

In view of the failure of the INSAT IA in early September 1982 transmission from the Doordarshan Kendra, Delhi, was discontinued. The NCERT has, however, started sending its programme capsules to the Doordarshan Kendra, Hyderabad and Cuttack, for transmission in Andhra Pradesh and Orissa. Currently, programmes are being produced and capsuled at the NCERT and despatched every week to Hyderabad and Cuttack for transmission.

Teacher's guidance notes for the television programmes are being prepared and sent to SCERTs, Orissa and Andhra Pradesh for being translated into the regional language for distribution to the TV villages.

About 100 *prototype ETV programmes* for children of the age-group 5-8 years and 9-11 years and for primary school teachers were produced first in Hindi and then translated and dubbed in Oriya and Telugu for transmission in selected schools of Andhra Pradesh and Orissa. In spite of the failure of INSAT IA, the ETV service which was introduced from 15 August 1982 was continued through terrestrial stations.

An eight-week intensive *Training Course for ETV Scriptwriters* selected from INSAT States during previous years was organized at the Central Institute of English and Foreign Languages, Hyderabad. The course, which began from 20 December 1982, was attended by 22 persons from Orissa, Andhra Pradesh, Maharashtra and Delhi. Sixty full-fledged ETV scripts were turned out by the course

participants. Of these 10 were produced in the ETV programmes and four were telecast from the Doordarshan Kendra, Hyderabad.

A national workshop for *identification of topics/themes for ETV programmes* was held from 31 March to 5 April 1983. About 40 persons from six INSAT States, the Doordarshan Kendras, the Space Application Centre and the NCERT participated in the programme. The workshop will be followed by the preparation of programme briefs and ETV programme scripts for 1983-84.

*For the development of scripts for films and video programmes for INSAT* a workshop was organized from 11 to 13 May 1982. It was attended by 15 persons including science teachers, scientists, writers of children literature and media specialists, besides the staff. During the workshop there was a discussion on the SITE experiences, relevant experiences in teaching science to rural teachers and the educational use of television programmes for INSAT. Later, the group worked on the identification of themes to be taken up on priority basis. The rough draft of five scripts were presented to the group by the faculty members for their comments for improvement. As a result of discussions and comments of the participants, four scripts on (i) Water, (ii) Safe water, (iii) Hand-pump, (iv) Food from the Trees, were finally approved for production of video programmes.

### **Radio Programmes**

In the project *Teaching First Language (Hindi) with the Help of Radio*, only one batch of children of Class 3 participated during 1982-83. A daily broadcast of 15 minutes' duration was transmitted through Akashwani Stations of Jaipur and Ajmer. An evaluation of achievements at the end of the Class III was conducted in April 1982. Later, development of speech has assumed at various intervals. The report of the final evaluation has been prepared. The experiment came to an end on 31 March 1983.

### **Evaluation Programmes**

Distance learning systems provide viable alternatives to formal education for teaching a large number of students who cannot otherwise attend formal institutions. Improvement of distance learning systems through the application of educational technology is of direct interest to the Centre for Educational Technology. In order to build up information based on correspondence education at the secondary

level the NCERT has initiated a series of case studies. The second study in this series has been completed in the case of correspondence course offered by the Board of Secondary Education, Rajasthan, Ajmer. The first study was completed in 1980 in respect of Patrachar Vidyalaya, Delhi. *The research study on correspondence education* offered by the Rajasthan Board has been completed and a draft report has since been prepared.

The NCERT has taken up the production of prototype ETV programmes for young primary school children and primary school teachers. These programmes are being telecast in selected districts of Andhra Pradesh and Orissa. In order to produce relevant and useful programmes, evaluation of programmes was done by testing them in the field. The feedback information was useful not only in revising these programmes but also in improving the future production of the programmes. The work of evaluating the programmes and getting feedback is being continued.

#### **Activities/Other Events in Technical Areas of CET**

A new *Conference system* comprising one Chairman Unit, twenty Dolegita Units, Monitoring Unit and power supply was installed and tested in the New Conference Hall on the second floor of New Library Building of the NCERT.

The stores block of old Library building in the NIE campus is being converted into *continuity TV studio*. The detailed estimate for the conversion of old library building into the continuity TV studio has been prepared by the Civil Construction Wing of AIR.

*Telecine link with the O.B. Van* has been established to provide additional facilities for the recording of programmes available on film on the video tape.

#### **TEACHING AIDS**

The NCERT concerns itself with the use of low-cost technology for educational purposes. Apart from developing audio-visual aids which are not expensive, the Council trains teachers and other personnel in the design and development of teaching aids from locally available materials.



## **Workshops and Training Courses**

The management of audio-visual resources is an area which must receive serious consideration. Some thinking for the setting up of a resource wing and allowing teachers to use the facilities has been done. In order to develop the operational modalities, the NCERT organized a two-day workshop-cum-seminar involving about 15 zonal education officers and principals from the Directorate of Education, Delhi, from 28 to 29 April 1982. The workshop appointed a six-member committee to pursue the matter. The follow-up action in this regard is being taken.

### *Geography Charts for Secondary and Higher Secondary Level*

A workshop on the preparation of geography charts for secondary and higher secondary school students was organized from 20 to 24 September 1982. Twelve persons, including subject experts, visualizers, artists, etc., from various universities and colleges, took part. The objective of the workshop was to produce a set of charts on Biosphere and Hydrosphere for use in the classroom teaching at the secondary and higher secondary level. The geography charts on Lithosphere and Atmosphere produced in an earlier workshop were also examined by the participants. As a result of the group exercise that was undertaken, the participants were able to select 23 concepts for the preparation of charts on both the topics. The work regarding the preparation of geography charts on the above topics is at the finalization stage.

### *Educational Technology and Its Application in the Preparation of AV Material*

A training course in the preparation of audio-visual material was organized at Madras from 13 to 25 September 1982 in collaboration with the State Council of Educational Research and Training, Tamil Nadu, Madras, and the Central Training Institute, Guindy, Madras. Twenty-five teacher-educators from the Southern States of Tamil Nadu, Karnataka, Kerala, and Andhra Pradesh participated in the course. Besides lectures, the participants were involved in the preparation of various audio-visual materials like charts, filmstrips, slides and flannel graph packages, etc. The participants took up ten projects including seven filmstrips and other teaching aids material.

### *Scripts for ETV Programmes for Rural Schools in Andhra Pradesh, Orissa and Uttar Pradesh*

A workshop on finalization of scripts for ETV programmes for rural schools by Andhra Pradesh, Orissa and Uttar Pradesh for the production of video films for telecast through INSAT was organized from 27 to 29 January 1983. The objectives of the workshop were that the programmes should create awareness about how to maintain good health and that they should provide an alternative approach to education of rural children, youth and adults.

In addition to the faculty members, nine persons with experience and expertise in the area of television production, script-writing, content and children's literature, etc. participated in the workshop. During the workshop, draft scripts on water, safe water, hand-pump and food from the trees developed earlier were analysed point by point.

Out of these scripts, the production of video programmes on two topics, namely Hand-pump and Food from Trees, has already been taken up in collaboration with CENDIT, New Delhi, which is expected to be completed during the early phase of 1983-84.

### *Evaluation of DTA Productions and Prototypes*

A two-day workshop for the evaluation of five tape slide programmes on population education was organized on 31 January and 1 February 1983. Participants and resource persons from the Central Institute of Education and the Teachers Training Institute, Daryaganj, New Delhi, participated in the workshop. The five programmes which were evaluated included Meaning and Scope, Our Growing Numbers, Consequences of the Growth of Population, the Family Life and National Policy and Programmes.

### *Scripts for Filmstrips*

The NCERT provided consultancy and expertise in conducting a workshop for writing scripts for filmstrips to the Educational Technology Cell of the State Institute of Education, Government of Sikkim, Gangtok, for ten days from 9 to 18 February 1983. Fifteen persons including teachers/teacher-educators from the region participated in the workshop. The objectives of the workshop were :

- (i) to acquaint the participants with the nature of script-writing for filmstrips ;

- (ii) to structure idea for the production of filmstrips ;
- (iii) to acquaint the participants with the various stages and the entire process of filmstrip production and to identify the vital role of the script-writer for the same ;
- (iv) to acquaint the participants with the nature and role of filmstrips and the stages of script-writing; and
- (v) to produce initially three or four filmstrips and prepare the layout for ten filmstrips.

Thirteen scripts for the production of filmstrips in the subject areas of science, mathematics, language teaching and social studies were finalized during the workshop. Out of these scripts six filmstrips were finally produced during the workshop.

#### *Low-cost Teaching Aids*

A workshop on low-cost teaching aids was conducted in collaboration with the SCERT, Haryana, Gurgaon, at the Government Higher Secondary School, Murthal, Distt. Sonapat, from 14 to 21 February 1983. Thirty-two science teachers from rural schools of Haryana participated in the workshop. A few specimens of models and other illustrated material were displayed initially in the form of exhibition for the benefit of the participants. A questionnaire was developed on these sample aids, and views from the participants were obtained on the opening day of the workshop.

The scope of the workshop was limited to the preparation of teaching aids in Mathematics and Science for the middle and the primary school levels. The programme in the workshop included identification of concepts/sub-concepts for the primary and the middle school levels, clarification of concepts and selection of ideas, identification of material available in the environment, procurement of material, planning and designing, preparation of aids and write-ups on the charts indicating the objectives. During the workshop, 33 teaching aids were prepared with a write-up on each aid.

#### *Development of Self-learning Cards in Mathematics*

A workshop on the development of self-learning cards in Mathematics for the rural primary school teachers of Ahmedabad District from 1 to 7 March 1983 was organized at the Vikram Sarabhai Community

Science Centre, Ahmedabad. The workshop organized in collaboration with the SCERT, Ahmedabad, and the Vikram Sarabhai Community Science Centre, Ahmedabad. Twenty-five rural primary teachers of Ahmedabad District participated in the workshop.

The main objective of the workshop was to prepare self-learning cards for single-teacher schools in rural areas with a view to helping the teachers cope with the problems faced by him/her in the single-teacher school. During the workshop, 200 self-learning cards were developed by the participating teachers in the subject area of Mathematics on the following six concepts : addition, subtraction, multiplication, division, numbers and place value.

A study visit to the village Rajoda in Ahmedabad District was also arranged in order to try out the effectiveness of the self-learning cards developed by the trainees.

The Department conducted a workshop for the development of scripts for films and video programmes for INSAT from 11 to 13 May 1982, attended by 15 persons including science teachers, scientists, writers of children literature and media specialists besides the staff of DTA, DESM and CET. During the workshop there were discussions on the SITE experiences relevant to teaching science to rural teachers and educational use of television programmes for INSAT. Later, the group worked on the identification of themes to be taken up on priority basis. The rough draft of five scripts was presented to the Group by the faculty members of DTA for their comments for improvement. As a result of discussions and comments of the participants, four scripts on the topics, viz. (i) Water, (ii) Safe water, (iii) Hand-pump and (iv) Food from the Trees, were finally approved for the production of video programmes.

#### *Operation and Use of AV Equipment*

A technical training course in the operation and use of audio-visual equipment was organized from 4 to 13 October 1982 at the Department of Teaching Aids. Fifteen participants from the SCERT's of Kerala, Rajasthan, Gujarat, Bihar, Tamil Nadu, Delhi, Haryana, Chandigarh, Nagaland and Meghalaya and also from local educational institutions participated in the training course. The demonstration of a new 16 mm film projector, manufactured by Cine Phone and also a visit to the Advanced-level Tele-communication Training Centre,

Ghaziabad, with a view to seeing the television and sound studio were also arranged for the participants. During the course a number of films on audio-visual equipment like 16 mm projector, overhead projector, etc., were also screened to acquaint the participants with the techniques of operating them.

### *Low-cost Teaching Aids in Mathematics*

The NCERT organized a workshop on low-cost teaching aids in Mathematics for selected rural primary/upper primary school teachers of Krishna District, Andhra Pradesh. The workshop was conducted in close collaboration with the State Education Department, Andhra Pradesh and the Association for the Improvement of Mathematics Education, Vijayawada, from 13 to 20 October 1982 at Keserapalli village. The workshop had the following objectives :

To make the participants understand the need of preparation and use of low-cost teaching aids;

To understand the difficult concepts in Mathematics ; to determine the kinds of aids which would help in the subject clarification ; to make aids on difficult concepts with the locally available materials ; and to analyse the aids prepared in the workshop and to refine them.

The first session was devoted to discussion with the participants on such issues as "Why are teaching aids necessary to supplement the classroom instruction ?" It was emphasized during the workshop that the material available in environment is to be given top priority while developing aids. The participants could think of preparing the charts, models, flannel cut-outs and hand-made slides and kits.

After the aids were prepared a number of sessions were arranged for analysing these aids. This exercise culminated in the form of lesson presentation by the participants with the help of aids which they had prepared and which provided useful feedback to improve upon the aids on the following days. In a short span of eight days efforts were made to apply the principle of educational technology in the preparation of these aids where process could be given more prominence than the products so that the participants could disseminate the knowledge acquired by them to the fellow teachers in their own situation.

### *Educational Technology and Its Application in the Development of AV Material*

A training course in educational technology and its application in the development of audio-visual materials was organized at the Department of Teaching Aids from 10 to 23 December 1982. Nineteen teachers/teacher-educators from Orissa, Madhya Pradesh, Delhi and Uttar Pradesh participated. The participants were given intensive training in the theory relating to educational technology and the application of the principles of educational technology in the production of different types of audio-visual materials such as video tapes, tape slides, filmstrips, charts, etc. The participants completed six projects, such as video tape on Hand-pump, tape slide on Map, tape slide on Tree and also charts and flannel graph on Hand-pump and a chart on Maps.

#### *Meeting of the Working Group*

The NCERT organized a working group meeting from 19 to 20 July 1982 in the subject area of Physical Geography for the finalization of geography charts developed at the earlier workshops during 1980-81. The working group, consisting of subject teachers from Delhi University and the Central and Delhi Administration schools, examined the charts critically for the finalization of the material. Based on the comments of the subject experts these charts are now at the finalization stage for mass production.

A working group meeting in the subject area of Biology was conducted from 9 to 11 August 1982 with a view to finalizing the Biology charts and also to consider the report of the workshop on the evaluation of Biology charts. Four resource persons and also concerned faculty members attended the working group meeting. The report of the evaluation workshop on Biology charts was examined thoroughly by the group. Some notable suggestions made by the participants of the evaluation workshop were found to be very useful and have since been incorporated in the Biology charts. As a result of the working group meeting, the work on the finalization of Biology charts with suggested modifications is in progress.

A two-week working group meeting to prepare the Mathematics teaching aids for primary schools was organized in collaboration with the Association for the Improvement of Mathematics Education, Vijayawada, and the SCERT, Hyderabad, from 28 January to 10 February

1983. A series of steps, indicated below, were taken in connection with the preparation of the manual :

- (i) Mapping up of teaching aids in Mathematics at the primary level.
- (ii) Identification of difficult concepts/subconcepts.
- (iii) Preparation of Inventory of the teaching aids already prepared by the Association for the Improvement of Mathematics Education and the aids which were prepared in the low-cost teaching aids workshops organized by the Department at Keserapalli during October 1982.
- (iv) Selection of aids for the preparation of the manual.
- (v) Material collection/procurement, reference, etc.
- (vi) Preparation of write-ups for charts and models.
- (vii) Preparation of drawings, for the charts or models.

A total number of 44 aids in the form of charts and models on 29 topics was finalized during the working group meeting along with rough drawings. These drawings are being cyclostyled along with the write-ups for testing by primary school teachers after which the manual will be finalized.

#### **Production Programme, Slide Programme, Tape Slide Programme on Sanchi**

A tape slide programme on Sanchi has been produced. The programme contains 78 slides, one recorded cassette of half an hour's duration and a manual. The main purpose of producing the tape slide programme is to give an illustrated account of the Buddhist monument in Sanchi with its historical background. The programme will also enlighten school children on our rich cultural heritage.

#### **Population Education**

An audio-visual package has been developed on population education. It consists of a teacher's manual, 264 colour slides, and three cassettes containing five commentaries in English/Hindi.

The package is meant to serve as an introduction to population education for teachers and teacher-educators of secondary schools. The entire area of population education has been divided into five units :

meaning and scope, growing numbers, consequences of population education, family life education and national policy programmes.

The slides/filmstrips can be shown through automatic slide projector or manually operated slide/filmstrip projector.

The package has now been duplicated. The complete tape slide package along with the cassette recorder and slide projector is now being sent to all the 30 centres for Population Education in the country. In all, 140 sets have been duplicated, which will also be distributed and sold to the educational institutions all over the country.

### **Tape Slide Programme on Chemistry**

A tape slide programme entitled "Chemical and Ionic Bonds" has been produced. It contains 42 slides with a recorded cassette of 30 minutes' duration along with teaching notes.

### **Manual of Low-cost Teaching Aids**

A manual of Low-cost Teaching Aids for the Rural Primary/Upper Primary School Teachers was compiled. The manual consists of 25 illustrations with write-ups. It has been developed as a result of a series of workshops on low-cost/no cost teaching aids. Five hundred copies of the manual were printed. These have been sent to the teachers/resource persons who had participated in the workshops on low cost teaching aids. The primary objective of the manual is to help teachers to prepare and use the teaching aids on difficult concepts by involving local technology and the students.

### **Portraits of National Leaders**

During 1982-83 production of portraits of 25 national leaders was taken up. Each portrait will consist of pictures and quotations of the leaders having a bearing on education, culture, religion and national integration. The quotations will be selected from the biography, autobiography, speeches and books of the concerned leaders. These sets, when finally developed, will be distributed among teacher training institutions, the SCERTs, the SIEs, the Field Advisers' Offices of the NCERT, the Regional Colleges of Education and similar other institutions all over the country, as far as possible in their languages. The objectives are to help children to identify various leaders by their pictures and get inspiration from these leaders while knowing the contribution made by them for the nation.



In the first phase a set of seven portraits of Mahatma Gandhi, Pt. Jawaharlal Nehru, Netaji Subhas Chandra Bose, Dr. S. Radhakrishnan, Dr. Zakir Husain, Dr. B.R. Ambedkar and Smt. Indira Gandhi has been prepared, the work regarding the remaining portraits of 18 national leaders is expected to be completed during 1983-84.

#### CENTRAL FILM LIBRARY

During the year 1982-83, 25 films were added to the stock of the Central Film Library. The total number of films has risen to 8,174. One hundred and ninety-one new members were enrolled up to 31 March 1983 and the total number of members is now 3,805. The number of films issued to the members of the Central Film Library during the period under review was 6,745.

#### *Preview and Purchase of Films*

During the period under review a number of previews of educational films for their possible acquisition for the Central Film Library were arranged. As a result, the following films were approved and acquired for the Library :

- (i) *From These Roots*—An award-winning film produced by William Greaves Productions, U.S.A.
- (ii) *Oh Sport You are Peace*—An Official film on Moscow Olympics 1980 produced by Mos Film Studio, Moscow.
- (iii) *Shores of the Cosmic Ocean*
- (iv) *One Voice in the Cosmic Fugue*
- (v) *The Harmony of the World*
- (vi) *Heaven and Hell*
- (vii) *Traditional World of Islam*
- (viii) *Care of the Eyes*—English version
- (ix) *Rabindra Nath Tagore*—English and Hindi versions
- (x) *Air Pollution*—English and Hindi versions
- (xi) *Iswar Chandra Vidyasagar*—English version.

A tape slide programme entitled *Vanishing Forests* produced in colour and in English version by World Wild Life Fund, India, was

approved and acquired for the Central Film Library. This tape slide programme contains 91 slides and recorded cassette commentary of the duration of 15 minutes along with the write-up.

### **Project on India's Struggle for Independence—through Visuals and Documents**

The NCERT is engaged in the production of a folio on India's Struggle for Independence for students and teachers of secondary and higher secondary level. The folio will consist of about eighty panels highlighting various aspects of Indian freedom movement right from the arrival of Europeans in India to the attainment of independence. The main purpose of the project is to present to teachers the important events of Indian freedom movement through a set of original visuals accompanied by relevant documents which would make the subject fascinating. With this material, the teachers may, in turn, find it easier to teach the topic to the students more effectively. It is expected that through this folio students and teachers will have a real feel of the happenings of the most important phase of the modern Indian history. These panels in the form of enrichment material would help students to understand the changing situation of that time more vividly than they could by reading matters from textbooks only.

During the period under review, about 45 panels highlighting various aspects of Indian freedom movement were finalized. It is expected that the remaining panels would be finalized and printed during 1983-84.

#### *Exhibition of Panels depicting Various Aspects of India's Struggle for Independence*

An exhibition of panels of India's struggle for independence was organized at Shastri Bhawan, New Delhi. The panels were appreciated by the Education Minister and members of the Executive Committee. It was felt that the folio will be useful as content and enrichment material for students and teachers of secondary and higher secondary classes and that it will also serve the cause of national integration.

### **Revised Edition of the Directory of Audio-visual Equipment and Material**

A questionnaire for the collection of data for the revised edition of the Directory was sent to all the manufacturers/dealers dealing with

hardware and software material. The responses received will be analysed and data will be compiled during 1983-84.

### **Production of Films**

The NCERT took up the production of film on integrated science entitled "Science is Part of Life". During the period under review the script of the film was finalized in consultation with the subject experts of the concerned department. The shooting of the film was held in the rural area of Haryana near Sohna in Gurgaon District. The film is expected to be completed during 1983-84.

The film aims at an integrated approach towards the teaching of science in our schools and considers the local environment and the daily activities of the child and the universalities of scientific principles.

### **Sale of Films**

The 16 mm educational films related to school curriculum, of the value of Rs. 87847.30, which have been produced by the Department, were sold to various educational institutions etc. all over the country.

### **International Contacts—Cultural Exchange Programmes**

Sixteen mm prints of the film *Understanding Animals* and 35 mm filmstrip *Wild Animals of India* in colour along with synopsis were sent as a gift to the Minister of External Relations, Government of Mexico for the children's museum.

A 16 mm film entitled *National Science Exhibition* (English version) along with synopsis was sent as a gift for National Association for Multi-racial Education, Ilford, Essex.

### **Facilities Development**

The CET sound studio was geared up for ETV programme production using the TV O.B. Van so that the first set of programmes could be completed by 16 July 1982. A diesel generator, produced by the Centre for Educational Technology, was also commissioned to work with the TV O.B. Van in case of power failure. The Telecine equipment was linked with TV O.B. Van to provide additional production facilities using 16 mm film and slide inputs.

The CET sound studio was also utilized for recording programmes for the Radio Pilot Project on time sharing basis with ETV Project.

By January 1983, the installation of  $\frac{3}{4}$ " 'U'matic Video Cassette recorder system was completed in the Telecine room of CET as an additional input. It was set up in such a way that it could be used independently for editing and also be connected to O.B. Van for the recording and playback of programmes.

Two lots of 1" video tapes of 200 numbers each were imported from IVC California/Singapore. The supply materialized in the months of December 1982 and February 1983.

One set of colour ENG equipment consisting of two numbers of  $\frac{3}{4}$ " video tape recorder, one electronic editing units, one portable video recorder, one colour camera, one colour monitor and a time base corrector unit was imported from Japan, in November-December, 1982.

In January 1983, 300 nos. of  $\frac{3}{4}$ " video tapes were received from Tokyo, Japan.

Four numbers of I.V.C. Scanners were received from I.V.C., USA, in the month of February 1983.

I.V.C. spares, consisting of video heads and electronic circuitry boards, were imported on G.C.E.L. for the supply of five sets of Sony  $\frac{3}{4}$ " 'U'matic ENG equipment system and four RCN 1" video tape recorders. The supply is expected to be complete by 31 August 1983.

Order for the purchase of an Electronic Light Dimmer System for the ETV Studio being constructed in the old library building is finalized. Supply and installation is expected in July-August 1983.

Order was placed for the supply of  $\frac{3}{4}$ " video equipment accessories, such as battery charger, battery belt, power pack, etc. These are expected to be received any day.

Negotiations for the construction of CET Building are in progress between the NCERT and the Civil Construction Wing of AIR. The Civil Construction Wing, AIR, has agreed to take up construction of this building on the NCERT Campus. It has been decided to build it in two phases. In phase I, only the technical complex will be built.

Conversion work of the old Library Building into a ETV studio was taken up by the Civil Construction Wing, AIR. The masonry work for converting the existing block into rooms suitable for ETV work is almost complete, the electrical wiring in the same building is in progress and the details for acoustic treatment etc. are being worked

out. Contract for constructing the annexe of ETV studio and for conditioning the plant room has also been awarded by the Civil Construction Wing. A firm target date for the completion of the building work is yet to be given. Necessary information regarding lighting load, lighting grid, acoustic treatment, air conditioning and other requirements has already been supplied to CCW, AIR.

The CET is maintaining a technical store having sixteen ledgers. The inventory of the stores has exceeded 3000 items valued at Rs. 64,18,000 approximately.

The activities involved in the technical store are forward planning, procurement, documentation, maintenance and preservation of stores, issue, preparation of inventory and timely replenishment of stores. This entails calling of quotation/tenders, evaluation, placement of orders and follow-up action. Import of stores from foreign countries involve further activities such as opening of L/C custom duty exemption, clearance from the airport after obtaining bank clearance and frequent liaison with DGS&D, DGTD and DOE.

The FRG and the British Council representatives were assisted by providing technical liaison to enable them to assess the national requirements for possible upgrading facilities for the INSAT programme of activities which have been undertaken by the Ministry of Education.

An Assistant Engineer was sent to Tokyo, Japan, for one month's maintenance training in  $\frac{3}{4}$ " 'U'matic video equipment and associated system. The training was arranged as a sequence to the purchase of new equipment.

A Reader (Engineering) undertook a pre-project study tour to Essen University, FRG, for the study of development of hardware facilities at CET. It was financed by UNDP.

Two technicians from the Educational Technology Cell, Bombay, were trained in the maintenance and TV audio-video production techniques from 12 to 24 July 1982.

## SCIENCE WORKSHOP

### Equipment and Kits

The Workshop continued to be engaged in research and development of science equipment for schools. Like previous years, the prototype and batch production of science kits was taken up at the

request of States. Requests for science kits were also received from a large number of teaching institutions. Efforts were made for developing a closer link with schools on the one hand and with the manufacturers of science equipment in the country, on the other. The Workshop considerably contributed to the standardization of such equipment as a member of EDC 77 of Indian Standards Institution.

On the advice of the Ministry of Education, the Workshop prepared a proposal containing organizational structure, budget and other salient features for setting up nine State-level science workshops and equipping the Workshop better with the help of the proposed assistance of 20 million DM from FRG. The proposal was scrutinized by a German appraisal mission which visited the Workshop and States. Setting up two State-level workshops with the expertise of German technologists and Workshop Department has been foreseen. The Workshop will also be ideally equipped in the first phase for training State personnel on design, providing know how and blue-prints to States and furthering research and developmental activities.

### **Design and Development**

On the recommendations of the advisory committee of the National Science Exhibition, the Workshop developed a Science Club Kit. This kit contains 58 items of hand tools, instruments, multipurpose tools specially designed by the workshop, consumables and first aid. It facilitates fabrication work, generally required by students and teachers for setting up experiments and preparing science exhibits. State resource personnel worked with it and found it absolutely essential for schools.

Exhibits for the National Science Exhibition for Children, 1982, were also developed by the Workshop.

A try-out of science equipment for the middle school level was undertaken and some items of previous design were modified as per the feed-back.

Mini-projects in electronics were developed for the State resource personnel who will further disseminate these ideas among the teachers.

### **Batch Production**

A total number of 2,071 Primary Science Kits were despatched to the following States :

SIE Srinagar—1600 Kits

SIE Jammu—452 Kits

Other Institutions—19 Kits

Thirteen science club kits were gifted to each of State resource personnel after they had completed a two-week training.

### **Training Programmes**

A technician from Nepal was trained on design and development of science equipment. He was sponsored by UNESCO under APEID special technical cooperation for a short term attachment.

ITI apprentices were trained in the trades of Electrician, Fitter, Turner, Machinist, Sheet Metal and Carpentry.

A two-week training programme was also organized in the Workshop for State resource personnel. To generate the multiplier effect they will conduct similar programmes in their respective States. They were given a booklet which outlines different exercises and projects required for conducting such training programmes in the States. Also, it describes the specifications, use and safety of tools and instruments provided in the kit.

### **Miscellaneous Activities**

The Workshop continued to look after the repair and maintenance of the fleet of NIE vehicles, hot and cold weather equipment, PA system, miscellaneous electrical and electronic gadgets, etc. It also innovated low cost but very effective designs of a shed and children's park equipment. The shed has been installed; the expenditure involved has been nearly 20% of the conventional construction.

# 10

## Population Education

**D**URING 1982-83, the National Population Education Project entered into its third phase. In the first phase, nine States and one Union Territory joined the project on 1 April 1980. During the second phase, another seven States and one Union Territory followed suit. In the third phase,



i.e. during the year under review (1982-83) another five States and four Union Territories—Manipur, Meghalaya, Nagaland, Sikkim and Tripura and Andaman and Nicobar Islands, Goa, Daman and Diu, Mizoram and Pondicherry—joined the project. With twenty-seven States and Union Territories the project has now truly acquired an all-India character.

*Some of the significant achievements of the project are :*

Seventeen out of eighteen States/U.T.s of Phases I and II have set-up Population Education Cells.

The total strength of the full time academic staff engaged in implementing the project all over the country is now seventy.

Fifteen State Coordination Committees are now functioning. They held 23 meetings during this year.

Sixteen States have developed the Population Education syllabi for primary and middle school stages and fourteen for all the three stages including the secondary school stage. Eight States have incorporated population education contents and ideas in their existing State curricula at the school level, without making it an additional or a separate subject.

Twelve States have introduced Population Education in their elementary teacher training institutes. Twenty-eight universities have introduced population education ideas in their B.Ed. syllabi. These are yet other steps to institutionalize population education in the on-going system in each State.

By now, as many as 12 States have developed training packages for orienting teachers, teacher-educators, school administrators and resource persons.

This year the number of supervisors and school administrators oriented in Population Education has risen to 3,076 and the total number of teachers oriented to Population Education has crossed fifty thousand mark.

Authors of 241 textbooks were also exposed to population education to sensitize them to the determinants and consequences of rapid population growth.

In all, 183 sample textbook lessons were either revised or rewritten, so as to incorporate population-related ideas in various school subjects. Four States have succeeded in inducting population-related contents in their existing school textbooks.

Sixteen States have developed suitable instructional materials for their teachers. The total number of titles of such materials prepared by various States has now risen to 156.

During this year 23 radio talks were delivered and one lesson was telecast on the T.V.

Five States have taken initiative to promote research in Population Education at various levels. The number of researches being conducted currently has risen to 17.

### **National-level Programmes**

Two intensive training programmes were organized mainly for the full-time personnel of Phase III States. These were :

- |             |                           |   |
|-------------|---------------------------|---|
| (i) Lucknow | 22 to 30 November<br>1982 | Principles and Procedures of Curriculum Development and Preparation of Instructional Material |
| (ii) Madras | 6 to 14 December<br>1982  | Strategies pertaining to Training, Monitoring, Evaluation and Research                        |

In all, 49 members of Population Education Cells in the States and U.T.s participated in these programmes.

### **Workshop for Development of Project Proposals for Phase III States/Union Territories**

A workshop was organized at Patna between 3 and 8 April 1982 to develop project proposals for the Phase III States and Union Territories. Manipur, Meghalaya, Nagaland and Sikkim participated in the workshop.

The Union Territory of Mizoram finalized its project proposals in Delhi between 1 and 3 July 1982. This exercise was preceded by the visits of three teams consisting of the officers of Population Education Unit, NCERT, to States and Union Territories of the North-Eastern Region for doing spade work in helping them to collect necessary data for the preparation of such proposals.

## **Orientation of Textbook Authors**

As a follow-up of the activities undertaken in the previous year one workshop was organized in Constructive Training College, Lucknow, for editing some of the lessons developed in Hindi in the earlier workshop. Some of the lessons so developed have been chosen by the States/Boards of Education to incorporate in their textbooks.

## **Population Education for the Non-formal Sector**

As a sequel to the recommendations made by the National Steering Committee to explore the possibility of adapting materials already developed in population education for the formal school systems to the non-formal sector, the Population Education Unit organized workshop at Punjab Agricultural University, Ludhiana, from 4 to 11 November 1982. The workshop concentrated its efforts on identifying the needs of the children in the age group 9-15 years who are outside the school. It also tried to find out whether there was a need to develop some special material specifically to cater to the needs of girls between 12 and 15 years of age. The workshop also tried to identify the target group to whom this material should be addressed and came to the conclusion that in the first instance the attempt should be confined to the development of materials addressed to the instructors working in non-formal centres.

It was decided that another workshop may be organized to develop some instructional materials that could be used by the instructors with necessary adaptation at their own level.

## **Development of Slides and Taped Commentary**

The Population Education Unit had been working on this project in collaboration with the Department of Teaching Aids for the past couple of years. For this purpose, two national workshops were organized to develop script on which slides and taped commentary could be developed. Five units, viz. (1) Meaning and Scope of Population Education, (2) Population Dynamics, (3) Consequences of Population Group, (4) Family Life, and (5) Population Policy and Programmes, were developed for the slide-cum-taped commentary.

Over 250 slides were developed. The approximate time to project these slides along with the taped commentary would be an hour. The

taped commentary is available in Hindi and English separately. This slide show was previewed at the Project Progress Review meeting held in Madras in the month of February 1983. The slides are under duplication, and are expected to be distributed to the States participating in this project.

### **Development of Evaluation Tools**

As the project has now already been extended to almost all the States of the country it was felt necessary to take steps to ensure qualitative improvement in various activities carried out under this project. For this purpose, the Population Education Unit developed a series of evaluation tools. This work was attempted through a series of workshops and group meetings as indicated below :

<i>Duration</i>	<i>Venue</i>
28 December 1982 to 2 January 1983	RCE, Mysore
16-22 January 1983	Population Education Unit NCERT, New Delhi
27-29 January 1983	U.P. Board of Secondary and Higher Secondary Education, Lucknow
30 January to 2 February 1983	Population Education Unit NCERT, New Delhi
5-7 February 1983	College of Education, Osmania University, Hyderabad
8-13 February 1983	Technical Teachers' Train- ing Institute, Madras

The tools being developed, are as follows :

- (i) Status Study Schedules (Schedules I-XVII).
- (ii) Achievement Test (for Middle School Stage).
- (iii) Awareness Test (For teachers and students of the Secondary School Stage).

(iv) Evaluation of specific components such as

(a) Curriculum.

(b) Textual and Instructional Materials.

(c) Training Programmes—Strategies and Techniques.

The tools and evaluation data collected through them are expected to be placed before the Tripartite Review Committee Meeting next year.

### **Foreign Delegations**

India had the privilege to receive an eight-member delegation of teacher-educators from the Philippines. It was headed by the Vice-Chancellor of the University. The delegation was in India from 5 to 9 September 1982.

Another delegation which visited this country was from the People's Republic of China. This seven-member delegation was in India for a period of 11 days, 11-21 September 1982.

These delegations visited schools, training colleges, SIE's/SCERT's and non-formal education centres in Delhi, Chandigarh, Punjab and Maharashtra.

The visiting teams were impressed by the innovative strategies and practices adopted in the implementation of this project in different States in India.

### **Participation in International Seminar**

India was represented by Prof. B.S. Parakh and S.L. Nagda in a consultative Regional Seminar for Developing Action Plan for promoting population education in the Asian Region for four years—1982-86, held at Bangkok from 11 to 18 October 1982. Prof. Parakh acted as a resource person in the seminar. He also attended the Technical Group meeting held at Bangkok from 4 to 9 October 1982 to prepare a working document for the above-mentioned seminar.

### **National Steering Committee Meetings**

The National Population Education Project is implemented under the overall supervision and guidance of the National Steering Committee headed by the Secretary, Ministry of Education and Culture, Government of India. A certain number of the State Education Secretaries and

the State Project Directors attended this meeting by rotation. The Committee held two meetings this year at an interval of about six months on 16 July 1982 and 5 March 1983. The Committee appreciated the work done by various States in implementing this project. It noted with satisfaction that as many as forty thousand teachers were oriented to Population Education this year, as against only ten thousand last year. However, it requested the States to upgrade the targets in regard to number of teachers to be trained under this project.

### **Project Progress Review Meetings**

At the beginning of the year three project progress review meetings were organized as follows :

<i>Venue</i>	<i>Date</i>	<i>States/Union Territories</i>
Udaipur	12-14 April 1982	Punjab, Haryana, Himachal Pradesh, Delhi, Rajasthan, Gujarat and Chandigarh
Trivandrum	17-19 April 1982	Maharashtra, Karnataka, Andhra Pradesh, Tamil Nadu and Kerala
Ranchi	22-24 April 1982	Bihar, Assam, Orissa, Madhya Pradesh and Uttar Pradesh

A similar meeting was also organized in Delhi to review the progress made by the Population Education Unit of the NCERT at the Central level towards the end of August 1982.

### **Tripartite Progress Review Meeting**

A consolidated report of the meetings was placed before the Tripartite Progress Review Committee held in New Delhi on 30 August 1982 in the Ministry of Education and Culture, Government of India. The meeting was presided over by Shri S. Sathyam, Joint Secretary, Ministry of Education and Culture. It was also attended by Dr. Dela Cruz, Regional Adviser on Population Education, UNESCO Regional Office for Asia and Pacific, Bangkok. On behalf of UNFPA Mr. O.J. Sikes, Chief, Technical Branch, UNFPA, New York, participated in this meeting. Mr. Vernon Peries, Senior Adviser on Population, UNFPA, New Delhi, also attended the meeting. The meeting appreciated the

work done under this project and various innovative practices adopted in its implementation. The Committee decided that mid-term evaluation of the project should be undertaken during the next Tripartite Review Meeting and that the emphasis should be laid on the qualitative assessment of various activities carried out under this project.

### **Project Progress Review Meeting**

Towards the end of the year a Project Progress Review meeting was held at Madras from 8 to 13 February 1983. As many as twenty States and U.T.s participated in this programme. The meeting reviewed the progress made by various States, discussed evaluation tools developed by the NCERT, re-scheduled programme for the next financial year and found out expected expenditure for each of the States.

# 11

## Educational Evaluation

**T**HE Examination Reform Project, since its inception, seeks improvement through research studies, training and extension programmes, and production of sample evaluation materials.

Written examinations are intended to be reformed by the



adoption of modalities which will discourage memorization and eliminate subjectivity. It is also intended to frame questions in such a way that the entire content area is covered and that questions are set which have well-defined objective in view.

The NCERT conducts a large number of training courses, paper-setters' workshops, item-writers' seminars and examiners' conferences, and produces a bulk of items, unit tests and sample question-papers in almost all school subjects, throughout India.

The NCERT works with the Examination Boards, State Institutes of Education, teacher colleges, university departments of education, State Institutes of Science Education, State Institutes of English Studies and Secondary Schools in India.

### **In-depth Study of Merit Scholarship-holders placed in Residential Schools**

Data were collected through a questionnaire from the scholars and their parents, the drop-outs and their parents, the principals of approved residential schools, Directors of Education, the Central Board of Secondary Education and the Ministry of Education. The data were analysed and interpreted. Report-writing is in process.

### **Educational and Vocational Aspirations of Students of Class XII**

In interview schedule on educational and vocational aspirations of students of Class XII has been brought out under the project. It has been sent to 125 training colleges with the objective that they may encourage students to take up research studies using the interview schedule and may provide feedback and results for comparison purposes.

### **Talent Search Studies**

The following studies are being conducted in the area of talent search for which the work relating to data analysis has been completed and the results are being compared.

- (a) Research and Development in Talent : a study in the Use of Creative Tests

- (b) Social and Cultural Change and Changes in Creative Functioning in Children
- (c) Background Study of the Talented Students of Classes X, XI and XII (three separate studies).

### **An Intensive Study of Accomplishments of the Talented National Talent Search Scholarships**

For this study data have been received from 80 talented students from India and abroad. Efforts are being made to contact more subjects to get responses to the question. Review of literature is being made.

### **Evaluation of Comprehensive Internal Assessment Scheme adopted by the Board of Secondary Education, Rajasthan, Ajmer for Classes IX, X and XII**

The data collected from sample schools were analysed to develop case studies and interpreted to finalize conclusions. During 1982-83, the report of this project has been drafted.

### **Teaching-Learning Units**

For the improvement of classroom learning in Civics, a meeting of the Working Group was held to finalize the teaching-learning units including unit tests for Class VIII. This material was produced as a result of Classroom Learning Improvement Project undertaken by the NCERT in collaboration with the Kendriya Vidyalaya Sangathan. The meeting of this group was held from 29 March to 3 April 1982. The units were vetted and finalized by nine participants from teachers training colleges, colleges, schools and SCERT's.

### **Improving Practical Examinations**

A two-day Planning Meet was organized by the NCERT on 20 and 21 April 1982. The major purpose of this meet was to discuss and finalize the monograph on practical examinations. In this meet about 15 experts from schools, colleges, universities, State Institutes of Science Education, and Boards of Secondary Education participated. The various chapters of the monograph were discussed and finalized. After editing, the report has been printed under the title *Improving Practical Examinations in Science*.

### **Refinement of Test Items**

The NCERT organized a programme on evaluation regarding development and refinement of test items in different subjects at Darjeeling from 9 to 12 June 1982. Sixteen persons in different subjects were invited to attend the workshop.

### **Unit Tests in Mathematics**

An eight-day workshop for preparing unit tests in Mathematics at the 12 stage was held in Delhi from 29 September to 6 October 1982. Eleven persons from different States attended the workshop and developed 16 unit tests covering the topics in Class XII syllabus. These are being finalized and will be sent to different schools for a try-out.

### **Evaluation in Political Science**

A high-level committee meeting to plan the format of the proposed handbook on "Evaluation in Political Science" at the +2 stage was held on 7 and 8 October 1982. On this committee four professors/Senior Lecturers of Political Science from universities participated and an outline of the format has been developed. On the basis of the guidelines materials will be prepared to develop the draft handbook.

### **Question Bank in History**

A workshop for the preparation and finalization of the question bank in history was organized from 11 to 18 October 1982 at the NIE Campus, New Delhi. Ten persons from six States participated in the workshop. The question bank in the subject would be published in book form.

### **Question Bank in Economics**

A six-day workshop to prepare test items for the question bank in Economics was organized during 18 to 23 October 1982. Fifteen persons, from Goa (2), Delhi (3), M.P. (1), Maharashtra (1), Jammu and Kashmir (2), Bihar (1), Haryana (1), Rajasthan (3), and U.P. (1), attended this workshop. Topic-wise test items on eight different topics were prepared, which are being sent to schools. One of the objectives of the workshop was to prepare parallel questions on the sub-topics. This attempt has been made to diversify and enrich the question bank.

### **Test Items in Economics**

Test items in Economics have been sent to 21 schools for reviewing from the point of view of appropriateness, correctness in terms of content, specification, expected outline answers and marking scheme. The schools are expected to send results regarding actual working of test items. This exercise will help the department to finalize test items on the basis of empirical evidences.

### **Criterion Referenced Testing**

A monograph entitled *Criterion Referenced Testing* was brought out by the NCERT and sent to educational institutions throughout the country for comments.

### **Evaluating Students in Elementary Schools**

A brochure entitled *Evaluating Students in Elementary Schools* has been sent to educational institutions to provide practical guidance for evaluating student's performance at the elementary stage.

### **Environmental Studies Test Material**

Test materials consisting of questions, assignments and project work along with their tools of evaluation were developed in the area of Environmental Studies (Social Studies) for Classes III, IV and V in a workshop held in March 1983 in Delhi. The material is based on the NCERT textbooks for this stage. It is proposed to publish this material as a teacher's manual in the near future.

### **Resource Persons in Educational Evaluation**

The NCERT organized a workshop on 12-13 May 1982 at Pondicherry to train resource persons in educational evaluation for the Union Territory of Pondicherry. The participants included headmasters, inspectors of schools and teachers and they were oriented in both theory and practical work in the subject areas of English, Mathematics, Science and Social Studies.

### **Orienting Senior Teachers of Sikkim**

On request a workshop was organized by the NCERT in collaboration with the Directorate of Education, Sikkim, from 14 to 20 July 1982 to orient the Senior Teachers of Mathematics, Biology, Physics and

Chemistry in the concept and techniques of evaluation. 35 teachers of Biology, 17 of Chemistry, 13 of Physics and 47 of Mathematics attended the training programme. The participants prepared unit tests in their respective subject areas. Each group also prepared yearly plans for effective classroom instruction. These yearly plans will be further scrutinized at the directorate level and steps would be taken for their implementation.

After the first level workshop, another workshop was held at the NIE Campus, NCERT, New Delhi, from 10 to 17 February 1983. In all, 19 teachers including their science Coordinator participated in the deliberations of the workshop. The teaching units in each of the subjects, viz., Physics, Chemistry, Biology and Mathematics, were developed.

At the end of the workshop, a 250-page report containing background material as well as sample material of teaching units was brought out. It is hoped that the material will be of immense value to the teachers of Sikkim, who would be teaching these subjects in their respective schools.

The Directorate of Education, Government of Sikkim, Gangtok, proposes to print this report for wider circulation in the State.

#### **Training Course for Paper-setters**

A training course for paper-setters of the CBSE was held in the State College of Education, Patiala, from 20 to 24 September 1982. The course was attended by 31 headmasters and subject specialists from college and universities in Social Sciences and Languages. The course was meant to train paper-setters of Class X and Class XII examinations in the techniques of setting better question papers. The sample question papers developed at the workshop in each subject were subsequently sent to the Board for publication and circulation to the concerned schools in the country.

#### **Paper-setting in Sciences and Mathematics**

A 10-day workshop during 3-12 November 1982 was organized in collaboration with the Board of Secondary Education, Madhya Pradesh, at Pachmarhi for providing expertise on paper setting in Sciences and Mathematics. In all, 44 participants and two resource persons were there in the workshop. During the workshop, test papers in Physics, Chemistry, Biology and Mathematics were prepared.

### **Training Course in Educational Evaluation**

An all-India training course in educational evaluation for resource persons in Biology and Mathematics was organized from 6 to 15 December 1982 at the Model High School, Osmania University, Hyderabad. In all, 18 participants in Mathematics and 12 in Biology from Sikkim, Delhi, Uttar Pradesh, Haryana, Jammu and Kashmir, Karnataka, Andhra Pradesh, Kerala, Bihar, Maharashtra, Rajasthan and Madhya Pradesh were there in the workshop. The programme included theoretical lectures to provide training in educational evaluation, specially the nature and scope of evaluation, content analysis, educational objectives, forms of questions and mechanics of setting better question papers and analysing them. The practical work included intensive practice in preparing objective-based questions of different forms and developing unit tests. In all, eight unit tests in Mathematics and five in Biology were developed by the participants. Moreover, each group prepared content analysis of their unit and also prepared sample illustrative items.

### **Training Resource Persons**

A nine-day workshop on "New Type Test" for training resource persons of Orissa State Board of Secondary Education was held at Puri, from 28 December 1982 to 5 January 1983. In all, 52 participants, who were from different colleges of education, degree colleges of Orissa State, university professors and readers and headmasters of secondary schools were there in the workshop. The subjects covered were English, Oriya, Civics, History, Geography, General Science and Mathematics. The programme included general lectures on the basic concepts of educational evaluation and measurement and the techniques of preparing relevant question papers. Each group prepared balanced question papers in their respective subjects.

A workshop was conducted in educational evaluation in Kerala in February 1983 to train resource persons in the subjects of Mathematics, Sciences and Social Sciences. The workshop was organized in collaboration with the Directorate of Education, Kerala. The 46 participants were trained in the concept and techniques of educational evaluation covering both theory and practice. Unit tests were developed in different subjects which will be printed and circulated to the schools of the State by the Directorate of Education, Kerala.

### **Developing the Question Bank**

The NCERT extended expertise and help to SCERT, Tamil Nadu, in developing the question bank for the senior secondary stage in the subject areas of Sciences and Political Science, History, Economics and Mathematics.

### **Developing Sample Question Papers**

The NCERT provided guidance and help to the Central Board of Secondary Education, New Delhi, in developing sample question papers in English (B-Course) for Class X, which were published and circulated to the schools by the Board.

### **Consultancy Services**

The NCERT provided consultancy services to the Army Public School, and Blue Bells School of New Delhi. The teachers of these schools were trained in the concept of evaluation and developing units for classroom evaluation in all the subjects, viz., Languages, Sciences, Mathematics and Social Sciences.

### **Publications**

The following publications were brought out during 1982-83 :

1. Evaluation at the Elementary Stage (Report of the Training Programme for Resource Persons of Bihar).
2. Objective-based Teaching and Testing at the Secondary Stage (Directorate of Education, Government of Sikkim).
3. Report on the Workshop for Developing Model Question Papers in History (SCERT, Meghalaya, Shillong).
4. Evaluating Students in Elementary Schools—Theory and Practice.
5. Criterion Referenced Testing—A monograph.
6. Sample Unit Tests in History.
7. Research and Development in Talent Search: a study in the Use of Creativity Tests.
8. Interview Schedule on Educational and Vocational Aspirations for the Students of Class XII.

# 12

## Survey, Data Processing and Documentation

**T**HE NCERT conducts surveys, provides data processing services, analyses data, compiles selected educational statistics and information, provides training in survey methods and organizes orientation of State-level personnel in conducting sample surveys.



Surveys are followed by secondary analysis of the data on sample basis so that district development plans for education can be based on such data. The data collected is utilized, among other things, for school mapping, and the opening of new schools in the country is done on the basis of these survey findings.

The NCERT is equipped with LSI-II computer terminal and other data processing machines. This considerably enhances the data processing capability of the NCERT and computer use for various purposes. The terminal is equipped with LSI-II/10 processor having 320 K 16-bit words memory.

## EDUCATIONAL SURVEYS

### **Impact of Mid-day Meals Programme on Enrolment and Retention Rates at Primary Stage**

The NCERT conducted a study on the impact of mid-day meals programme on enrolment and retention rates at the primary school stage. The study was financed by the USAID. The impact of the mid-day meals programme was studied separately in respect of boys and girls and scheduled castes/scheduled tribes. The following 13 States implementing the CARE-assisted MDM programme were covered under this study:

Andhra Pradesh	Gujarat	Haryana
Karnataka	Kerala	Madhya Pradesh
Maharashtra	Orissa	Punjab
Rajasthan	Tamil Nadu	Uttar Pradesh
West Bengal		

The States were placed in two clusters, namely the States having CARE-assisted as well as indigenous MDM programme and the States having only CARE-assisted MDM programme. The unit of measurement in this study was an administrative district. In Haryana and Karnataka, the impact was studied separately by taking a block as the unit of measurement. The data analysis involved stepdown multiple regression analysis, analysis of variance and covariance.

The analysis of the data did not provide definite and clear-cut evidences of the impact of mid-day meals on the variables, probably because the unit of measurement was too large for this purpose. However, the impact of mid-day meals programme on enrolment rates of girls was more discernible than on the total enrolment rate. The block-level

study in Haryana and Karnataka has provided more conclusive evidences of the impact of mid-day meals programme on enrolment rates.

### **Study of Stagnation and Drop-out Rate at Primary Stage in Nine Educationally Backward States**

The objectives of the study are to estimate stagnation and drop-out rate at the primary stage separately for boys and girls, SC and ST for rural and urban areas without going into the causes, using the restructured cohort method. The following States are being covered under this study:

Andhra Pradesh	Assam	Bihar
Jammu and Kashmir	Madhya Pradesh	Orissa
Rajasthan	Uttar Pradesh	West Bengal
Himachal Pradesh		

Himachal Pradesh, though not educationally backward, has been included at the request of the State Government.

The schedule for the collection of data has been finalized and its Hindi version has been printed. The sample of schools to be studied is being finalized.

### **Sample Study Based on the Fourth All-India Educational Survey**

The study was conducted on a sample basis with the purpose of studying the availability of school plant, equipment and curricular, co-curricular and ancillary facilities, etc. School Information Forms canvassed during the Fourth All-India Educational Survey formed the basis. Different sampling fractions were applied for different types of schools, namely, primary, middle, secondary and higher secondary or equivalent. A sample of schools, using sampling fraction prescribed for each State, was selected from each district. School Forms from more than 50 per cent districts were not received. Data in respect of Himachal Pradesh, Jammu and Kashmir, Karnataka, Orissa, Punjab, Tamil Nadu and Tripura and Andaman and Nicobar Islands, Delhi, Goa, Daman and Diu and Lakshadweep have been computerized and the report on the project is under preparation.

### **Development of District Education Plans on the Basis of the Fourth All-India Educational Survey Data**

A programme was undertaken in some States to orient officers at the

district and block level in using the Fourth Survey data for the planning of educational facilities at primary and middle levels. A methodology was developed for the identification of habitations in rural areas where primary schools need to be opened on a priority basis and where the existing primary schools need to be upgraded to the middle standard. During 1982-83, the State-level training was held at Panjim for Goa, Daman and Diu, at Madras for Tamil Nadu and at Bhagalpur for Bihar.

### **Sample Survey of Educational Facilities for SC/ST in Rajasthan**

This Survey is being conducted to assess the availability of educational facilities for elementary education in habitations predominantly populated by SC/ST and to know the reasons why such children are either not sent to school or withdrawn from school before completing the elementary education. Two districts, namely, Bharatpur and Dungarpur, have been selected for the study. Data from Dungarpur District have been collected and data from Bharatpur are under the process of collection.

### **Study of Educational Backwardness of Girls**

A research project on educational backwardness of girls has been taken up in eight States of India (Andhra Pradesh, Bihar, Uttar Pradesh, Rajasthan, Haryana, Orissa, Jammu and Kashmir and Madhya Pradesh) in which the enrolment rates of girls at the primary state are quite low. The project is being financed by the UNICEF. The main objectives of the study are to estimate enrolment and wastage rates among girls and to identify the causes of low enrolment and dropping-out among them. It is expected that on the basis of the information collected it would be possible to suggest remedial measures for reducing drop-out rate and increasing the enrolment rate. The collection and analysis of data have been completed in the majority of the States. One of the States has already brought out some district reports. In this study data have also been collected from teachers, parents and other members of the community.

### **Training Course on Application of Sample Survey Methods in Education**

The third training course on application of sample survey methods in education was organized at the Regional College of Education, Ajmer, from 24 February to 5 March 1983. The course was meant for the staff of SIE/SCERT and officers of the Education Departments in

different States and Union Territories. In all, 16 representatives from 13 States/Union Territories including one representative from the RCE, Ajmer, attended the training course.

#### **Report on Fourth All-India Educational Survey**

The report on the Fourth All-India Educational Survey was published. The report contains information on the availability of educational facilities in rural areas, on schools, teachers enrolment, etc.

#### **Report on Educational System**

The report on the educational system in the States and Union Territories of India was brought out.

### **LIBRARY AND DOCUMENTATION**

The Library and Documentation Unit continued to provide all kinds of services to its users. The relevant data for the year 1982-83 is as under :

1. Number of books purchased	1239
2. Number of books received as gratis	855
3. Number of books purchased by various departments against projects and accessioned in Regular Library Accession Register	1737
4. Total number of books added	3831
5. Total number of books and bound periodicals	120893
6. Number of members	2128
7. Number of books and periodicals get bound during the year	2599
8. Number of outside research scholars who availed themselves of the consultation facilities of the library	3596
9. Journals subscribed	329
10. Journals received on exchange	19
11. Journals received as gratis	150
12. Number of newspapers received	16
13. Back volumes of journals purchased	83

## **Documentation Services**

The following documentation services were provided :

- |  |           |
|--|-----------|
| 1. Current contents  | 12 issues |
| 2. Accession list  | 6 issues  |
| 3. Press-clipping on Education and other allied disciplines prepared | 1012      |

## **Reprographic Service**

The Library continued to provide reprographic services and 12887 photocopies of documents were made at the request of various departments/units etc.

## **Stock Verification**

It has been planned to conduct stock verification of the Library in a phased manner to complete a cycle within three years. The work in this regard has already started and nine sequences of the collection have been verified. The first cycle of verification is likely to be completed in 1984. The stock verification has been taken up as an on-going project and this method does not interfere with the normal working of the Library while the verification process goes on.

## **Training**

Shri U.T. Lama from Bhutan, a Unesco fellow under UNDP programme, initially joined this Unit in December 1982 as a trainee in Library Science for four months. The term of Shri Lama which was to expire on 31 March 1982 has been extended by two months.

At the invitation of the Directorate, Union Territories Civil Services (Training), Delhi, Shri K.L. Luthra, Head, L.D.U., participated as a resource person for the orientation programme organized by the Directorate of School Librarians.

## **Staff Development**

Shri S.L. Verma, Documentation Officer, proceeded on study leave for one year and obtained the degree of M.C.I. Sc. from Delhi University.

# 13

## Research and Innovations

**R**ESearch 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 research fellowships so that educational problems are investigated and a band of competent research workers is created in different parts of the country. Most of the research undertaken or supported by the NCERT is in identified areas of priority.

The Educational Research and Innovations Committee (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.

The research proposals that NCERT receives from its departments/units are first evaluated by a Screening Committee or external and internal members under the Chairmanship of the Joint Director. Evaluation of the proposals is generally made on the criteria of worth-while-ness, 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. Seven Junior Research Fellows at the NIE and eight Junior Research Fellows at the RCEs worked for their doctoral degrees during the period under report.

#### **Conferences/Seminars/Lectures**

Under the NIE Lecture series, nine 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. The NCERT also sponsored a Researchers Seminar on eve of the the birthday of the Nobel Laureate Prof. C.V. Raman on 6 November 1982.

<i>Speaker</i>	<i>Topic</i>	<i>Date</i>
Dr. C. Gopalan Nutrition Foundation of India, New Delhi	Nutrition Problems of Children	30 June 1982
Dr. B.N. Joshi Bombay	Education of Mind Employability	16 July 1982
Ms. Betty Adams National Foundation for Educational Research	Educational Research in the United Kingdom	2 to 3 August 1982
Dr. S. Ramakrishna Tamil scholar	Mahakavi Subramaniya Bharati	18 September 1982
Dr. M.L. Farhat Tripoli Alfetah University	Social Alternatives in the Third World	24 September 1982
Ms. Aban Bana Max Muller Bhavan 3, Kasturba Marg New Delhi	Effective School System based on Rudolf Stienner Anthroposophy	24 January 1983
Prof. W. Miltter Director, Institute of International Education and Research Frankfurt	Educational Research in Europe with special reference to Germany	5 March 1983
Dr. (Smt.) Devaki Jain President, Institute of Social Studies Trust New Delhi	Women : Development and Employment	8 March 1983
Dr. (Km.) Susheela Bhan, Director, Indian Council of Social Research, New Delhi	Women and Development	8 March 1983



### Third Survey of Research in Education

The Council has initiated the Third Survey of Research in Education. Approximately, 1,600 abstracts have been collected on research undertaken on various aspects of education in India and abroad. The manuscript is being edited for publication.

### Completed Research Projects

The research projects completed during the year are listed in the table below along with the main findings.

#### Completed Projects

<i>Title of the Project</i>	<i>Principal Investigator</i>
Construction and Standardization of Primary School Achievement Test (PSAT) for Pupils of Grade VII in the State of Gujarat	Dr. Jayantibhai, H. Shan Bhavnagar
Economics of Primary Education in Andhra Pradesh	Shri B. Rajaiah, Warangal
Science Teaching in Primary Schools—a Training Programme	Dr. K. Adinarayana, Gandhigram
A Study of Teaching Competency of Secondary School Teachers	Dr. B.K. Passi, Indore University
Identification of Selection Criteria for National Talent	Dr. (Km.) Sudesh Gakhar, Chandigarh
A Study of Learning Environment of Achieving Classes of Rajasthan Schools	Dr. Ram Pal Singh, Ajmer
A Study of the Effectiveness of Using Educative Toys in Teaching Science to Fifth Standard	Shri Shankaranarayana Sastry Hassan
Impact of Non-Graded Units upon Primary School Drop-outs	Dr. G. Subramania Pillay, Madurai

Profile of Registrants—an Enquiry into Variables relating to Students of Correspondence Institutions at the Secondary Level	Dr. O.S. Dewal, Delhi
Orientation Course in Sexism for Urban Middle/Higher Secondary School Teachers of Delhi	Smt. K. Nishchal, Bombay
Preparation of Improvised Educational Teaching Aids with the Help of Waste Materials	Shri N.K. Srivastava, Banswara
Disabled Children in Normal Schools	Dr. A.B. Phatak, Udaipur
A Study of the Incidence and Factors responsible for Dropping out of Children from Municipal and Local Authority Schools in Greater Bombay and Thana District from Standards I-VII during the last four years, i.e. 1973-77	Smt. Madhuri Shah, Bombay
Aspirations, Values and Personality Pattern of Tribal Students in Mirzapur	Dr. S.S. Srivastava, Varanasi
Social-Psychological Problems of the Rural Students Migrating to Urban Areas for Studies	Dr. Subimal Deb, Calcutta
Relation of Diet and Growth to Intellectual Growth among School Children in Orissa	Dr. S. Patel, Bhubaneswar
An Intensive Study of Certain Factors Influencing the Reading Attainment of Primary School Children	Prof. R. Srinivasa Rao, Tirupati
Children's Judgement of Personal Happiness	Prof. Ramdhar Singh, Kanpur

**CONSTRUCTION AND STANDARDIZATION OF PRIMARY SCHOOL  
ACHIEVEMENT TEST (PSAT) FOR PUPILS OF GRADE VII  
IN THE STATE OF GUJARAT**

Principal Investigator :

*Dr. J.H. Shah*

Since the Government of Gujarat has decided to have 7+5+2 pattern of education, Class VII will be the terminal point for the first stage and therefore there is need for estimating the capacity of a pupil to undertake the next phase of schooling. The study aimed at constructing and standardizing the Primary School Achievement Test (PSAT) to estimate the real capacity of seventh graders.

The PSAT is a verbal test constructed on the pattern of the American School and College Ability Test (SCAT) series of Educational Testing Service. The test comprises four subtests which directly measure school learning abilities : (i) attaching meaning to isolated words—Vocabulary Test ; (ii) manipulating numbers and applying concepts accurately in a computation situation—Routine Computation Test ; (iii) comprehending the sense of a sentence—Sentence Completion Test ; (iv) solving quantitative problems—Mathematical Reasoning Test.

In the first two try-outs, open-ended items containing 90 items in each of the language subtests and seventy-five items in the Mathematics subtests were administered to 90 pupils. The third try-out on 200 children, contained 75, 60, 80, and 50 multiple choice items for each of the subtests respectively. For the fourth try-out 399 subjects of Class VII were selected from 12 schools of three districts. For the final form 25 items were selected for each subtest.

The cluster sampling was used to select 52 schools from 10 out of the 18 districts.

There were significant differences between means of urban and semi-urban and between urban and rural areas for both the sexes ; the differences between semi-urban and rural areas for both the sexes ; were, however, not significant. Therefore, separate norms for boys and girls of urban areas and combined norms for semi-urban and rural areas boys and girls, were developed ; Stanine norms were computed for the three groups.

Inter-test reliability was calculated by the product moment formula. All correlations were positive and substantial suggesting that subtests have some common factor. Reliability co-efficients varied from 0.76 to 0.94. Validation was done with percentage of examination marks, with other standardized tests and with teachers' ratings.

#### ECONOMICS OF PRIMARY EDUCATION IN ANDHRA PRADESH

Principal Investigator :

*Shri B. Rajaiah*

Education contributes to social change in developing countries. Since girls' enrolment is low, social change is also slow. Education as a form of investment has to be expanded. Since the formation of Andhra Pradesh in 1956, awareness of the need for education is reflected in the upward trend of enrolment index for primary education, the average enrolment being 69.49 per cent. The ratio of girls enrolled also increased with an average growth rate of 3.62 per cent. In fact, girls' enrolment increased at a faster rate than that of boys.

Between 1956-57 and 1978-79 there was a 36.5 per cent increase in the number of schools. The retention rate being low, there was a high correlation between the output of primary schools and the literacy rates. With the increase in the primary school teacher index, there was greater participation of women.

As it has not been possible to distinguish between expenditures for consumption and investment, the magnitude of human investment has not been estimated. The expenditure of education as a percentage of National Domestic Product increased in primary education showing an increase of 778 per cent as against an increase of 1606 per cent in the State's revenue. However, the share of primary education in aggregate investment in education declined in the period. The average annual per pupil total real cost, including income foregone, increased nearly ten fold in the absence of private resource costs (expenditure on tuition, travel and school uniform). The school-related costs tended to increase with the level of education and opportunity costs or incomes foregone increasing with age. Wastage rates tended to decline in all classes. The number of female drop-outs was significantly greater than the number of males. The cumulative annual wastage rate was higher among the girls, among the scheduled caste and scheduled tribe children. The incidence of wastage in primary education was highest among children of the scheduled tribes. As the primary school system was

not able to hold all children during the period of schooling, the number of school learners increased.

Variations in literacy rates in the different districts of Andhra Pradesh implied that the Telengana region was educationally more backward.

#### SCIENCE TEACHING IN PRIMARY SCHOOLS—A TRAINING PROGRAMME

Principal Investigator :

*Dr. K. Adinarayana*

The study attempted to develop strategies for science teaching in primary schools. The specific objectives were : (i) to identify areas of competence in the teaching of elementary science ; (ii) to evaluate the course in elementary science based on competency required in teacher ; (iii) to develop competence criteria for the observational, investigatory and inquiry skills in pupils ; (iv) to develop packages of instructional aids to teachers ; and (v) to determine the advantages and effectiveness of packages in terms of development of skills in pupils.

Two units of the science syllabus of Standards IV and V prescribed by the Tamil Nadu Government were selected for teaching. Instructional packages were prepared for teaching through the experimental method as well as the customary method. Comparison of effectiveness of the methods was made on the basis of criterion tests for knowledge and comprehension, observation, inquiry and investigatory skills. Using the stratified random sampling some semi-urban and rural schools were selected from Athoor Panchayat Union of Madurai district.

Forty-eight teachers were selected of whom twenty-four teaching experimental group were oriented to the objectives of the programme, analysis of content, methods and techniques, evaluation techniques, organization of clauses, administration of tests and the role of teachers during teaching, discussion group work and demonstrations. The sample of 760 pupils were divided into equated groups in each school on the basis of age, mental ability and science background test. The means and standard deviation of each group was computed and test was applied to determine the difference in pre-test and post-test performance. The total performance was analysed in terms of observational, inquiry and investigatory skills. Reaction towards science activities was measured through a reaction scale prepared by the investigator.

The findings revealed : (i) there was a significant difference in development of skills of the experimental group; (ii) Standard IV students in nine schools and Standard V students in seven schools of the experimental group indicated an increase in knowledge and comprehension in comparison to the control group students; (iii) as regards observational skills, Standard IV students in nine schools and Standard V students in eleven schools of the experimental group showed significant improvement; (iv) investigatory skills developed significantly in eleven schools in each of the standards of the experimental group; (v) performance of the experimental group in inquiry skills of ten schools in Standard IV and seven schools in Standard V increased significantly; and (vi) the experimental group was highly favourable towards science activities.

#### A STUDY OF TEACHING COMPETENCY OF SECONDARY SCHOOL TEACHERS

Principal Investigator :

*Dr. B.K. Passi*

The objectives of this study were : (i) to study the relationship between teachers' demographic variables (sex and age) and teaching competency at the secondary level; (ii) to study the relationship between other variables (teachers' attitude towards teaching, interest in teaching, self-perception for his teaching behaviour and intelligence) and teaching competency at secondary level; (iii) to study the relationship between teaching competency of secondary language teachers and product variables in terms of academic achievement and pupils' liking the teaching behaviour of their teachers; (iv) to develop instructional materials for one of the identified teaching competencies required for the teaching of Hindi/English at secondary level; and (v) to study its effect on the development of the teaching competency.

The hypotheses to be tested were : (i) male and female secondary school teachers teaching language (Hindi/English) do not differ significantly in their teaching competency. (ii) The age of the secondary language teachers has no significant relationship between the teacher's attitude towards teaching and the teaching competency of secondary language teachers. (iii) There is no significant relationship between the teacher's interest in teaching and the teaching competency of secondary language teachers. (iv) The teacher's self-perception of his/her teaching is not significantly related to his/her teaching

competency. (v) There is no significant relationship between the teacher's intelligence and the teaching competency of secondary language teachers. (vi) There is no significant relationship between the teaching competency of the secondary language teacher and the liking of his pupils about his teaching behaviour. (vii) The teaching competency of the secondary language teacher has no significant relationship with the academic achievement of pupils. (viii) The practice of the competency through the developed instructional materials will improve the level of teaching competency of teachers on that particular competency. (ix) The practice of the competency through the developed instructional materials will improve the language teaching competency of teachers.

The sample for the pilot study of the descriptive phase of the study consisted of 72 teaching-learning situations. In these 36 language teachers teaching Grades IX, X and XI and their pupils were involved. For the final study of the descriptive phase of the study, a total number of 556 classroom teaching-learning situations (228 each at the time of teaching Hindi and English separately) were observed. In all, 107 teachers (48 teachers teaching Hindi and 59 teachers teaching English) were involved in the study. These teachers were teaching Grades IX, X and XI in 38 secondary schools of Indore district. In addition data from 9360 pupils relating to their liking about teachers' teaching behaviour were collected. The achievement test in Hindi was administered to 766 pupils of Grade IX. For the purpose of validation of instructional materials, 28 student-teachers who had offered Hindi as a teaching subject were selected. From these 28 student-teachers, two groups (experimental and control) consisting of 14 student-teachers, were randomly formed.

The various tools used were : Grewal's Teacher Attitude Scale, Grewal's Interest Inventory for Teachers, Raven's Standard Progressive Matrices, Rama's Teacher Self-rating Scale, Rama's Pupil Liking Scale, the classroom observation schedule and the achievement test of Hindi were developed by the investigator. The data were analysed by employing Principal Component analysis, Varimax rotation test, correlation, and ANCOVA.

The finding of the study were : (1) Nineteen competencies were identified and shared a total variance of 76.80 per cent. The competencies were : giving assignment, loud reading, reading, asking

questions, introducing a lesson, managing classroom, clarification, secondary loud reading, using blackboard, using reinforcement, pacing avoiding repetition, consolidating the lesson, dealing with pupil's responses, improving pupils' behaviour, audibility, using secondary reinforcement, recognizing pupils' attending behaviour, and presenting verbal mode. (2) The male and the female language teachers did not differ in their competency. (3) There was a positively significant correlation between the age of language teachers teaching at the secondary level and their teaching competency. (4) There was no significant relationship between the attitude of the language teacher teaching Hindi/English at the secondary level towards teaching, interest and intelligence and teaching competency respectively. (5) There was a negatively significant correlation between the self-perception of language teachers teaching at the secondary level for their teaching and the teaching competency. (6) There was a positive significant relationship of the teacher's teaching competency with the liking of their pupils for their teaching behaviour and academic achievement of their pupils of Grade IX in Hindi, respectively. (7) The training of student-teachers through the instructional materials in micro-teaching setting improved the cognitive competency, emotional competency, and behavioural competency of loud reading and competency of loud reading as a whole among the student-teachers of experimental group significantly more as compared to student-teachers of control group. (8) After training in instructional materials in simulation condition, the competency of loud reading among the student-teachers of experimental group was improved significantly more in real classroom condition as compared to the student teachers of control group. (9) There was no significant difference on the language teaching competency of the student-teachers of experimental and control groups in real classroom condition.

#### IDENTIFICATION OF SELECTION CRITERIA FOR NATIONAL TALENT

Principal Investigator :

*Dr. (Km.) S. Gakhar*

The objectives of the study were : (i) to study the relationship of intellectual personality and motivational variables with performance on the National Talent Search procedures, (ii) to assess the outcome in terms of clusters of such variables as could serve as the best criteria for the selection of talented students, and (iii) to study the differential



pattern of variables related to selected and unselected groups in the NTS scheme.

One-way analysis of variance was employed to identify the potential variables on which the NTS awardees and rejectees differed significantly. Thirty-one independent variables included two measures of intelligence, five of creativity, sixteen of personality, ten interest areas, five indices of SES and a score each for scientific attitude and achievement motivation. Three types of scores on the NTS examination (scholastic aptitude test, general mental ability and interview) comprised the dependent variable.

The sample which was restricted to Delhi, included the awardees (Group I), those who were rejected after the interview (Group II), those who could not qualify in the written examination (Group III) and a matched random sample who did not even appear in the examination (Group IV).

The tests used were test of General Mental Ability (Jalota) (Hindi-version), Standard Progressive Matrices, Torrance Tests of Creative Thinking, Test of Attitude towards Science (Miachel, Ford), Achievement Motivation Test and Inventory (Prayag Mehta), Eysneck Personality Inventory, Jr. Sr. High School Personality Questionnaire (HSPQ), Socio-Economic Scale (Dev-Mohan) and an adaptation of the NCERT Interest Inventory.

The results revealed : (i) The awardees and those rejected in the interview did not differ on the variables of verbal and non-verbal intelligence and creativity, attitude towards science, interest in science but they differed in outdoor physical activities. The awardees were more reflective, self-assertive and overactive. (ii) The awardees were better than those who did not qualify the written examination on non-verbal intelligence, creativity total (verbal) flexibility and originality while the latter group was significantly better as regards verbal intelligence, interest in economics and outdoor physical activities. (iii) The awardees scored higher than those who did not appear for the examination on non-verbal intelligence, in all the measures of verbal creativity and interest in scientific area. The latter group scored higher on outdoor physical activities, economics and on non-verbal creativity. (iv) Those rejected in the interview performed better than those who did not qualify the written test on verbal creativity and scientific attitude but were equally intelligent. (v) The potential variables of

selection criteria in the NTS examination appeared to be non-verbal intelligence, four dimensions of verbal creativity, attitude towards science, interest in science and economics and outdoor physical activities. (vi) Verbal intelligence was significantly positively correlated with interview scores while significantly negative correlation existed between non-verbal intelligence and interview scores. (vii) Educational status of the family had significant positive correlation with SAT and interview scores.

#### A STUDY OF LEARNING ENVIRONMENT OF ACHIEVING CLASSES OF RAJASTHAN SCHOOLS

Principal Investigator :

*Dr. R.P. Singh*

The objectives of the study were : (i) to study the relationship between socio-emotional classroom climate and the academic success of pupils as well as general classroom behaviour, (ii) to identify and analyse the patterns of classroom climate comparing those in schools of rural and urban areas and their effects on school learning, (iii) to compare the socio-emotional climates of classes taught by male and female teachers to identify the effect of sex of the teacher, (iv) to study the interrelationship between students' perception of teachers' classroom behaviour and socio-emotional tone of the class, (v) to compare the prevailing socio-emotional climate of high and low achieving classes, and (vi) to develop a socio-metric test to measure pupils' behaviour development as perceived by classmates.

A student information schedule of twenty-three items assessed the self-concept of high and low achieving pupils; the five-point ratings by pupils enabled measurement of personality traits like habits, ideas, cognitive aspects and physical traits. Standard Progressive Matrices and Jalota's Group Test of Mental Abilities provided information about intelligence of pupils. With the help of the first edition of Socio-Economic Status Scale (Kuppuswamy) the position of pupils in society and school life was ascertained. On the basis of Spaulding's Coping Analysis Schedule, a pupil classroom behaviour schedule, covering only ten areas, was developed. Tried out on a sample of 500 students of Ajmer city, the reliability co-efficient for all the dimensions was 0.77. The Learning Environment Inventory of Anderson and Welberg was used to measure the classroom environment as perceived by pupils. From among the Class XI pupils of (a) 15 higher secondary

schools who topped and those who scored the poorest in the 1979 secondary examination of Rajasthan, (b) the public schools and (c) the Central Higher Secondary Schools, five best and five poorest students were sampled from each group of schools. T-test and analysis of variance were applied. The product moment coefficient of correlation indicated relationship between variables. With the help of partial correlation, the effects of intervening variables like intelligence and socio-economic status were parcelled out; regression analysis helped predict the powers of the variables. For the purpose of analysis, individual scores as well as school means were considered the unit.

The study indicated : (i) Pupils' academic achievement was related to the category of school. (ii) Private schools, particularly mission schools, had high achieving students. (iii) Socio-economic status had significant relationship with academic achievement ; the pupils with low socio-economic status failed to achieve high. (iv) Sex played a role in the creation of classroom learning environment ; female teachers did significantly better. (v) Classroom climate significantly affected the pupil's academic achievement, an adverse or hostile climate hampered the pupil's achievement. (vi) Though rural schools had a more conducive learning environment, most of the poor achieving schools were rural schools. (vii) The socio-emotional climate not only influenced the pupil's academic achievement but was a reliable predictor of the pupil's academic achievement. (viii) The classroom climate affected the pupil's scholastic achievement as well as classroom behavioural activities.

#### A STUDY OF THE EFFECTIVENESS OF USING EDUCATIVE TOYS IN TEACHING SCIENCE TO FIFTH STANDARD

Principal Investigator : *Shri Sankaranarayana Sastry*

It was hypothesized that (i) science teaching through educative toys may not be as effective as traditional methods ; and (ii) science teaching through educative toys may not increase the comprehension easily.

Toys, models, figures based on one or other concept included in primary school science syllabus were used.

Two sections of Class V of a primary school in Karnataka were selected. Only one section, the experimental group, was exposed to

science teaching through toys for an academic year. Some of the toys used were prepared by the teacher/investigator while others were from children's collections locally available or from toy manufacturers. The selection of toys was dependent on their relevance to concepts in Physics, Chemistry, and Biology, which could be taught through toys. The same teacher taught both the groups so as to minimize differences likely to arise because of difference in teaching. The selected teacher was oriented to teaching science through toys. The experiment entailed providing some of the selected toys to individual students or groups of students to play with. This was followed by discussions initiated by the teacher on different aspects of the toys, its functioning, and its construction and the evaluation of concepts was done with the help of other similar toys.

Data were gathered with the help of a questionnaire, observations and school test marks.

The findings revealed : (i) the experimental group did considerably better on the post-test than the controlled group. However, the number of passes in the post-test of the two groups was the same probably because indirectly they had become aware of the treatment. (ii) Comparison of school marks of the two groups revealed a steep rise in marks of the experimental group. (iii) Initially, the use of toys in the experimental group consumed more time than the traditional method but in later stages, the teaching was quicker and easier. (iv) A marked difference in attitude towards learning of science was noted among the experimental group pupils. (v) An attachment rapport had developed between the teacher and the subjects of the experimental group. (vi) The students of the experimental group evinced more interest in science where it was taught in the first or last school period.

#### IMPACT OF NON-GRADED UNITS UPON PRIMARY SCHOOL DROP-OUTS

Principal Investigator :

*Dr. G. Subramania Pillay*

The study aimed at (i) appraising the outcome of the non-graded units in minimising wastage in primary education, (ii) to find out the reactions of teachers to the non-graded units, (iii) to identify the practices in the non-graded primary schools, and (iv) to find out facilities provided in Standards I, II and III.

The following hypotheses were tested : (i) Non-graded units have helped minimize drop-outs in primary schools. (ii) Teachers have favourable reactions to non-graded units. (iii) The major components of non-graded units are followed in schools. (iv) Proper facilities have been provided in schools for the implementation of the non-graded units.

A sample of 875 teachers were selected from a sample of 150 primary schools of the four southern districts of Tamil Nadu, viz., Madurai, Ramnad, Tirunelvilli and Kanyakumari. Data were gathered with the help of Enrolment Enquiry Proforma (EEP), the Non-Graded Unit Reaction Scale (NGURS) along with an interview schedule developed for the study.

The findings indicated : (i) Non-graded units introduced in the primary schools of Tamil Nadu helped minimize drop-outs. (ii) Teachers favoured non-graded units. (iii) Additional work was not given to the gifted who completed their work earlier nor was special attention given to talents and interests of pupils, as envisaged for effective functioning of non-graded system. (iv) Teaching was done to the entire group and not individuals or small groups. (v) Assignments were not given on the basis of talents and interests. (vi) Pupils' individual progress record was not maintained nor was continuous testing done. (vii) Most teachers were not oriented for the non-graded system. (viii) Teachers were not convinced that the pupil performance improved with the introduction of the system. (ix) Standards I, II and III were not considered a single unit as separate time tables were prepared for each of the classes. (x) Since a minimum of 75 per cent attendance was required for promotion of students from Standard III to IV, only 45.76 per cent students were promoted to Standard IV in May 1981. (xi) Stagnation in Standard III increased with the introduction of the system. (xii) All concerned, namely, teachers, pupils and parents, were frustrated with the system resulting in lack of motivation.

PROFILE OF REGISTRANTS—AN ENQUIRY INTO VARIABLES RELATING  
TO STUDENTS OF CORRESPONDENCE INSTITUTIONS AT THE  
SECONDARY LEVEL

Principal Investigator :

*Dr. O.S. Dewal*

Correspondence courses were first introduced at the higher education level so as to regulate expansion of education and also to provide

education to the employed, while only in 1964 were correspondence courses introduced at the school level for improving the academic standards of private students. The four institutions which introduced such courses were the Madhya Pradesh Board of Secondary Education, Bhopal ; the Patrachar Vidyalaya, Delhi ; the Board of Secondary Education, Rajasthan, Ajmer ; and the Board of Secondary Education, Orissa.

The objectives of the study were : (i) to understand the distribution of students in correspondence institutions, and (ii) to study their reactions towards various subsystems of correspondence education like difficulty level of courses, study hours, self-containedness of courses, response sheets, fees, etc.

Of the 3,000 students registered in the four institutions, a stratified random sample of 80 registrants from the institutions at Delhi, Bhopal and Ajmer were sampled. Since complete data could not be collected from the Board of Secondary Education, Orissa, it was omitted from the study. A questionnaire was prepared to collect information on students and their reactions to correspondence education. Students' information on age, sex, income, medium of examination, state-wise representation and of scheduled castes and scheduled tribes was collected. Reactions to difficulty level of course, study hours, despatch, frequency and uniformity of lessons, usefulness of personal contact programme, response sheets, fees and personal correspondence were also collected through the questionnaire.

The findings revealed that (i) more females were registered in Delhi (25 per cent) and the least in Rajasthan (2.2 per cent); (ii) the percentage of scheduled caste and scheduled tribe registration was very low; in fact, there was no female scheduled tribe student in Delhi and no scheduled caste or scheduled tribe female registrant in Rajasthan; (iii) most students in the three institutions were in the age range 18-21 years; (iv) the majority of the registrants were from low and medium income groups, only 5.3 per cent belonged to the income groups Rs. 12,000 and above; (v) while in the Patrachar Vidyalaya, Delhi, the largest number was from Delhi (89.4 per cent) the representation from Haryana, Uttar Pradesh and Tamil Nadu was 2.2, 2.6 and 1.5 per cent, respectively; all registrants at the Rajasthan Board belonged to Rajasthan. However, at the Madhya Pradesh Board there were few students from Madhya Pradesh, the largest number was from Haryana followed

by Rajasthan, Kerala and Punjab; (vi) while all students at the Rajasthan Board opted to write in Hindi, as many as 32.5 per cent opted for English in Madhya Pradesh and 8 per cent in Delhi; (vii) though most students considered the course of average difficulty, the Delhi course was considered more difficult as it was an all-India level course; (viii) the majority of students studied 13 to 24 hours a week with maximum hours on Sundays; (ix) English was considered the most difficult subject by the students each of the institutions; students of Madhya Pradesh and Rajasthan considered Commerce the next most difficult subject, while the Delhi students considered Mathematics the most difficult (x) the majority of the students did not find the lessons self-contained; this was felt more for English and less so for Mathematics, Economics and Commerce; (xi) the personal contact programme was not attended by as many as 50 per cent students while 30 per cent attended only part of the time; (xii) as many as 50 per cent who attended the contact programme did not find it meaningful; (xiii) no student appeared satisfied with the evaluation of response sheets; besides, the Madhya Pradesh students were not satisfied with the timing of return of response sheets; and (xiv) the routine type of queries by students were replied to but the majority of unconventional questions were not.

ORIENTATION COURSE IN SEXISM FOR URBAN MIDDLE/  
HIGHER SECONDARY SCHOOL TEACHERS OF DELHI

Principal Investigator :

*Smt. K. Nishchal*

The study was an attempt to develop an orientation programme for modifying the existing attitudes of urban higher secondary school teachers of Delhi. The study tried to assess whether the orientation course was successful in bringing out any change in the biases of teachers in respect of adult sex roles and behaviour in the classroom.

On the basis of findings of Phase I which was an attitudinal study of teachers in Delhi and Bombay, it was decided to limit the study to predominantly male Hindu teachers from government and non-government schools. The final sample for the orientation programme consisted of ten teachers each from a government (single sex) and a non-government (coeducational) but on account of illness, six teachers could not be observed by the experts. Before the beginning of the orientation programme, six observers (experts) observed teachers in the classrooms/games field to find out whether they transmitted sexist messages to students in their normal conduct, serving as base-line data. A series of

five practical, verbal and non-verbal exercises was given to teachers of both schools. An attitude questionnaire administered earlier to the teachers was again administered on the completion of the programme.

The study indicated : (i) Although occupational avenues were equally open to men and women, the responses indicated that there were certain areas of work which showed an imbalance in assignment of occupations to men and women; although direct occupational guidance was not given by teachers, covert messages were transmitted which were likely to gear the students towards stereotyped goals. (ii) Though they claimed equality and sharing of tasks amongst the sexes, they continued to assign tasks they attributed as either male or female responsibility. (iii) Teachers were aware of stereotyped roles of men and women in society; cultural and social biases were strongly reflected in the character of male and female figures in textbooks. (iv) Though the sample comprised an almost equal number of male and female teachers, the responses revealed definite acceptance of existing social beliefs. (v) About providing sex education, respondents were equally divided; half of the sample favoured segregation of sexes while showing a movie pertaining to boys while the other half felt no segregation was necessary. (vi) The post-orientation scores on the attitude questionnaire, after exposure to the tape-slide programme and the awareness, exercises, revealed a positive change among the male teachers; the lesser increase in the scores of female teachers was due to the fact that earlier they were positively inclined toward greater equality. (vii) There was a greater positive change in attitude towards adult sex roles amongst teachers of government schools while the change in attitude in the classroom amongst teachers in non-government schools was more positive.

#### PREPARATION OF IMPROVISED EDUCATIONAL TEACHING AIDS WITH THE HELP OF WASTE MATERIALS

Principal Investigator :

*Shri N.K. Srivastava*

The objectives of the study were : (i) to prepare teaching aids through waste materials available in the environment, (ii) to make teachers aware of the importance of the waste materials in the environment, and (iii) to provide a better education in an economized way.

The study was limited to the teaching aids for the primary and upper primary schools from waste material available in the environment of Rajasthan. Entire Rajasthan was divided into six geographical regions



from where the waste materials were collected. An exhibition of the teaching aids thus prepared was arranged while 100 primary and upper primary school teachers were invited and asked to give their opinion about the aids and suggestions for improvement. However, only eighty-two responded. The responses were collected on a questionnaire prepared for the purpose. Most of the aids were meant to teach Science and Mathematics.

The results indicated : (i) As regards availability of materials in the villages, 68.29 per cent claimed they were not available; 4.88 per cent felt very few were available while 26.83 per cent felt some of the materials were available. (ii) Though 26.83 per cent teachers felt they required technical help in the preparation of similar teaching aids, 48.78 per cent felt they required some such help while 24.99 per cent required no help. (iii) Though 59.76 per cent respondents expressed their desire to prepare the teaching aids in the extra periods, 34.15 per cent preferred preparing them in the vacant periods while 6.09 per cent could not propose a definite time for their preparation. (iv) The aids were considered very helpful for class teaching by 57.32 per cent teachers, of some use by 28.04 per cent and of hardly any use in classroom teaching by 14.63 per cent. (v) Along with the students and the community, 68.29 per cent teachers felt they could prepare such teaching aids while 14.63 per cent teachers felt they could prepare them along with the students; and 10.98 per cent felt they could be prepared by students and the community. (vi) Teachers felt a write-up of all the aids should be provided to the primary and upper-primary teachers, and the aids should be categorized according to class and subject.

#### DISABLED CHILDREN IN NORMAL SCHOOLS

Principal Investigator :

*Dr. A.B. Phatak*

The objectives of the investigation were to study (i) the personality traits of orthopaedically disabled children studying in normal schools, (ii) the adjustment of the disabled children, (iii) the aspirations of disabled children, (iv) the sociometry of the orthopaedically disabled children in normal schools, and (v) ways to achieve better integration with normal children.

The sample was drawn from among the orthopaedically disabled children in normal schools of three districts of Rajasthan, namely, Udaipur, Banswara and Jodhpur. The final sample consisted of

seventy-nine boys of thirty-two secondary and higher secondary schools of which nine schools were from the rural area. The age varied from 12 to 18 years while most of the boys were in the age range 14 to 17. The tools used were the High School Personality Questionnaire (Kapoor and Mehrotra), Adjustment Inventory (Sinha and Singh) and an aspiration questionnaire and personal data bank prepared for the purpose.

The study revealed : (i) Most of the disabled children had illiterate fathers who were from poor economic background; sixty-three of the seventy-nine children's fathers had studied only up to higher secondary or below and forty-six had a family income below five hundred rupees. (ii) Most children were from large-sized families having four to five children. (iii) Children were slightly reserved, emotionally stable, satisfactorily adjusted but low in scholastic capacity, demanding and easily excitable, obedient, expedient, vigorous, not very tense and were with the group. (iv) Overall adjustment was average, emotional adjustment was good while social and educational adjustment was average. (v) Socio-metric status was satisfactory; 41.6 per cent were above the sixtieth percentile and 22.2 per cent above the ninetieth percentile; only three children were isolates. (vi) Most of them wanted to continue studies up to post graduation. (vii) Teaching was the most preferred vocation and the army, police and athletic the least; a religious way of life was the most preferred while intellectual or political pursuits and material comforts the least preferred. (viii) The majority felt they did not face any serious problem; the type of problems faced were fear of the school, difficulty with classroom teaching, dissatisfaction with teachers, ridicule by other children and participation in co-curricular activities.

A STUDY OF THE INCIDENCE AND FACTORS RESPONSIBLE FOR DROPPING  
OUT OF CHILDREN FROM MUNICIPAL AND LOCAL AUTHORITY SCHOOLS  
IN GREATER BOMBAY AND THANA DISTRICT FROM STANDARDS  
I TO VII DURING THE LAST FOUR YEARS I.E. 1973 TO 1977

Principal Investigator :

*Smt. Madhuri Shah*

The objectives of the study were : (i) to estimate the incidence of dropping out of boys and girls in different language schools conducted by Municipal Corporation, Greater Bombay and local authorities and (ii) to study the factors responsible for the high incidence of drop-outs.

The hypotheses formulated were : (i) A study of the cases of drop-outs will enlighten researchers regarding various causes of drop-outs and thereby help remedying them. (ii) Improved teaching techniques and use of suitable instructional material will minimize the dropping-out:

The study was conducted in Greater Bombay and Thana district and was confined to municipal schools, municipal-aided schools and a few zilla parishad schools in Thana district. The study was conducted in four phases. Phase I comprised the estimation of the incidence of drop-outs in the area and a study of their causes. Phase II covered case studies of the drop-outs. Phase III was confined to a special study of five schools while in the last phase, an experiment was conducted in two schools, one Marathi and another Gujarati-medium school. The study necessitated preparation of a data form for collection of information about drop-outs and a questionnaire for case studies of drop-outs.

The first phase of the study revealed : (i) The total number of drop-outs in Marathi-medium municipal schools was the highest in Standard I and the lowest in Standard VII, with a sharp rise in percentage of drop-outs in Standard V. (ii) The rate of drop-outs in Gujarati-medium municipal schools in Greater Bombay was the highest in Standard I and the lowest in Standard VII. (iii) The total number of drop-outs and the rate of drop-out in Hindi-medium municipal schools was the highest in Standard I and the lowest in Standard VII. (iv) In the Urdu-medium municipal schools the rate of drop-out was the highest in Standard I in 1975-76, in Standard II in 1974-75, in Standard III in 1974-75, in Standard IV in 1976-77, in Standard V in 1973-74 and in Standard VI in 1975-76. (v) In the English-medium municipal schools the rate of drop-out was the highest in Standard I, high in Standard V, the lowest in Standard VII and low in Standard VI. (vi) In the Telugu-medium schools the rate of drop-out was the highest in Standard I generally, at times in Standards II and III. (vii) In the Tamil-medium schools, the rate of drop-out was the highest in Standard I. (viii) In the Malayalam-medium schools the drop-out rate was not constantly high in any particular standard. (ix) The average rate of drop-out in all the four years was the highest in Telugu-medium and the lowest in Malayalam-medium schools. (x) The drop-out rate was constantly high in Hindi and Telugu-medium

schools. (xi) In the Marathi-medium schools in 1973-74, in English-medium schools in 1975-76 and in Sindhi-medium schools in 1974-75 the drop-out rate was high. (xii) In the zilla parishad schools the total number on rolls was the highest in Standard I and the lowest in Standard VII with a sharp decrease from Standard V onwards. (xiii) The sex-wise analysis indicated no difference between the rate of drop-out of boys and girls, generally.

The case studies of the drop-outs revealed : (i) as many as 40 per cent parents had not attended schools at all while 54 per cent had education up to Standard IV or VII. (ii) Out of 366 parents, 261 were in service, 35 were labourers, 28 were in business and 24 were hawkers. (iii) Of the 366 parents 206 had an income between Rs. 300 and 500 while 127 had an income between Rs. 101 and 300. (iv) Approximately 60 per cent parents were on duty six to eight hours a day and in some cases both the parents were out on duties which were not of a regular nature and therefore were out the whole day. (v) Domestic trouble like ill health of parents or the need to look after younger brothers or sisters in the family was one of the factors responsible for pupils leaving schools. (vi) A majority of the drop-outs left school for helping parents at home, a few for taking up jobs and less than 1 per cent for helping parents in trade.

The study of stagnation in the five schools indicated. (i) The frequency of failures was the highest in Standard I and somewhat high in Standards II and III. (ii) Though some pupils failed seven times in the same class, they continued.

The experiment at trying out improvements in the methods of teaching and the use of better instructional material revealed : (i) According to the heads and the teachers 11.00 a.m. to 5.00 p.m. was the ideal timing for the school. (ii) Both the groups felt the impact on pupils was on their personal cleanliness and attendance in school. (iii) Activity method was useful in teaching arithmetic as it helped create interest in the subject. (iv) On the whole, the experimental treatment resulted in significantly better achievement while teaching Gujarati in Standard II and arithmetic in Standard I in Gujarati-medium schools. (v) In the Marathi-medium schools, the treatment proved significantly better in all subjects except general knowledge in Standard II.

ASPIRATIONS, VALUES AND PERSONALITY PATTERN OF  
TRIBAL STUDENTS OF MIRZAPUR

Principal Investigator :

*Dr. S.S. Srivastava*

The objectives of the study were : (i) to find out and compare the problems of tribal, backward class and upper caste students in high and higher secondary schools and intermediate colleges of Mirzapur district, (ii) to find out and compare the values pattern of the three groups of students, (iii) to find out and compare the personality patterns and profiles of the three groups, and (iv) to find out the occupational aspirations of the three groups of students.

The study was confined to students of Classes IX and XI of high schools, higher secondary schools and intermediate colleges of Duddhi and Robertsganj sub-divisions which were mainly tribal but where there was no institution only for them. The three groups of students were selected from the mixed schools and intermediate colleges. All the fifty-six tribal students were included and a proportionate number of backward and upper caste students were selected from the same institutions. The tools were the Hindi adaptation of the Money Problem Checklist (Srivastava and Rai), the Personal Value Questionnaire (Sheery and Verma), the Jr.-Sr. High School Personality Questionnaire (Kapoor, Srivastava and Srivastava) and a vocational aspiration questionnaire prepared for the purpose. The data were analysed using mean, standard deviation, percentages and t-test.

The findings indicated : (i) Among the tribal students the problems of greatest magnitude were related to psychological-personal relations, health and physical development and courtship, sex and marriage; the greatest among the backward caste students were those pertaining to courtship, sex and marriage, social and recreational facilities and health and physical development ; among the upper caste students they were in the area of health and physical development, finances, living conditions, employment, and social and recreational activities. (ii) The problems of least concern were in the areas of curriculum and teaching procedure, adjustment of school work and morals and religion among the tribal students, home and family, curriculum and teaching procedure and adjustment to school work among the backward class students and curriculum and teaching procedure, the educational and vocational future, and personal and psychological relations among upper caste students. (iii) Vocational aspirations and expectations of

upper caste students were limited to thirteen occupations while among the backward castes and scheduled tribes the range was nine with teaching as the most preferred ; there was no difference in vocational aspirations of tribal and non-tribal students. (iv) Though most students belonged to agricultural families, less than 5 per cent from any of the groups aspired for agriculture as an occupation. (v) The backward caste students tended more towards seeking pleasure and avoiding pain, were desirous of ruling and leading others while the scheduled tribe students had less hedonistic goals ; the backward and upper caste students differed significantly on four values, social, knowledge, hedonistic and power. (vi) Except for a significant difference on the personality trait, phlegmatic vs excitability, the backward caste and scheduled tribe students in the same schools in Mirzapur district could not be differentiated. (vii) The backward caste students were more tenderminded, sensitive and dependent, had more self-sentiment and controlled, exacting will-power with more tension and were fretful in comparison to the upper caste students while the latter were more excitable, impatient, demanding, over-active and unrestrained. (viii) Upper caste students differed significantly from backward caste students on four personality factors but the backward caste and upper caste students differed from the tribal students on only two personality factors.

#### SOCIAL-PSYCHOLOGICAL PROBLEMS OF THE RURAL STUDENTS MIGRATING TO URBAN AREAS FOR STUDIES

Principal Investigator :

*Dr. S. Deb*

The objectives of the study were to find out : (i) the number of students who have migrated and the geographical distance covered, (ii) their socio-economic background. (iii) the nature of choice of their rurality and urbanity, and (iv) the areas in which they feel maladjusted.

The twenty-five urban colleges in a radius of 20 kms under the University of Calcutta, offering Classes XI and XII on the pattern presented by the West Bengal Council of Higher Secondary Education formed the universe. These colleges had rural migrants as day-scholars and hostellers. A sample of 450 rural migrants who had basic schooling in rural schools, had no part-time employment, were economically dependent on guardians and were day-scholars, was selected. A comparable group of students who were staying in Calcutta for ten

years, had never been to school in rural areas had studied in a Calcutta school and whose parents were residents of the Calcutta Metropolitan, was selected.

An information schedule was developed to explore the socio-economic background of migrating rural students as well as the urban sample. It covered twenty areas concerning socio-economic aspects while answers were expected on a five-point scale. A rural-urban choice scale was also prepared containing forty items, an equal number representing rural and urban choices. An adjustment inventory was developed and used for ascertaining problems of adjustment of the migratory population. Chi-square test and t-test were used.

The results revealed : (i) There was no difference in the views of rural students and their urban counterparts as regards education and modernity. (ii) Inter-group comparisons indicated no difference in the adjustment problems. (iii) The rural group was from farm-oriented families with low income, low academic background and poor quality residence ; professionally, their guardians were less status-oriented.

#### RELATION OF DIET AND GROWTH TO INTELLECTUAL GROWTH AMONG SCHOOL CHILDREN IN ORISSA

Principal Investigator :

*Dr. S. Patel*

The objective of the study was to explore the relation between physical and intellectual growth with regard to nutritional status and parental educational level among the top ten students of Classes VIII, IX and X in the district headquarters high schools of Orissa.

The hypotheses tested were : (i) Students with normal physical growth will be superior to their counterparts on some cognitive tests. (ii) Students attending public schools (receiving a greater amount of stimulation and representing a higher economic status) will score more in IQ test than those attending traditional schools. (iii) On the gradation of nutritional anthropometry there is similar gradation/variation on IQ test scores.

The top ten students of Classes VIII, IX and X from three schools of a district, namely, boys', girls' and public, were selected. Students in public schools were taken to belong to higher socio-economic group than those of non-traditional schools. The homes of these students were visited on three consecutive days to record food intake. Kitchen

balance, standardized cups and spoons were used for easy estimation of food intakes. Anthropometric measurements were recorded. The Standard Progressive Matrices were also administered.

The findings revealed : (i) Students from traditional and public schools differed considerably as regards intelligence. (ii) There was a positive relationship between IQ and body weight but not height. (iii) Nearly 50 per cent traditional school students were underweight as against 33 per cent public school students. (iv) The normal weight students from traditional and public schools comprised 32 per cent and 43 per cent, respectively. (v) The diet of students from higher income group (public schools) was adequate for maximal growth and needed no supplementation. (vi) If hereditary weakness in growth potential and intelligence had led people to lower income groups, their children would be further handicapped.

AN INTENSIVE STUDY OF CERTAIN FACTORS INFLUENCING THE READING  
ATTAINMENT OF PRIMARY SCHOOL CHILDREN

Principal Investigator :

*Prof. R.S. Rao*

The objectives of the study were : (i) to examine the association of various home and school factors and personal characteristics of children with their reading attainment, (ii) to estimate the relative influence of these factors on reading attainment of children, and (iii) to suggest remedial measures to improve the reading skills of poor readers.

Three broad categories, namely, home background, school conditions and personal characteristics of children, were selected for study. The study was confined to a sample of sixty schools selected at random from the three regions of Andhra Pradesh, Rayalaseema, Telengana and Circar districts, and twenty schools were selected in each region from rural urban locality and various types of managements with the help of stratified random sampling ; five boys and five girls were selected from each school comprising a total sample of 600 students. Scores obtained on a silent reading test were taken as the reading attainment of the child at his age level. The study was confined to Telugu and to students in Classes III to VIII. The factors considered as home background were type of housing and accomodation, availability of reading material at home, educational level of the parent, occupation of parent, income of family and social participation of the



family ; school conditions studies included physical facilities of the school, accomodation, strength of class, qualification and experience of teachers, availability of instructional material and availability of books and library facilities ; the personal attributes included general mental ability of the child, visual discrimination of words, auditory discrimination of sounds, clarity of speech, reading habits and interest of the child in reading. Information regarding school and home factors was obtained through questionnaire and interview schedules. Reading tests were constructed for Classes III and IV, V and VI, and VII and VIII, separately. The validity and reliability were established using 1,000 students from each grade and representing all of Andhra Pradesh. Standard progressive matrices were also administered. Observation and interview procedure was used to supplement information by teachers and heads of institutions. On the basis of performance on the reading test students were divided into three groups and contingency tables and chi-square test were applied.

The study revealed : (i) There existed close relation between each of the factors of home background and reading attainment taken separately. (ii) There was relationship between each of the school conditions taken separately and reading attainment. (iii) Association existed between each of the personal attributes taken separately and reading attainment. (iv) There was greater correlation between personal characteristics and reading attainment than between the total of home conditions and the total of school conditions correlated to reading attainment. (v) The multiple correlation between reading attainment and personal attributes accounted for 81.5 per cent of the variance while that for school conditions and home conditions was 82.5 per cent and 83 per cent, respectively.

#### CHILDREN'S JUDGEMENT OF PERSONAL HAPPINESS

Principal Investigator :

*Prof. Ramdhar Singh*

The major purpose of the research was to study how children of 4-9 years of age expressed their immediate happiness. There were four experiments in all, involving 72, 144, 48 and 48 subjects in each experiment, respectively.

The experimental tasks were employed. Task 1 consisted of factorial combinations of verbal and concrete reinforcements. Children performed on a simple motor task and received one of the several

combinations of verbal reinforcements and balloon. They gave self-judgements of their happiness along a 15-face scale. In Task 2, serial positions of positive and negative verbal reinforcements were manipulated. Subjects indicated their cumulative happiness from three verbal remarks. In accord with the information integration theory, it was expected that the verbal and concrete reinforcements of Task 1 and the verbal reinforcements of the different serial positions would be averaged in expression of personal happiness.

Experiments 1 and 2 yielded strong evidence against centrations. All 4-5 year olds were able to attend to both verbal and concrete reinforcements in the expression of their happiness, more important was the evidence that they followed an averaging rule integration of verbal and concrete reinforcements. The 8-9 year old boys ignored balloons in expressions of their happiness. Pattern in profile of concrete verbal reinforcement was also variable across the three age-groups of boys. In girls, happiness obeyed a non-linear rule. Also, they interpreted absence of balloons as punishment.

Experiments 3 and 4 obtained recency effect in happiness. Children were influenced most by the latest reinforcement. However, they utilized all the three verbal remarks in expression of their happiness. This result also argued against the centration hypothesis of Piaget.

Considered together, the findings of the four experiments are :

- (a) that happiness obeys an averaging rule ;
- (b) that children's judgements are characterized by recency effect ;
- (c) that 4-5 year olds in India have a well-developed metric sense ;  
and
- (d) that children of 4-9 years of age were equally good in decentering to the multiple aspects of the reinforcing situations.

Accordingly, it can be concluded that children are more complex than what they have been believed to be.

#### **Publication Grant for Ph.D. Theses, Monographs**

Under the scheme of publication grants for doctoral theses and monographs, the following publications were supported by ERIC.

- Emerging Patterns of Teacher Behaviour Dr. Brij Kishore Sharma  
Pratapgarh
- A Study of the Scheduled Caste Awareness about the Schemes for their Educational Progress Dr. S.K. Yadav, New Delhi
- Research Indicators in Normal and Clinical Groups in Military Population Dr. B.L. Dubey, Chandigarh
- Person Perception Dr. Parkash Chander Verma  
Gorakhpur
- A Study of Some Factors affecting Students Involvement in Studies Dr. (Smt.) Asha Bhatnagar  
New Delhi
- An Investigation into Organization Climate of Secondary Schools of Rajasthan Dr. Moti Lal Sharma  
South Gujarat University
- Concept of Speed Development-cum-Training Dr. (Smt.) U. Bevli, New Delhi
- Some Psychological and Social Factors related to Vocational Aspirations of Rural and Urban High School Children Dr. S.S. Chaddha, Chandigarh
- A Study of Dimensions of Administrative Leadership in relation to Group Acceptance and Some Other Educational Aspects in the Colleges of Meerut University Dr. S.P. Kaushik, Meerut

## Departmental Projects

The following departmental projects were completed :

<i>Title of the Projects</i>	<i>Principal Investigator</i>
Motivation of B.Ed. Correspondence Course Students	Dr. Kuldip Kumar
Comparison of Curriculum Load at the Secondary Stage in Different States	Shri G.L. Arora
A Study of Social Cohesion in Elementary Teacher Training Institutions and Their Relationship with Their Efficiency	Dr. N.K. Jangira
Research and Development in Talent Search : a Study in the Use of Creativity Tests	Dr. M.K. Raina

### MOTIVATION OF B.ED. CORRESPONDENCE COURSE STUDENTS

Principal Investigator :

*Dr. Kuldip Kumar*

The system of correspondence education can be a viable solution for problems related to expansion of educational opportunities. This system was adopted by the NCERT in 1966 for teacher training at the school level by offering a Summer School-cum-Correspondence Course (SSCCC) for in-service training of teachers.

The study was limited to students (in-service school teachers) of the NCERT course. All those who had completed the course requirements and who could respond to the questionnaire and inventories in English, were included.

The objectives of the investigation were to find out (i) the motivations of the selected group for taking up the SSCCC programme ; (ii) the immediate and long-term goals of the selected group after obtaining the B.Ed. degree, and (iii) perceptions of this group regarding the operation of different course inputs, and suitable measures developed/selected.

The checklist related to course inputs covering the following aspects :  
(a) regularity in receiving the lessons, (b) difficulty in understanding

the lessons, (c) academic quality of lessons received, (d) number of assignments in each paper, (e) time provided to complete assignments, (f) guidance and facilities for practice teaching and (g) evaluation procedures adopted in the course. In addition, achievement motivation and attitude of SSCCC students towards correspondence education were analysed for males and females, separately, and compared with a group of students of full-time B.Ed. programme.

The study revealed : (i) The expressed considerations for taking up the teaching career were (a) nobility of the profession and service to mankind closely followed by (b) earning a livelihood with interest, liking and ambition among males while among females the three most popular reasons remained the same but their order was changed to second, third and first. (ii) The most common reasons for doing B.Ed. through the correspondence course were (a) financially more suited for in-service teachers, (b) to improve professional competencies. (iii) Analysis of life goals revealed that as regards immediate goals, becoming a better teacher was the most common reason while writing a book was the least reason, and for long-term goals, most males claimed the same while by females, pursuing higher studies was ranked first. However, there was marked difference in the goals expressed by full-time B.Ed. students, which was to get trained teacher's salary as immediate goals and pursuing higher studies as the most frequently mentioned long term goal. (iv) The quantitative assessment of achievement motivation of the SSCCC and regular B.Ed. students did not indicate any significant differences. (v) The SSCCC group registered a higher mean score on attitude towards education. (vi) The students of the RCEs at Bhopal, Bhubaneswar and Mysore were most critical about the syllabus and curriculum stating that the syllabus was too lengthy and theoretical. The majority of students suggested that the teaching practice be eliminated or drastically reduced in view of their experience. (vii) Students at Bhopal were not satisfied with the handling of the teaching methods and suggested more attention be paid to it. (viii) Some students of Bhopal and Mysore desired that the regular RCE staff should teach in the summer programme. (ix) A few students suggested the starting of M.Ed. programme through correspondence, organization of refresher course for in-service teachers, granting study leave, etc., as regards feedback on specific instructional inputs. (x) One-third of the total number of students faced difficulty in understanding the lectures which pertained to medium of instruction, use of difficult words, non-availability of teachers to clarify doubts and few others. (xi) About

50 per cent felt that the lectures were poorly organized. (xii) Three-fourths of the Ajmer students felt the instructions during the course were inadequate for working out assignments. (xiii) Two-thirds of students were satisfied with the evaluation system for assessing assignments. (xiv) Three-fourths of the students were eager to form a study circle to resolve their academic problems.

COMPARISON OF CURRICULUM LOAD AT THE SECONDARY  
STAGE IN DIFFERENT STATES

Principal Investigator :

*Shri G.L. Arora*

Curriculum load is a relative term and should be judged taking the overall view of several factors, viz., time and energy spent by pupils to learn it and the teachers to transact it, the school environment and its resources, extent of its manageability in terms of available time and the mental attainment level of the students.

The major objective of the investigation was to study the load of curriculum on the students of secondary stage, viz., Classes IX and X. The study was conducted in Delhi, Haryana, Kerala and Maharashtra.

The research question of the study can be stated as "Whether the prescribed curriculum (year 1981-82) in the five compulsory subjects in Delhi, Maharashtra, Kerala, Haryana is heavy."

In the present study techniques used for data collection included questionnaire, rating scales interview, deliberations, group discussion, observation, etc.

A number of various types of schools, viz., rural and urban schools, boys and girls schools, government and government-aided schools in the four States and U.T.s, were contacted to obtain data.

The consideration of the teachers' opinions about the purposes of teaching and of the existing curricula, reasons for their inability to finish the courses in time, approaches followed to finish the courses, suggestions for the adjustment of curriculum load and difficulty index of the course content led to the following conclusions :

1. In Delhi, at the secondary stage, the existing curriculum in English, Mathematics, and Hindi is considered to be negligibly heavy, while the curriculum in Science and Social Sciences was considered somewhat heavy by the teachers. In the opinion of students, Science was the only subject with heavy curriculum.

2. In Maharashtra the existing curriculum in the subject of English and Social Studies was considered to be negligibly heavy while the curriculum in Marathi, Science and Mathematics was considered to be somewhat heavy. In the opinion of students, Science was the only subject having heavy curriculum.
3. In Haryana, at the secondary stage, the present curriculum in all the five subjects, namely, English, Hindi, Science, Mathematics, and Social Studies was negligibly heavy. In the opinion of students one subject, namely Mathematics, had heavy curriculum.
4. In Kerala, at the secondary stage, the curriculum in English, Mother-tongue, Mathematics and Social Science was somewhat heavy while the curriculum in Science was considered to be negligibly heavy. In the opinion of students, Mathematics was the only subject the curriculum of which was heavy.

A STUDY OF SOCIAL COHESION IN ELEMENTARY TEACHER TRAINING  
INSTITUTIONS AND THEIR RELATIONSHIP WITH THEIR EFFICIENCY

Principal Investigator :

*Dr. N.K. Jangira*

The study was conducted in 33 elementary teacher training institutions of Uttar Pradesh. Social cohesion was measured through Social Cohesion Assessment Inventory developed for the purpose. Student-teachers' marks in the Board Examination were considered their achievement. Attitudes were measured through Ahluwalia Attitude Inventory and Attitude towards Institution was measured through the tool developed by Roma Dutta. Adjustment towards the teaching, peers, teachers and the institution was measured through Student Teacher Adjustment Inventory developed by her. The following findings emerged from the study :

The correlation between the student-teacher achievement and the social cohesion scores on interpersonal Attraction, evaluation of the group as a whole and leadership style and decision-making are significant at .01 level and its correlation with express desire to remain in the group is significant at .05 level. Other correlations are positive without reaching significance level.

The student-teacher achievement in Principles of Education has significant correlations with the social cohesion scores of

interpersonal attraction, evaluation of the group as a whole and leadership style and decision-making. It also has positive correlation with the closeness with the group and express desire to remain in the group without reaching significance level.

Student-teacher achievement in practice teaching has significant correlation with the express desire to remain in the group, interpersonal attraction, evaluation of the group as a whole, closeness with the group and leadership style and decision-making.

The variables of adjustment and attitude are not correlated significantly with any of the social cohesion scores. The student-teacher achievement mean scores in the Principles of Education and their total achievement differ significantly in institutions with high and low social cohesion.

Student-teacher attitudes towards teachers (teacher-educators) in institutions with high and low social cohesion significantly.

Social cohesion scores have low predictive value for student-teacher achievement in theory accounting for only 11.69 per cent of the variance explained. Student-teacher adjustment and attitude turn out to be better predictors explaining about 36 per cent and 14.41 per cent of the variance, respectively.

Social cohesion variables turn out to be strong predictors of student-teacher achievement in practice teaching accounting for 48.23 per cent of the variance explained.

The study was exploratory in nature covering institutions only from one State. The study of process variable and differentiated study simulating different levels of social cohesion will be able to provide further insight into this important context of variable of teaching effectiveness.

#### RESEARCH AND DEVELOPMENT IN TALENT SEARCH : A STUDY IN THE USE OF CREATIVITY TESTS

Principal Investigator :

*Dr. M.K. Raina*

The primary objective of the study was to investigate the relationship between creative thinking ability (Wallach and Kogan Tests of Creativity), creative perception and measures of talent. More specifically, the study aimed at answering the following questions :



- (i) Do the candidates selected for the NTS award differ significantly from those called for interview but rejected, in their performance on Wallach-Kogan tests of creativity ?
- (ii) What is the correlation between scores on tests of creativity and measures of talent ?
- (iii) What is the correlation between the measures derived from verbal and visual forms of the tests of creativity ?
- (iv) Do the two batteries of creativity tests define separate dimensions of intellect as compared to what is measured by measures of talent ?

The sample consisted of 276 candidates of Class X who were called for interview at two different centres in the country, in 1977. They were called for interview on the basis of their performance on General Mental Ability Test and Scholastic Aptitude Test. Out of them, 48 candidates were selected and 228 rejected for the National Talent Search Scholarship.

The 1978 sample included 205 Class XI and Class XII candidates who were called for interview at three different centres in the country. Out of them, on the basis of interview, 50 were selected and 155 rejected for the National Talent Search award.

The instruments used in this study were Wallach and Kogan Tests of Creativity—both Verbal and Visual—to measure creativity and 'something about myself' to measure creative perception.

The principal findings can be summarized under the following heads :

- (i) A comparative study of the creativity of the selected and the rejected candidates revealed : (a) Results for both years indicated that there were no significant mean differences between the selected and the rejected candidates on verbal dimensions of creativity. (b) on visual creativity tests also, no significant differences were found. (c) On a measure of creative perception also, no significant difference was found between the two groups.
- (ii) The relationship between measure of talent and creativity indicated : (a) Low and insignificant correlations were obtained between GMAT scores and verbal and visual tests of creativity.

Similar results were obtained in the case of 1978 group. (b) Extremely low and mostly negative relationship was found between SAT scores and various dimensions of verbal and visual tests of creativity. In 1978 also, correlations obtained were low and in many cases zero. (c) Most of the correlations obtained in both the years between the visual and the verbal tests of creativity and interview scores were in the neighbourhood of zero.

- (iii) As regards relationship between measures of talent and creative perception : (a) Modest correlation was found between a measure of creative perception and GMAT in the case of 1978 group. (b) SAT showed negative correlation with 'something about myself', a measure of creative perception. (c) Interview showed no association with creative perception in the 1978 total and rejected group. It showed a very low and insignificant correlation ( $r=.13$ ) in the selected group.
- (iv) For intercorrelations among measures of creative thinking ability : (a) Results for both the years indicated that the scores on the various tasks of creativity were fairly cohesive. (b) Six verbal indices of creativity were not found to be highly correlated with the four visual indices. (c) The factor analysis results indicated task specificity as well as form specificity in the tests of creativity. Factors like Number Factor; Factor of Pattern Meanings; uniqueness—Line Meanings; Scholastic ability; uniqueness—similarities and uniqueness—instances emerged. Results also indicated statistical separation of creativity measures and measures of talent.

### **New Projects**

As many as twenty-nine research projects and publication grants for doctoral theses and research reports 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>
<b>RESEARCH PROJECTS</b>	
Effects of Counselling and Other Helping Strategies and Self-Concept	Prof. J.N. Joshi Chandigarh

Guidance Needs of Children Living in Destitute Homes in U.P.	Dr. Sahab Singh Varanasi
Construction and Standardization of Silent Reading Comprehension Tests in Gujarati for Pupils of Classes V, VI and VII to study the Effect of Reading Improvement Programme	Dr. B.V. Patel Vallabhvidyanagar
An Empirical Study of Mathematics Teaching and Learning in Andhra Pradesh	Dr. K. Sangeetha Rao Guntur
Measuring Disparities in Enrolment and Schooling Facilities, Using the Data Generated by the All India Educational Surveys of the NCERT	Shri J.L. Azad New Delhi
A Study of School Broadcasts in Baroda District	Dr. G.R. Sudame Baroda
An Investigation into the Nature and Incidence of Reading Disability among Children Studying in Standards 3 to 7 in the Rayalaseema Region of Andhra Pradesh	Dr. R. Srinivasa Rao Tirupati
Case Studies of Applications of Educational Technology in India—Pilot Study	Smt. Kusum Kamat, Bombay
Evaluation Tools and Teaching Methods of Hindi Short Story at + 2 and Under-graduate Levels	Dr. R.S. Sharma and Smt. Kamla Vohra New Delhi
Dis-Calculia among First Grades of Choyyasi Block—A Psychometric Exploration—A Pilot Study	Dr. S.G. Shah, Surat
Private Investment in Primary Education—a Study in the District of Warrangal (A.P.)	Dr. N. Rajaiah, Warangal

The Study of Current Status and Relevance of Community Nutrition and Health System in Schools and Identification of Practical Steps for Improving Their Efficiency	Dr. C. Gopalan, New Delhi
Learning Disabilities of Primary School Children	Dr. K.G. Desai, Ahmedabad
The Socio-economic Conditions of Sadhu Organizations in Pilgrimage of U.P.	Dr. J.K. Misra, Muradabad
<b>PUBLICATION GRANTS</b>	
Intellective and Non-intellective Factors associated with Engineering Creativity	Dr. M. Sen Gupta, New Delhi
Cost Analysis of the University of Punjab, 1950-51 to 1974-75	Dr. V.P. Garg, New Delhi
The Nature of Teaching	Prof. R.P. Singh, New Delhi
School Teachers in Delhi : Relationship between Their Social Background and Professionalization	Dr. C.L. Wadhawan New Delhi
Prathmik Vidyalayon Ki Adhyapikaon Ki Samajik Arthik Prishtha Bhumi Evam Unki Karya Santushti	Dr. (Smt.) Karuna Shah Varanasi
Development of a Programmed Text in Physical Geography for High School Students	Dr. Nirmal Singh Kurukshetra
A Study of Personality Differences between Normal and Problem Children	Dr. Shyam Krishnan Gorakhpur
A Practical Handbook for Teachers of Young Hearing Handicapped Children	Menka Parthasarthy, Madras

Prachin Bharate Prakrita Jana Sikshar Upar Dharmiya Pradhin (The Influence of Dharma on Popular Education in Ancient India)	Dr. D.P. Mukerjee Viswa Bharati
An Investigation into the Empirical Validity of Bloom's Texonomy of Educational Objectives	Dr. Pritam Singh New Delhi
Influence of Education in Socio-economic Status	Dr. B.M. Modi, Ahmedabad
An Empirical Study of the Development of Achievement Motives and Functions of Prolonged Deprivation	Dr. Ashta Nand Tiwari Deoria
Self-actualization among Teachers of Higher Secondary Schools in Delhi	Dr. (Smt.) A.K. Sathpathy New Delhi
Analysis of Common Factors in Teacher Adjustment	Dr. S.K. Mangal, Rohtak
Naga Bhasha Bhashi Chhatroan Ki Hindi Siekhne Ki Samasyaen	Dr. Ram Kirpal Kumar Agra

## EDUCATIONAL PSYCHOLOGY

The Educational Psychology programmes have three major foci : (a) the learner, (b) the teaching-learning process, and (c) the teaching-learning situation. The NCERT conducts research, organizes training and extension programmes, and develops materials related to the three foci mentioned above. With the above purpose in view a plan of research in keeping with the priorities in the field of education was developed. It was proposed to concentrate efforts on the anticipated rearsness in the next 5-10 years. Three kinds of handicaps, viz. learning disabilities, social deprivation and economic deprivations have been identified. The problems in each of these three categories were listed for preparing research proposals and developing research designs.

*A Longitudinal Investigation into the Drop-out Process and Characteristics of Drop-out*

This longitudinal study is aimed at examining how a variety of students and institutional characteristics are related to their dropping out of school and at suggesting control of dropping out phenomenon.

- (a) The names of students who dropped out during 1981-82 were obtained.
- (b) Teachers' ratings were obtained on (i) school environment and (ii) students' characteristics.
- (c) Detailed guidelines for interpreting (i) Szondi Test and (ii) Picture Frustration Test were prepared.
- (d) Case studies were under preparation and hypotheses on drop-out process were being formulated.

*Development of Criteria for Electing a stream and Courses within a Stream at Higher Secondary Stage*

Report-writing was undertaken and the first draft of the following was prepared :

- Measures of 'g' and 'SAT' as predictors of academic achievement.
- Secondary School Certificate Examination as Predictors of Senior School Certificate.
- EPQ and Academic Performance.
- Interest Factors and Academic Performance.
- Academic Adjustment and Academic Performance.

*An Investigation into the Effectiveness of Vocational Exploration Programme*

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) occupational exploration.

This year self-exploration materials were prepared both in English and Hindi. The topics were :

- (i) Your Needs.
- (ii) Self-exploration.

- (iii) Your Interest.
- (iv) Your Aptitudes.
- (v) Social and Vocational Influences.
- (vi) Your Leisure-time Activities.

Students studied the materials in regular classes and participated in discussion thereafter. Their responses were also obtained on (a) Self Information Schedule, (b) a Career Maturity Inventory, (c) Career Maturity Scale and (d) a number of Aptitude Tests.

*Improving Cognitive Functions and Classroom Behaviour of Elementary Students by Contingency Management*

The objective of the research project is to assess the efficacy of management technique in improving the cognitive functions and classroom behaviour of elementary students. These techniques were employed in three schools selected for the study. The post-experiment data have also been collected. The results are being analysed.

*Effectiveness of Jeevan Vigyan Training through Preksha Dhyana*

The project had been jointly undertaken by the Tulsi Adhyatma Nidam and the Directorate of Education, Rajasthan, to study the efficacy of training in Jeevan Vigyan through preksha dhyana (advocated by Acharya Tulsi). The Council had agreed to undertake the evaluative study. The investigation employs pre-and post-treatment testing design.

Data were collected on the following variables :

General Health : height; weight; blood pressure; chest expansion; capacity to hold breath; vision (specific mention of those who wear spectacles); general ENT examination; and any other noticeable disease.

General Academic Achievement

General Mental Ability

Creativity

Anxiety

Adjustment

Frustration Tolerance

Problem-solving capacity

Socio-economic Status.

The Jeevan Vigyan training was given during September 1982—February 1983 by regular school teachers trained by Tulsi Adhyatma Nidam.

Besides the above field study, an intensive investigation was undertaken in one of the schools in which additional data on the following variables were also collected : Electro Ecephalography (EEG), Maze Learning (electrical) Reaction Time Galvanic Skin Resistance. Pre-treatment data had been scored.

The NCERT organized training programmes to develop key personnel with these objectives : to improve the quality of teacher-educators and their knowledge of psychological principles underlying learning and development; to develop skills in understanding students; and to develop skills in modifying learners' behaviour. With these objectives in view, some training programmes were organized.



# 14

## Search for Talent

**T**HE National Talent Search Examination of the NCERT aims at identifying talented students and providing them with financial assistance so that they pursue education at advanced levels. The scholarships are available for the study of various disciplines, such as basic science, social sciences, agriculture and commerce and professional courses in engineering and medicine.

The total number of scholarships awarded each year are 550—50 reserved for scheduled castes/scheduled tribes are included in this number. Every year students who have taken the final public examination at the end of Classes X, XI and XII appear for selection tests at over 400 centres.

Tests are administered in all languages recognized in the Constitution of India. Intensive studies of the accomplishments of national talent scholars are conducted later.

The National Talent Search Examination was conducted on 9 May 1982 at 439 centres in India and one in a foreign country, i.e. in Germany. In all; 83,320 students appeared in the test—46,365 for Class X, 8,988 for Class XI and 27,967 for Class XII. In all, 550 (including 50 SC/ST students) were selected for the award.

State-wise number of National Talent Search candidates appeared (A), interviewed (I), and selected (S) during the year 1982 for Classes X, XI and XII may be seen in the following table :

S. No.	State/U.T.	X			XI			XII		
		A	I	S	A	I	S	A	I	S
1.	A.P.	3518	16	5	48	—	—	2328	19	15
2.	Assam	332	1		4	—	—	287	1	1
3.	Bihar	7013	100	50	6	—	—	1923	32	13
4.	Gujarat	1167	7	3	1	—	—	1137	7	3
5.	Haryana	559	7	3	382	13	7	189	—	—
6.	H.P.	367	1	—	142	3	2	67	—	—
7.	Jammu and Kashmir	183	—	—	107	—	—	112	—	—
8.	Karnataka	2217	13	7	—	—	—	923	5	3
9.	Kerala	2400	10	7	25	2	—	732	2	1
10.	M.P.	840	7	4	4134	18	8	177	1	—
11.	Maharashtra	4533	92	43	4	—	—	2836	53	33
12.	Manipur	33	—	—	—	—	—	30	—	—

13.	Meghalaya	88	—	—	—	—	—	36	—	—
14.	Nagaland	3	—	—	—	—	—	5	—	—
15.	Orissa	1800	9	4	490	17	12	1883	10	4
16.	Punjab	716	7	3	499	15	9	241	5	2
17.	Rajasthan	2481	21	12	2820	119	56	338	7	2
18.	Sikkim	6	—	—	—	—	—	11	—	—
19.	Tamil Nadu	3358	22	9	21	—	—	2920	28	16
20.	Tripura	65	1	—	—	—	—	63	—	—
21.	Uttar Pradesh	6188	22	9	44	1	—	4607	28	13
22.	West Bengal	2824	29	12	2	—	—	2130	20	14
23.	Andaman and Nicobar Islands	65	—	—	—	—	—	46	—	—
24.	Arunachal Pradesh	36	—	—	—	—	—	8	—	—
25.	Chandigarh	373	4	4	246	28	11	193	4	1
26.	Dadra and Nagar Haveli	—	—	—	—	—	—	—	—	—
27.	Delhi	4860	177	97	53	1	—	4479	101	50
28.	Goa, Daman and Diu	85	1	1	—	—	—	64	—	—
29.	Lakshadweep	8	1	—	—	—	—	2	—	—
30.	Mizoram	29	—	—	—	—	—	2	—	—
31.	Pondicherry	213	—	—	—	—	—	186	—	—
32.	Foreign Countries	6	—	—	—	—	—	2	—	—

46365 549 274 8988 217 105 27967 323 171

Total Appeared = 83320

Total Interviewed = 879

Total Selected = 550

The position of NTS awardees selected in 1982 who are studying in different disciplines during the year 1982-83, is presented in the following table :

S. No.	Class	No. of Awardees selected	Discipline in which studying during 1982-83					
			+2 stage	1st year B.A.	1st year B.Com.	1st year B.Sc.	1st year Engineering i.e. B.E./ B. Tech.	1st Year M.B.B.S.
1.	X	250	250	—	—	—	—	—
2.	XI	100	35	25	6	21	13	—
3.	XII	150	—	24	36	13	48	29
	Total	500	285	49	42	34	61	29

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*SC/ST Students selected in 1982*

1.	X	24	24	—	—	—	—	—
2.	XI	5	1	2	1	1	—	—
3.	XII	21	—	4	3	1	7	6
	Total	50	25	6	4	2	7	6

The position of NTS awardees who are studying in different disciplines during 1982-83 is given below :

<i>Sl. No.</i>	<i>Class/State</i>	<i>Number of awardees in general category</i>	<i>Number of awardees in SC/ST category</i>	<i>Total</i>
1.	+2 stage	500	43	543
2.	B.A. I Year	60	6	66
3.	B.A. II Year	50	7	57
4.	B.A. III Year (Final)	76	—	76
5.	B.Com. I Year	47	4	51
6.	B.Com. II Year	35	—	35
7.	B.Com. III Year	25	—	25
8.	B.Sc. I Year	63	2	65
9.	B.Sc. II Year	18	2	20
10.	B.Sc. III Year	39	—	39
11.	M.A. (P)	69	—	69
12.	M.Com. (P)	11	—	11
13.	M.Sc. (P)	40	—	40
14.	M.A. (F)	23	—	23
15.	M.Com. (F)	3	—	3
16.	M.Sc. (F)	10	—	10
17.	Ph.D I Year	26	—	26
18.	Ph.D. II Year	33	—	33
19.	Ph.D. III Year	25	—	25

20.	Ph.D. IV Year	25	—	25
21.	B.E./B.Tech. I Year	203	7	210
22.	„ II Year	159	7	166
23.	„ III Year	195	—	195
24.	„ IV Year	201	—	201
25.	„ V Year	143	—	143
26.	M.B.B.S. I Year	121	9	130
27.	„ II Year	142	3	145
28.	„ III Year	164	—	164
29.	„ IV Year	120	—	120
30.	„ V Year	48	—	48
	Total	2674	90	2764

The Summer Placement Programme for postgraduate NTS awardees studying in Basic Science, held during May-June 1982 is given below.

<i>Sl. No.</i>	<i>Venue of Summer Placement Programme</i>	<i>Number of awardees who participated</i>
1.	Indian Institute of Science, Bangalore	17
2.	Bhabha Atomic Research Centre, Bombay	2
3.	Tata Institute of Fundamental Research, Bombay	27
4.	Physical Research Laboratory, Ahmedabad	1
5.	Radio Astronomy Centre of TIFR, Ootacomund	3
6.	Indian Agricultural Research Institute, New Delhi	1
7.	Indian Institute of Technology, Kanpur	1

The Summer Schools for NTS awardees studying in Basic Science at undergraduate stage, held during May-June 1982 is given below :

<i>Sl. No.</i>	<i>Name and Address of the Director who organized Summer Schools</i>	<i>Number of awardees attended, class and subject</i>
1.	Prof. M.S. Sodha Deptt. of Physics IIT, New Delhi	(14) I Year Physics
2.	Prof. K.V. Rao Deptt. of Physics IIT, Kharagpur (West Bengal)	(14) II Year Physics
3.	Prof. C. Ramasastry Deptt. of Physics IIT, Madras	(15) III Year Physics
4.	Prof. R.D. Dua Deptt. of Chemistry IIT, New Delhi	(19) I, II, III Year Chemistry
5.	Prof. C.M. Purushotham Deptt. of Mathematics IIT, Madras	(21) I, II, III Year Mathematics
6.	Dr. Y.R. Malhotra Deptt. of Biology Jammu University Jammu (J & K State)	(16) I, II, III Year Biology

# 15

## Extension and Working with the States

**T**HE NCERT works extensively with extension services departments and centres established in teacher training colleges and schools throughout the country with the purpose of providing assistance to teachers on a continuous basis. Four Regional Colleges of Education and sixteen



field units of the Council encourage extension programmes and innovations in order to improve classroom teaching and practices.

The Council initiates significant programmes with a view to improving organizational climate and practices of the school system in India. It organizes courses, orientation workshops, seminars, competitions and conferences for counsellors, career-masters, teacher-educators, inspectors, supervisors, teachers, principals and heads of educational institutions. Extension programmes relate to intensive improvement projects, good school practices, encouragement for innovation, national seminars of key personnel, national conferences of State officers and national exhibitions of materials. All the 22 States and nine Union Territories of India are covered by such extension activities.

The *Ahmedabad Field Office* received as many as 28 project proposals from various schools of Gujarat, out of which 13 projects were financed during the financial year 1982-83. These 13 schools are given guidance for undertaking the experimental projects and the requisite financial assistance.

The *Allahabad Field Office* promoted activities concerning innovative and experimental projects in schools and teacher training institutions at both the levels. The Field Office organized a workshop for twenty principals of regional training institutes for the preparation of experimental designs to be taken up by their institutions. These are being followed up. The Field Adviser visited two of the institutes to see the projects already undertaken by them.

The *Bangalore Field Office* engaged itself in the activities of conducting national integration camp, training in socially useful productive work, competition in educational toy-making, internal assessment for Classes I-X, enrichment course on learning and development for teacher-educators, learning episodes in Tamil, talent search examination, and UNICEF-aided projects.

The *Bhopal Field Office* has experimental projects in schools as one of the important programmes. The experimental projects are implemented through the Extension Services Centres of the teacher training institutions in the State. This year twenty-six experimental projects were received from the schools of Madhya Pradesh; twenty-one of these were approved and an amount of Rs 5,350 was sanctioned.

The *Bhubaneswar Field Office* invited experimental project proposals from the teachers of secondary and primary schools of Orissa and

provided necessary guidance to the on-going experimental projects. In all, 36 project proposals were received from secondary school teachers and 46 from primary school teachers of the State. A duly constituted committee scrutinized these project proposals and recommended financial assistance for 17 primary schools and nine secondary schools. Grants of the order of Rs. 3,239 were given to 15 primary schools and four secondary schools to carry out the project proposals.

Academic guidance was provided to those teachers/institutions who consulted the field office during the course of implementation of the projects undertaken by them.

The Oriya version of the booklet entitled "A Scheme of Assistance for Experimental Projects" was distributed among the Extension Services Centres, participants of different meetings/workshops/seminars, attended by the Field Adviser or Assistant Field Adviser and among the interested schools/institutions in order to supply detailed information.

The *Calcutta Field Office*, this year, received 14 proposals on experimental projects from different schools of West Bengal and Andaman and Nicobar Islands. The Committee under the Chairmanship of the DPI, West Bengal, screened the proposals and selected eight projects for financial assistance. Later, seven schools were supplied with the money and the remaining one school was not, as it had failed to submit the necessary papers.

The *Chandigarh Field Office* requested Directors, SCERTs/SIEs of all the States and the principals of in-service training centres to give wide publicity to the scheme of experimental projects and asked teachers to send project proposals. Forty-five, eight, five and three project proposals were received respectively from Punjab, Haryana, Himachal Pradesh and Chandigarh. For screening the project proposals a committee consisting of the Field Adviser and two members from the State concerned was constituted. Finally, four projects from Punjab, three from Himachal Pradesh and three from Chandigarh were given financial grant.

The *Gauhati Field Office* had meeting with the Chairman and the academic Officers of the Board of Secondary Education, Assam, and discussed the implementation of experimental projects for secondary school teachers and other educational programmes.

The *Hyderabad Field Office* participated in the programmes of national integration camp for girls, monitoring and evaluation of universalization of elementary education, vocationalization of education, non-formal education and talent search examination.

The *Jaipur Field Office* participated in the programmes to develop a sense of human relationship among students by the introduction of certain activities and orientation programme for STC school instructors.

The *Madras Field Office* participated in programmes pertaining to the improvement of Tamil language skills, vocationalization of education, textbook evaluation, science exhibition, formal education, continuing education and cultural programmes which strengthen the academic ideals.

The *Patna Field Office* organized a seminar in the fourth week of September 1982 for school teachers working on the experimental projects. Experts from the SCERT and Teacher Training College, Patna, provided guidance in formulating experimental projects in Language, Science and Social Studies. Fifty-one experimental project proposals were received from different schools of Bihar through the Extension Services Centres. On scrutiny, only 16 were considered suitable for financial grant. However, only 8 teachers signed papers in time to receive the grant.

The *Pune Field Office* participated in the programme of training of teacher-educators, orientation of science teacher, toy-making competition, innovative projects, State-level science exhibition and try-out of instructional materials and pupils' evaluation.

The *Shillong Field Office* continued helping the States/Union Territories in experimental projects, innovative practices, examination reform, toy-making competitions, talent search, non-formal education, science exhibitions, teaching aids, and consultancy and liaison work.

The *Srinagar Field Office* organized a workshop at Leh from 18 to 21 August 1982 for secondary school teachers of Ladakh region for explaining the Council's scheme of contingency assistance towards approved experimental projects on classroom and school situations. Sixteen teachers were helped to design project proposals on selected problems. The approved projects are likely to be given financial assistance in 1983-84 for improving the quality of school education.

The *Trivandrum Field Office* organized four days' orientation programme on experimental projects for the teachers of Kasargod area. Twenty-two teachers of Kasargod region participated. In addition to the Field Adviser, two resource persons from the State helped conduct this programme. During the course of this programme teachers were given training in the preparation of project proposals. At the end of this course the teachers submitted their proposals which were screened by a panel of experts.

# 16

## International Assistance and International Relations

**A**S an institution of national importance, the NCERT 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 has received project assistance from international

agencies like the UNDP, UNESCO, etc. It also acts as a major agency for implementing the provisions of the 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 Programme for Educational Innovations and Development (APEID). The functions of the Secretariat include, among others, the establishment of a line of communication with the Directors of Education and the Directors of SCERTs/SIEs and other associated centres of the APEID, providing of information/documentation services, development and evaluation of various programmes 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 through direct participation and through APEID and by undertaking studies in various educational fields. Direct participation includes sponsoring 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*

Dr. R.N. Mathur, Reader, Department of Education in Science and Mathematics, attended UNESCO sub-regional writing workshop for preparing exemplar training modules and open-ended laboratory experiments in Physics, in Malaysia from 22 to 26 June 1982.

Shri K.N. Hiriannah, Reader, Survey and Data Processing Unit, visited Malaysia and Thailand for inter-country study visit on the drop-out problem from 6-15 September 1982.

Dr. D.S. Muley, Reader, Department of Education in Social Sciences and Humanities, visited Philippines and Thailand for a study of contemporary world problems within the framework of associated schools project from 24 August to 10 September 1982.

Shri C.K. Misra, Reader, Vocational Education Unit, and R.M. Namade, Lecturer, Regional College of Education, Bhopal, visited Indonesia, Australia and Thailand on a study visit under the UNESCO

project "Mobile Team in Vocational and Technical Education" under Japanese Fund-in-Trust, from 25 February 1983 to 11 March 1983.

Dr. U.S. Prasad, Reader, Regional College of Education, Bhopal, visited Philippines and Japan for study visit under the UNESCO project "Mobile Team in Vocational and Technical Education" under Japanese Fund-in-Trust Programme, from 20 to 30 March 1983.

Dr. S.N. Prasad, Lecturer, Regional College of Education, Mysore, visited Malaysia in an attachment programme of training in classroom testing and measurement in Secondary Science and Mathematics at the SEAMEO Regional Centre for Education in Science and Mathematics, Penang, Malaysia, under the APEID/ACEID, for six weeks from 4 April 1982.

Dr. A.K. Sharma, Professor, Regional College of Education, Mysore, and Dr. R.D. Shukla, Reader, DESM, participated in the APEID Regional Design Workshop of Chemistry Curricula and Teaching Materials, for one week from 21 October to 28 October 1982.

Dr. S.C. Chaturvedi, Reader in Education, Regional College of Education, Bhubaneswar, attended the Second APEID Regional Seminar to provide training on Special Education for handicapped persons/children, for one week from 16 to 23 September 1982 in Japan.

Prof. (Smt.) S. Shukla, Professor, CET, participated in the ACEID Study Group Meeting on Applicability of Advanced Technologies of Educational Development, organized by UNESCO, for five days from 20 to 24 September 1982 in Penang (Malaysia).

Shri M.A. Chandrashekhar, Lecturer in Physics, Regional College of Education, Bhubaneswar, completed training in Development of Secondary Science and Mathematics Equipment (Design and Prototype Production), organized under APEID, from 20 September to 27 November 1982 in Penang (Malaysia).

Shri K.N. Hiriyanniah, Reader, Survey and Data Processing Unit, participated in the Regional Workshop on Educational Information organized by the National Institute of Educational Research (NIER), Japan, in collaboration with UNESCO, Bangkok, and APEID in Tokyo, Japan, from 1 to 23 February 1983.

Prof. A.K. Mishra, Head, Vocational Education Unit, visited Paris to participate in the UNESCO International Consultation concerning the

possibility of making the transition between general, technical and vocational education more flexible in both initial and further education, from 1 to 4 March 1983.

Dr. T.N. Dhar, Joint Director, NCERT, attended the meeting of the experts on Universalization of Primary Education in Bangkok from 21 to 29 March 1983.

#### *Foreign Visitors to the Council*

The Council organized the following visits for experts from other countries. A short observation visit for five Nepalese nationals in the area of new techniques of production of science teaching aids was organized for one week in April 1982.

Eleven trainees from nine Asian countries sponsored by the International Institute for Educational Planning (IIEP), Paris, on a study visit to NIEPA, visited the NCERT on 1 June 1982 and were acquainted with the activities and programmes of the NCERT.

Two UNESCO fellows from Indonesia, namely M/s Muzamil, Khalimi and Alex Mozes Oppier attended a short-term training programme in the NCERT in the field of Science Education from 6-10 June 1982.

Dr. (Smt.) W.D. Ponniah, Regional Adviser in Environmental Education at the UNESCO Regional Office for Education in Asia and the Pacific, Bangkok, came on a study visit to the Council from 9 to 11 June 1982.

The Deputy Education Minister, Shri Samaraweera Veerawani, accompanied by Dr. Eric J. De. Silva, Chief Technical Adviser, Quality Improvement of Education, Sri Lanka, visited the Council from 1 to 3 July 1982 and had a varied programme of meetings/discussions with the faculty of the NCERT.

A Chinese delegation, consisting of seven Chinese educators, visited the NCERT from 14 to 20 September 1982 to study the Population Education Programme.

A team of eight educators from Philippines, accompanied by Dr. Ansar Ali Khan, Population Education Specialist from UNESCO Regional Office, Bangkok, visited the NCERT from 6 to 9 September 1982 to study the Population Education Programme.



The Council organized a ten-week training programme in Guidance and Counselling for Mr. G.M.K. Phiri, Zambian scholar awarded scholarship by the Ministry of Education, under the Special Commonwealth Assistance Plan 1982-83 from 26 July 1982 to 3 October 1982.

A training programme for Mr. Galley Dorji, UNESCO Fellow from Bhutan, was organized in the field of Audio-visual Resources Development from 3 August to 30 September 1982.

Mr. Siripon Chantanont, Programme Officer for Education, Thailand, on a study tour visit on the invitation of the Government of India for a period of 10 days from 10-20 August 1982 under the exchange programme of UNESCO National Commission Personnel, visited the NCERT on 13 August 1982.

A team of 15 Afghan teachers came on a study visit for a period of two weeks from 29 September 1982 to study the out-of-school education programmes, under UNICEF assistance.

M/s Kebede Friesenbet, Abdul M. Ahmad and Donable, UNESCO Fellows from Ethiopia, visited the NCERT for a study programme in production of educational equipments and materials from 21 to 27 October 1982.

Mr. Bishnu Kumar Bhujju, UNESCO Fellow from Nepal, attended a training programme in the NCERT in the field of development of science kits for a period of two weeks from 29 November 1982 under the APEID Special Technical Cooperation Programme.

The Kenyan, Cabinet Minister of Basic Education, Mr. J.K. Ng'ene, visited the NCERT on 3 November 1982, during the course of his visit to India at the invitation of the Education Minister to study the system of education at the school level.

Mr. Ugen T. Lama, UNESCO Fellow from Bhutan, attended a training programme in the field of Library Science in the NCERT for a period of six months from 6 December 1982 to 31 May 1983.

Five UNESCO Fellows from Bhutan, namely, Madhukar Gajmer, Tshongpen Wangdi, Madan Kumar Lama, Harka Bahadur Vishwa and Somnath Pradhan, attended a primary teachers training programme in the NCERT for a period of three weeks from 15 December 1982.

Five Afghan nationals, namely, Miss Nasrin Rafiq, M/s M.I. Habibi, Azizullah, Yunus and Abdul Ghaffor Talatum, attended a training

programme in the NCERT in the field of Educational Statistics and Information for a period of two months from 17 January 1983.

Dr. Mansour Hussain, Deputy Education Minister, Government of Egypt, accompanied by Mr. El Hasainy Sadak, Under-Secretary of State, Ministry of Education, Egypt, and Mrs. Soag Anis, Director-General, Department of Preparatory Schools, Egypt, visited the NCERT on 24 March 1983. They were acquainted with the activities and programmes of the Council.

Mrs. Lida Fritsch, Programme Specialist, Division of Equality of Educational Opportunity and Special Programme, Educational Sector, UNESCO, Paris, visited the NCERT on 16 March 1983.

Mr. Lee Meow Fatt from Malaysia visited the NCERT on 7-9 September 1982 to study the drop-out problems and mobility in the educational system.

Mrs. Mathai from Thailand and Mrs. Froznosa from Manila (Philippines) visited the NCERT from 29 August to 2 September 1983 in connection with the UNESCO project regarding preparation, field implementation and evaluation of materials on the study of contemporary world problems with the object of furthering peace and international understanding.

#### *NCERT Programmes as Associated Centre for the APEID*

The NCERT as an Associated Centre of the APEID hosted the following programmes :

A Regional Training Course in Mathematics for up-grading of basic sciences related to Technical and Vocational Education was organized at the Regional College of Education, Bhubaneswar from 5th July to 20th August 1982. Participants from Afghanistan, Bangladesh, Bhutan, Laos, Maldives and Nepal attended the training course.

Council organized a UNESCO Sub-regional workshop on Teacher Training in Environmental Education for a period of two weeks from 3 to 16 March 1983. Participants from Afghanistan, Bangladesh, and Sri Lanka attended the workshop.

A national Training workshop on Biology Education in Asia for preparing training materials was organized in NCERT from 28 November to 8 December 1982.

A regional Seminar on the Introduction of Productive work into teacher education was organized in the NCERT from 5th to 14th April 1982. Participants from Afghanistan, Australia, China, India, Indonesia, Maldives, Bangladesh, Nepal, Bhutan, Pakistan and Thailand attended the Seminar. Three UNESCO experts from France and Thailand also attended the seminar.

#### ***NCERT-UNESCO Projects***

During the year the Council signed contracts with UNESCO for undertaking the following studies :

Preparation of a regional guide for identification and elimination of sex-stereotype in and from educational programme and textbooks.

A study on position of science education in India.

A study on "Alternative Structures for Universalizing First Level of Education with emphasis on Disadvantaged Groups".

Inter-regional experimental research project on the study of contemporary world problems with the object of furthering peace and international understanding.

The Council published a special issue of the Associated Centre's *Journal of Indian Education* devoted to in-service primary teacher education.

#### **Bilateral Cultural Exchange Programme**

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 expert delegations to study innovative educational developments. The Council has also been exchanging educational materials, including textbooks, supplementary reading materials, research monographs, films, film-strips, etc., 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. Mouhmad Khair Al Hilo, a Syrian expert, visited the NCERT for a period of two weeks from 11 October 1982 to study curriculum development under Item 1 of the Indo-Syrian Cultural Exchange Programme, 1980-82.

Mr. Mouhmad Said Melohi and Mr. Farhod Gybrayel, two Syrian experts, visited the NCERT for a period of one month from 11 October 1982 to acquaint themselves with the training of teachers under Item 2 of the Indo-Syrian Cultural Exchange Programme, 1980-82.

A two-member Soviet delegation, headed by Mr. Akhumiyan Semen Tigeanovich, Minister of Public Education of Armenia, Armenian Soviet Socialist Republic, and Prof. Jusov Boris Petrovich, Head of Fine Arts Department, USSR Academy of Pedagogical Sciences, Moscow, visited the NCERT for a period of 10 days from 27 October 1982 to acquaint themselves with school education in India under Item 32 of the Indo-Soviet Cultural Exchange Programme, 1981-82.

Mr. George Deeb and Mr. Mahmoud Abed Al Aziz, two Syrian experts, visited the NCERT for a period of two weeks from 21 December 1982 to study the Indian experience in the field of education and TV under Item 4 of the Indo-Syrian Cultural Exchange Programme, 1980-82.

### *Deputations*

Dr. J.S. Rajput, Principal, Regional College of Education, Bhopal, was deputed to USSR from 15 September 1982 to 28 September 1982 to study the educational information system in USSR under Item 31 of the Indo-Soviet Cultural Exchange Programme, 1981-82.

Shri M.G. Kelkar, Field Adviser, NCERT, Pune, and Dr. M.S. Khaparde, Reader (P) were deputed to Belgium for a period of two weeks from 20 September 1982 to study the programmes of vocational education and preparation of instructional materials, respectively, in Belgium under Item 4-10 of the Indo-Belgium Cultural Exchange Programme, 1980-82.

Shri V.S. Gopalan, Field Adviser, NCERT, Trivandrum, and Shri H.L. Sharma, Lecturer, Non-Formal Education Unit, were deputed to France for a period of one week from 27 December 1982 to study the programmes of vocational education at higher secondary stage and elementary education respectively in France under Item V (I) of the Indo-French Cultural Exchange Programme, 1982-83.

### *Other Developments*

Shri K.G. Restogi, Professor, Non-Formal Education, participated in the annual convention of the International Reading Association held at Chicago (USA) from 28 to 30 April 1982.

Km. Bimla Verma, Lecturer, CET, Shri K.K. Chainani, Lecturer, DTA, and Shri R.P. Sennon, Artist, DTA, were deputed for training in the U.K. under the British Council Scholarship, British Technical Cooperation Training Programmes for training in graphic and animation techniques for Educational TV for three months from 4 May 1982.

Prof. M.M. Chaudhri, Head, DTA, attended UNESCO planning meeting on the development of teacher's resource kits from 3 to 15 June 1982 in Tokyo (Japan).

Dr. Chottan Singh, Reader, DESM, participated in the Second International Symposium on World Trends in Science Education for two weeks from 21 July to 4 August 1982 in Nottingham (U.K.).

Shri Harmesh Lal, Research Associate, DTA, attended a training course in the preparation of low-cost educational audio-visual materials suitable for use by the rural community under the Italian Government Scholarship 1981-82, from 12 July to 20 August 1982 in Turin (Italy).

Dr. P.K. Khanna, Reader in Botany, Regional College of Education, Bhopal, attended a Regional Workshop for Key Personnel concerned with out-of-school scientific activities by young people organized by the Science Society of Thailand in collaboration with ACEID for ten days from 24 August to 2 September 1982 at Bangkok.

Dr. T.N. Dhar, Joint Director, NCERT, participated in the International Conference on Education, on the "Universalization and Renewal of Primary Education in the Perspective of an Appropriate Introduction to Science and Technology" organized by the International Bureau of Education in Geneva from 20 to 23 July 1982.

Prof. R.C. Das, Dean (A), participated in the regional workshop on Development of Research concerning the Implementation and Evaluation of Reforms in Educational Content and Methods, organized by the National Institute for Educational Research (NIER), Tokyo, from 4 to 17 November 1982 in Tokyo (Japan).

Prof. H.S. Srivastava, Head, PCEU, visited Paris and Hamburg (Germany) for completing the project on Monitoring and Evaluation of Universalization of Elementary Education and for finalizing tools and procedures in collaboration with the International Institute for Educational Planning (IIEP) and UNESCO Institute for Education (UIE), for four weeks from 21 December 1982 to 20 January 1983.

# 17

## Publications

**A**N important function of the NCERT is to publish school textbooks, instructional materials, students' workbooks, teachers' guides/manuals, research studies/monographs, etc. The Council produces, distributes and supplies a wide range of publications in the field of education, including

supplementary readers, report of educational surveys, handbooks, brochures, journals, etc.

During the year, the following publications were brought out :

<i>Category in Publication</i>	<i>Number of Titles</i>
First edition textbooks/workbooks/prescribed, supplementary readers	6
Reprints of textbooks/workbooks/prescribed, supplementary readers	117
Textbooks/workbooks for other Government/ Agencies	19
Research monographs/reports and other publications	24
Periodicals (issues)	15
<b>Total</b>	<b>181</b>

The list of publications brought out is annexed.

### **Distribution**

The NCERT publications continued to be distributed and sold through the Publications Division of the Ministry of Information and Broadcasting, New Delhi, the Council's National Distributors. They were formerly covering only the northern, eastern and western regions of the country through their sales emporia at New Delhi, Calcutta and Bombay. During the year, the Ministry set up a sales emporium at Madras also. Consequently the sale and distribution of the Council's publications in Tamil Nadu, Kerala and Pondicherry was also handed over to it. The Council's journals, however, were distributed and sold by the Council directly, as in the past years. Besides the above 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 advertisement in leading newspapers all over India.



During the year, a total number of 329 direct orders were received—31 from Kendriya Vidyalayas, 15 from Sainik Schools, 20 from Central Schools for Tibetans, 253 from other schools (including orders from booksellers in Andhra Pradesh and Karnataka), and 10 from Districts of Arunachal Pradesh. Textbooks were also supplied directly by the Council to the Directorate of Education, Sikkim, for the session 1983-84. Thirteen textbook titles in English, Hindi and Urdu, for Classes-IX-X, were also supplied in bulk to the Jammu and Kashmir Board of School Education, directly by the Council.

### **Participation in Book Fairs/Exhibitions**

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

National Science Exhibition, Calcutta.

Children's Book Exhibition, Teen Murti, New Delhi.

Eleventh National Book Fair, Chandigarh.

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

Book Fair, Frankfurt.

Exhibition of India Books, London.

Fourteenth Singapore Festival of Books.

Exhibition of India Books, Kuala Lumpur, Malaysia.

Middle East Book Fair, Bahrain.

Exhibition of India Books, Tehran (Iran).

International Book Fair, Manila.

Exhibition of India Books, Mauritius.

Exhibition of Indian Books, Zaire, Nigeria.

### **Sale**

During the year, the receipt from the sale of the NCERT publications amounted to Rs. 2,52,38,783.17. Publications worth \$416.09 and £19.30 were also sold to various parties abroad. In addition, the NCERT earned Rs. 5,826 as royalty from publishers.

## Copyright Permission to State Governments and Other Agencies

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

### *Assam*

Director of Elementary Education Assam, Gauhati Permission to adapt and publish Non-formal Reader *Siko Aha*

### *Gujarat*

Gujarat State Board of School Textbooks 29, Government Bungalow, Near Duffnals, Cantonment Ahmedabad Permission to use—  
(i) The first 21 lessons from *English Reader, Book I (GS)*  
(ii) To translate Teachers Guide to *English Reader, Book I (GS)*

### *Jammu and Kashmir*

Director Dogri Research Centre University of Jammu, Jammu Permission to translate the essay entitled "Samachar Patra" in Dogri

### *Madhya Pradesh*

Board of Secondary Education Madhya Pradesh Bhopal Permission to publish *Sanskri-todaya*

### *Uttar Pradesh*

Director of Education and Chairman Board of High Schools and Intermediate Education U.P. Permission to adopt and publish  
(i) *Sabhyata Ki Kahani* Bhag I, for Class IX  
(ii) *Sabhyata Ki Kahani* Bhag II, for Class X  
(iii) *Manushya Aur Vatavaran*  
(iv) *Bharat Vikas Ki Oar*

- (v) *Hum Aur Hamara Shashan*  
for Classes IX-X

### *West Bengal*

West Bengal State Book Board  
6-A, Raja Subhodh Mullick Square  
Calcutta

Copyright permission to translate  
into Bengali and publish—

- (i) *Ancient India*  
by Dr. R.S. Sharma
- (ii) *Medieval India, Part I*  
by Dr. Satish Chandra
- (iii) *Medieval India, Part II*  
by Dr. Satish Chandra

### **Journals**

Journals occupy a pride of place in the NCERT's publishing activities. They cater to a wide range of readers, from primary school teachers to research workers.

The *Primary Teacher* (English) and *Primary Shikshak* (Hindi) acquaint practising teachers and administrators with 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.

*Indian Educational Review* provides a medium for dissemination of the findings of educational research and exchange of experience among research workers, scholars, teachers and others working in the field of educational research.

The *Journal of Indian Education* provides a forum for teachers, teacher-educators and research workers and encourages original and critical thinking in education through discussion of current educational problems and views. It is a bi-monthly publication.

*School Science* is a quarterly journal of science education which serves as an open forum for the discussion of various aspects of science education, its problems and prospects, and the individual experiences of teachers and students.

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

<i>The Primary Teacher</i>	October 1981, January 1982 April 1982
<i>Primary Shikshak</i>	January 1982
<i>School Science</i>	September 1981, December 1981
<i>Journal of Indian Education</i>	January 1982, March 1982, May 1982, July 1982 and September 1982
<i>Indian Educational Review</i>	April 1982, July 1982, October 1982 and January 1983

*Annexure*

PUBLICATIONS LIST (excluding periodicals)

<i>S.No.</i>	<i>Title</i>	<i>Month of Publication</i>	<i>Year of Publication</i>
1	2	3	4

**CLASS I**

*Textbooks*

1.	Bal Bharati, Bhag I (R.P.)	April	1982
2.	Bal Bharati, Bhag I (R.P.)	March	1983
3.	Let's Learn English Book I (S.S.) (R.P.)	June	1982
4.	Mathematics for Primary School, Book I (R.P.)	August	1982

*Workbooks*

5.	Abhyas Pustika Bal Bharati Bhag I (R.P.)	July	1982
6.	Workbook to Let's Learn English, Book I (S.S.) (R.P.)	July	1982

## CLASS II

### *textbooks*

7. Bal Bharati, Bhag II (R.P.)	May	1982
8. Bal Bharati, Bhag II (R.P.)	March	1983
9. Mathematics for Primary School, Book II (R.P.)	June	1982

### *Workbooks*

10. Abhyas Pustika Bal Bharati, Bhag II (R.P.)	February	1983
11. Workbook to Let's Learn English, Book II (S.S.) R.P.)	March	1983

## CLASS III

### *Textbooks*

12. Bal Bharati, Bhag II (R.P.)	April	1982
13. Bal Bharati, Bhag III (R.P.)	March	1983
14. Let's Learn English, Book III (S.S.) (R.P.)	March	1983
15. Paryavaran Adhyayan, Bhag I (R.P.)	March	1983

### *Workbooks*

16. Workbook to Let's Learn English, Book III (S.S.) (R.P.)	March	1983
17. Workbook to Let's Learn English Book III (S.S.) (R.P.)	March	1983

## CLASS IV

### *Textbooks*

18. Bal Bharati, Bhag IV (R.P.)	April	1982
19. Bal Bharati, Bhag IV (R.P.)	March	1983
20. English Reader, Book I (S.S.) (R.P.)	March	1983
21. Mathematics for Primary School, Book IV (First Edition)	June	1982
22. Paryavaran Adhyayan, Bhag I (R.P.)	May	1982

*Prescribed Supplementary Reader*

23. Read for Pleasure, Book I (R.P.) April 1982

*Class V*

*Textbooks*

24. Bal Bharati, Bhag V (R.P.) March 1983

25. Swasti, Bhag I (R.P.) February 1983

26. Insight into Mathematics, Book V (R.P.) April 1982

27. India and the World (R.P.) May 1982

28. India and the World (R.P.) April 1982

29. Bharat Aur Sansar (R.P.) April 1982

30. Bharat Aur Sansar (R.P.) March 1983

31. Learning Science through Environment,  
Part III (R.P.) June 1982

32. Learning Science through Environment,  
Part III (R.P.) February 1983

33. Paryavaran Se Vigyan Seekhna,  
Bhag II (R.P.) February 1983

*Prescribed Supplementary Reader*

34. Read for Pleasure, Book II (R.P.) February 1983

*Class VI*

*Textbooks*

35. Swasti, Bhag II (R.P.) March 1983

36. Mathematics for Middle School,  
Book II (R.P.) July 1982

37. Lands and Peoples, Part I (R.P.) June 1982

38. History and Civics, Part I (R.P.) September 1982

*Workbooks*

39. Abhyas Pustika Swasti, Bhag II  
(First Edition) February 1983

40. Workbook to English Reader, Book III  
(S.S.)(R.P.) July 1982

*Prescribed Supplementary Reader*

41. Read for Pleasure, Book III (R.P.)                      March                      1983

*Class VII*

*Textbooks*

42. Swasti, Bhag III (R.P.)                                      April                      1982

43. Swasti, Bhag III (R.P.)                                      March                      1983

44. English Reader, Book IV (S.S.)(R.P.)                      March                      1983

45. Ganit Madhyamik Schoolon Ke Liye,  
Bhag I (R.P.)    March                      1983

46. Mathematics for Middle School,  
Book II, Part II (R.P.)    May                      1982

47. Mathematics for Middle School,  
Book II, Part II (R.P.)    March                      1983

*Workbooks*

48. Abhyas Pustika Swasti III  
(First Edition)    March                      1983

*Prescribed Supplementary Reader*

49. Naya Jeevan (R.P.)    April                      1982

50. Sankshipt Mahabharat (R.P.)                                      May                      1982

*Class VIII*

*Textbooks*

51. Bharati, Bhag III (R.P.)                                      April                      1982

52. History and Civics, Part III (R.P.)                                      April                      1982

53. Itihas Aur Nagrik Shastra, Bhag III (R.P.)                      March                      1983

54. Learning Science, Part III (R.P.)                                      April                      1982

*Prescribed Supplementary Reader*

55. Trividha (R.P.)    April                      1982

56. Jeevan Aur Vigyan (R.P.)                                      May                      1982

*Class IX*

*Textbooks*

57. Mathematics, Part I (R.P.)                                      May                      1982

58. Ganit, Bhag I (R.P.)	May	1982
59. The Story of Civilization, Part I (R.P.)	June	1982
60. Sabhyata Ki Kahani, Bhag I (R.P.)	May	1982
61. Science, Part I (R.P.)	May	1982
62. Vigyan, Bhag I (R.P.)	May	1982
63. Hum Aur Hamara Shasan (R.P.)	April	1982

*Class X*

*Textbooks*

64. Mathematics, Part II (R.P.)	April	1982
65. India on the Move (R.P.)	April	1982
66. Bharat Vikas Ki Oar (R.P.)	April	1982
67. Science, Part II (R.P.)	May	1982
68. Vigyan, Bhag II (R.P.)	June	1982
69. Steps to English—5 : English Reader (First Edition)	April	1982

*Workbooks*

70. Steps to English—5 : Workbook to English Reader (First Edition)	May	1982
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*Prescribed Supplementary Reader*

71. Steps to English—5 : Supplementary Reader (First Edition)	May	1982
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*Class XI*

*Textbooks*

72. Hindi Pratinidhi Kahaniyan (R.P.)	May	1982
73. Mathematics, Book I (R.P.)	May	1982
74. Ganit, Bhag I (R.P.)	May	1982
75. Mathematics, Book II (R.P.)	April	1982
76. Ganit, Bhag II (R.P.)	April	1982
77. English Reader, Part I (R.P.)	April	1982
78. Chemistry, Part I (R.P.)	May	1982
79. Biology, Part I (R.P.)	June	1982
80. Ancient India (R.P.)	May	1982



81. Prachin Bharat (R.P.)	June	1982
82. Medieval India, Part I (R.P.)	April	1982
83. Madhyakalin Bharat, Bhag I (R.P.)	July	1982
84. Rajnitik Vyavastha (R.P.)	March	1983
85. Evolution of Indian Economy (R.P.)	June	1982
86. Understanding Society (R.P.)	June	1982
87. Understanding Society (R.P.)	March	1983
88. Physical Basis of Geography (R.P.)	April	1982
89. Physical Basis of Geography (R.P.)	March	1983
90. Field Work and Laboratory Techniques in Geography (R.P.)	June	1982
91. Geography Workbook (R.P.)	April	1982
92. Bhugol Abhyas Pustika (R.P.)	June	1982
93. Parijat (R.P.)	April	1982
94. Chyanika (R.P.)	April	1982
95. Physics (R.P.)	June	1982
96. English Reader II (R.P.)	April	1982

*Class XII*

97. Vividha (R.P.)	March	1983
98. Hindi Sahitya Ka Parichayatmak Itihas (R.P.)	April	1982
99. Sahitya Shastra Parichay (R.P.)	March	1983
100. English Supplementary Reader II (R.P.)	May	1982
101. Dear to All the Muses (R.P.)	April	1982
102. On Top of the World (R.P.)	April	1982
103. Sanskrit Kavya Tarangini (R.P.)	July	1982
104. Sanskrit Kavya Tarangini (R.P.)	March	1983
105. Mathematics, Book IV (R.P.)	July	1982
106. Mathematics, Book V (R.P.)	May	1982
107. Chemistry, Part II (R.P.)	May	1982
108. Madhyakalin Bharat, Bhag II (R.P.)	June	1982
109. Modern India (R.P.)	April	1982
110. Adhunik Bharat (R.P.)	June	1982

111.	Bharat Men Loktantra (R.P.)	May	1982
112.	Bhartiya Lekha Paddhati (R.P.)	March	1983
113.	Arthik Siddhant Ka Parichay	April	1982

*Urdu Textbooks*

*Class II*

114.	Hisab, Book II	October	1982
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*Class III*

115.	Hisab, Book III	December	1982
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*Class V*

116.	Hindustan Aur Duniya	March	1983
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*Class VI*

117.	Science Seekhna, Part I (R.P.)	July	1982
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*Class VIII*

118.	Mumalik Aur Unke Bashinde, Part III (R.P.)	July	1982
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*Class IX*

119.	Aadmi Aur Mahol	June	1982
120.	Tehzeeb Ki Kahani, Bhag I (R.P.)	July	1982

*Classes IX-X*

121.	Aum Aur Hamari Hukumat (R.P.)	July	1982
122.	Keamiya	July	1982

*Class X*

123.	Science, Part II	September	1982
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*Textbooks/Workbooks for Other States/Organizations*

124.	Chauthi Kiran (R.P.)	April	1982
125.	Arun Bharati, Bhag I (R.P.)	July	1982
126.	Arun Bharati, Bhag II	August	1982
127.	Abhyas Pustika to Arun Bharati, Bhag I (R.P.)	June	1982
128.	Stories and Legends—Supplementary Reader, Book I, for the Open School	November	1982

129.	Stories and Fables—Supplementary Reader, Book I, for the Open School	November	1982
130.	English Reader, Book I, for the Open School	December	1982
131.	Gadya Bharati (R.P.)	April	1982
132.	Kavya Bharati (R.P.)	May	1982
133.	Mathematics, Part I (Cl. IX)	May	1982
134.	Science, Part I	May	1982
135.	Vigyan, Bhag I	May	1982
136.	Story of Civilization, Part I (Cl. IX)	June	1982
137.	Sabhyata Ki Kahani, Bhag I (Class IX)	May	1982
138.	Hum Aur Hamara Shasan for Classes IX-X	April	1982
139.	Science, Part I (Urdu)	July	1982
140.	We and Our Government (Urdu)	July	1982
141.	Story of Civilization, Part I (Urdu)	August	1982
142.	Man and Environment (Urdu)	June	1982

*Research Monographs and Other Publications*

143.	Selected Reading Material in English, Part I	April	1982
144.	Audit Report, 1980-81	April	1982
145.	NCERT Lekha Pariksha Report, 1980-81	July	1982
146.	The Effect of Environmental Process Variable on School Achievement (5½ to 11 years)	May	1982
147.	SUPW Source Book, Volume IV	May	1982
148.	Third All-India Educational Survey (Institutions of Physical Education)	July	1982
149.	Field Studies in the Sociology of Education—a Report on Gujarat	July	1982
150.	Fourth All-India Educational Survey Report	August	1982
151.	Sample Unit Test in History	September	1982

152.	National Science Exhibition for Children 1982	November	1982
153.	Structure and Working of Science Models, 1982	November	1982
154.	You and Your Future	December	1982
155.	NCERT Annual Report 1981-82	December	1982
156.	NCERT Varshik Report 1981-82	December	1982
157.	A Handbook of State-level Organizers, Volume I	December	1982
158.	Core Teaching Skills—a Micro-Teaching Approach	December	1982
159.	Objective-based Test Items in Mathematics	December	1982
160.	Status of Women through Curriculum	January	1983
161.	No Limits to Development	January	1983
162.	Teacher Education Curriculum—a Framework	February	1983
163.	Catalogue for 1983-84	February	1983
164.	Socially Useful Productive Work, Vol. IV	February	1983
165.	Role of Sample Surveys in Education	February	1983
166.	Education in Applied Science in India	February	1983

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

# 18

## Administration, Finance and Welfare Activities

### Administrative and Welfare Activities

**T**HE 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.

As a measure of staff welfare, the Council Secretariat continued to provide facilities for sports and games, and encouragement for cultural activities. In December 1982, the annual sports meet of the Council was organized at the Regional College of Education, Mysore. The matches in the games of Football, Volleyball and Table Tennis were played from 13 to 16 December 1982 at Mysore. The teams from all the Regional Colleges of Education and the NIE participated in the NCERT tournament. The number of participants in the games was 125. The participants also presented cultural programmes.

In February 1983, out of 104 staff quarters of Types I, II, III, IV, and V constructed by the CPWD, 88 quarters were taken over and allotted to the Council employees. The remaining 16 quarters of Type IV are expected to be taken over soon from the CPWD and will be allotted to the employees.

The NCERT has introduced the LIC Group Insurance Scheme for the benefit of Groups B, C, and D employees from 1 April 1982. Steps are being taken to extend the benefit to Group A officers of the Council.

A new Field Adviser's Office has been established for Himachal Pradesh.

On the expiry of the tenure of his contract, Dr. S.K. Mitra relinquished the charge of the post of Director, NCERT, on 18 August 1982. Shri V.K. Pandit, I.A.S., Secretary of the Council was appointed as Joint Educational Adviser in the Ministry of Education and Culture on 2 December 1982. He continued to work as Secretary, NCERT, in addition to his post of Joint Educational Adviser till the new Secretary joined.

A training course in stenography/type-writing was arranged by the Council exclusively for the employees belonging to scheduled caste and scheduled tribe communities from May 1982 to March 1983. Another training course was arranged by the Council exclusively for the Chowkidars of the Council headquarters.

Establishment matters and personal problems were attended to expeditiously. Particular mention may be made of the prompt grant of house building advance, general provident fund withdrawal, cycle/scooter/car loans, etc. Officials who retired during the year were sanctioned and paid retirement benefits at almost the same time as their

date of retirement. The families of the deceased employees were given utmost sympathetic consideration and, in every case, a member of the bereaved family was employed in the Council, thus reducing their hardship to a certain extent.

### **Use of Hindi**

The Hindi Cell of the NCERT accomplished the following tasks during 1982-83 for the progressive use of Hindi for official purposes.

#### *Development of Material*

The Cell procured the following books and distributed them in the Council to enable Departments, Units, etc., to make maximum use of Hindi in their work :

Official Language of the Union.

Entries in the Service Book.

Karyalaya Sahayika

English-Hindi Dictionary (compiled by Father Bulke)

#### *Running Shield*

A Running Shield was awarded to Establishment IV of the Council Secretariat as it made the maximum use of Hindi during the year 1981-82.

#### *Translation*

Eighty-eight pages were translated from English into Hindi, out of which 51 pages pertained to the material of the Accounts Branch.

#### *Circulars*

Twelve circulars were issued in Hindi; 11 of these circulars were concerned with the information sought regarding the use of Hindi in the Council; the 12th included the programme regarding the progressive use of Hindi for Official purposes during the year 1982-83, which mainly contained the following provisions :

Use of Hindi for prescribed purposes.

Use of Hindi and English both for specified purposes.

Optional use of Hindi as an alternative medium of examinations for recruitment to subordinate services and posts.

Arrangements for the use of Hindi as a medium of instruction for departmental training centres.

Optional use of Hindi in departmental examinations.

Introduction of check-points to ensure complementation of orders relating to the Official Language.

Printing of forms, codes, manuals and gazette notifications in bilingual form.

Issue of general orders, etc. in bilingual form.

Writing of addresses on envelopes in Hindi.

Rubber stamps, name-plates, sign-boards, etc., to be in bilingual form.

Entries in the service book.

Sending replies in Hindi to letters received in Hindi.

### *Survey*

Two surveys were undertaken: one in relation to the use of the "Committee of Parliament on Official Language" and other undertaken to ascertain the name of the Department of the Council for making maximum use of Hindi in official work for awarding the running shield. The first survey consisted of 19 pages wherein data were collected on 304 points and the other was of two pages on 22 points.

### *Dissemination of Information*

The following information concerning the Council was forwarded to the Ministry of Education and the Parliament Committee :

Position of the Hindi posts created in the Council as on 1 January 1982.

Information regarding the posts of Hindi Translators and the Hindi Officer as on 1 April 1982.

Information regarding implementation of the annual programme for the year 1981-82 pertaining to the use of Hindi for official purposes. Information was collected and presented before the Committee of



Parliament on Official Language as required in the questionnaire received therefrom.

#### *Competitions*

The Council encouraged the employees to participate in the following All-India competitions :

- (a) Hindi Stenography.
- (b) Hindi-noting and drafting.

#### *Consultancy*

The Cell helped the administrative sections of the Council Secretariat in English-Hindi translation work and offered solutions to their problems connected with it. It also offered consultancy in the preparation of their tools in Hindi to the departments/units of Teacher Education, CAPE, Women's Education and Measurement and Evaluation.

#### *Other Work*

Other work done by the Cell related to the preparation of list of trainees in the Council for Hindi typing, Hindi Stenography, Hindi noting and drafting and Hindi examinations through correspondence.

#### *Typing Work*

The Hindi Cell did the following typing work during the year :

Typing — 786 pages.

Stencilling — 670 pages.

These included 70 manuscripts of 742 pages received from different departments/units of the Council.

**CONSOLIDATED RECEIPTS AND PAYMENTS ACCOUNTS FOR THE YEAR 1982-83**

<i>Receipts</i>	<i>Amount (Rs.)</i>	<i>Payments</i>	<i>Amount (Rs.)</i>
Opening Balance	81,55,345.00	Pay of Officers	1,01,13,813.00
		N.P.	98,46,305.00
		Plan	2,67,508.00
Grant-in-aid from the Government of India, Ministry of Education and Culture	9,46,57,563.00	Pay of Establishment	1,01,20,228.00
		N.P.	97,42,651.00
		Plan	3,77,577.00
Grants and Refunds pertaining to Specific Grant	1,31,84,249.00	Allowances and Honoraria	2,04,10,873.00
		N.P.	1,95,67,262.00
		Plan	8,43,611.00
<i>Receipts relating to Non-Plan</i>		Travelling Allowances	19,33,385.00
		N.P.	18,58,446.00
		Plan	74,939.00
Rent of Council's Building	7,77,174.00	Other Charges	1,12,55,563.00
		N.P.	1,07,99,560.00
		Plan	4,56,003.00

Interest on Loan and Advances	24,048.00	Scholarship/Fellowship	9,69,417.00
		N.P.	6,66,389.00
		Plan	3,03,028.00
Recovery of Over-payments (refund of unutilized funds)	14,17,877.00	Programme	4,33,34,876.00
		N.P.	3,56,05,008.00
		Plan	77,29,868.00
Interest of Provident Fund Investment	14,22,649.00	Equipment and Furniture	95,00,519.00
		N.P.	2,22,092.00
		Plan	92,78,427.00
		Land and Building	1,13,98,531.00
		N.P.	12,96,540.00
		Plan	1,01,01,991.00
Sales Proceeds of Books and Periodicals	2,51,83,522.00	Miscellaneous Payment	12,764.00
Sale of Science Kits	3,07,811.00	Leave Salary and Pension Contribution	57,054.00
Royalties from Publishers	5,826.00		
Fees and Other Charges	5,33,385.00	Council's Contribution to CPF and Interest on GPF	21,01,412.00
Leave Salary and Pension Contribution	87,443.00		
<i>Miscellaneous Receipts</i>	42,00,083.00	Pension and DCRG	11,32,627.00
C.G.H.S.	35,851.00	C.G.H.S.	3,88,836.00

Advertisement	3,08,275.00
Audit Fee	1,66,590.00
House Rent	17,685.00
Expenditure on Specified Project	1,35,11,880.00

*Recoveries of Advances from Employees*

Motor-car/Scooter Advance	1,67,367.00	Motor/Scooter Advance	1,27,075.00
Advance of Other Conveyance	42,240.00	Other Conveyance Advance	49,600.00
Fan Advance	4,798.00	Fan Advance	1,500.00
Festival Advance	2,24,843.00	Festival Advance	1,81,820.00
House Building Advance	11,88,572.00	House Building Advance	31,91,576.00
Advance of T.A. on Transfer	1,742.00	Advance of T.A. on Transfer	35,363.00
Advance of Pay on Transfer	18,905.00	Advance Pay on Transfer	5,105.00
Flood Advance	49,460.00	Miscellaneous Advance	6,000.00
Other Advances	31,104.00	Permanent Advances	10,000.00
Permanent Advances	8,000.00	Other Advances	13,870.00
		Foodgrain Advance	758.00

		Warm Clothing	250.00
<i>Funds and C.D.S. Accounts</i>			
G.P.F.	75,80,745.00	G.P.F.	42,68,342.00
C.P.F.	23,12,429.00	C.P.F.	12,91,262.00
C.D.S.	1,658.00	C.D.S.	2,681.00
<i>Deposits</i>			
Earnest Money/Security Deposit	5,54,825.00	Earnest Money/ Security Deposit	6,78,132.00
Caution Money	1,18,268.00	Caution Money	1,57,060.00
Other Deposits	4,30,074.00	Other Deposits	4,26,770.00
G.P.F./C.P.F. Investment	15,26,453.00	G.P.F./C.P.F. Investment	46,28,946.00
Short-term Investment	1,52,00,000.00	Short-term Investment	1,52,00,000.00
Group Insurance Scheme	2,27,690.00	Group Insurance Scheme	1,02,333.00
Suspense	(—) 22,13,110.00	Suspense	3,74,408.00
<i>Remittance</i>			
G.P.F./C.P.F.	93,642.00	G.P.F./C.P.F.	88,063.00
Income-tax Remittance	3,28,535.00	Income-tax	3,19,741.00

P.L.I./L.I.C. Miscellaneous and Other Remittance	1,60,456.00	L.I.C./P.L.I. Miscellaneous Remittance	1,65,033.00
S.O. Remittance	16,05,005.00	S.O. Remittance	15,57,352.00
C.T. Society	79,163.00	C.T. Society	72,059.00
D.R.F.	26,355.00	D.R.F.	22,264.00
		Closing Balance Cash in hand and Bank	1,00,50,354.00
	<u>17,97,62,045.00</u>		<u>17,97,62,045.00</u>

## **APPENDICES**

## *Appendix A*

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

**T**HE National Council of Educational Research and Training has always recognized the importance of voluntary effort in 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.

The main details of the scheme as they exist at present are as follows :

#### **Objectives**

The following are the major objectives of the scheme :

1. To sustain and promote voluntary effort for the improvement of education especially school education.
2. To encourage publication of quality journals of professional nature which could help in disseminating information about educational innovations.
3. To promote extension work in education through voluntary organizations.

#### **Conditions of Eligibility**

##### *Organizations*

1. 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 1960); 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 resolution of State Government shall not be entitled to assistance under this scheme.

2. 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.
3. It should be open to all citizens of India without distinction of region, race, caste, creed, sex or language.
4. It should be recognized where such recognition is required for securing grant from the State Government.
5. It should have a properly constituted managing body with its powers, duties and responsibilities clearly defined and laid down in a written constitution.
6. 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.
7. It should have at least 50 members on roll on the date of application.
8. It should not be run for profit to any individual or a body of individuals.

#### *Activities*

1. Under the scheme the following types of activities are normally supported :
  - (a) Annual conferences provided they have a definite theme related to some national educational issues about which the NCERT may be concerned and/or which support the NCERT's work and may be useful in the furtherance of the NCERT's objectives.
  - (b) Production of educational literature including professional journals but excluding textual materials.

- (c) Educational exhibitions if they have a bearing on educational innovations or on other educational developments of topical nature.
2. No grant shall ordinarily be given for the following :
- (a) Seminars, workshops especially of the type that can be organized or are being organized by the NCERT.
  - (b) Research Projects.

### **Magnitude of Grant**

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

1. The grant-in-aid from the NCERT shall not normally exceed 60 per cent of the expenditure on an activity during that year.
2. 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 reduced accordingly.
3. 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% of the expenditure                                     | = Rs. 1,020 |
| (b) Short-fall of expenditure from other sources<br>(1700—900) | = Rs. 800   |

Recoverable amount

[Grant minus lesser of (a) and (b)]

= Rs. 1,500 – 800 = Rs. 700.

### **Procedure for Applying**

1. The PEOs should submit their applications in the prescribed application form complete in all respects and in duplicate.
2. Separate applications should be submitted for each programme or activity.
3. 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 journals/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**

1. In the case of grants for publication of journals it would be obligatory on a PEO to carry one advertisement of the NCERT with charges.
2. In the case of grants for annual conferences, the organization should associate some representatives of the NCERT with the conference.

3. 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.
4. The accounts and supporting documents shall be open to a test check by the Comptroller and Auditor-General of India at his discretion.
5. 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.
6. The organization must exercise utmost economy in the working of the programmes approved and assisted by the NCERT.
7. Applications for grant should be submitted to the Secretary, NCERT.

**Grants given by the NCERT to Professional Educational Organizations during 1982-83 for Publication of Journals**

<i>Sl. No.</i>	<i>Name of the Organization</i>	<i>Title of Journal</i>	<i>Amount Sanctioned</i>
1.	S.I.T.U. Council of Educational Research, 169, R.K. Mutt Road Rajah Annamalipuram Madras-28	Experiments in Education	Rs. 3000
2.	English Language Teachers Association of India, 108 R.K. Mutt Road, R.A. Puram, Madras-28	English Language Teaching	Rs. 5000
3.	Association for Improvement of Mathematics Teaching 25, Fera Road, Calcutta-29	Indian Journal of Mathematics Teaching	Rs. 3500
4.	Association for the Promotion of Science Education No. 3, First Trust Link Street Mandaveli Pakkam, Madras-28	Junior Scientists	Rs. 4500
5.	Indian Association for Pre-school Education, Lady Irwin College Sikandra Road, New Delhi	Balak	Rs. 2500
6.	Indian Reading Association Bhartiya Vidya Bhawan Kasturba Gandhi Road New Delhi C/o Deptt. of Teacher Education NCERT, New Delhi-16	Reading Journal	Rs. 2760
7.	Indian Physics Association C/o Tata Institute of Fundamental Research, Homi Bhabha Road Bombay-25	Physics News	Rs. 5000
8.	All India Science Teachers' Association, C/o Non-formal Education, NIE New Delhi-16	Vigyan Shikshak	Rs. 3500

**Grants given by the NCERT to Professional Educational Organizations during 1982-83 for Organizing Conferences**

<i>Sl. No.</i>	<i>Name of the Organization</i>	<i>Purpose</i>	<i>Amount Sanctioned</i>
1.	Bombay Psychological Association, Kokina Campus Vidya Nagari Bombay-98	National Conference on Applied Psychology	Rs. 5000
2.	All India Science Teachers Association C/o Non-formal Education, NIE New Delhi-16	Conference on Silver Jubilee Celebration of the Association and Printing of Report	Rs. 6000
3.	Indian Academy of Social Science 555-E, Mumfordganj Allahabad	7th Indian Science Congress	Rs. 5000
4.	Indian Association for Pre-school Education Lady Irwin College Sikandra Road, New Delhi	18th Annual Conference	Rs. 4000
5.	Indian Reading Association Bhartiya Vidya Bhawan Kasturba Gandhi Marg New Delhi-1	National Convention	Rs. 4000
6.	Integrated Education Rehabilitation and Research Centre for Handicapped S-601, School Block Shakarpur, Delhi-92	Annual Conference	Rs. 3500

## *Appendix B*

### **Location of Field Advisers in the States**

- |  |  |
|--|--|
| 1. Field Adviser (NCERT)<br>Zoo Road<br>Gauhati  | Assam, Manipur,<br>Arunachal Pradesh<br>and Nagaland |
| 2. Field Adviser (NCERT)<br>State Institute of Education Building<br>Pooja Pura, Trivandrum              | Kerala and Lakshadweep                               |
| 3. Field Adviser (NCERT)<br>3-6-69/B/7, Havanti Nagar<br>Bashir Bagh, Hyderabad                          | Andhra Pradesh                                       |
| 4. Field Adviser (NCERT)<br>A-33, Prabhu Marg (West)<br>Tilak Nagar, Jaipur                              | Rajasthan  |
| 5. Field Adviser (NCERT)<br>MIG-161, Saraswati Nagar<br>Bhopal   | Madhya Pradesh                                       |
| 6. Field Adviser (NCERT)<br>555-E, Mumfordganj, Allahabad  | Uttar Pradesh  |
| 7. Field Adviser (NCERT)<br>Homi Bhabha Hostel<br>Regional College of Education<br>Bhubaneswar           | Orissa   |
| 8. Field Adviser (NCERT)<br>736, Sahakari Main Road<br>III Block, Rajaji Nagar, Bangalore                | Karnataka  |
| 9. Field Adviser (NCERT)<br>1-B, Chandra Colony<br>(near Smarpan Flats)<br>Behind Law College, Ahmedabad | Gujarat and Dadra and<br>Nagar Haveli                |

- |   |   |
|---|---|
| <p>10. Field Adviser (NCERT)<br/>No. 32, Hindi Prachar Sabha Street<br/>T. Nagar<br/>Madras</p>                   | <p>Tamil Nadu and<br/>Pondicherry</p>   |
| <p>11. Field Adviser (NCERT)<br/>128/2, Kothrud Karve Road<br/>Pune</p>   | <p>Maharashtra and Goa,<br/>Daman and Diu</p>   |
| <p>12. Field Adviser (NCERT)<br/>P-23, C.I.T. Road, Scheme-55<br/>Calcutta</p>                                    | <p>West Bengal, Sikkim<br/>and Andaman and<br/>Nicobar Islands</p>                    |
| <p>13. Field Adviser (NCERT)<br/>Kankarbag<br/>(Patrakar Nagar), Patna</p>  | <p>Bihar</p>  |
| <p>14. Field Adviser (NCERT)<br/>Kothi No. 23, Sector 8-A<br/>Chandigarh</p>                                      | <p>Punjab, Haryana,<br/>Chandigarh and<br/>Himachal Pradesh<br/>Jammu and Kashmir</p> |
| <p>15. Field Adviser (NCERT)<br/>Nizam Manzil<br/>Sher-i-Kashmir Colony, Sector 2<br/>Qamar Wari<br/>Srinagar</p> | <p></p>   |
| <p>16. Field Adviser (NCERT)<br/>Boyce Road, Laitumukhra<br/>Shillong</p>   | <p>Meghalaya, Tripura and<br/>Mizoram</p>   |



## Appendix C

### Members of 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<br>President ex-officio,   | 1. Smt. Sheila Kaul<br>Union Minister for Education<br>Shastri Bhavan<br>New Delhi  |
| (ii) Chairman of the University Grants Commission, ex-officio   | 2. Dr. (Smt.) Madhuri R. Shah<br>Chairman<br>University Grants Commission<br>Bahadur Shah Zafar Marg<br>New Delhi   |
| (iii) Secretary to the Ministry of Education<br>ex-officio  | 3. Smt. Anna R. Malhotra<br>Secretary<br>Ministry of Education<br>Shastri Bhavan<br>New Delhi<br><br>Smt. Serla Grewal<br>Secretary<br>Ministry of Education<br>Shastri Bhavan<br>New Delhi<br>(from 2 November 1982) |
| (iv) Four Vice-Chancellors of Universities, one from each Region, nominated by the Government of India. | 4. Prof. S. Hamid<br>Vice-Chancellor<br>Aligarh Muslim University<br>Aligarh<br><br>5. Shri R.K. Manbarkar<br>Vice-Chancellor<br>Shivaji University<br>Kolhapur   |

- (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 Councillor, Delhi, (or his representative)
6. Prof. B.S. Ramakrishna  
Vice-Chancellor  
Hyderabad University  
Hyderabad
  7. Dr. V.K. Sukumaran Nair  
Vice-Chancellor  
Kerala University  
Trivandrum
  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

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

37. Dr. N. Vedamani Manuel  
Prof. and Head of Department of  
Education, Kerala University  
Trivandrum
38. Prof. V.G. Kulkarni  
Tata Institute of Fundamental  
Research, Homi Bhabha Centre  
for Science Education  
Homi Bhabha Road  
Bombay
39. Shri B.M. Joshi  
Principal, Shri M.M. Pupils'  
Own School and Sharda Mandir  
Swami Vivekanand Road, Khar  
Bombay
40. Shri M.S Dixit  
Principal, Hiralal VN 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.) Shakuntala Bhattacharya**  
**Reader, Department of Education**  
**in Science and Mathematics**  
**National Council of Educational**  
**Research and Training**  
**New Delhi**
45. **Shri S. Sathyam**  
**Joint Secretary (SE)**  
**Ministry of Education**  
**Shastri Bhavan**  
**New Delhi**
46. **Shri Man Mohan Singh**  
**Financial Adviser, NCERT**  
**Ministry of Education**  
**Shastri Bhavan**  
**New Delhi**
- (vii) (a) **Chairman**  
**Central Board of**  
**Secondary**  
**Education,**  
**New Delhi**  
**ex-officio**
47. **Chairman**  
**Central Board of Secondary**  
**Education**  
**17-B, Indra Prastha Estate**  
**New Delhi**
- (b) **Commissioner**  
**Kendriya Vidyalaya**  
**Sangathan**  
**New Delhi**  
**ex-officio**
48. **Commissioner**  
**Kendriya Vidyalaya Sangathan**  
**Nehru House**  
**4-Bahadur Shah Zafar Marg**  
**New Delhi**
- (c) **Director**  
**Central Health**  
**Education Bureau**  
**(D.G.H.S.)**  
**New Delhi**  
**ex-officio**
49. **Director**  
**Central Health Education**  
**Bureau (D.G.H.S.)**  
**Nirman Bhavan**  
**New Delhi**

- (d) Deputy Director-General, Incharge of Agricultural Education, ICAR Ministry of Agriculture New Delhi ex-officio
50. Deputy Director-General Incharge of Agricultural Education ICAR, Ministry of Agriculture Dr. Rajendra Prasad Road New Delhi
- (e) Director of Training Directorate-General of Training and Employment Ministry of Labour New Delhi ex-officio
51. Director of Training Directorate-General of Training and Employment, Ministry of Labour Shram Shakti Bhavan, Rafi Marg New Delhi
- (f) Representative of Education Division Planning Commission, New Delhi ex-officio
52. Educational Adviser Planning Commission Yojana Bhavan, Parliament Street New Delhi
- (viii) Such other persons not exceeding six as the Government of India may, from time to time, nominate. Not less than four of these shall be school teachers-
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

56. **Shri Bir Singh**  
**Divisional Supdt. 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**
- (ix) **Special Invitees**
59. **Secretary, Council of Indian School**  
**Certificate Examination**  
**Pragati House, 3rd Floor**  
**47, Nehru Place**  
**New Delhi**
60. **Shri V.K. Pandit**  
**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**
1. **Smt. Sheila Kaul**  
**Minister of State**  
**Ministry of Education**  
**Shastri Bhavan**  
**New Delhi**



- (ii) (a) The Minister of State in the Ministry of Education who shall be the ex-officio Vice-President of the Executive Committee
- (b) A Deputy Minister in the Ministry of Education nominated by the President, NCERT
- (c) Director of the Council
- (d) Secretary, Ministry of Education ex-officio
- (iii) Chairman of the University Grants Commission, Member ex-officio
- (iv) Four educationists with known interest in school education (two of whom shall be school teachers) nominated by the President
2. Shri P.K. Thungan  
Deputy Minister of Education  
Shastri Bhavan  
New Delhi
3. Director, National Council of Educational Research and Training  
New Delhi
4. Smt. Anna Malhotra  
Secretary  
Ministry of Education  
Shastri Bhavan  
New Delhi
- Smt. Serla Grewal  
Secretary  
Ministry of Education  
Shastri Bhavan  
New Delhi  
(from 2 November 1982)
5. Smt. Madhuri R. Shah  
Chairman  
University Grants Commission  
Bahadur Shah Zafar Marg  
New Delhi
6. Prof. V.G. Kulkarani  
Project Director, Tata Institute of Fundamental Research, Homi Bhabha Centre for Science Education  
Homi Bhabha Road  
Bombay

- (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
7. Dr. N. Vedamani Manuel  
Prof. and Head of Department of Education, Kerala University  
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  
Chhibramau  
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

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| (vii) One representative of the Ministry of Education   | 14. Shri S. Sathyam<br>Joint Secretary (SE)<br>Ministry of Education<br>Shastri Bhavan<br>New Delhi          |
| (viii) One representative of the Ministry of Finance, who shall be the Financial Adviser of the Council | 15. Shri Man Mohan Singh<br>Financial Adviser, NCERT<br>Ministry of Education<br>Shastri Bhavan<br>New Delhi |
|   | 16. Shri V.K. Pandit<br>Secretary<br>National Council of Educational<br>Research and Training<br>New Delhi   |

#### ESTABLISHMENT COMMITTEE

- |   |  |
|---|--|
| (i) The Director, NCERT<br>Chairman   | 1. Dr. Shib K. Mitra<br>Director<br>NCERT<br>Chairman  |
| (ii) The Joint Director<br>NCERT.   | 2. Dr. T.N. Dhar<br>Joint Director<br>NCERT  |
| (iii) A nominee of the<br>Ministry of Education<br>to be nominated by<br>the President                          | 3. Shri S. Sathyam<br>Joint Secretary (SE)<br>Ministry of Education<br>Shastri Bhavan<br>New Delhi |
| (iv) Four educationists to be<br>nominated by the<br>President, of whom at<br>least one shall be a<br>scientist | 4. Prof. M.I. Savadatti<br>Department of Physics<br>Karnataka University<br>Dharwad                |

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|  | 5. Prof. P.L. Malhotra<br>Dean of Colleges<br>Delhi University<br>Delhi  |
|  | 6. Dr. Francis Ekka<br>Prof. and Deputy Director<br>Central Institute of Indian<br>Languages, Manasagangotri<br>Mysore |
|  | 7. Prof. (Km.) A.J. Dastur<br>Head, Department of Civics and<br>Political Science<br>University of Bombay<br>Bombay    |
| (v) One representative<br>from Regional Colleges<br>of Education to be<br>nominated by the<br>President  | 8. Shri P.C. Joseph<br>Storekeeper, Regional College of<br>Education<br>Mysore   |
| (vi) One representative of<br>the National Institute<br>of Education, Delhi, to<br>be nominated by the<br>President  | 9. Km. S.K. Ram<br>Reader in English,<br>DESS&H, NCERT<br>New Delhi  |
| (vi) Two representatives,<br>one each from the<br>regular academic and<br>non-academic staff of<br>the Council elected<br>from amongst their category<br>in the manner prescribed<br>in Appendix to this<br>Regulation | 10. Shri Balgopala Verma<br>Lecturer, Regional College<br>of Education<br>Mysore                                       |
|  | 11. Shri Prabodh Kumar<br>U.D.C.<br>DESS & H, NCERT  |

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| (viii) | Financial Adviser<br>NCERT            | 12. | Shri Man Mohan Singh<br>Financial Adviser, NCERT<br>Shastri Bhavan<br>New Delhi |
| (ix)   | Secretary, NCERT<br>(Member-Convener) | 13. | Shri V.K. Pandit<br>Secretary<br>NCERT<br>Member-Convener                       |

#### FINANCE COMMITTEE

- |    |   |          |
|----|---|----------|
| 1. | Prof. S.K. Mitra<br>Director<br>National Council of Educational<br>Research and Training<br>New Delhi   | Chairman |
| 2. | Shri S. Sathyam<br>Joint Secretary (SE)<br>Ministry of Education<br>Shastri Bhavan<br>New Delhi   |          |
| 3. | Shri J. Veera Raghavan<br>Executive Director<br>National Institute of Educational<br>Planning and Administration (NIEPA)<br>17-B, Sri Aurobindo Marg<br>New Delhi |          |
| 4. | Prof. V.G. Kulkarni<br>Project Director<br>Tata Institute of Fundamental<br>Research, Homi Bhabha Centre for<br>Science Education<br>Homi Bhabha Road<br>Bombay   |          |

5. Shri Man Mohan Singh  
Financial Adviser  
Ministry of Education and NCERT  
Room No. 109 'C'  
Shastri Bhavan  
New Delhi
6. Shri V.K. Pandit  
Secretary  
NCERT
- Convener

#### BUILDING AND WORKS COMMITTEE

- |   |                   |  |
|---|-------------------|--|
| 1. Director, NCERT<br>ex-officio                                | Chairman          | 1. Dr. Shib K. Mitra<br>Director, NCERT  |
| 2. Joint Director<br>NCERT, ex-officio                          | Vice-<br>Chairman | 2. Dr. T.N. Dhar<br>Joint Director, NCERT  |
| 3. Chief Engineer<br>CPWD or his<br>nominee                     | Member            | 3. Shri M.L. Kalra<br>Superintending Surveyor of<br>Works (Food), CPWD<br>I.P. Bhavan<br>Indraprastha Estate<br>New Delhi                    |
| 4. A representative<br>of the Ministry<br>of Finance<br>(Works) | Member            | 4. Shri A.K. Saxena<br>A.F.A. (Works), Ministry of<br>Works and Housing<br>Room No. 340, 'C' Wing<br>(III Floor), Nirman Bhavan<br>New Delhi |
| 5. The Consulting<br>Architect of the<br>Council                | Member            | 5. Shri K.M. Saxena<br>Senior Architect, HPT-2<br>CPWD, Room No. 318<br>'A' Wing (III Floor)<br>Nirman Bhavan<br>New Delhi                   |

6.	Financial Adviser of the Council or his nominee	Member	6.	Shri Man Mohan Singh Financial Adviser, NCERT Room No. 109, 'C' Shastri Bhavan New Delhi
7.	A nominee of the Ministry of Education	Member	7.	Shri S. Sathyam Joint Secretary (SE) Ministry of Education Shastri Bhavan New Delhi
8.	A Civil Engineer standing (nominated by the President)	Member	8.	Shri R.A. Khemani Chief Engineer, Delhi Development Authority (D.D.A.) Vikas Bhavan, Annexe Indraprastha Estate New Delhi
9.	An Electrical Engineer of standing (nominated by the President)	Member	9.	Shri T. Krishnamurthy Superintending Engineer Delhi Central Electric Circle-1 (5th Floor), CPWD I.P. Bhavan Indraprastha Estate New Delhi
10.	A member of the Executive Committee nominated by the Committee	Member	10.	Shri S.H. Khan Reader, Primary Curriculum Development Cell (PCDC), NCERT New Delhi
11.	Secretary NCERT	Member-Secretary	11.	Shri V.K. Pandit Secretary, NCERT

#### PROGRAMME ADVISORY COMMITTEE

1.	Director, NCERT	Chairman
2.	Joint Director, NCERT	Vice-Chairman

3. Prof. S. Bhattacharya  
Professor of Education  
Visva Bharati  
Shantiniketan  
West Bengal
4. Prof. B.K. Passi  
Head of the Education Department  
Indore University  
Indore
5. Prof. K. Kumaraswamy Pillai  
Professor of Education  
Annamalai University  
Annamalai Nagar  
Tamil Nadu
6. Prof. B.R. Kamble  
Head of the History Department  
Shivaji University  
Kolhapur, Maharashtra
7. Prof. K. Padma Umapati  
Professor of Home Science  
University of Mysore  
Mysore
8. Director  
State Institute of Education  
Sector 20-D  
Chandigarh
9. Principal  
State Institute of Education  
Trivandrum  
Kerala
10. Director  
State Institute of Education  
Jorhat  
Assam



11. Director  
State Institute of Education  
M.S, Sadashiv Peth  
Kumethkar Road  
Pune  
Maharashtra
12. Director  
Department of State Educational Research and Training  
Shri B.P. Wadia Road  
Basvangudi  
Bangalore  
Karnataka
13. Head  
Department of Measurement and Evaluation  
NCERT
14. Head  
Department of Education in Science and Mathematics  
NCERT
15. Head  
Department of Education in Social Sciences and Humanities  
NCERT
16. Head  
Department of Teacher Education  
NCERT
17. Head  
Workshop Department  
NCERT
18. Head  
Publication Department  
NCERT
19. Head  
CAPE Group  
NCERT
20. Head  
Department of Teaching Aids  
NCERT

21. Head  
Curriculum Group  
NCERT
22. Head  
Educational and Vocational Guidance Unit  
NCERT
23. Head  
Child Study Unit  
NCERT
24. Head  
Educational Psychology Unit  
NCERT
25. Head  
SC/ST Education Unit  
NCERT
26. Head  
Women Education Unit  
NCERT
27. Head  
Population Education Unit  
NCERT
28. Head  
Extension Unit  
NCERT
29. Head  
Planning, Coordination and Evaluation Unit  
NCERT
30. Head  
Vocationalization of Education Unit and SUPW Unit  
NCERT
31. Head  
Survey and Data Processing Unit  
NCERT

32. Head  
Library and Documentation Unit  
NCERT
33. Head  
National Talent Search Unit  
NCERT
34. Head  
Primary Curriculum Development Cell  
NCERT
35. Head  
Journals Cell  
NCERT
36. Principal  
Centre for Educational Technology  
NCERT
37. Principal  
Regional College of Education  
Ajmer
38. Principal  
Regional College of Education  
Bhopal
39. Principal  
Regional College of Education  
Bhubaneswar
40. Principal  
Regional College of Education  
Mysore
41. Professor  
Non-Formal Education Group
42. Prof. A.N. Maheshwari  
Regional College of Education  
Mysore
43. Dr. B.D. Atreya  
Reader, Department of Education in Science and Mathematics  
NCERT

44. Miss S.K. Ram  
Reader, Department of Education in Social Sciences and  
Humanities  
NCERT
45. Shri Tilak Raj  
Reader, Department of Teaching Aids  
NCERT
46. Shri Prabhakar Rao  
Chief Production Officer  
Publication Department  
NCERT
47. Dr. M.V. Ramji  
Reader, Regional College of Education  
Bhubaneswar
48. Dr. J.S. Grewal  
Reader, Regional College of Education  
Bhopal
49. Dr. (Smt.) Amrit Kaur  
Reader, Regional College of Education  
Ajmer (Rajasthan)
50. Dr. Jagdish Singh  
Reader, Centre for Educational Technology  
NCERT
51. Dean (A & R)  
NCERT
52. Dean (C)  
NCERT

#### ADVISORY COMMITTEE FOR SCHOOL CURRICULUM

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|----|--|----------|
| 1. | Director<br>NCERT                        | Chairman |
| 2. | Dr. T.N. Dhar<br>Joint Director<br>NCERT | Member   |

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|-----|---|--------|
| 3.  | Vice-Chairman<br>U.G.C., Bahadur Shah Zafar Marg<br>New Delhi   | Member |
| 4.  | Prof. R.C. Paul<br>Vice-Chancellor<br>Panjab University<br>Chandigarh   | Member |
| 5.  | Prof. G.R. Damodaran<br>Vice-Chancellor<br>University of Madras<br>Madras   | Member |
| 6.  | Prof. Rasheeduddin Khan<br>Chairman, Centre for Political<br>Studies, School of Social Sciences<br>Jawaharlal Nehru University<br>New Delhi | Member |
| 7.  | Dr. Amrik Singh<br>Secretary, Association of Indian<br>Universities<br>Dindayal Upadhyaya Marg<br>New Delhi                                 | Member |
| 8.  | Dr. Suma Chitnis<br>Professor, Tata Institute of Social<br>Sciences, Sion, Trombay Road<br>Bombay   | Member |
| 9.  | Dr. Rajammal P. Devadas<br>Principal, Sri Avinashilingam<br>Home Science College for Women<br>Coimbatore                                    | Member |
| 10. | Prof. S.M. Chatterji<br>98/39, Gopal Lal Tagore Road<br>Calcutta  | Member |
| 11. | Dr. Gopal Singh<br>Chairman<br>World Sikh University Press<br>7, Poorvi Marg, Vasant Vihar<br>New Delhi                                     | Member |

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| 12. | Shri V.G. Kulkarni<br>Project Director, Tata Institute of<br>Fundamental Research<br>Centre for Science Education<br>Homi Bhabha Road<br>Bombay | Member |
| 13. | Dr. Mohammad Ahmed<br>Reader in Medicine<br>Jawaharlal Nehru Medical College<br>Aligarh Muslim University<br>Aligarh                            | Member |
| 14. | Shri M.N. Kapur<br>Director, Guru Shikhar School<br>Mount Abu<br>Rajasthan  | Member |
| 15. | Dr. S.N. Mehrotra<br>Vice-Chancellor<br>Agra University<br>Agra   | Member |
| 16. | Prof. B.K. Roy Burman<br>Council for Social Development<br>53, Lodi Estate<br>New Delhi   | Member |
| 17. | Smt. Ashima Chaudhuri<br>Principal, South Delhi Polytechnic<br>for Women, No. 9, Ring Road<br>South Extension—I<br>New Delhi                    | Member |
| 18. | Dr. Prem Kirpal<br>63-F Block, Sujan Singh Park<br>New Delhi  | Member |
| 19. | Dr. P.L. Malhotra<br>Principal, College of Vocational Studies<br>University of Delhi<br>Delhi   | Member |

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|-----|---|--------|
| 20. | Director<br>All India Institute of<br>Medical Sciences<br>Ansari Nagar<br>New Delhi   | Member |
| 21. | Dr. Nagendra<br>Prof. of Hindi, University of Delhi<br>16, Cavalry Lines<br>Delhi   | Member |
| 22. | Dr. (Smt.) Usha K. Luthra<br>Sr. Deputy Director-General<br>Indian Council of Medical Research<br>Ansari Nagar<br>New Delhi | Member |
| 23. | Shri A.K. Dhan<br>Vice-Chancellor<br>North Eastern Hill University<br>Shillong  | Member |
| 24. | Dr. H.S.S. Lawrence<br>5, Arulagam, Bragadambal Road<br>Nungambakkam<br>Madras  | Member |
| 25. | Prof. J.J. Nanavati<br>Central Bombay Service—I (R)<br>11 Napier Road<br>Pune   | Member |
| 26. | Prof. L.K. Mahapatra<br>Head, Department of Anthropology<br>Utkal University<br>Vani Vihar, Bhubaneswar<br>Orissa           | Member |
| 27. | Dr. K.R. Srinivasan Iyengar<br>152, Kutchery Road<br>Mylapore<br>Madras   | Member |

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|-----|---|-------------------|
| 28. | The Principal<br>Netarhat School<br>P.O: Netarhat (via Ranchi)<br>Bihar   | ex-officio Member |
| 29. | Commissioner<br>Kendriya Vidyalaya Sangathan<br>(Central Schools Organization)<br>Nehru House, Bahadur Shah Zafar Marg<br>New Delhi | ex-officio Member |
| 30. | Asstt. Director-General (Education)<br>Indian Council of Agricultural Research<br>Krishi Bhavan<br>New Delhi                        | ex-officio Member |
| 31. | Director of Primary Education<br>Primary Education Directorate<br>Govt. of West Bengal<br>New Secretariat Building<br>Calcutta      | ex-officio Member |
| 32. | Chairman<br>Central Board of Secondary Education<br>17-B, Ring Road, I.P. Estate<br>New Delhi                                       | ex-officio Member |
| 33. | President<br>Council of Boards of Secondary Education<br>in India<br>17-B, I.P. Estate<br>New Delhi                                 | ex-officio Member |
| 34. | Director<br>State Institute of Education<br>Government of Maharashtra<br>Kumthekar Marg<br>Pune, Maharashtra                        | ex-officio Member |
| 35. | Secretary<br>Council for the Indian School Certificate<br>Examination<br>Pragati House<br>47-48, Nehru Place<br>New Delhi           | ex-officio Member |



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| 36. | Member-Secretary<br>Indian Council of Social Science<br>Research<br>I.P. Estate<br>New Delhi | ex-officio Member  |
| 37. | Director<br>Netaji Subhash National Institute of Sports<br>Moti Bagh<br>Patiala              | ex-officio Member  |
| 38. | The Director of Public Instruction<br>Government of Kerala<br>Trivandrum                     | ex-officio Member  |
| 39. | All the Heads of Departments/Units<br>etc. and Professors of NIE                             | Permanent invitees |
| 40. | Principal and Professor(s) CET   | Permanent invitees |
| 41. | Reader (Programme)   | Permanent invitee  |
| 42. | Head, Curriculum Group<br>NCERT<br>New Delhi   | Convener           |

#### EDUCATIONAL RESEARCH AND INNOVATIONS COMMITTEE

- |    |  |          |
|----|--|----------|
| 1. | Dean (Research)  | Chairman |
| 2. | Dean (Academic)  |          |
| 3. | Dean (Coordination)  |          |
| 4. | Heads of all Departments of the NCERT  |          |
| 5. | Principals of Regional Colleges of Education<br>and the Centre for Educational Technology                      |          |
| 6. | Two persons from the State Institutes of<br>Education to be nominated by the Director<br>NCERT                 |          |
|    | (i) Director, State Council of Educational<br>Research and Training, 6, D.P.I. Compound<br>Madras (Tamil Nadu) |          |

- (ii) Director, State Institute of Education  
Jahangirabad, Bhopal (M.P.)
7. Eight persons from universities/research institutes of other appropriate agencies to be nominated by the President of the NCERT
- (i) Dr. S.B. Adaval  
Professor of Education  
University of Allahabad  
Allahabad (U.P.)
- (ii) Dr. C.L. Anand  
Professor of Education  
NEH University  
Shilong
- (iii) Dr. Ramesh Mohan  
Director, Central Institute of English and Foreign Languages  
Hyderabad
- (iv) Dr. B.N. Mukerji  
Director, Research Council for Social Development  
53, Lodhi Estate  
New Delhi
- (v) Prof. A.K. Kulkarni  
Professor of Chemistry  
University of Bombay  
Bombay
- (vi) Prof. (Smt.) Amita Verma  
Professor of Child Development  
Department of Home Science  
University of Baroda  
Baroda
- (vii) Prof. P.G. Panicker  
Director  
Centre for Development Studies, Ulloor  
Trivandrum
- (viii) Dr. J.N. Kapoor  
Senior Professor of Mathematics  
Indian Institute of Technology  
Kanpur (U.P.)

## ADVISORY COMMITTEE FOR ENVIRONMENTAL EDUCATION

1. Head, Department of Teacher Education and Principal, Centre for Educational Technology
2. Head, Department of Education in Social Sciences and Humanities and Population Education Unit
3. Head, Child Study Unit
4. Head, Primary Curriculum Development Cell
5. Head, Comprehensive Access to Primary Education Group
6. Head, Vocationalization of Education Unit and Socially Useful and Productive Work Unit
7. Head, Planning, Coordination and Evaluation Unit
8. Head, Scheduled Castes and Scheduled Tribes Education Unit
9. Head, Department of Teaching Aids, I.P. Estate, New Delhi
10. Head, Curriculum Group
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  
Reader (Programme)
16. Shri G. Guru  
Reader, Vocationalization of Education Unit and Socially Useful Productive Work 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, Department of Education in Science and Mathematics  
Convener

## LIBRARY ADVISORY COMMITTEE

- |  |          |
|--|----------|
| 1. Prof. A.N. Bose, DESM                                       | Chairman |
| 2. Prof. B.S. Parakh<br>Head, DESS&H                           | Member   |
| 3. Prof. P.N. Dave<br>Head, CAPE Group                         | Member   |
| 4. Prof. Anil Vidyalkar<br>DESS&H                              | Member   |
| 5. Prof. C.H.K. Misra<br>Member-Secretary (ERIC)               | Member   |
| 6. Prof. (Smt.) S. Shukla<br>Centre for Educational Technology | Member   |
| 7. Dr. (Km.) S. Bisaria<br>Head, Women Education Unit          | Member   |
| 8. Dr. M.S. Khaparde<br>Reader (Programme)                     | Member   |
| 9. Professional Senior<br>Library and Documentation Unit       | Member   |
| 10. One representative of<br>Library Association               | Member   |
| 11. Head, Library and Documentation Unit                       | Convener |

## 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 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 (Convener)

#### 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 Programmes
6. A representative of the Planning, Coordination and Evaluation Unit
7. Principal, Centre for Educational Technology (Convener)

#### 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 (Convener)

**COORDINATION ACTION COMMITTEE FOR  
NON-FORMAL EDUCATION**

1. Head, Comprehensive Access to Primary Education Group
2. Head, Primary Curriculum Development Cell
3. Head, Scheduled Castes and Scheduled Tribes Education Unit
4. Head, Women Education Unit
5. Head, Extension 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. Rastogi (Convener)

**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 Unit
8. Head, Educational Psychology Unit
9. Head, Planning, Coordination and Evaluation Unit
10. Head, Vocationalization of Education Unit
11. Reader (Programme)
12. Head, Department of Education in Science and Mathematics
13. Head, Primary Curriculum Development Cell
14. Head, Department of Teacher Education (Convener)

## *Appendix D*

### **Major Decisions taken by the Committees during 1982-83**

#### **THE EXECUTIVE COMMITTEE (20 May 1982 and 23 October 1982)**

**T**HE 57th and 58th meetings of the Executive Committee were held on 20 May 1982 and 23 October 1982, respectively.

The need for bringing out textbooks on moral education within the shortest possible time was emphasized. The Executive Committee suggested that a beginning in this direction should be made by preparing textbooks for the primary stage of education.

The Executive Committee agreed to give grant-in-aid to the Vikram Sarabhai Community Science Centre during the year 1982-83.

It was decided that two-stage selection procedure for the award of National Talent Search Scholarship will be introduced from May 1984.

The proposal for bringing out a folio depicting India's Freedom Struggle was approved by the Executive Committee. The price of the folio will be fixed in such a way that the total production and distribution costs are covered. It was also suggested that the publication of the folio should be followed by such other efforts as its publication in the form of a book, tapes, slides, films, etc.

The Executive Committee advised that the price structure of all the books costing more than Rs. 10 should be re-examined.

The Executive Committee observed that the NCERT should consider the question of developing suitable mechanism for the monitoring of enrolment in elementary education, since universalization of this stage formed part of the minimum needs programme and the 20-point economic programme.

It was also decided that the Council should not play any direct role in the area of Adult Education since the Ministry has already set up a separate Directorate of Adult Education.

**THE FINANCE COMMITTEE**  
(26 April 1982, 26 May 1982 and 29 November 1982)

The 57th, 58th and 59th meetings of the Finance Committee were held on 26 April 1982, 26 May 1982 and 29 November 1982, respectively.

The Finance Committee noted the approval already accorded to the rates of remuneration for evaluators for the task of identifying the objectionable materials in the textbooks :

- (a) Textbooks for Classes I-V : Rs. 50 per title.
- (b) Textbooks for Classes VI-VIII : Rs. 75 per title.
- (c) Textbooks for Classes IX-XII : Rs. 100 per title.

The Finance Committee recommended that Members of the Expert Committees may be paid at the rate of Rs. 50 per day per member for meetings convened to finalize the evaluation reports of the NCERT textbooks.

The Finance Committee recommended that the NCERT may follow the UPSC rules in all respect for payment of TA/DA, etc., to the members of the selection committees of the Council.

The Finance Committee recommended the creation of a rolling fund of Rs. 15,00,000 in respect of UNICEF-aided project numbers 1 and 4 in the current year within the approved plan budget of the Council. The working of the rolling fund will be reviewed after one year. The continuance of the rolling fund arrangement for projects 1 and 4 and its extension to other UNICEF projects would be dependent upon the results of the review.

The Finance Committee recommended the following for the approval of the Executive Committee :

1. Enhancement of fellowships from Rs. 400 to Rs. 600 per month for the first two years and thereafter @ Rs. 700, Rs. 800 P.M.



For grant of fellowship of Rs. 800 a Fellow should have worked on the same project for a minimum period of two years and should have submitted Ph.D. thesis. The enhanced fellowship of Rs. 800 would be effective from the date of submission of the Ph.D. thesis. They will, however, not be eligible for any contingent grant.

2. The present Senior Project Fellows will be re-designated as Post-doctoral Project Fellows and will be eligible for the fellowship @ Rs. 900/- P.M. without any contingent grant. The tenure of fellowship will be valid till the completion of the Project.
3. The total duration of Junior Project Fellow and Post-doctoral Fellow will not in any case exceed four and a half years.

The Finance Committee recommended that six places for trainees be created for a duration not exceeding six months in India with a provision for payment of an out-of-pocket allowance of Rs. 250 P.M. per trainee/student.

The Finance Committee recommended the grant of recurring honorarium of Rs. 20 P.M. for the Daftry who operates the following machines in the Population Education Unit :

1. Overhead Projector
2. Slide Projector
3. Scanner (Electric Stencil Cutter)
4. Plain Paper Copier (Photostat Unit)
5. Duplicator.

The Finance Committee agreed to the following rates for the hiring of auditorium in the Department of Teaching Aids :

1. Screening of films—Rs. 150 per hour plus Rs. 75 for additional half an hour.
2. Meeting in Auditorium—Rs. 75 per half hour and Rs. 150 per hour.

The Finance Committee agreed to the creation of the following regular posts :

1. Editor (Hindi) Rs. 1100-1600—one

2. Editorial Assistant Rs. 550-900—one (Proficient in both Hindi and English).

The Finance Committee agreed to the levy of following charges for Data Processing services of the NCERT to other organizations and individuals engaged in educational research :

1. Punching and Verification of Cards : Rs. 1 60.00 per thousand cards.
2. Cost of Cards : Rs. 40.00 per thousand cards.
3. Rental for the use of Magnetic Tapes : Rs. 25.00 per month per tape.
4. Programming charges: Rs. 2 665.00 per programme per month.

Agencies and individuals might be asked to deposit a sum equivalent to 75 per cent of the total estimate before undertaking the job.

#### THE ESTABLISHMENT COMMITTEE

(31 January 1983 and 22 February 1983)

The meetings of the Establishment Committee were held on 31 January 1983 and 22 February 1983.

The Committee considered the report of the one-man Committee which was assigned the task of Cadre Review and Promotional Policies. It was decided that a factual analysis and the data should be made by J.S., F.A. and Secretary, NCERT, to identify the levels at which and to what extent stagnation was occurring. Based on the analysis, the Council should come to the Establishment Committee with proposals for appropriate relief to the employees.

#### THE BUILDING AND WORKS COMMITTEE

No meeting was held during this period.

**THE ANNUAL GENERAL BODY MEETING OF THE NCERT  
(23 December 1982)**

The 19th Annual General Body meeting of the NCERT was held on 23 December 1982 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 highlighted some of the important educational tasks which required concerted efforts on the part of the NCERT, the State Governments and others concerned with educational development. In particular, she drew the attention of the members to the need for increasing access of girls and the disadvantaged to education, the importance of providing value orientation to education, the need for a critical look at the existing programmes of teacher education, the urgency to provide education to the disabled in the normal school setting, the need for hastening the evaluation of textbooks from the standpoint of national integration, etc. She drew the attention of the Council to the facilities and expertise available in NCERT and requested the State representatives to take advantage of these in an increasing measure. She stressed the need to develop SCERT's/SIE's as viable and effective institutions so that they could develop and implement innovative programmes of educational development in the States.

The General Body approved the draft Annual Report of the Council for 1981-82 as presented to it by the Executive Committee.

The General Body advised that format for the presentation of the Audit Report might be changed to indicate in a tabular form the contents of the Audit Report and the progress made in the settlement of the objections raised in it.

During the course of the discussion the General Body gave the following suggestions :

- (a) Greater attention would have to be paid for identifying and concentrating on the promotion of enrolment of girls and their retention in schools through formal and non-formal strategies. Success stories, indicating the strategy adopted in specific cases, might be collected by the Council and circulated to the States.
- (b) Catalogue of innovative projects might be compiled by the NCERT and circulated for the benefit of State Departments.

- (c) Summary of findings of research might be prepared every year and circulated to the States which in turn could translate them into regional languages and disseminate them to institutions.
- (d) One or two brochures containing information about various schemes operated by the Council might be made available periodically for further circulation by the States.
- (e) An inter-organization group of NCERT and KVS might be set up for the study of the effectiveness of the contribution of yoga instruction in schools.
- (f) The NCERT was advised to involve itself in a variety of research and developmental activities in the area of non-formal education. It was also suggested that the NCERT might collaborate, where necessary, with the Directorate of Adult Education for this purpose.
- (g) Special efforts were required to be made by the NCERT for integrated education of the disabled children.

The General Body recommended the creation of a cell in the NCERT for the education of the disabled for preparation of resource materials, training of teacher educators and research studies in this area.

Value-orientation to inculcate desirable values among children was emphasized and the Council was advised to speed up the preparation of syllabi and textbooks/supplementary readers on moral education.