

NCERT
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National Council of Educational Research and Training

ANNUAL REPORT 1977-78



National Council of Educational Research and Training

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AC KNOWLEDGEMENTS

THE Council is indebted to the Union Minister of Education and Social Welfare for his keen interest in its affairs. The Council also expresses its gratitude to the Ministry of Education and Social Welfare for extending several facilities to it from time to time during the year under report. The Council is grateful to the experts who spared their valuable time to serve on its committees and extended help in many other ways. Thanks are also due to several organizations and institutions and especially the State Departments 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.

1

NCERT : Its Resurgent Role

NINETEEN Seventy Eight will mark the 17th year of the setting up of NCERT. During these years, NCERT has assisted the Government of India in its arduous task of rapid development and improvement of education in this country. Seventeen years is

not, perhaps, a very long time in the history of an institution, but much has been achieved in this brief period.

In the field of education there is a pressing need for a new meaning and a new sense of social purpose. New and challenging educational issues and concepts have emerged and a new strategy for educational development which would truly correspond to the aspirations of the community, has to be evolved. Not unnaturally, the quest for a new educational order so necessary for the country, has involved the NCERT in an attempt to define its own objectives in relation to the country's major problems and in an effort to clarify and examine, in greater depth, the significance of the concept of a new educational system and its implications. In this context, developmental and improvement programmes, formulated and implemented by NCERT during the year under review, emerge as a matter of national concern.

Dissatisfaction with the existing educational system is almost universal; its irrelevance to the learner, to society and even to educational goals themselves is constantly being stressed. Tinkering with the problem will be of little avail, as past experience has shown. Education must be given new purpose and direction and meaning for the entire nation. A radical change in the entire system and even in the very concept of education has become necessary. Curricula and syllabuses of the schools have been branded as incapable of meeting the challenge of recent scientific and technical achievements and of a fast-changing social order. Learning, today, has to be continuous, organically related to life and experience and non-prescriptive. It encompasses the formal, non-formal and informal forms of learning.

Viewed in the larger national context, the work of NCERT, during the year under review, acquires new meaning and significance. Through continuous improvements in curriculum, preparation of new textbooks and reference materials, training programmes for teachers, vocationalisation of education, research and survey work, and a massive onslaught against educational backwardness, NCERT has been steadily advancing towards new frontiers in educational development. Through the programmes initiated during the year 1977-78, NCERT has been able to formulate scientifically validated programmes for comprehensive solution of fundamental problems related to education. Its programmes point beyond the present day horizons and trace out lines of action which permit a long-term view of the situation. New possibilities for change and purpose are gradually becoming realities.

STRUCTURE AND FUNCTIONING OF NCERT

The NCERT is an autonomous body registered under the Societies

Registration Act (Act XXI of 1860). Its Memorandum of Association lays down that :

- (i) The objects of the Council shall be to assist and advise the Ministry of Education and Social Welfare in the implementation of its policies and major programmes in the field of education, particularly school education.
- (ii) For the realization of these objectives, the Council may undertake any, or all, of the following programmes and activities :
 - (a) To undertake, aid, promote and coordinate research in all branches of education;
 - (b) To organize pre-service and in-service training mainly at an advanced level;
 - (c) To organize extension services for such institutions in the country as are engaged in educational research, training of teachers or provision of extension services to schools;
 - (d) To develop and/or disseminate improved educational techniques and practices in schools

Structure

In order to achieve these objectives effectively, the Council has been structured as shown in Table I on page 7. Broadly speaking, there are two wings : the Secretariat responsible for coordination and servicing; and various constituents charged with the improvement of specific aspects of school education.

Among the constituents, the National Institute of Education occupies a prominent position. It has been established for the development of research, advanced training and the provision of extension services. It is an institute devoted to the improvement of the quality of school education in the country in all its aspects. It is composed of a number of departments and units (Table I).

Another set of constituents under the NCERT comprises four Regional Colleges of Education at Ajmer, Bhopal, Bhubaneswar and Mysore, respectively. Their main area of responsibility is teacher training, both in-service and pre-service. They are trend-setters in the country in this field. Not only did they initiate an integrated approach to teacher training but have also started certain non-traditional courses.

The Centre for Educational Technology also has the status of a Regional College of Education. It is working in the area of educational technology in all its ramifications. It collaborated actively with the Satellite Instructional Television Experiment (SITE).

The constituents which provide the vital link between the NCERT and State educational agencies are the Field Advisers' offices. There are

eighteen of them, at present. Their addresses are given in Appendix A. They aid and promote NCERT's policies and programmes in the States and send back the necessary feedback for evaluation and improvement.

Functioning

The functioning of the NCERT is patterned on democratic lines. The decision-making machinery consists of a number of committees as shown in Table II on page 8. The highest body is the Council, with the Union Minister of Education as its President and Ministers of Education from the States/Union Territories as members. It meets at least once a year. The affairs of the NCERT are administered through a smaller governing body called the Executive Committee. It generally operates through a number of Standing Committees and the Programme Advisory Committee. Lists of members of these Committees are given in Appendix B. Important decisions taken by these Committees are given in Appendix C.

The Programme Advisory Committee is the main academic body which oversees all programmes of the Council. It lays down broad guidelines and decides priorities for various programmes of the Council. In the light of the guidelines set up by the Programme Advisory Committee, the programmes of the Council are processed by a number of other committees and boards. The first level of consideration and approval lies with the Departmental Advisory Board (DAB) of each Department/Unit of the NIE. After the DAB of a Department has approved the programmes proposed by members of the academic staff, the Academic Committee/Coordination Committee/Educational Research and Innovations Committee consider them for a second approval, from the point of view of inter-departmental coordination and priorities of the Council. All the research programmes are put up to the Educational Research and Innovations Committee under the chairmanship of Dean (Research). This body approves research proposals received from outside as well as inside the Council for academic approval and financial assistance. The details of these may be seen at Appendices D and E. The Academic Committee under the chairmanship of Dean (Academic) considers other programmes, like those concerned with development and training, while the Coordination Committee, under the chairmanship of Dean (Coordination) considers programmes of service/production departments. There is a Coordination Committee under the chairmanship of Dean (Academic) for the Regional Colleges of Education as well, to coordinate the programmes of the Colleges.

The functions of the Council can be broadly classified under Research, Training, Development, Evaluation and Dissemination. Its products

can be identified as Curriculum, Methods of Instruction and Media (aids), Educational Materials (including Textbooks, Teachers' Guides, Kits, Journals, etc.), Trained Personnel (e.g. teacher-educators, teachers, specialists, etc.).

Staff

During 1977-78, the following were the principal functionaries of the Council :

Director	:	Dr. Shib K. Mitra
Joint Director	:	Dr. A.N. Bose
Secretary	:	Shri V.R. Dravid, I.A.S.
Dean (Academic and Research)	:	Prof. R.C. Das
Dean (Coordination)	:	Prof. A.N. Bose

Looking Ahead

When the framers of the Constitution laid down that free and compulsory education should be provided by 1960 for all children up to the age of fourteen, it was expected that an additional five crore children would have to be enrolled in elementary schools. Although 31 years have passed and a very large enrolment in elementary education has since taken place, the task still remains incomplete and the problem of universalization of elementary education will have to be tackled on a war-footing without further loss of time. New strategies for meeting the challenge will have to be devised to tackle problems of non-enrolment, stagnation and drop-outs. In this massive nation-wide assault on educational backwardness, NCERT will have a vital role to play.

As the first step towards achieving our targets, NCERT has launched the Fourth All India Educational Survey to assess existing conditions and facilities available for girls and for children belonging to the weaker sections of society. The Survey will also help to identify the habitations not served by schooling facilities within walking distance. This data will help to prepare the bloc plans for achieving universalization of elementary education.

Alternative approaches to Teacher Education Programmes, and radical reforms to meet new requirements and challenges have been devised and are in process of implementation in the States and in Union Territories through Field Offices of NCERT working in collaboration with Education Departments. Details regarding changes in teacher education curriculum have been set forth in NCERT's document "Teacher

Education Programme—A New Framework''. Elementary teacher-educators are being oriented towards new strategies with the object of reaching out-of-school children, especially those belonging to the deprived sections of society. One such programme has already been conducted by the Field Unit located at Delhi for elementary teacher educators of the Union Territory. A number of seminars on Universalization of Elementary Education and orientation courses/workshops for preparation of literature for non-formal education have already been conducted with NCERT's assistance and guidance; a large number of non-formal education centres have already been set up in the States and many more will be added to the list in the ensuing years. This is only the prelude to what might eventually prove to be the turning point in the history of the nation's educational progress. The work grows apace.

TABLE I
Structure of NCERT

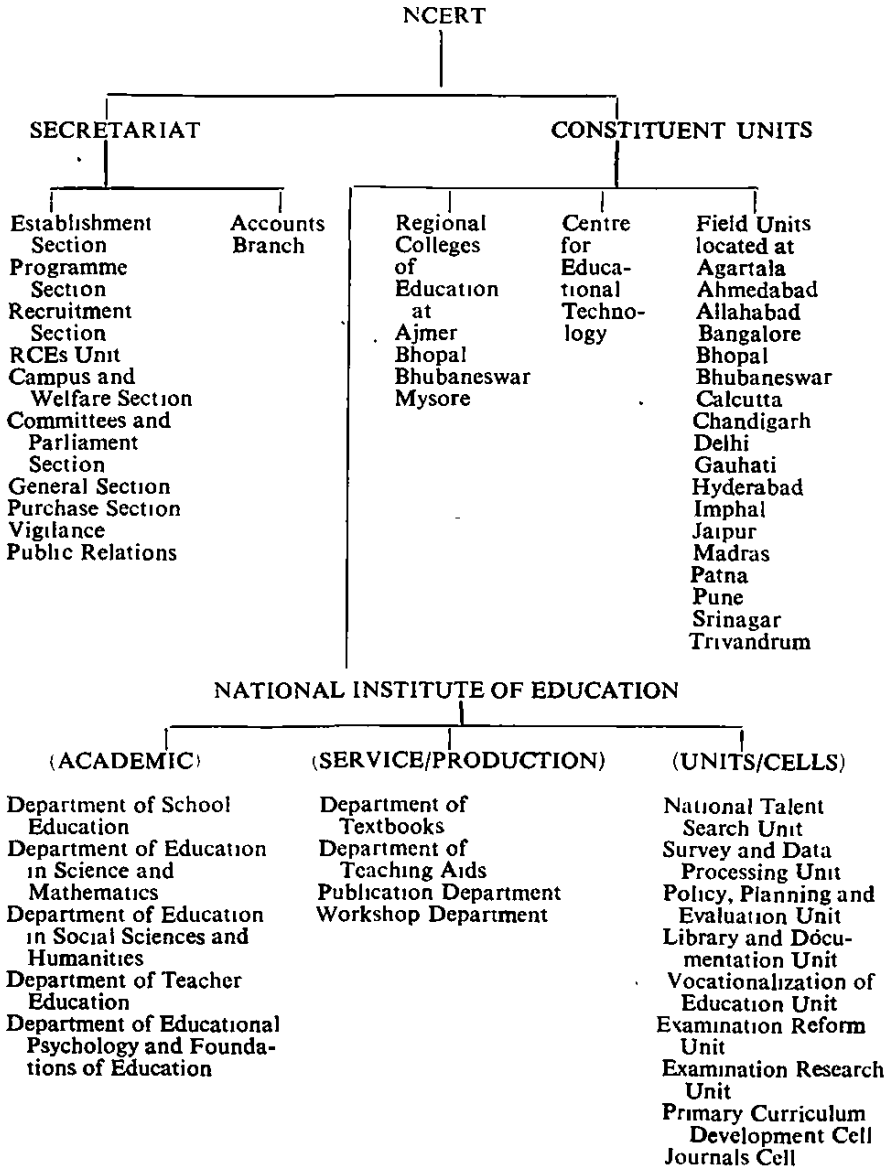
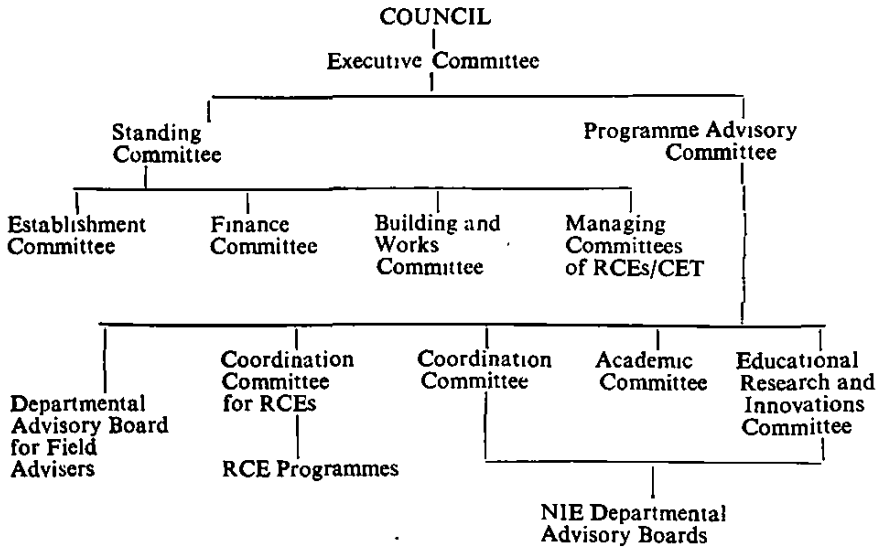


TABLE II
Functioning of NCERT



2

Curriculum Development in the Changed Educa- tional Context

IF education is to be a source of social vision and of those common values thought necessary to hold a diverse society together, a curriculum, developed in conformity with the needs and aspirations of the people, is very necessary. Not surprisingly, therefore, the

major thrust of the Council during the year 1977-78 continued to be in the area of Curriculum Development and related materials for the 10+2 pattern of education. Eminent scholars in the different disciplines were invited to help in the development of the new curriculum and the textbooks related to it. Textbooks for Classes I, III, VI, IX, X and XI have been brought out and the manuscripts for more textbooks are now ready. A wide range of subjects has been covered :

1. Primary school stage :
 Mother tongue (Hindi)
 Mathematics
 Environmental studies
2. Middle school stage :
 Mother tongue (Hindi)
 Hindi as a second language
 Mathematics
 History, Civics and
 Geography
 Integrated Science
3. Secondary school stage :
 Mother Tongue (Hindi)
 Hindi as a second language
 Sanskrit
 Mathematics
 Physics, Chemistry and
 Life Sciences
 History, Geography,
 Civics and Economics
4. Higher secondary stage :
 Hindi as core and as elective
 English as core and as elective
 Sanskrit as elective
 Mathematics
 Physics
 Chemistry
 Life Sciences
 History
 Geography
 Political Science
 Economics
 Sociology
 Psychology

The total number of titles brought out was 85 in both Hindi and English. Another 50 titles are in various stages of publication.

The new curriculum emphasises environment-based education at the primary stage and these courses are named Environmental Studies. In Classes I and II a course was devised to integrate languages with science and social sciences. For Classes III-V the courses for environmental

studies were divided into two streams—(1) Environmental Studies and (2) General Science. At the middle stage the courses in science were developed on an integrated approach combining the elements of Physics, Chemistry and Biology. In Social Sciences the courses prepared consist of History, Geography and Civics. For Classes IX-XII, the disciplinary approach was followed.

At +2 stage, provision was made in the syllabus for easy mobility of students from the academic stream to the vocational and vice versa through the use of unit approach and credit-based semester system. The duration of the course was also kept flexible.

Review of Curriculum and Textbooks

Soon after the introduction of the new curriculum and the new textbooks, it was widely felt that the total load on the students, particularly for Classes I to X, was heavy. The Union Minister for Education and Social Welfare acting in his capacity as President of NCERT appointed a Review Committee under the chairmanship of Dr. Ishwarbhai J. Patel, Vice-Chancellor, Gujarat University, to review the existing syllabus and suggest changes which might be considered necessary. The Committee suggested a few changes in the syllabus and textbooks with the object of reducing the load on the pupil and NCERT incorporated these changes in the revised textbooks which are under preparation.

In addition to preparation of textbooks, the Council also developed a few curriculum guides and supplementary readers, guide-books for teachers on environmental studies in Physics, Chemistry and Life Sciences, and a wide range of supplementary readers was developed. A pilot project in secondary science was taken up to prepare worksheets on different chapters of Physics, Chemistry and Life Sciences textbooks for Classes IX and X so as to provide the teachers and students with better teaching-learning situations. The materials were developed jointly by the teachers of Bhartiya Vidya Bhavan and the Department of Education in Science and Mathematics, after they had been tried out in the classroom.

Special Curriculum Projects

Population Education

NCERT has played a pioneering role in emphasizing the importance of population education in the country. The new textbooks of the Council, particularly in Life Sciences, Economics, Geography and Civics, incorporate population education ideas. Teaching units of lesson plans

for about 10 topics at the higher secondary school level have been published for the benefit of teachers in a book entitled "Population Education in Classrooms". A supplementary reader on population and development has also been published. The book deals with the inter-relationship between population growth and socio-economic development of the country. The Council's work-books on "Population Studies" which was tried out at eight centres in the country and adapted in six different languages for the purpose turned out to be immensely popular. A teachers' manual together with the work-book was also developed and this has been followed by the National Source Book on Population Education which was farmed out to university scholars, teacher educators and experienced teachers. Both these projects were financed by UNESCO's Regional Office of Education in Asia.

UNICEF-assisted Science Education Programme

During the year 1977-78 a UNICEF-assisted Science Education Programme was directed towards helping 13 States and Union Territories in their efforts to achieve universalisation, to help in the qualitative improvement of the programme so that it might meet the requirements of Science Education at the elementary level and to encourage States which are lagging behind to show better progress and achieve better results. Some of the distinctive features of this programme which merit enumeration are :

1. *Supply of Kits* : With the supply of 3100 kits, total number of kits supplied through UNICEF assistance has reached the figure of 39,524. The kit has been revised to meet the requirements of the new environment based textbooks for 10-year school curriculum. During 1978, it is expected that it would be possible for us to supply nearly 6,300 kits to the States.
2. *Training* : UNICEF assistance was provided to train 4,600 teachers and other categories of functionaries.
3. *Supply of Laboratory Science Equipment and Library Books* : Sixty-four sets have been supplied, thus bringing the total of supply to 579 key institutions. A set of four volumes prepared by NCERT on primary science teaching has also been provided for all the key institutes.
4. *Materials for Training Programmes* : Materials have been developed for training programmes under UNICEF Science Projects.
5. *Use of Environment and Improvisation of Local Resources* : The development of the concept of environmental education and improvisation through use of local resources was planned through four Regional Workshops.

A Master Plan to undertake comprehensive evaluation of the Science Education programme has also been finalised and is expected to be completed shortly.

Pilot Scheme of Nutrition/Health Education and Environmental Sanitation

Awareness of nutrition/health education and environmental sanitation is gradually becoming more perceptible. The Council undertook the task of training 1,068 teachers, with the help of the UNICEF, at five regional centres located at Baroda, Calcutta, Coimbatore, Ludhiana and Jabalpur. Instructional material and teachers' guides have been prepared and the work of translating the material from regional languages into English is in progress.

3

Instructional Learning Materials

A constant stream of instructional materials flows out from NCERT every year. These materials are designed to help teachers, teacher educators, learners, administrators, planners, on the one hand, and also provide general information in the form of biblio-

ographies, inventories, etc., on the other. Our instructional materials stress quality. They are the result of long years of study and careful preparation. A wide range of subjects is covered by them. Manuals for training/evaluation, prototype printed materials—self-instructional or descriptive, inventories, monographs, worksheets, films, filmstrips, slides, slide-cum-tape programmes, radio programmes, training materials on schools and video tapes, materials for software bank, low cost teaching aids etc.—all form part of NCERT's total effort to make instructional materials available in the country.

During the year under review 19 books/brochures, 5 mimeographed materials, 7 kits, a number of worksheets, 5 audio tapes/slide-cum-tape, material on teaching aids, 8 filmstrips with taped commentaries, 6 film-scripts and 5 film/video tapes have either been produced or are in production as per details shown in Appendices H and I. The instructional learning materials produced by NCERT have been tried out in all parts of the country including remote villages, and they have been found useful

4

Training

Teacher training programmes form a very important and continuous part of our work; they go hand in hand with curriculum development, preparation of textbooks, research and other activities.

A. Pre-service Teacher Training

Pre-service teacher training continued to be organized at the four regional Colleges of Education located at Ajmer, Bhopal, Bhubaneswar and Mysore respectively on a regional basis. The colleges offer the following courses :

Four-Year Courses in Arts and Science

The four-year courses in Arts and Science leading to B.A. B.Ed. and B.Sc. B.Ed. degrees, which these colleges were conducting, are being progressively phased out since July of 1976 in the three Colleges at Ajmer, Bhopal and Bhubaneswar. The four-year course in Science and Mathematics is, however, being continued at the Regional College of Education, Mysore, as the course has proved to be quite successful in that College, but the four-year course in Arts has been discontinued. During 1977-78 the third and fourth year of these four-year courses were still continuing even in these three colleges at Ajmer, Bhopal and Bhubaneswar. During 1977-78 the enrolment figures for the four-year courses in these Colleges were as follows :

<i>Ajmer</i> (B.Sc. B.Ed.)	
(third and fourth year)	72
<i>Bhopal</i> (B.Sc. B.Ed.)	
(third and fourth year)	86
B.A. and B.Ed. (third and fourth year)	20
<i>Bhubaneswar</i> (B.Sc. B.Ed.)	
(third and fourth year)	112
B.A.B.Ed. (third and fourth year)	97
<i>Mysore</i> (B.A. and B.Ed.)	
(third and fourth year)	44
B.Sc. and B.Ed. (4-year course)	223

One-Year B.Ed. Course

All the four Regional Colleges of Education offer a one-year course, after a basic Bachelor's degree, leading to B.Ed. degree. This is the usual teacher training programme prevalent all over the country, but in the Regional Colleges there are certain innovations and experimentations which are being carried out in this programme so as to influence the practice of teacher training in every College. For example, the Colleges have successfully implemented internship in teaching over a block period, internal evaluation and integrated content-cum-method course. The Colleges have also introduced training in Work Experience so that the teachers trained through the Regional Colleges need not be further

oriented in areas like Work Experience in order to teach them in the secondary schools. Further, the Regional Colleges have also one-year teacher training facilities in subjects like Commerce and Agriculture which are very rarely found elsewhere. During 1977-78 the Regional Colleges introduced a new specialized course at the B.Ed. level in Elementary Education so as to prepare persons competent to supervise and train teachers in Elementary Education. Enrolment in the B.Ed. (one-year course) in the four Regional Colleges was as follows :

Ajmer

Science	80
Languages	104
Commerce	40
Agriculture	20

Bhopal

B.Ed. Science	61
Languages	68
Commerce	33
Agriculture	13
B.Ed. (Elementary)	41

Bhubaneswar

B.Ed. Science	74
Language and Social Science	47
B.Ed. (Elementary)	19

Mysore

B.Ed. (Science)	93
B.Ed. (Elementary)	18

M.Ed. Course

Regional Colleges at Ajmer, Bhopal and Bhubaneswar offer post-graduate course in Education leading to the M.Ed. degree. At Ajmer, the course is specialised in the field of Science Education. At Bhopal, the specialisation is in Elementary Education. Bhubaneswar offers specialisation in Curriculum Construction, Educational Administration and Educational Measurement. The enrolment in these courses during 1977-78 are as follows :

Ajmer	19
Bhopal	9
Bhubaneswar	32

M.Sc. Ed. Course

A two-year post-graduate course in the subjects of Mathematics, Physics and Chemistry, together with the methodology of teaching, is being offered at Regional College of Education, Mysore. The enrolment in this course in 1977-78 reached 42.

B. In-service Education Programmes

B.Ed. (Summer School-cum-Correspondence Course)

Since there are a large number of untrained graduate teachers in our schools who find it difficult to join a one-year regular programme of teacher education, a programme of summer school-cum-correspondence course leading to B.Ed. degree is being offered at the four Regional Colleges, to train these teachers while they are in service. Graduate teachers with five years' teaching experience and post-graduate teachers with three years' teaching experience are trained through two consecutive summer vacations supplemented by correspondence lessons in between two summers. At the end of the course they can appear at the B.Ed. degree examination of the university. The course, which has been very popular, helps to clear the backlog of untrained teachers. The enrolment during 1977-78 in this programme was as follows :

Ajmer	212
Bhopal	273
Mysore	230
Bhubaneswar	
Secondary	250
Elementary	100

Correspondence-cum-Contact Programme for Secondary School Teachers

In order to upgrade knowledge of content of the teachers required to teach the revised curriculum, as well as to acquaint them with new methodologies of teaching, a correspondence-cum-contact programme for secondary school teachers has been developed and is being offered through the four Regional Colleges of Education. This programme consists of a correspondence course of about six months' duration during which the teachers receive correspondence lessons and complete certain assignments based on those lessons. They are then called to a contact session of 15 days' duration during which they engage in practical work related to the subject and also discuss their problems with other teachers. The course is being offered for teachers

in Physical Science, Biological Science, Mathematics, Social Science, English, Hindi as second language and Art and Culture. The enrolment in this course is as follows :

	<i>Enrolled</i>	<i>Completed Correspondence</i>
Ajmer	2,462	1,096
Bhopal	3,300	2,911
Bhubaneswar	3,010	1,755
Mysore	2,112	1,109

Correspondence-cum-Contact Programme for Elementary Teacher-Educators

In order to orient the elementary teacher-educators in the latest trends and techniques in elementary teacher education as well as to upgrade the knowledge of content and methodology at the elementary level, a correspondence-cum-contact programme has been designed and is being offered through the four Regional Colleges. This course consists of a correspondence programme of six months' duration followed by a Contact Programme of 15 days. The enrolment in this course in the four Regional Colleges is as follows :

Ajmer	96
Bhopal	327
Bhubaneswar	82
Mysore	284

Other In-service Programmes at the Regional Colleges of Education

Short in-service training programmes are also conducted at the Regional Colleges of Education on the basis of felt needs of the region, or at the request of State Governments. Some of the Programmes conducted during 1977-78 were :

Ajmer

1. Orientation Conference of headmasters and cooperating teachers for intensive programme.
2. Regional Workshop for developing filmstrips in accounting.
3. Regional Seminar on English teaching.
4. Regional Seminar for teaching Urdu.
5. Regional Workshop for developing a programme for Vocational Business Education at the plus two level.
6. Regional Workshop on preparation of research designs in the educational systems at school level.

Bhopal

1. Workshop on teaching of Mathematics.
2. Workshop on Creativity in Physics.
3. Workshop for Science Method Masters.
4. Workshop on Environmental Studies.
5. Workshop for Method Masters in Mathematics.
6. Workshop for Work Experience teachers.

Bhubaneswar

Workshop on Work Experience for teachers of Andaman and Nicobar Islands.

Mysore

1. A Seminar on Guidance and Problems of under-achievement.
2. A Seminar on teaching of Science.
3. Follow-up Seminar for teaching under-achievers.

In-service Training Programmes of NIE Departments

NCERT organized 42 summer science institutes in Physics, Chemistry, Biology and Mathematics and trained 1,844 teachers in these institutes to enable them to teach at the higher secondary level.

The follow-up regional workshops on The Use of Environment and Improvisation from Local Resources for Science Education at Primary Level was held at Udaipur.

Fifty-five summer institutes were organized in the following subjects : English—14, Sanskrit—2, History—12, Geography—7, Political Science—7 and Economics—13.

A software orientation programme on The Use of the Language Laboratory was organized for the staff members of the Signal School, Naval Base, Cochin, during May-June 1977, at the request of the Naval Headquarters.

Two regional training programmes on Micro teaching were organized for secondary teacher educators. About 100 secondary teacher educators have been trained in these two programmes. Besides, another 27 teacher educators participated in Training-cum-Research Workshop organized by the Department of Micro teaching.

An orientation training programme on Educational Television for Elementary Teacher Educators was conducted. About 40 elementary teacher educators were oriented on Educational Television.

Two In-service Training Programmes in Appreciation of Fine Arts were organized for secondary teacher educators. These courses were sponsored by the Ministry of Education, Department of Culture, under the scheme

for Propagation of Art and Culture among College and School Students and Teachers.

An annual conference of Directors of State Institutes of Education and State Councils of Educational Research and Training, was organized at Chandigarh to discuss their programmes for the future.

A national competition on Seminar Readings for Elementary and Secondary Teacher Educators was organized. Sixteen teacher-educators were awarded prizes.

In collaboration with Akhil Bhartiya Nai Talim Samitee, a national seminar of secondary teacher educators was held at Wardha to discuss the Teacher Education Curriculum.

Materials for the Correspondence-*cum*-Contact Courses for elementary teacher educators and secondary school teachers were developed in collaboration with the Regional Colleges. These courses are being organized at the Regional Colleges of Education.

NCERT functioned as the Secretariat of the National Council for Teacher Education and organized meetings of its committees and of the Council. It also initiated follow-up action on the recommendations of these committees.

Community orientation and motivation programmes were conducted in non-formal educational centres, in the States of Uttar Pradesh, Bihar, Gujarat and Delhi and other Union Territories.

Five orientation programmes on the new educational pattern were organized for Principals of Higher Secondary Schools affiliated to the Central Board of Secondary Education were organized, one in each Educational District of Delhi. About five hundred principals and eighty education officers attended these programmes.

Seventy principals from Christian Schools were oriented on the Ten-Year School Curriculum.

Fifteen Resource Persons from different SIEs were oriented in Effective Use of Curricula.

Three orientation courses were organized for teachers of 20 experimental schools under integrated approach to primary education project in Alwar (Rajasthan).

Key persons in schools of Kerala, Madhya Pradesh and Hyderabad were oriented in socially useful productive work.

A training programme for the diploma course in Educational and Vocational Guidance was organized. This was a nine months' training course for officers preparing to serve as school counsellors. Thirty trainees were trained in this course during the year 1977-78.

An orientation programme for textbook writers and evaluators from the States of Karnataka, Kerala and Tamil Nadu was held at Bangalore. Fifty-two participants in different subject areas were oriented for this

course.

An orientation programme for textbook writers and evaluators from the States of Assam, Manipur, Sikkim, Meghalaya and Mizoram was held at Gauhati. Fifty-two participants attended this programme.

A workshop of three weeks' duration on Script Writing for Science Films was conducted in June 1977. Twenty-one science teachers from all over the country participated in this course.

A two-weeks' training course in Graphic Aids was organized at the State Institute of Science Education, Jabalpur, in July 1977, in collaboration with the Directorate of Education, Madhya Pradesh, for twenty-one teacher-educators of Madhya Pradesh.

A four-weeks' training course in Audio-Visual Instruction was organized in September 1977 for twenty-one teacher educators from secondary training colleges and state institutes of education.

A fifteen days' orientation-cum-selection programme for script writers for Educational Television was organized at Madras in collaboration with the Directorate of Education, Tamil Nadu, Technical Teachers' Training Institute and Door Darshan Kendra, Madras.

An intensive training course in Educational Television Script Writing of eight weeks' duration was organized at Delhi. Nineteen candidates were trained in this course.

Two training programmes, each of 15 days' duration, were organized at Ahmedabad and Jabalpur respectively for primary school teachers for training them in using Multi-Media Package.

Two training courses for Educational Radio Script Writers, each of 15 days' duration, were organized at Hyderabad and Madras, respectively. Two batches of twenty persons were trained in these programmes.

A four weeks' joint India-Maldives training course for Educational Radio Production was organized with the assistance of UNESCO and UNDP. Eight participants (three from Maldives and five from India) participated in this course.

Five training programmes, each of two weeks' duration, were organized on Self-Instructional Correspondence Lessons.

A two weeks' training programme on Evaluation of Educational Technology Programmes was organized for officers of the State Educational Technology Cells.

Short-term training courses in Educational Evaluation in Languages, Social Sciences and Sciences were held at Darjeeling, Gwalior and Udaipur, to train Resource Personnel in the implementation of Examination Reform Programmes.

5

Evaluation

EVER since its inception in 1961, NCERT has been particularly active in the field of evaluation.

Programme Evaluation

The Council is currently busy with evaluation of UNICEF-assisted science education projects in Rajasthan,

Madhya Pradesh, Kerala, Pondichery and Manipur. Data has been collected, compiled and, in some cases, analysed as well.

The second important programme of the Council is the evaluation of textbooks. In this area, the Council has been conducting training programmes for authors and evaluators. This year it conducted two training programmes covering the States of Tamil Nadu, Kerala, Karnataka, Assam, Manipur, Meghalaya, Mizoram and Sikkim. It also evaluated textbooks prescribed in Gujarat, Kerala and Maharashtra in different school subjects for Classes I to XI.

The National Council of Educational Research and Training conducted a two-day session for the evaluation of films and filmstrips produced in collaboration with the Space Applications Centre, Ahmedabad.

Examination Reform

The need for examination reform cannot be over-emphasized. It is of paramount importance and is a necessary component in all programmes aimed at improvement of quality of education. Educationists all over the country are agreed that the present examination system needs to be drastically changed. In the context of this need for change the Council's efforts have been especially commendable during the year under report. The major thrust of the Council's efforts was under the following heads:

1. Classroom Learning Improvement Project.
2. An In-depth Study of Autonomous Schools.
3. Gearing Software for Manning Evaluation Programmes.
4. Remediation as an Approach to Improving Learning.
5. Unit Publications.
6. Exporting Examination Reform Ideas.

Classroom Learning Improvement Project

NCERT launched the CLIP Project with the Central Schools of Delhi with a view to improving students' learning through the improvement of instructional and evaluation practices in the school. The aim is to develop a working model for the improvement of classroom learning in an average school under normal conditions.

Some instructional and evaluation material has been already developed and some more is proposed to be developed.

An In-depth Study of Autonomous Schools

The Indian Education Commission 1964-66 had recommended the

granting of autonomy to some selected institutions in order to minimise the undesirable influence of public examinations on teaching learning practices. As a follow-up of this recommendation the Rajasthan Board of Secondary Education granted autonomy to two of its schools, namely, Vidya Bhawan Higher Secondary School, Udaipur, and Banasthali Vidya-peeth, Banasthali, in 1974.

NCERT collaborated with these schools in promoting these schemes. Intensive work has been done in these two schools during the last two years.

Under this project, the total curriculum of the concerned schools, including instructional and evaluation programmes, has been studied. The teachers have been oriented to the new concepts of evaluation and have been given intensive training in the techniques of preparing improved questions and balanced question papers. The emphasis has been on improving the scheme of internal assessment as a tool for monitoring better learning and personality development. The work in regard to curriculum renewal is in full swing in the two schools. It is hoped that as soon as the general framework of the new curriculum is ready, the work on developing modules will start and schools will, it is hoped, be able to achieve something tangible under the new assignment.

Gearing Software for Manning Evaluation Programmes

The country-wise phenomenon of short-falls in the implementation of examination reform programme, due to lack of trained manpower, prompted the initiation of short-term training courses in Educational Evaluation in Languages, Social Sciences and Sciences. These were held at Darjeeling, Gwalior and Udaipur in June and December 1977.

Besides training resource personnel, test material for the plus two stage was also developed in these subjects.

Remediation as an Approach to Improving Learning

NCERT undertook development of remedial exercises in Hindi in December 1977. In this programme about 16 basic mistakes of spelling committed by children very frequently were identified and remedial material was prepared on them. This material consists of eight sets of exercises. Each of these eight sets contains six exercises—the *first exercise* is meant to diagnose the magnitude of pupil weaknesses, the *second exercise* is for practice, the *third exercise* is for self-evaluation, the *fourth* and *fifth exercises* are meant for those children who are not able to benefit from the *second* and *third exercises* and the *sixth exercise* is for summary evaluation.

The chief characteristic of this material is that it is completely self-

learning; teachers would not have to spend more than two class periods for its use. It would also not involve correction work for teachers.

The material, which has been tried out in a Central School with encouraging results, is now being finalised for printing.

Export of Examination Reform Ideas

At the request of UNESCO, NCERT undertook the task of developing 'A Case Study of Examination Reforms in India'. The very fact that it is being published by the International Bureau of Education, Geneva, in English, Spanish and French, is by itself reassuring.

Orientation Programmes for Textbook Writers and Evaluators

NCERT organised Orientation Programmes for textbook writers and evaluators from three southern States of the country, namely, Karnataka Kerala and Tamil Nadu at Bangalore from 18 to 22 December 1977. Fifty-two participants in different subject areas representing these States participated in the orientation programme.

NCERT also organized an orientation programme for the North-Eastern region of the country at which fifty-two participants from Assam, Manipur, Sikkim, Meghalaya and Mizoram were oriented.

Evaluation of Films and Filmstrips

NCERT conducted a two-day session for the evaluation of films and filmstrips produced by the Department. Fifteen teachers from Higher Secondary/Middle/Primary Schools of Delhi participated in this session held on 4 and 5 March 1978. Two films, viz., (i) Science is Doing and (ii) Tools and Techniques of Cell Study and one 35 mm. filmstrip *Birds* were evaluated by these teachers.

Prof. Vinod C. Agarwal from Space Applications Centre, Ahmedabad, guided the deliberations of the programme. The tools for the study were earlier finalised and an evaluation report prepared and printed. This study was undertaken for the first time in the area of educational films and filmstrips. The project was approved by ERIC.

6

Research, Survey and Innovations

THE importance of research in the educational development of the country cannot be over-emphasized and it is hardly surprising that one of the principal objectives of the Council is to undertake, aid, promote and coordinate research activity in all branches

of education. Largely as a result of extensive research work undertaken in recent years, NCERT has been able to elaborate scientifically validated programmes for the development of education in the country

The first report of the Council's Educational Research and Innovations Committee (ERIC) has been published and a second report is being compiled. On the basis of the recommendations made by the three task forces set up by ERIC for identifying priority areas, it has been decided that financial assistance on a priority basis should be extended to research activities related to fulfilment of the Constitutional Directives under Article 45 regarding provision of free and compulsory education for all children up to the age of 14. Research programmes aimed at helping the weaker sections of the community would also receive encouragement. In order to tackle the problem of drop-outs in schools, ERIC has emphasized the need for financing projects relevant to the socio-economic needs of the country. In keeping with new developments and changes in the life of the nation, research programmes in areas such as life-long education, non-formal education, adult education, teaching-learning processes, vocationalisation of education will be given priority. Greater emphasis will in future be placed on problems related to rural/tribal as well as urban children. The Council will not finance projects other than those which have relevance for education, but may, to a limited extent, encourage proposals for research in the field of higher education, too.

During the period under report, 26 research projects were sanctioned by ERIC to outside agencies and institutions. This involved a total expenditure of Rs. 1,54,656.75. External projects are approved after being screened by experts in the field.

The Departments of the National Institute of Education and the four Regional Colleges of Education have been conducting research projects and 22 such projects were completed during the year. There are 75 on-going projects at different stages of completion. Allocations for financing these projects total more than Rs. 3.00 lakhs. Tables I and II provide details regarding completed and on-going research projects being conducted in NCERT.

The Third All India Educational Survey

At the instance of the Ministry of Education, NCERT conducted the Third All-India Educational Survey in respect of school education and in allied areas. The aim of the Survey was to assess available educational facilities in school education. The following aspects were covered by the Survey :

1. Villages all over the country.
2. Urban areas.

3. Schools at all stages—both recognized and non-recognized.
4. Teachers in schools.
5. Pre-primary schools.
6. Other schools like Sanskrit Pathshalas, Makhtabs, Madaressas, Urdu and Persian schools.
7. Schools for the handicapped.
8. Coaching Institutes.
9. P.U./Intermediate/Junior Colleges.
10. Education outside schools.
11. Correspondence Courses.
12. Hostel facilities in tribal areas.
13. Elementary teacher training institutions and elementary teacher educators.
14. Pre-primary teacher training institutions.
15. Physical education institutions.
16. Hostel facilities for the scheduled castes.
17. Secondary teacher training institutions and teacher educators at secondary level.

As many as 26 schedules were canvassed in connection with the Survey which involved both manual as well as computer processing. The Survey begun in November 1973 was completed during the year 1977-78. On the basis of the data collected for the Survey, the following highly informative reports have been brought out:

1. School facilities and enrolment.
2. Work experience in schools.
3. Education outside schools.
4. Teachers.
5. School buildings.
6. Primary teacher training institutions.
7. Hostel facilities for the scheduled castes.
8. Library, laboratory and school textbooks.
9. Languages and media of instruction in schools.
10. Other schools.
11. School-community relationship.
12. Pre-primary schools and coaching institutes.
13. Colleges and institutes of physical education.
14. Education of the physically handicapped.
15. Ancillary services and schools.
16. Teacher training at the elementary and secondary stages and teacher educators in these institutions.

A collaborative project between the Ministry of Education and Social Welfare and NCERT was undertaken to study the optimal utilization of existing facilities in elementary schools in some blocks in the States of

Himachal Pradesh, Jammu and Kashmir, Arunachal Pradesh, Maharashtra, Orissa, Rajasthan and Uttar Pradesh. The study was confined to facilities in respect of building, equipment and teacher component. One district was selected in each State and three community development blocks, with high average and low literacy indices in the district were studied. The project started in August 1977 was completed by March 1978.

On the basis of recommendations made by the State Education Ministers' Conference held on 11-12 August 1977, and at the instance of Ministry of Education and Social Welfare, the Fourth All-India Mini Educational Survey will be conducted by the Councils' Survey and Data Processing Unit. Preparatory work for the Survey is in process of completion.

TABLE I
List of Completed Projects

<i>Sl. No.</i>	<i>Title</i>	<i>Department</i>
1.	Developmental Norms Project (5½-11 years)	DEPFE
2.	Experimental Studies on Differential Effectiveness of Micro Teaching Components	D.T.E.
3.	Development of Tools for Admission to Teacher Education Institutions	D.T.E.
4.	A Study to determine the Impact of Reading on the Achievement of Pupils in Different School Subjects	D.S.E.
5.	Graded Reading Material in Urdu	R.C.E. (Mysore)
6.	A Survey of Occupational and Productive Resources and Microplanning of Vocational Courses at +2 Level in a Set of Districts of West Bengal for the Period 1980-1995.	R.C.E. (Bhubaneswar)
7.	Private Costs of Education	R.C.E. (Bhubaneswar)
8.	Effects of Simulated Information on Assessment of Cognitive Competence : "A Test of Expectancy Hypothesis"	R.C.E. (Bhubaneswar)
9.	Contribution of Oriya Poets to the Medieval Bengali Literature	R.C.E. (Bhubaneswar)
10.	Pre-primary Teacher Training Institutions—Information about	DEPFE
11.	Development of Prototypes of Play Materials	DEPFE
12.	Preparation of Graded Bibliography of Children's Literature	D.S.E.
13.	Comparative Study of School Curriculum (Classes IX and X) in Different States (Pilot Study)	D.T.E.

<i>Sl. No.</i>	<i>Title</i>	<i>Department</i>
14.	Development of Science and Mathematics Concepts in Children at Primary Grades in	DEPFE
15.	Standardisation and Simplification of Techniques in Isolation of Plant Protoplasts for Cell Physiological Demonstrations at High School Level	D.E.S.M.
16.	Evaluation of Multi-Media Package for Inservice Training of Primary School Teachers in Science	C.E.T.
17.	To study the Impact of SITE on Primary School Children	C.E.T.
18.	A Study of Primary School Broadcasts in Jalgaon (Maharashtra)	C.E.T.
19.	A Feasibility Study to test Alternative System of Education for Optimization of Primary Education in the Rural Areas	C.E.T.
20.	A Survey of Audio-visual Production Equipment	C.E.T.
21.	Improvement of Day-light Rear Projection Screen	C.E.T.
22.	To prepare a Directory of Personnel in Educational Technology in the Country.	C.E.T.

Brief Report of Completed Projects

Developmental Norms Project (5 ½—11 years)

Purpose	The purpose of this study was to investigate the fact of environmental process variables on school achievement.
Target Group	This study was conducted during 1977 on samples of children belonging to 5 ½-11 years age group at Bombay, Hyderabad, Ranchi, Kerala, Bangalore, Varanasi and Delhi.
Major Findings	<ol style="list-style-type: none"> 1. It was proved that the home variables such as the socio-economic status of the families, parent-child relationships, parental aspirations and facilities for language development have a significant impact on the school achievement of the child. 2. None of the school variables such as teachers' attitude, teachers' qualifications, teacher-pupil ratio or school facilities were found to have any significant relationship with the school achievement of the child. 3. The results of a reading test indicated that 50% of the children at the end of Class I and 25% of the children at the end of Class II scored zero, i.e. they were unable to read at all. 4. Among the home variables, education of the parents

- and Income Ratio of the family were found to be highly related to cognitive development of the children.
5. Among the school variables, school facilities, language achievement, arithmetic achievement had a significant relationship with cognitive development. Intelligence was also significantly related to cognitive development.
 6. Language achievement is the prime prediction of cognitive development for younger age groups ($5\frac{1}{2}$ to $7\frac{1}{2}$ years) and Arithmetic achievement is the main prediction at higher age levels ($7\frac{1}{2}$ to 11 years).

Experimental Studies on Differential Effectiveness of Micro Teaching Components

Purpose	<p>The aims of the Study were :</p> <ol style="list-style-type: none"> 1. To compare the effectiveness of micro teaching technique with different modifications in its component in the development of General Teaching Competence (GTC); 2. To compare the retention level of GTC of student teacher over a period of time ; 3. To study the change in attitude towards teaching in the group of student teachers trained through micro-teaching technique and otherwise.
Target Group	The study was a field experiment conducted in 22 Colleges of Education and University Departments of Education.
Major Findings	<ol style="list-style-type: none"> 1. General teaching competence of student teachers trained through micro-teaching with perceptual modelling does not differ significantly from those trained under micro-teaching with either symbolic or audio-modelling. 2. GTC (General Teaching Competence) scores of student teachers do not differ significantly when trained through micro-teaching with varying sources of feedback. In other words, the feedback provided by peer or college supervisors or self feedback by audiotape has similar effects on development of general teaching competence. 3. Micro-teaching under simulated conditions and that under real classroom conditions does not produce different effects on development of general teaching competence. 4. The change in the nature of component skills in a set

does not have differential effects on the teaching competence of student teachers when trained through microteaching.

5. Development of general teaching competence is not affected significantly if the same or different teaching unit is taught in the 'reteach' session of microteaching.
6. Planned variations in the microteaching components such as modelling, feedback, conditions, etc., do not produce significant changes in either the 'retention' level or 'the cumulative effect' of general teaching competence when microteaching is followed for some period by usual practice teaching

REPLICATION

The above findings were reviewed in a research seminar and it was decided to replicate the experiments. Thirty teacher educators plan further experiments. Reports of 20 experiments were written.

Development of Tools for Admission to Teacher Education Institutions

- Purpose** The purpose of the investigation was to select, try out and standardise certain tools and techniques for selection of candidates for admission to Teacher Education Institutions.
- Progress** As a preliminary step, related literature, which can be categorised under the following heads, has been surveyed ;
- (a) Admission Procedures/Criteria as laid down by the various Universities and State Department of Education ;
 - (b) Admission Procedures used by the Colleges of Education ;
 - (c) Studies on teacher aptitude, and
 - (d) Studies on teaching efficiency.

A Study to Determine the Impact of Reading on the Achievement of Pupil in Different School Subjects

- Purpose** The purpose of the project was to determine the effect of speaking, reading and writing vocabulary in Hindi on children of Grades I and II on the achievement of pupil in different school subjects.
- Target Population** Students of Grades I and II of seven Hindi-speaking regions covering 22 dialects.

Major Findings	<ol style="list-style-type: none"> 1. There is positive correlation between reading ability and achievements of pupils in different school subjects and general academic achievement. The relationship appears to be significant. 2. The rural children show poorer reading ability in comparison to their urban counterparts. The differences are quite significant. 3. There are quite marked differences in reading ability of children belonging to different dialectic areas. 4. The difference in reading ability of children belonging to different Hindi-speaking States are also significant. 5. While the children of Grade I belonging to different occupational classes show variations in reading ability, the children of service classes have an edge over the performance of the children belonging to the other occupational classes. The children of Grade II do not show any significant differences in reading ability. 6. Generally, children having fifth or sixth place in birth orders have shown better reading ability and the trend is towards decline in case of birth orders seventh to eighth or first to third, though the differences are insignificant in a majority of instances. 7. The differences in reading ability between boys and girls are generally insignificant i.e. there is no role of sex in determining the reading ability of the children.
By-product Study	<p>The following standardised reading ability tests were developed during the project :</p> <ol style="list-style-type: none"> 1. Five tests for Grade I. 2. Three tests for Grade II.

Graded Reading Material in Urdu

Purpose	No graded reading materials for Urdu language are available for any class. The project aims to develop such material as also objective type tests for evaluation of achievement in Urdu.
Target Population	Classes V, VI, and VII of Karnataka State.
Progress	Vocabulary, Structure, diversified themes based on the child's environment and suitable for Classes V, VI, and VII were prepared. The values reflected in the reading

material are : patriotism, national integration, tolerance for all religions, truthfulness, sincerity, cooperation, courage, determination, initiative, leadership, self-confidence, consideration for others, awareness of duty, honesty, sense of sacrifice, universal brotherhood, modesty, non-violence, love for human beings, sympathy, perseverance, kindness, forgiveness, respect for elders, charity, helping each other, decision-making, objective judgement and alertness.

Workshops of 10 days each were organised to develop lessons for Classes V, VI and VII. The participants were Urdu language teachers of primary and secondary schools of Karnataka State. The resource persons belonged to Central Institute of Indian Languages (CIIL), Mysore. Each prepared 25 lessons.

Sixty Urdu teachers were oriented in the use of new material. They tried out the material in the schools. The views of teachers and views of students were obtained after the try-out of the material.

- Major Findings
1. The students found the lessons interesting and easy.
 2. Teachers stated that they were successful in developing the vocabulary to the extent desired when developing the material and were convinced that they were successful in developing the values.

A Survey of Occupational and Productive Resources and Microplanning of Vocational Courses at +2 Level in a Set of Districts of West Bengal for the Period 1980-1995

Purpose The purpose of the project was to gather information regarding demographic composition of population, rate of urbanisation, economic and productive activities in the organised and un-organised sectors, occupational structure and trend, availability of natural resources and the extent of their utilisation or underutilisation and the educational pattern of a socio-cultural and techno-economical backward district of West Bengal.

Target Population Adult population of Purulia, a district in West Bengal.

- Major Findings
1. The project has identified the sectors and sub-sectors having employment and self-employment potentialities

- and having capabilities to take unutilised or under-utilised resources of the district.
2. The project has identified the existing and potential vocations in different micro-regions of the district and has grouped them into “families of vocations” keeping a close link with the needs of the region and availability of resources
 3. The project has identified vocational courses for the families of vocations for different micro-regions of the district keeping in view the existence of a large number of S C.s/ S T.s’ population in the district.

Private Costs of Education

Purpose	<p>The purposes were :</p> <ol style="list-style-type: none"> 1. The composition of private costs of education in Classes VI-XI ; 2. To investigate the magnitude of burden of different components of private costs of education borne by the household with different levels of education of the head of the family. 3. To investigate the magnitude of burden of different components of private costs of education borne by the households belonging to different income groups living in rural and urban areas of the State. 4. To compute the relative importance of per student fee cost and costs incurred on ancillary services in relation to per student total private costs of education in urban and rural areas of the State.
Target Population	<p>Households of rural and urban areas of eight districts of Orissa belonging to four income groups :</p> <ol style="list-style-type: none"> 1. Below Rs. 3000 per annum. 2. Rs. 3001 to 5000 per annum. 3. Rs. 5001 to 8000 per annum. 4. Rs. 8001 and above per annum.

Effects of Simulated Information on Assessment of Cognitive Competence : “A Test of Expectancy Hypothesis”

Purpose	The purpose was to investigate the effects of simulated information on evaluation of the pupil’s real classroom
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performance in Arithmetic, Social Studies and English under two expectancy conditions (positive and negative); two question types (objective and essay) and two systems of evaluation (marks and letter grades).

Target
Population

Teachers of Higher Secondary Schools of Orissa.

Major
Findings

1. Evaluation scores for high for positive expectancy, objective type question and Arithmetic as compared to the scores for negative expectancy; essay type question, Social Studies and English.
2. Over-all rating of performance reveals a strong expectancy effect.
3. Effectiveness of simulated information containing multiple causes for inducing expectancy and its consequent effect on evaluation of pupil performance in the desired direction, have received experimental support.

Contribution of Oriya Poets to Medieval Bengali Literature

Purpose

The purpose was to determine the contribution of Oriya poets to Bengali literature in the Medieval period.

Major
Findings

1. It has been established beyond doubt that between 16th and 19th centuries A.D. a large number of Oriya poets wrote Bengali Kavya in perfect harmony with the cultural traditions of Bengal.
2. The first volume of edited manuscript, "Manasa Mangal" by Dwarika Das, is under publication by the Bengali Department, Calcutta University.
3. Seven more manuscripts have been annotated and edited.
4. Three more manuscripts are under way. These are expected to be completed by June 1978.

Pre-Primary Teacher Training Institutions—Information about

Purpose

The purpose of the study was to obtain information about pre-primary teacher training institutions and the courses provided by them for educational planning and development.

Progress

The source of the information was the Third All India Educational Survey.

Major Findings	<ol style="list-style-type: none"> 1. In the case of pre-primary training institutions, recognition is granted by the State Department of Education. 2. In the case of Balsebikas, recognition is granted by the State Council of Child Welfare. 3. The duration of the course varies from three months to two years ; however, it is two years in most of the institutions 4. Theory and practical work are given almost equal weightage. 5. Medium of instruction is, usually, the regional language of the State in which the institution is located. 6. The minimum qualification for admission is school leaving certificate, but some States make a relaxation. 7. The institutions are generally located in urban areas. 8. The management of the institution is generally private, they are aided and recognised by the State Education Department/Council of Child Welfare. 9. The percentage of trained staff is 71.5 (1974); it was only 34 in 1964. Thus marked improvement has taken place in this regard.
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Development of Prototypes of Play Materials

Purpose	The purpose of the study was to develop new play materials for helping children in their educational development, as also to perform experiments with the use of the material.
Target Population	Pre-School children
Major Findings	<p>Play material developed</p> <ol style="list-style-type: none"> 1. Materials for colour discrimination. 2. Materials for developing social awareness. 3. Materials for whole-part relationship. 4. Materials for developing number concepts. 5. Construction materials. 6. Seriation Cards. 7. Jigsaw Puzzles. 8. Life cycle cards. 9. Language development material. 10. Science experience games etc.

Preparation of Graded Bibliography of Children's Literature

Purpose	There is a great dearth of graded bibliographies of children's literature and, therefore, the project aims at developing graded bibliographies on children's literature.
Target Population	Primary children.
Progress	A list of books for children in Hindi, English and other prominent regional languages was first prepared and 100 books from this list were collected. An annotated bibliography of 200 Hindi books under titles such as stories, biographies, poetry, etc., has been prepared.

Comparative Study of School Curriculum (IX-X) in Different States (Pilot Study)

Purpose	There have been complaints regarding the increase in curriculum load for school students, especially in terms of addition of subjects at secondary level. The study investigates the curriculum load at the secondary and post-secondary level in different States of the country.
Target Population	Syllabi of Classes IX and X of Andhra Pradesh, Kerala, Karnataka, Maharashtra, Tamil Nadu and NCERT. All these States have adopted the ten-year general education pattern.
Major Findings	The curriculum load was calculated from two points of view : (1) time allotted, (2) number of major topics/units included.

SOCIAL SCIENCES

History	The curriculum load of history came out to be heaviest in Tamil Nadu. Karnataka came next, followed by Kerala. The lightest syllabus is in Maharashtra. By comparison, NCERT's syllabus is just average in terms of load.
Geography	The curriculum load is heaviest in Tamil Nadu and lowest in Kerala; NCERT syllabus is a little below average.
Civics	The curriculum load is heaviest in Andhra Pradesh and lightest in Kerala; NCERT syllabus is a little above average.
Economics	The NCERT syllabus is the heaviest, followed by that of Kerala.
Conclusions	The over-all load in social sciences is heaviest in Tamil

Nadu. The NCERT syllabus appears to be, more or less, average and the lowest seems to be that of Maharashtra.

NATURAL SCIENCES

- Physics** Kerala seems to have maximum load. Next come Maharashtra, Tamil Nadu, NCERT, Andhra Pradesh and Karnataka.
- Biology** The curriculum load is maximum in Kerala. This is followed by Maharashtra, Andhra Pradesh, Tamil Nadu, Karnataka and NCERT.
- Chemistry** The curriculum load is heaviest in Kerala. Next come Maharashtra, Andhra Pradesh, NCERT, Karnataka and Tamil Nadu.
- Conclusion** The over-all load in natural sciences in Kerala and Maharashtra is more than the average load of all the States.
- Mother Tongue**
1. The load in grammar is almost equal to that of the syllabus of NCERT, Maharashtra, Tamil Nadu and Karnataka.
 2. The number of textbooks in Classes IX, X in Karnataka is four.
- Mathematics** The curriculum load in Mathematics is in the following descending order : Tamil Nadu, NCERT, Andhra Pradesh, Kerala, Maharashtra and Karnataka.
- English**
1. In Tamil Nadu seven periods per week have been provided for English while the NCERT has only suggested five periods a week.
 2. The NCERT syllabus is comprehensive; it highlights the objectives of teaching English in terms of language skills.
- These findings are tentative. There is need to take up a study for defining concepts of curriculum load.

Development of Science and Mathematics Concepts in Children at Primary Grades in India

- Purpose** The purposes of the study were (1) to investigate the differences in the timing, and ways of acquisition of certain basic concepts in science and mathematics between urban and rural children at the primary grades (III to V) in

the age group 7-11 years, (2) to investigate the effect of language development on the acquisition of science and mathematics concepts and (3) to develop strategies by which the results of the study could be used to guide curriculum development work in Science and Mathematics. Seven basic concepts were selected for study. These concepts are (i) Number, (ii) Length, (iii) Area, (iv) Volume, (v) Weight, (vi) Force and (vii) Energy.

Target Group The study was conducted on children in the age group of 7-11 years studying in Classes III, IV and V. The sample consisted of 156 children from an urban area (Delhi) and 159 children from a rural area (Jalgaon District, Maharashtra).

Major Findings

1. The study showed that there is a significant difference in the timing and ways of acquisition of Science and Mathematics concepts between urban and rural children. Urban children of all grades showed better performance than the rural children of their respective grades in all the tasks designed to study development of concepts.
2. Among the concepts selected for the study, the performance of the rural children was comparable to that of the urban children in the development of the concept of weight, particularly in the fifth grade.
3. Among the seven concepts selected for the study, the earliest of all the concepts was the concept of numbers for the urban group, while for the rural group it was the concept of weight. The concept of energy was found to be the most difficult for both rural and urban children, even at the fifth grade level.

Standardisation and Simplification of Techniques in Isolation of Plant Protoplasts for Cell Physiological Demonstrations for Biology Teaching at the High School Level

Purpose The investigations were undertaken with a view to simplifying the techniques of protoplast studies so that high school students can carry out investigatory experiments or projects in the cell biology course at the higher secondary level. The need for such a laboratory study was particularly felt in the light of the recent emphasis on these topics in biological research and education.

Target Population	Higher secondary students and teachers of Biology.
Major Findings	The following experiments have been recommended in general on the basis of these investigations : <ol style="list-style-type: none"> 1. Isolation of protoplasts from higher plants. 2. Study of osmolysis and plasmolysis. 3. Study of cell wall regeneration by naked protoplasts. Experiments based on these studies have also been included in the experimental course developed by the NCERT for the +2 stage.

Evaluation of Multi-Media Package for In-service Training of Primary School Teachers in Science

Target Group	Primary school teachers of SITE areas.
Objectives	<ol style="list-style-type: none"> 1. To study the change in knowledge of science, attitude to science and experimentation in science, and classroom behaviour of the teachers exposed to the programme. 2. To evaluate the various inputs of the training programme.
Major Findings	<ol style="list-style-type: none"> 1. The teacher trainees showed positive gains in their knowledge of content and methodology of teaching science. 2. Their attitude towards experimentation in teaching science also underwent change in the desired direction. 3. The classroom behaviour of the teachers also changed in as much as they increasingly taught science with the help of experiments using low-cost materials.

To study the Impact of SITE on Primary School Children

Target Groups	Primary school children and teachers of SITE areas.
Hypotheses	It was hypothesised that there would be <ol style="list-style-type: none"> 1. larger attendance in the schools; 2. better interaction with the teachers; 3. greater interest in acquiring knowledge; 4. better achievement in school subjects; and 5. gain in cognitive development.

Hypotheses regarding teachers were that

- (a) they would have a positive attitude towards utilization of media-technology in Education; and
- (b) they would involve children to a greater extent in the learning process.

Major Findings The report has been finalised and sent to Space Applications Centre, Ahmedabad.

Study of Primary School Broadcasts in Jalgaon (Maharashtra)

Target Group Primary Schools covered under District Education Project.

- Objectives**
1. To study the extent of utilization of school broadcasts and factors contributing or impeding their fuller utilization.
 2. To know the teacher's attitude towards school broadcasts.

Major Findings Ninety-two per cent of the schools covered under the project utilized radio, against only 25 per cent of the schools not covered by the project. Greater acceptance of radio in the project schools was mainly due to an organisational set-up and organised efforts of the project officials to look after the various aspects of radio listening in the school. The active participation of teachers also contributed to the relatively greater success of radio in the project schools.

A Feasibility Study to test an Alternative System of Education for Optimization of Primary Education in the Rural Areas

Target Group Primary School Children of Telonia (Rajasthan).

- Objectives**
1. To bring to school every child of school-going age; and
 2. to reduce wastage and stagnation at primary level.

Findings The project proved a success on two parameters :

1. Scholastic attainment.
2. Attendance.

The second phase of the project has been completed and the work is now being extended to sixty-four schools with the help of the Rajasthan Government.

A Survey of Audio-visual Production Equipment

Target Group	Educational Institutions in the country with audio-visual production equipment.
Objectives	<ol style="list-style-type: none">1. To prepare a catalogue of audio-visual production equipment available with different institutions in the country.2. To know about the audio-visual materials produced by the educational institutions.3. To know the number of trained persons and finances available for the audio-visual equipment and production of materials, with each institute.
Findings	A catalogue of audio-visual production has been prepared. More details are being collected to make it comprehensive and up to date.

Improvement of Day-light Rear Projection Screen

Target Group	School Children
Objectives	To improve a day light rear projection screen for the projection of films/slides for the students, so that all students are within an angle of 45 to either side of the normal to the screen.
Findings	An improved folding type screen has been developed and work is in progress to improve the quality of the material used.

To prepare a Directory of Personnel in Educational Technology in the Country

Target Group	Persons engaged in the field of the Educational Technology in India.
Objectives	To prepare an information catalogue of different persons engaged in educational technology.
Findings	The first volume of the Directory has been prepared. More information is being collected. A revised volume is proposed to be brought out.

TABLE II

List of Projects in Progress

<i>Sl. No.</i>	<i>Title</i>	<i>Department</i>
1.	A Diagnostic Investigation into the Formation, Development and Conservation of Mathematical Concepts in Students at Primary Level in Rural and Urban Areas of South Indian States	R.C.E. (Mysore)
2.	Identification of Deficiencies and Difficulties in Secondary School Teachers and finding Ways and Means to help Them	R.C.E. (Mysore)
3.	A Study of the Innovative Practices prevalent in Schools in the Southern Region	R.C.E. (Mysore)
4.	The Relationship between-Lesson Kinetic Structures and Learning Outcomes in School Science	R.C.E. (Mysore)
5.	A Study to determine the Impact of Reading on the Achievement of Pupils in Different School Subjects	D.S.E.
6.	Developing a Handbook in Reading for Primary School Teachers and Its Try-out	D.S.E.
7.	Implementing Pre-service Curriculum in Reading in Junior Teacher Training Institutions	D.S.E.
8.	Preparation of a Graded Bibliography of Children's Literature	D.S.E.
9.	Know the Plants around You	R.C.E. (Bhubaneswar)
10.	Teacher Education Programmes as perceived by Trained Working Teachers of the Eastern Region	R.C.E. (Bhubaneswar)
11.	Measuring Attitudes of School Students developing a Suitable Methodology	R.C.E. (Bhubaneswar)
12.	Measuring Achievement Responsibility in Elementary School Children and a Programme for Improving Certain Non-intellective Variables	R.C.E. (Bhubaneswar)
13.	An Investigation into the Implementation of Recommendations on Secondary Teacher Education made by the Education Commission (1964-66)	R.C.E. (Bhubaneswar)
14.	A Survey of Teachers under Training in the SS/CC (1976) in the R.C.E. Bhubaneswar	R.C.E. (Bhubaneswar)
15.	Conservation of Natural Aquatic Ecosystems in and around Bhubaneswar	R.C.E. (Bhubaneswar)
16.	Know about Parasites of Your Paddy Field	R.C.E. (Bhubaneswar)
17.	Know Your Food-fishes and Their Nutritive Value	R.C.E. (Bhubaneswar)
18.	Mushroom Cultivation Scheme	R.C.E. (Bhubaneswar)
19.	School Teachers : Job Satisfaction vs. Study of Values (Deptt. Facilities)	R.C.E. (Bhubaneswar)

<i>Sl. No.</i>	<i>Title</i>	<i>Department</i>
20.	Parental Child Rearing Practices and Value Orientation as underlying Dynamics of Study Habit of Elementary School Children Income Group Families	R.C.E. (Bhubaneswar)
21.	Systematic Studies of the Fauna in and around Bhubaneswar for the Development of Museum	R.C.E. (Bhubaneswar)
22.	Know the Life between the Tide Marks	R.C.E. (Bhubaneswar)
23.	Know about the Helminth Parasites of Man with special reference to Filariasis	R.C.E. (Bhubaneswar)
24.	A Survey and Cultivation of Edible Mushrooms as a Work Experience/Vocational Programme for the High/Higher Secondary Schools	R.C.E. (Bhubaneswar)
25.	Culture and Breeding of Commercially Important Fish under Controlled Conditions	R.C.E. (Bhubaneswar)
26.	Development and Persistence of Analytic Ability in Culturally Different Elementary School Children and Their Effects on Certain Cognitive Performances	R.C.E. (Bhubaneswar)
27.	An Investigation into the Implementation of Recommendations on Secondary Teacher Education made by the Education Commission (1964-66)	R.C.E. (Bhubaneswar)
28.	Teacher's Personality Components as Determinants of Job Satisfaction	R.C.E. (Bhubaneswar)
29.	Development of a Model for Forecasting Teacher Manpower Requirements in a State	D.T.E.
30.	Development of Tools for Admission to Teacher Education Institutions	D.T.E.
31.	Development of Norms for Secondary Teacher Education Colleges	D.T.E.
32.	A Study of the Problems bearing on Teacher Education for 10+2 Curriculum with Reference to One State	D.T.E.
33.	A Study of the Methodologies of Teaching Various Subjects	D.T.E.
34.	Development of a Tool for Supervision and Evaluation of Student Teaching and Other Practical Work in Colleges of Education	D.T.E. D.T.E.
35.	Case Studies of Teacher Education Institutions (Elementary and Secondary)	D.T.E.
36.	A Study of Teaching Competencies for Developing Cognitive Processes in Pupils	D.T.E.
37.	A Study of Social Cohesion in Colleges of Education and Its Relationship to Efficiency	D.T.E.
38.	A Study of In-service Needs of Secondary Teacher Educators in India	D.T.E.
39.	Planning and Designing of Educational Research : a Handbook for Teacher Educators	D.T.E.
40.	Effect of Classroom Behaviour : Training on Classroom Questioning Behaviour of Teachers	D.T.E.

<i>Sl. No.</i>	<i>Title</i>	<i>Department</i>
41.	A Study of the Role Expectations of the Primary and Secondary School Teachers in Working with Community with a view to develop Corresponding Courses for Teacher Education both at Primary and Secondary Levels	D.T.E.
42.	Adjustment and Effectiveness of Beginning Teachers	D.T.E.
43.	A Study to see the Efficacy of the Technique of Transcendental Meditation in Relation to Academic Performance, Creativity, Intelligence Growth Rate, Learning Ability, Motivation, Anxiety, Parent Pupil Expectation Discrepancy and Adjustment	DEPFE
44.	A Study of the Nature and Function of Group Process to motivate Children	DEPFE
45.	Workshop on Teacher Behaviour Patterns and Their Impact upon Students' Academic Achievement	DEPFE
46.	To Study the Effect of Socio-cultural Deprivation on the Educational Development of Rural Children in the Age Group 6-11 Years	DEPFE
47.	Action-oriented Studies to develop Need-based Instructional Resources for the Educational Development of Young Children in Rural Areas	DEPFE
48.	Cognitive Development of Indian Children : A Longitudinal Study	DEPFE
49.	Explorations in optimizing Learning Science in School	DEPFE
50.	A Study of the Awareness and Reaction of Teachers towards the Introduction of Population Education in Schools	DEPFE
51.	A Study of the Attitude of Teachers and Parents towards the Introduction of Sex Education in Schools	DEPFE
52.	An Exploratory Study on the Interest Concerns and Problems of School Students in the Field of Health	DEPFE
53.	Review of the Studies in the Field of Population Education	DEPFE
54.	Development of Learning Material for the Non-formal Education of the Girls in the Rural Areas in the Age Group of 11 to 14	DEPFE
55.	Compilation and Linguistic Analysis of Hindi Vocabulary of Children of Primary Classes belonging to Hindi-speaking Areas	D.T.B.
56.	Different Forms of Hindi Literature included in Hindi Textbooks for Secondary Classes . an Investigation into Their Effectiveness from the Standpoint of Instructional Objectives and Interest of the Children	D.T.B.
57.	Comparative Study of Standards as reflected in the Syllabi of Science, Mathematics, Social Science, English and Hindi of the States where there is Public Examinations at the end of Class X	D.T.B.

<i>Sl. No.</i>	<i>Title</i>	<i>Department</i>
58.	Importance of Illustrations in Geography Textbooks	D.T.B.
59.	A Study of Material in History Textbooks which (i) jeopardizes the National Integration (ii) promotes National Integration	D.T.B.
60.	A Study of Evolution of Textbook and its Role in Formal Education in the Concept of Changing Society (Ancient to Modern Period with Special Emphasis on Post-Independence Period)	D.T.B.
61.	A Comparative Review of Science Education in U.K. and India with Special Reference to the Chemistry Teaching in Secondary Schools	D.E.S.M.
62.	(A) A Study of the Extent of Utilization of School Broadcasts in Delhi (B) A Study of the Extent of Utilization of School T.V. Programmes in Delhi	C.E.T.
63.	A Study of Primary School Television Programmes of Delhi Doordarshan	C.E.T.
64.	Studies in Science Talent	ERU
65.	Social and Cultural Change and Changes in the Creative Functioning of Children	ERU
66.	Serum Urate Concentrations, Intellectual Style and Personality	ERU
67.	An Evaluation of the Comprehensive Internal Assessment Scheme adopted by the Board of Secondary Education, Rajasthan, Ajmer, for Classes IX, X and XI	ERU
68.	Development of Psychological Tests for Selection of Police Officer	ERU
69.	Population and Education Policies : A Country Case Study of India	DESSH
70.	Linguistic Analysis and Description of the Phonological Variations in Standard Hindi	DESSH
71.	Contrastive Sound Systems of Hindi and Malayalam	DESSH
72.	Verb Form Frequency Count in Hindi	DESSH
73.	A Survey of Some Aspects of the Teaching of History at the Higher Secondary Level in the Schools of Delhi	DESSH
74.	Evaluation of DTA Products and Prototypes	D.T.A.
75.	Utilization of Audio-visual Media at Teacher Training Level in the Country	D.T.A.

7

Vocationalisation of Education—Education for Work

THE vocationalization of education as a complement to the ten-year general education programme is rapidly gaining prominence in the country. There is general agreement regarding the need for transformation of education so as to make it socially relevant

and purposeful. If higher secondary education is to be meaningful, it must be integrated with goals of national development. Among the immediate targets is the removal of unemployment and under-employment within the next 10 years, and provision of facilities for rural development, village uplift and encouragement to cottage and small industries.

In 1976, NCERT had published a document on "Higher Secondary Education and its Vocationalisation" as the result of wide-ranging consultations culminating in a National Conference. The document contained many important, forward-looking features and covered areas such as flexibility in the choice of vocations, the question of determining vocations with reference to a district or a group of districts, and the need for conducting district-wise surveys of economic activities and potentialities. The common purpose of the entire diversified vocational education system is to produce skilled workers in contrast to the "Specialists", and to make education an avenue for socially productive activity.

Through its Vocationalisation of Education Unit, NCERT has, during the year under report, taken major strides towards the implementation of these goals. The Central Board of Secondary Education was prevailed upon to accept the scheme of vocationalisation and NCERT prepared, on behalf of the Board, curricula in 27 vocational subjects. In the preparation of curricula, the following details were provided for each course: aims and objectives of the course, the syllabus, the equipment needed for the course, the reference books and the evaluation procedure. As these courses were introduced for the first time in the higher secondary schools of Delhi, a series of orientation programmes for teachers and heads of institutions was arranged and in this way nearly 600 teachers were oriented to the concept of vocationalised education. The Council, through its Vocationalisation of Education Unit, assisted the State Governments of Tamil Nadu and Karnataka in preparing syllabi in different vocational courses and introducing them in a large number of institutions. The Governments of Kerala, Assam and Gujarat were also assisted through discussions relating to the task of implementation of vocationalisation schemes. Several Workshops, Conferences and Seminars arranged in different parts of the country provided opportunity to the Council's experts in the Vocationalisation of Education Unit to elaborate the main objectives, aims of vocationalisation and methods for their implementation. The Government of Karnataka accepted the scheme of vocationalisation as set forth in the National Document prepared by NCERT and introduced 21 vocational courses in 13 institutions in the districts of Bangalore, Dharwar and South Kanara. Nearly 1,030 students are undergoing training in these courses. A critical study of the progress of these courses was undertaken during March 1978, and the report of the study has been submitted to the State of Karnataka and to the Ministry

of Education and Social Welfare, Government of India. The report reveals

1. that students are enthusiastic about the courses ;
2. that a significant proportion is preparing for self-employment ;
3. that their placement is not likely to pose any problems ;
4. that they would like to make use of apprenticeship facilities with or without stipends ; and
5. that they would like to improve their qualification in their chosen vocations, if facilities are created.

It is regretted that not much headway could be made in the preparation of textbooks in vocational subjects in view of important changes likely to be made in the scheme of vocationalisation of education on the basis of a report of the National Review Committee on higher secondary education.

8

Consultancy and Information

IN order to assist States and other agencies working in the field of education, the NCERT provides consultancy services and valuable information based on research, as and when invited to do so. The Steel Authority of India Ltd., for instance, asked for

NCERT's help in the selection of Management Personnel, for placement in steel plants in the public sector. NCERT responded to their invitation and designed a testing programme, following it up by making use of it at different centres in the country. On the basis of results obtained through the tests devised by NCERT, a list of suitable candidates was prepared and supplied to the SAIL Authority.

At the request of SNDT University, Bombay, NCERT, organized a six weeks' course on educational technology in May/June 1977, at Pune. Consultancy was also provided to the T.V. branch of the Directorate of Education, Delhi, and to the E.T. Cell, Jaipur, in training radio and T.V. script writers. Similarly, one of the staff members of the Department of Education, University of Kerala, was trained in educational technology activities and projects during April 1977. The members of the academic staff of the NCERT were actively associated with school television programmes and with the subject sub-committees of the Ishwar Bhai Patel Committee. The Social Science teachers of Atomic Central School, Trombay, Bombay, were put through an orientation course in May 1977. Assistance was rendered to the National Parent-Teacher Association, New Delhi, in organizing their seventh national parent-teacher conference in May 1977. The Indian Council for Management was helped to organize a seminar on "Social Future in 2000 A.D." and the Directorate of Education, Delhi Administration, was provided assistance in organizing an orientation programme for 400 Principals and Education Officers of higher secondary schools in the new 10+2 pattern. NCERT helped National Staff College for Educational Planners and Administrators, New Delhi, to conduct a workshop, which they organized on Indian History and Culture for American supervisors and curriculum directors of social sciences. The same institution sought help in organizing an orientation programme for education officers in curriculum development and population education, and for their UNESCO sponsored project on promoting international understanding through schools. A senior professor of the Council's Department of Education in Social Sciences and Humanities is also to act as convener for a committee which will work towards planning international understanding in the field of Social Sciences. NCERT was also able to help the Centre for Studies in Social Sciences, Calcutta, in their orientation course in History.

A conference of representatives of state textbook agencies, Boards of Secondary Education, State Institutes of Education and State Departments of Education was also organised in Delhi, from 21 to 23 February 1978, to discuss emerging issues and problems regarding the policies and programmes of textbook preparation and production in the country.

In addition, the members of the academic staff of NIE departments of the units were engaged in guiding and supervising the work of large

numbers of students working towards the Ph.D. degree in the different universities in the country.

NCERT availed of the under-mentioned foreign consultancies during the year under report :

1. Shri Kenneth Nelson	—Four months	E.T.V.
2. Shri Piers Pandread	—Two months	E.T.V.
3. Mrs. Carol Haslem	—Two months	E.T.V.
4. Shri Peter Dye	—One Year (Continuing)	E.T.V.
5. Shri A W. Vartram	—Six weeks	Self-instruc- tional material.

9

Working with the States

CLOSE collaboration and liaison with the States/Union Territories is of vital importance for successful implementation of NCERT's programmes for improvement in the educational system. Plans and programmes developed by NCERT have to be

worked out in the States and close cooperation with the State authorities is, therefore, absolutely essential. Improvement in the quality of education is possible only through willing and active cooperation of the States. NCERT assists State Governments with expertise and with much-needed information, and, thereby, enables them to devise new strategies for bringing about changes and improvements. In areas such as Examination Reform, Training for the New Curriculum, Preparation of Text-books, Curriculum Development, Preparation of Reference Books and Instructional Material, etc., the NCERT has been particularly active and helpful to the States. Some idea of the manner in which NCERT has been working with the States can be had from the following resume of our activities.

New Strategies for Internal Assessment and Evaluation

Maharashtra, Kerala and Manipur evinced keen interest in effecting improvements in the existing examination system and in trying out new concepts and techniques of evaluation with the help of NCERT. Kerala decided to adopt altogether new strategies for internal assessment in schools in the State. The new approach, which is based] on guidelines prepared by the Council, differs radically from the systems tried out earlier and is expected to yield very favourable results.

Sixty participants drawn from all over the State of Maharashtra attended a Workshop, organized with technical assistance from NCERT, in January 1978, to familiarize themselves with the new concepts and techniques of evaluation.

Thanks largely to the enthusiasm displayed by the Manipur Board of Secondary Education and the expertise provided by NCERT, considerable headway was made in introducing reforms in the examination system in Manipur. The work was carried out in three phases. In the first phase, paper-setters of the Board were trained in the concept and techniques of evaluation. This was followed, in the second phase, by the preparation of sample question papers. The third and final phase, which is under way, will complete the work begun earlier through total implementation of examination reform proposals already formulated by the Board under the guidance of NCERT. It might be of some interest to note in this connection that the Board has taken the decision to appoint only trained evaluators as paper-setters for its examinations. This should certainly go a long way towards arresting the decline in examination standards.

Twenty-two secondary school teachers from Arunachal Pradesh attended a three weeks' training course for Career Masters which NCERT conducted at Ziro. Instructional material was specially prepared for

their use. At the request of the Government of Rajasthan, a member of the academic staff of the Council was deputed to serve as a resource person for a training course for Career Masters.

The first of a proposed series of orientation programmes in Educational Psychology for District Education Officers in the States was conducted at Gauhati. Nineteen District Education Officers from eleven States attended. This was followed by a similar course organised at Trivandrum for the southern States. Both the courses were designed to help District Education Officers to clarify their own constructive role and responsibilities in promoting guidance and learning in schools.

Primary Curriculum Development Cell

With the assistance of UNICEF, NCERT took up the following two programmes in 15 States of our country :

1. 'Primary Education Curriculum Renewal' (Project 2)
2. 'Developmental Activities in Community Education and Participation' (Project 3)

The specific objective of Project 2 is to develop innovative curricula which can satisfy the educational requirements of the under-privileged children. The main challenge of the project is to develop suitable instructional material and strategies based on the needs of the children living in the communities selected for the project.

The specific objective of Project 3 is to develop programmes to provide opportunities of formal, non-formal and informal education to cater to the needs of the age group 0-3, 3-6, 6-14, 15-25 and mothers. The challenge of this project lies in the effective utilisation of the resources available for each of the selected communities through the programmes already offered by such agencies as ICDS, Community Development Department, Health and Family Welfare Department, Agriculture Department, etc. The project also requires development of suitable instructional materials for different age groups.

The following States are participating in the two projects :

- | | | |
|-------------------|---------------------|-------------------|
| 1. Andhra Pradesh | 6. Himachal Pradesh | 11. Mizoram |
| 2. Assam | 7. Karnataka | 12. Orissa |
| 3. Bihar | 8. Kerala | 13. Rajasthan |
| 4. Delhi | 9. Maharashtra | 14. Tamil Nadu |
| 5. Gujarat | 10. Madhya Pradesh | 15. Uttar Pradesh |

The machinery for the execution of these projects consists of :

- (a) NCERT : Planning, monitoring, executing and supervising the projects at the Central level.
- (b) SIEs/SCERT/DSERT/SIERT : Monitoring, executing and supervising the projects at the State level. Different developmental

agencies at the State level are also involved. Their help is sought through the State Coordination Committee.

- (c) TTIs : In each participating State three Teacher Training Institutes have been selected to supervise and provide training to the teachers of a cluster of ten schools in the region. The TTIs are also expected to give assistance to the SPCDC of the SIE in the effective implementation of the two projects in the selected schools and communities.

Role of PCDC, NCERT

Primary Curriculum Development Cell at NCERT is the central coordinating cell responsible for planning, coordination and implementation of the Projects 2 and 3 mentioned earlier.

Progress of Projects 2 and 3

These two projects are being tried out on a pilot basis in selected schools in 15 States. The main aim of these projects is to find out a suitable strategy for developing need-based curriculum at the primary level. Replicability of the principles and strategies is the main guiding factor in the programme. It is hoped that these projects will provide potential guidance for expanding the programme at the State level in the fifteen States and in introducing programmes on similar lines in the remaining States of the country.

Project 2 : All the participating States have already prepared their curriculum plan and syllabi with the help of the Ten-Year School Curriculum. Before developing the curriculum plan and syllabi, the participating States conducted a detailed survey of the socio-economic conditions and educational facilities available in the communities. The findings of the surveys have been helpful in developing suitable syllabi and curricula for the selected schools. Based on the curriculum plan and syllabi developed in each of the States, they have developed instructional materials such as textbooks, teacher guides, workbooks, etc., for Classes I and II and have organised training programmes for teacher educators, supervisors and inspectors of schools and the teachers. One of the main features of the project is that the teachers are involved in all the stages of curriculum development and preparation of instructional material. All the States have introduced the newly developed curriculum and syllabi and all the instructional materials in Classes I and II from the academic session 1977-78. Materials for Classes III to V are being developed for introduction in the schools from the academic session 1978-79 and in subsequent years, through a phased programme. A variety of models of decentralised curriculum development are emerging. An in-built system for evaluating all aspects of the programme at various

levels has also been evolved.

Project 3 : A thorough survey of the needs of the community and various socio-economic conditions of the community has been conducted. Based on these findings, the programmes and activities for various target groups have been prepared in all the participating States. The local community and teachers have also been closely involved in the preparation of plans of programmes and activities for the community centres involved in this project. Instructional material, such as units for the education of drop-out children of the age group 6-14, and for the general education of the adults, is being prepared in almost all the participating States. The cooperation of various departments and voluntary agencies working for the education and welfare of the community has been sought. The Coordination Committee at the State and district levels has been constituted in most of the participating States. The teachers and community workers are being trained. Community centres have started functioning in most of the participating States. A variety of models are emerging as a result of setting up community centres to suit the local requirements and resources.

Regional Meetings, National Conference and Evaluation Workshop

In order to provide to the participating States an opportunity to take stock of the work done in different States, to identify the problems being faced by them in the implementation of the projects, and to provide an opportunity to these States to meet in smaller groups in different regions to discuss their programmes, materials and problems, three regional meetings in the months of April, May and July 1977 were organised. The plan of action for future programmes and activities to be taken up by each State was submitted by the States and scrutinised at the NCERT level and finalised. The key persons involved in the two projects in the participating States were invited to these meetings. This procedure has helped the States to take up the programme most suited to their needs and has provided a base for speedy progress.

A National Conference on these two projects was organised from 12-14 September 1977 at New Delhi. The conference had the benefit of the presence of Mr. J. Ratnaike, Education Adviser to UNESCO Regional Office, Bangkok. Future plans of action of the States suited to requirements of individual States were also prepared at the conference.

A workshop was organised at the NIE from 6-9 December 1977 in which the strategy and tools for evaluation of all aspects of Project 2 were evolved.

A National Conference on 'Developmental Activities in Community Education and Participation' was held at Delhi in Shri Delhi Gujarati

Samaj from 6-10 February 1978. The conference evolved effective strategies for all aspects of Project 3. It was attended by key persons from the States involved in this project.

The role of UNICEF in these projects is to provide inputs in the form of financial aids for preparation and production of materials, training of personnel and provision of basic equipment.

An important role of PCDC, NCERT, is to act as a clearing-house of information for the States. Table I gives details of materials which have been transmitted to the States in the year 1977-78.

PCDC is also involved in developing certain conceptual literature for providing guidance to the States.

TABLE I

Reference Books/Materials supplied to each of the 15
SIEs/SCERTs and 450 Participating Schools

1. A set of textbooks/workbooks/teachers' guides developed by the various departments of NCERT for primary classes in various school subjects supplied to SIEs.
 2. Reference material* developed by the Department of Textbooks for the guidance of textbook authors and evaluators supplied to SIEs.
 3. Sixteen sets of Environmental Studies exchange including slides were received through the courtesy of the British Council and supplied to the SIEs.
 4. A set of 182 books received through the courtesy of the British Council, 26, Jor Bagh, New Delhi, supplied to the SIEs.
 5. A set of 19 books received through the courtesy of the UNESCO..Office, Bangkok, supplied to the SIEs.
 6. Supplementary reading materials for children worth Rs. 1,000 supplied to each of the schools.
-
- *a. A brochure of supplementary readers : Preparation and Evaluation (sent to the SIEs of the participating States for the use of authors).
b. Development of Exercises for Language Textbooks (sent to the SIEs and TTIs for the use of authors and teacher educators).
c. Style Manual—Sheet 1 (sent to SIEs for use of authors and publishers).

State Level Interaction

Under the UNICEF-assisted project, a pilot scheme on nutrition/health education and environmental sanitation in primary schools is in active progress. The first national annual conference was held in Coimbatore from 24 to 28 June 1977 to review the progress of the work carried out at five regional centres, namely, Jabalpur, Baroda, Ludhiana, Calcutta and Coimbatore, and to find out to what extent the objectives set up in the plan of action have been realised and to make suggestions and recommendations for further development of the scheme.

Jabalpur and Baroda Centres entered into the second phase of the scheme and each trained 400 primary school teachers from 400 centres selected for the scheme during September 1977 to January 1978, respectively.

Ludhiana Centre trained the first batch of 45 teachers in August 1977.

Coimbatore centre organised training programmes for 421 primary school teachers of the newly selected schools in Kanya Kumari district in February 1978.

Preparation and Evaluation of Textbooks

NCERT worked closely with the Department of Education, Arunachal Pradesh, in developing syllabi and textbooks in Hindi for Class I. The book is now ready for printing. Similarly, NCERT provided help to the Department of Education, Orissa, in the preparation of a textbook on Social Studies for Class III, entitled "Our Orissa". A team of experts from NCERT worked in Bhubaneswar for a week and helped to draw up a detailed syllabus and the synopsis of the book. The Director of Education, Haryana, has adopted our textbook in Social Studies at the Primary and Middle School level. The Council helped the Board of Secondary Education, Rajasthan, and Central Board of Secondary Education, New Delhi in, developing syllabi and in the selection of textbooks.

NCERT is involved in assisting textbook agencies in the States in their textbook development programmes. The assistance is mainly in the areas of evaluation of textbooks and in the training of authors and evaluators. The programmes of evaluation of textbooks were taken up in the States of Maharashtra, Kerala and Gujarat. In the case of the States of Maharashtra and Kerala the programmes were conducted in collaboration with the State Institutes of Education. In Gujarat the Gujarat Board of School Textbook collaborated with us. In all the States, nationalised textbooks prepared in various subjects at different levels were evaluated. The number of textbooks evaluated in each State is as follows :

1. Maharashtra : 69 textbooks
2. Kerala : 14 textbooks
3. Gujarat : 24 textbooks.

Workshop for Teacher Educators

A workshop was organized in Hyderabad, for 30 Principals and Lecturers of Elementary Teacher Training Institutions of Andhra Pradesh. This was followed by a similar programme for Secondary Teacher Educators of

Andhra Pradesh. These workshops were devoted to developing tools and techniques for evaluation and improved methods of Secondary Teaching. The workshop for Elementary Teacher Educators of Kerala was held at Trivandrum, followed by a workshop on methods and materials for Teacher Training at Bangalore for 37 Teacher Educators. Similar workshops on methods and materials for Elementary Teacher Educators was organised for 37 teachers of Tamil Nadu. Training was imparted in this workshop on different types of Audio-Visual methods and materials useful for Teacher Training. A workshop for improving Curriculum at the B.Ed. level was organized at Ajmer for Teacher Educators of Teacher Training Colleges of Rajasthan. For Secondary Teacher Educators of Uttar Pradesh, a workshop on evaluation of student performance at the Secondary Teachers Training Level was held at Kanpur. Tools and techniques for improving evaluation in training colleges were developed at this workshop.

Field Work : Offices of the Field Advisers

In order to ensure close collaboration with the States/Union Territories, NCERT maintains a wide network of 18 Field Units. These Units work towards dissemination of information, and collect useful feedback for the Departments of the Council located at Delhi. Implementation of the Council's major projects in the States is largely the responsibility of the Field Units. They act as the eyes and ears of the Council in the States and serve as the base for the Council's operations in the remotest regions of the country. Each Field Unit has its own staff and with the help of experts drawn from the States and the NIE, organises extension activities designed to bring about qualitative improvement in education. Among the major activities which our Field Units engaged in during the year under report, mention may be made of Seminars and Workshops for teachers and teacher-educators in the various disciplines, orientation programmes for Education Officers and teacher-educators and heads of institutions, training courses for teachers and Resource Persons, State-level Conferences on 10+2 pattern of education, and implementation of the Council's Experimental Projects Scheme.

Inter-State Student-Teacher Camps for National Integration

These camps were organised separately for boys and girls in the age-group of 14 to 17 years. In each camp 75 students and 15 teachers from five States stayed together for 15 days. Each State was represented by 15 students and 3 teachers.

A wide variety of activities such as cultural programmes, sports, visits, social service, exhibitions, living together, language-learning programmes, preparation of various models and paintings, creative writing in the form of articles, stories, poems, etc., depicting feelings of National Integration was organised at each camp.

The total number of camps organised from 20 December 1976 to 31 March 1978 was nine.

Number of Participants

Girls	—	450
Boys	—	225
Teachers	—	135 (90 ladies and 45 men)

**Orientation Courses for Primary School Teachers in
New Trends in Education and National Integration**

Three camps were organised for primary school teachers. One hundred primary teachers were invited from the States and Union Territories of India to each camp for a week's stay.

Development and growth of a sense of national integration through a set of programmes, was the main objective of these camps. New strategies [related to teaching-learning process were also elaborated. Emphasis was laid on the role of elementary school teachers for universalization of elementary education through formal and non-formal methods.

In all these camps 25 per cent of the teachers were from the scheduled castes and scheduled tribes.

States and Union Territories Covered : Bihar, Orissa, Nagaland, Haryana, Madhya Pradesh, Andhra Pradesh, Rajasthan, Gujarat, Pondicherry, Chandigarh, Jammu and Kashmir, West Bengal, Maharashtra, Delhi, Uttar Pradesh, Himachal Pradesh, Sikkim, Assam, Mizoram, Kerala, Lakshadweep, Karnataka, Tamil Nadu.

10

The Search for Talent

ONE of the Council's major activities aimed at helping the development of the nation is to identify and nurture talent in the country at various terminal stages of the secondary and higher secondary levels. Since its inception in 1964 and until 1976, NCERT

operated what was known as National Science Talent Search Scheme to identify pupils with a marked aptitude for scientific studies. A large number of scholarships was awarded under the National Science Talent Search Scheme to pupils all over the country.

With effect from 1977, NCERT acting on the basis of recommendations made by the Review Committee, enlarged the scope of the scheme. In addition to basic sciences and social sciences professional courses, such as medicine and engineering, have now been included within the scope of the scheme. During the year under reference, there were two national level tests—one for the students who completed Class X under the 10+2 school pattern and the other for the students who completed Class XI under the old higher secondary pattern. The first one has been named the National Talent Search Scheme and 350 scholarships are being awarded under this scheme. The second one is the old scheme, that is, National Science Talent Search Scheme, for which 100 scholarships are to be awarded. Ten special scholarships under Mathematics Olympiads Scheme are also being continued.

The awardees selected after Class X would receive scholarships initially for two years to be continued up to Ph. D. level in the case of basic sciences, agricultural sciences and social sciences, and up to M.D./M.S./Tech. after suitable revalidation by NCERT under professional courses.

During 1978, the NCERT is holding the tests at three different stages, that is Class X, Class XI and Class XII. Details regarding the number and value of scholarships are given below :

<i>S.No.</i>	<i>Name of Examination</i>	<i>No. of Scholarships</i>	<i>Value of Scholarship</i>
1.	Class X	250	(a) Rs. 150 per months for 2 years + Rs. 200-per annum as Book Grants, then (b) Rs. 200 per month up to the second degree in Basic and Social Sciences and first Degree in Engg. and Medicine + Rs. 300 per annum as Book Grants.
2.	Class XI	100	(a) Rs. 150 per month for one year + Rs. 300 per annum as Book Grant; then

- (b) Rs. 200 per month up to the second degree in Basic and Social Sciences and first degree in Engineering and Medicine + Rs. 300 per annum as Book Grant.
3. Class XII 150 Rs. 200 per month up to the second degree in Basic and Social Sciences and first degree in Engineering and Medicine + Rs. 300 per annum as Book Grant.

It is expected that 80,000 candidates would appear in Class X, about 30,000 in Class XI and about 25,000 in Class XII national tests.

Our experience of previous years reveals that the distribution of awards between students from rural and urban areas is not a balanced one. In order to encourage students in the rural areas and to reduce these imbalances, NCERT has taken the following steps :

1. Intensification of publicity so as to cover the remotest areas in the country through mass communication media.
2. Printing of application forms, information brochures, and sample items in all regional languages.
3. Conducting interviews separately for basic sciences and social sciences, with a State representative on each of the Interview Boards.

Regular follow-up programmes for the awardees has also been undertaken. During 1976-77, awardees at the undergraduate level were placed at 12 summer schools and practice summer schools at different centres of higher learning in the country. Post-graduate students were allotted to National Science Laboratories and Centres of Advanced Studies where these NSTS scholars were given individual attention in the execution of independent research projects.

New tools for evaluating talent have also been devised and methods of selection are undergoing a major change. A new component, "General Mental Ability Aptitude Test" has been introduced in the test paper supported by a scholastic aptitude test.

11

International Contacts

CONTACTS on an international level with other educational agencies provide much-needed information and impetus for the activities of NCERT. In an age dominated by rapid scientific and technological progress, exchange of ideas on an inter-

national level is vital to progress. Though NCERT's concern is specifically with the improvement of education in this country, it must utilise all available expertise in the field of education that is available in countries all over the world. International contacts are, therefore, a major source of inspiration for our programmes. UNESCO and UNICEF are the chief international agencies for NCERT's collaborative work in the international field. By acting as one of the implementing agencies for bilateral cultural exchange programmes of the Government of India, NCERT regulates a two-way flow of ideas with countries abroad by sending out delegations to study specific educational problems and arranging training programmes for developing nations. The details of these programmes may be seen at Appendix F.

Among the major areas in which NCERT collaborated with international agencies during the year under report are: (A) Population Education, (B) Primary Curriculum Development (C) Conferences and Seminars, (D) Training Programmes and (E) Educational Technology.

POPULATION EDUCATION

Population Education : Cooperative Development of Learning Units

Under this project, the workbook developed earlier at the Simla Workshop was translated into Hindi, Gujarati, Marathi, Tamil, and Urdu. The material thus prepared was tried out at the following urban, rural and tribal centres in the country :

Urban Centres

1. Ahmedabad
2. Bombay
3. Delhi

Rural Centres

1. Dinapur (Bihar)
2. Gandhigram (Tamil Nadu)
3. Ghatampur (Uttar Pradesh)

Tribal Centres

1. Arki (Himachal Pradesh)
2. Mandla (Madhya Pradesh)

With the finalisation of the Workbook and a teacher's Manual entitled, POPULATION 'EDUCATION—A CONCEPTUAL FRAME-

WORK, the project has now been completed. Twenty copies of this material have been submitted to UNESCO.

National Source Book on Population Education

With the assistance of a handsome grant from UNESCO, NCERT developed a National Source Book on Population Education for India along the lines of a similar publication on Population Education for Asian Countries published by UNESCO's Regional Office at Bangkok. The national source book prepared by NCERT comprises the following volumes :

1. Population Education—Content Area.
2. Strategies for implementing Population Education.
3. Teaching Population Education through Various School Subjects.
4. Reference Tables on Demographic Aspects.

Study Tour Programme for Key Persons in Population Education

Delegates from South Asian countries visited India to study the Population Education Project and its implications for their own country. This was followed by a conference of representatives from Malaysia, Indonesia, Philippines and Korea held at Bangkok at which NCERT was also represented. The material developed by these countries was examined and exchanged by the member States, thus helping each other with information and new ideas.

PRIMARY CURRICULUM DEVELOPMENT PROGRAMMES

Projects related to (1) Primary Education Curriculum Renewal and (2) Developmental Activities in Community Education and Participation (UNICEF-aided Projects 2 and 3) have been taken up in fifteen States as the result of an agreement arrived at between the Government of India and UNICEF. The Delhi office of UNICEF and their field representatives are closely associated with activities related to these projects, at the national as well as State level. Financial assistance for the programmes and the basic equipment is being provided by UNICEF.

UNESCO Regional Office, Bangkok, is also associated with the projects. An UNESCO mission visited India from 20 August to 16 September 1977 and studied in detail the progress of the projects through actual visits to the schools and community centres in the States participating in the projects. The report of the mission records generous appreciation of the progress made so far. The relevant extract from the report is quoted below :

“The Mission wishes to record its appreciation of the outstanding

progress in Project 2 and the effective organisational set-up that has been established for Projects 2 and 3 during the years between the two mission visits. With the objective of enhancing the capacity in the States to develop State specific curricula, the current facilitatory, rather than an authoritative or paternalistic role that the NCERT Unit is playing is indeed a model in leadership for the several countries of Asia which are contemplating decentralised curriculum development.”

The UNESCO Office has also supplied 16 sets of 19 books for use by members of the PCDC, NCERT, and PCDCs in the States.

The British Council, New Delhi, took keen interest in the two projects. Sixteen sets of 182 books were received from the Council for use by members of the PCDC (Primary Curriculum Development Cell) in NCERT and SPCDC in the States. Sets of publications on Environmental Studies Exchange, including studies for use by the national and State teams involved in the projects, were also received. For the benefit of members of PCDC, Mr. Meurig Evans and Mr. Alan Young organised a discussion group on the Environmental Study Approach. They also visited the SIE, Udaipur, and the community centre at Ruhania, Distt. Banswara, Rajasthan.

Mr. R.M. Prideaux, H.M. Inspector of Schools (Retd.), West End, North Leach, Cheltenham (U.K.), was deputed by the British Council to attend the national conference on Project 3 ‘Developmental Activities in Community Education and Participation’.

INTERNATIONAL CONFERENCES AND SEMINARS

An Asian Regional Seminar on the relevance of Science and Mathematics Education was held in New Delhi from 20-24 March 1978. The Seminar was sponsored by the Commonwealth Association of Science and Mathematics Educators (CASME) and hosted by NCERT. Many academics of NCERT participated in the seminar, contributed papers and took active part in its deliberations. The details of these may be seen in Appendix F.

NCERT organised a seminar for primary teachers under India-Afghan culture exchange programme and prepared and arranged study programmes for the UNESCO fellows from Korea, Nepal, and Bhutan.

TRAINING PROGRAMMES FOR FOREIGN NATIONALS

The Council organised a training programme for a batch of 29 women primary school teachers from Afghanistan from 2 March 1978 to 1 April 1978. The main objective of the course was to acquaint the trainees with

the various aspects of primary education in India and with the developments in the field. The programme was organised under the ITEC programme of the Ministry of External Affairs.

A study programme in the area of Social Sciences was also organised by the Council for Mr. F. Stibel, an American scholar. The course was organised under the Barkley Professional Studies Programme in India of the University of California.

Training in Correspondence Education

Under the UNESCO fellowship scheme, NCERT sent a team of nine officers (three from NCERT and six from E.T. Cells of the six SITE States) for two months' intensive training in Correspondence Education, to the University of New England, Australia.

Training Programme in Educational Radio Production

NCERT conducted a course known as "Joint India Maldives Training Programme in Educational Radio Production", during March-April 1978 in which the Under-Secretary, Maldives, Ministry of Education the Secretary, Radio Maldives, and a Presentation Announcer, Radio Maldives, participated. They were taken to the Archives Library of All India Radio. The objectives and modus operandi of the project were explained to them.

EDUCATIONAL TECHNOLOGY

ERIC Project for Developing an Audio Tape Library

1. Cassette recordings of the following seven programmes were sent to the Indo-US Seminar on Educational Technology held in USA, in May 1977 :

- (a) Palanquin of Poesy (Poems of Sarojini Naidu).
- (b) Musical Instruments of India.
- (c) Warnings of History: Palaces and Hovels by Sardar K.M. Panikkar.
- (d) India Becomes Free.
- (e) Peaceful Uses of Atomic Energy.
- (f) Our National Anthem.
- (g) Once Upon a Time : Story of the Archaeological Survey of India.

12

Publications

THE publishing activity of NCERT is part of its total effort to improve the quality of education in India.

We produce and distribute a wide range of publications. These include school-level textbooks, workbooks, teachers' guides, supplementary reading

materials, journals, pamphlets and brochures.

During the year under report, NCERT's publishing activity centred mainly on the production and distribution of textbooks for the second phase of the new (10+2) Curriculum—that is, on books for Classes II, IV, VII, X and XII.

A significant and radical departure from the practice of the previous year was the Council's decision to assume total responsibility for production and distribution of all textbooks relating to the second phase for the session 1978-79. Thus, the year under review was notable for preparatory work for bringing out 42 new 10+2 pattern second phase textbooks and workbooks. Out of these, three are intended for Arunachal Pradesh.

At the same time, the Council published 51 reprints of old textbooks, a number of research publications, supplementary readers, journals, pamphlets, etc.

Our publications continued to be marketed by the Publications Division of Ministry of Information and Broadcasting. The Japanese publishing house of M/s Teikoku Shoin & Co. requested copyright permission from the Council to bring out a Japanese edition of our book "India on the Move" against payment of a royalty fee at 7%.

The category-wise break-up of the titles brought out by Publication Department during the year under review is given below :

<i>Category</i>	<i>No. of titles brought out</i>
Textbooks	49
Teachers' guides and workbooks	12
Supplementary Readers	5
Research monographs and other developmental materials and reports	35
Periodicals	34
Textbooks published by private publishers	50
Total	<hr/> 185 <hr/>

Detailed lists of various titles brought out during 1977-78 are given in Appendix G.

During the year under review, our sales amounted to Rs. 64,43,701.63 (This figure does not include the sales made by the Publications Division's sales emporia at Bombay for the period October 1977—March 1978, as the sales statement for this period has not yet been received by Publication Department from Publications Division, Ministry of Information and Broadcasting.)

A sale in foreign exchange to US \$ 309.31 + £ 7.20.

NCERT participated in the following Book Fairs and Exhibitions to publicise NCERT publications:

1. The Third World Book Fair, February 1978, New Delhi.
2. National Science Exhibition, November 1977, Teen Murti, New Delhi.
3. Indian Science Congress Conference, January 1978, Ahmedabad.
4. Commonwealth Book Fair, June 1977, London.
5. Saba Saba International Trade Fair, Dar-es-salaam, August 1977, Tanzania.
6. First International Book Fair, September 1977, Moscow.
7. The 9th Singapore Festival of Books and Book Fair, August-September 1977.
8. The 29th Frankfurt Book Fair, October 1977.
9. International Children's Books Exhibition, November 1977, Ankara Turkey.
10. National Book Week, November 1977, Ghana.
11. Cairo 10th International Book Fair, 1978, February.

During the year, NCERT granted copyright permission to the following State Government/Nationalised Textbook agencies, to re-publish a number of its textbooks and, in some cases, particular chapters from them:

1. Dy. Secretary, Board of School Textbooks, Government of Jammu and Kashmir, Srinagar.
2. The Head, Non-formal and Adult Education, State Institute of Education, Haryana, Gurgaon.
3. The Secretary, H.P. Board of School Education, Simla.
4. Director, State Institute of Education, M.S. Poona, Maharashtra.

Journals

Journals occupy pride of place in NCERT's publishing activity. They cater to a wide range of readers from the primary school teacher to research workers. "The Primary Teacher"/"Primary Shikshak" published simultaneously in English and Hindi transmits to practising teachers and administrators authentic information about the educational policies being decided on and pursued at the Central level. It aims at giving meaningful and relevant material for direct use in the classroom. "Indian Educational Review" provides a medium for dissemination 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 to encourage original and critical thinking in education through discussion of current educational 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, prospects and the individual experiences of teachers and students.

In addition, the Council publishes its own house journal entitled "NCERT Newsletter" which carries news items, reports and informative write-ups about the activities of the Council.

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Receipts and Expenditure

DURING the year 1977-78 the Council received a grant of Rs. 5,05,33,805.00 from the Government of India. In addition the Council realised an amount of Rs. 48,40,431.00 from the sale of its publications and miscellaneous receipts amounting to

Rs. 82,95,345.00 were also received.

Against the total funds of Rs. 6,63,15,552.00 the Council incurred an expenditure of Rs. 4,29,01,600.00 under Non-Plan and Rs 1,95,87,737.00 under Plan Sections. Besides an expenditure of Rs. 27,08,091 was also incurred on the Third and Fourth All India Educational Survey. A provisional statement of Receipts and Payments is given on the next page.

Provisional Statement of Receipts and Expenditure of the Council for the Year 1977-78

<i>Receipts</i>	<i>Rs.</i>	<i>Payments</i>	<i>Rs.</i>
Opening Balance	26,45,971 00	Non-Plan Expenditure	
Grants received from the Government of India and other agencies		(a) Pay and Alls. Programmes etc,	4,18,86,421.00
(a) Main grant from the Government	5,05,33,805.00	(b) Loans and Advances	10,15,179.00
(b) Specific Grant from the Government of India and other agencies	65,27,448.00	Plan Expenditure	
Receipts		(a) Pay and Alls Programmes etc.	1,95,87,737.00
(a) Sale Proceeds of Publications etc.	48,40,431.00	(b) Third and Fourth All India Educational Survey	27,08,091.00
(b) Other Receipts	82,95,345.00	(c) Expenditure out of specific grants	52,36,913.00
Provident Fund and C D. Account	41,82,987 00	Provident Fund and C D. Account	25,12,645 00
Deposits, Advances, Suspense and Remittances	2,93,59,568.00	Deposits, Advances, Suspense and Remittances	3,02,64,482.00
C.E.T.	27,30,872.00	C.E.T.	21,90,961.00
		Closing balance	37,13,998.00
	<u>10,91,16,427.00</u>		<u>10,91,16,427.00</u>

Appendices

APPENDIX A

Field Advisers of the Council

1. Shri D.C. Upreti
Field Adviser (NCERT)
Kannachal
Navagraha Road
Gauhati-781003
2. Dr. M. Haridas
Field Adviser (NCERT)
Geetanjali
T.C. No. 15/1019
Jagathy
Trivandrum-14
3. Dr K.V. Rao
Field Adviser (NCERT)
3-6/147-2, Himayat Nagar
Hyderabad-500029
4. Dr. S.C. Verma
Field Adviser (NCERT)
B-47, Prabhu Marg
Tilak Nagar
Jaipur-302004
5. Shri M.K. Gupta
Field Adviser (NCERT)
E-1/66, Arera Colony
Bhopal-462014 (M.P.)
6. Shri Prabhakar Singh
Field Adviser (NCERT)
555/E, Mumfordganj
Allahabad-211002 (U.P.)
7. Shri S.K. Gupta
Field Adviser (NCERT)
119, Budheswari Colony
Bhubaneswar-751006 (Orissa)
8. Shri S.R. Raod
Field Adviser (NCERT)
714, 9th Cross
West of Chord Road
Rajaji Nagar
Bangalore-560010
9. Shri B.P. Misra
Field Adviser (NCERT)
1-B, Chandra Colony
Ahmedabad-380006
10. Shri W.A.F. Hopper
Field Adviser (NCERT)
No. 5, Hindi Prachara-Sabha
Street, T. Nagar
Madras-600017
11. Shri S.L. Gajwani
Field Adviser (NCERT)
285/10, Koregaon Park
(Near Bund Garden)
Poona-411001.
12. Dr. S.P. Sharma
Field Adviser (NCERT)
Road No. 2
Rajendra Nagar
Patna-800016.
13. Shri C. Bhattacharya
Field Adviser (NCERT)
P. 23, C.I.T. Road
(L.V. Scheme)
Calcutta-700014

14. Dr. (Km.) Evelyn Marr
Field Adviser (NCERT)
House No. 23, Sector-8 (A)
Chandigarh-160018
15. Dr. S. Prasad
Field Adviser (NCERT)
Maqbul Manzil
First Floor, Rajbagh
Srinagar (J & K)
16. Shri R.B. Banerji
Field Adviser (NCERT)
P.G. Hostel, NIE Campus
New Delhi-110016
17. Shri A.C. Pachauri
Field Adviser (NCERT)
c/o State Institute of Education
Government of Manipur
Imphal-795001

APPENDIX B

Composition of Committees

B. 1—THE COUNCIL

- | | |
|--|--|
| (i) The Minister for Education and Social Welfare
President (<i>ex-Officio</i>) | 1. Dr. Pratap Chandra Chunder
Union Minister for Education and Social Welfare
Shastri Bhavan
New Delhi |
| (ii) Chairman of the University Grants Commission
(<i>ex-Officio</i>) | 2. Prof. Satish Chandra
Chairman
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi |
| (iii) Secretary to the Ministry of Education and Social Welfare
(<i>ex-Officio</i>) | 3. Shri P. Sabanayagam
Secretary
Ministry of Education and Social Welfare
Shastri Bhavan
New Delhi |
| (iv) Four Vice-Chancellors of Universities, one from each Region, nominated by the Government of India | 4. Dr. C.D.S. Devanesen
Vice-Chancellor
North Eastern Hill University
Shillong-793001
5. Prof. R.C. Mehrotra
Vice-Chancellor
Delhi University
Delhi
6. Prof. K. Satchidananda Murty
Vice-Chancellor
Sri Venkateshwara University
Tirupati-517502 (A.P.) |

- (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)
7. Shri D.A. Dabholkar
Vice-Chancellor
Poona University
Ganesh Khind
Poona (Maharashtra)
 8. Education Minister
Andhra Pradesh
Hyderabad
 9. Education Minister
Assam
Shillong
 10. Education Minister
Bihar
Patna
 11. Education Minister
Gujarat
Ahmedabad
 12. Education Minister
Haryana
Chandigarh
 13. Education Minister
Himachal Pradesh
Simla
 14. Dy. 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
Rajasthan
Jaipur
24. Education Minister
Punjab
Chandigarh
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

(vi) All Members of the Executive Committee not included above; and

33. Education Minister
Government of Pondicherry
Pondicherry-1
34. Dr. S.K. Mitra
Director
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-16
35. Prof. M.V. Mathur
Director
National Staff College for Educational Planners and Administrators
New Delhi-16
36. Prof. C.N.R. Rao
Indian Institute of Science
Bangalore
37. Smt. Anutai Vagh
Sanchalika
Gram Bal Shiksha Kendra
Vikaswadi—Kosbad Hill
Tal. Dahanu, Distt. Thana
(via Dahanu Road Stn.
W. Railway)
Maharashtra-401703
38. Master A.A. Kaifi
R/o Maleratta, Koker Masjid
P.O. S.R. Ganj
Srinagar-2 (J & K)
39. Joint Director
National Council of Educational Research and Training
New Delhi-16
40. Prof. A.N. Bose, Dean (C) &
Head of the Workshop
Department
NCERT
New Delhi-16
41. Prof. R.C. Das, Dean (A) and
Head of the Department of
Teacher Education, NCERT
New Delhi-16.

- (vii) Such other persons, not exceeding twelve, as the Government of India may, from time to time, nominate. No fewer than four of these shall be school teachers.
42. Dr. K.P. Nayak
Principal
Regional College of Education
Bhopal (M.P.)
 43. Smt. J. Anjani Dayanand
Joint Secretary
Ministry of Education and
Social Welfare
Shastri Bhavan
New Delhi
 44. Shri J.A. Kalyanakrishnan
Financial Adviser, NCERT
and Ministry of Education
and Social Welfare
Room No. 109 'C'
Shastri Bhavan
New Delhi
 45. Shri Jagdish Mishra
General Secretary
All India Primary Teachers'
Federation, Exhibition Road
Patna (Bihar)
 46. Shri J.S. Sigamani
Headmaster
St. Patrick's Middle School
Melur, Tuticorin-2
Distt. Tirunelvali
(Tamil Nadu)
 47. Smt. Sayeeda Begum
Teacher
Govt. Girls High School
Pampore, Distt. Anantnag
(Jammu & Kashmir)
 48. Shri A.N. Thaker
Principal
Thaker's High School
Ellisbridge
Ahmedabad-380006 (Gujarat)
 49. Director-General
I.C.A.R., Krishi Bhavan
New Delhi

50. Director-General of
Employment and Training
(Training side)
Ministry of Labour
(DGE&T), Shram Shakti
Bhavan
New Delhi-1
51. Dr. Malcolm Adiseshiah
Vice-Chancellor
Madras University
Madras-600005
52. Prof. A.P. Jambulingam
Principal
Technical Teachers
Training Institute, Adyar
Madras-600020
53. Prof. C.S. Jha
Director
Indian Institute of Technology
Kharagpur
54. Dr. (Smt) S.K. Sandhu
Director
Central Health Education
Bureau (Directorate General
of Health Services)
Temple Lane
Kotla Road
New Delhi
55. Shri P.R. Chauhan
Commissioner
Kendriya Vidyalaya Sangathan
Nehru House
Bahadur Shah Zafar Marg
New Delhi
56. Prof. Tapas Majumdar
Chairman
Zakir Husain Centre for
Educational Studies
Jawaharlal Nehru University
New Delhi
57. Shri V.R. Dravid
Secretary
NCERT
New Delhi-16

—Secretary

B. 2—EXECUTIVE COMMITTEE

- | | |
|---|---|
| (i) President of the Council who shall be the <i>ex-officio</i> President of the Executive Committee | 1. Dr. P.C. Chunder
Union Minister of Education and Social Welfare
Shastri Bhavan
New Delhi |
| (ii) (a) The Minister of State in the Ministry of Education and Social Welfare who shall be the <i>ex-officio</i> Vice-President of the Executive Committee | 2. _____ |
| (b) A Deputy Minister in the Ministry of Education and Social Welfare, nominated by the President, NCERT | 3. _____ |
| (c) Director of the Council | 4. Prof. S.K. Mitra
Director
National Council of Educational Research and Training
New Delhi.-16 |
| (iii) Chairman of the University Grants Commission
(Member <i>ex-officio</i>) | 5. Prof. Satish Chandra
Chairman
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi |
| (iv) Four educationists with known interest in school education (two of whom shall be school teachers) nominated by the President | 6. Prof. M.V. Mathur
Director
National Staff College for Educational Planners and Administrators
New Delhi-16 |
| | 7. Prof. C.N.R. Rao
Indian Institute of Science
Bangalore |
| | 8. Smt. Anutai Vagh
Sanchalika, Gram Bal
Shiksha Kendra
Vikaswadi—Kosbad Hill
Tal. Dahanu, Distt. Thana
(via Dahanu Road Stn. W.Rly)
Maharashtra-401703 |

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|---|-----|--|
| | 9. | Master A.A. Kaifi
R/o Maleratta, Koker
Masjid
P.O. S.R. Ganj
Srinagar-2 (J & K) |
| (v) Joint Director of the Council | 10. | Joint Director
National Council of Educa-
tional Research and Training
New Delhi-16 |
| (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 | 11. | Prof. A.N. Bose, Dean (C)
and Head of the Workshop
Department, NCERT
New Delhi |
| | 12. | Prof. R.C. Das
Dean (A) and Head of the
Department of Teacher
Education, NCERT
New Delhi |
| | 13. | Dr. K.P. Nayak
Principal
Regional College of Education
Mysore |
| (vii) One representative of the
Ministry of Education and
Social Welfare; and | 14. | Smt. J. Anjani Dayanand
Joint Secretary
Ministry of Education and
Social Welfare
Shastri Bhavan
New Delhi |
| (viii) One representative of the
Ministry of Finance, who shall
be the Financial Adviser of the
Council | 15. | Shri J.A. Kalyanakrishnan
Financial Adviser, NCERT
Room No. 109
Shastri Bhavan
New Delhi |
| | 16. | Shri V.R. Dravid
Secretary
National Council of
Educational Research and
Training
New Delhi-16 |

Secretary

B. 3—ESTABLISHMENT COMMITTEE

- | | |
|---|--|
| (i) The Director, NCERT | 1. Dr. S.K. Mitra
Director, NCERT |
| (ii) The Joint Director, NCERT | 2. Joint Director
NCERT (Chairman) |
| (iii) A nominee of the Ministry of Education to be nominated by the President | 3. Smt. J. Anjani Dayanand
Joint Secretary
Ministry of Education and
Social Welfare
Shastri Bhavan
New Delhi |
| (iv) Four educationists to be nominated by the President of whom at least one is a scientist | 4. Prof. M.S. Sodha
Department of Physics
Indian Institute of Technology
Hauz Khas
New Delhi |
| | 5. Prof. (Km.) Malathi Bolar
Director
Institute of Applied Man-
power Research, Indraprastha
Estate, Ring Road
New Delhi-110002 |
| | 6. Dr. Amrik Singh
Secretary
Association of Indian
Universities, Rouse Avenue
New Delhi-110002 |
| | 7. Prof. S. Manzoor Alam
Department of Geography
Osmania University
Hyderabad-500007 (A.P.) |
| (v) One representative from the Regional Colleges of Education to be nominated by the President | 8. Shri S.N. Saha
Principal
Regional College of Education
Ajmer |
| (vi) One representative of the National Institute of Education, Delhi, to be nominated by the President | 9. Dr. R.C. Das, Dean (A) and
Head of the Department of
Teacher Education
NCERT |

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| <p>(vii) Two representatives, one each from the regular academic and non-academic staff of the Council</p> <p>(viii) Financial Adviser, NCERT</p> <p>(ix) Secretary, NCERT</p> | <p>10. Prof. R.P. Singh
Journals Cell
NCERT</p> <p>11. Shri K.M. George
Supdt
Recruitment Section
NCERT</p> <p>12. Shri J.A. Kalyanakrishnan
Financial Adviser
NCERT, Room No. 109 'C'
Shastri Bhavan
New Delhi</p> <p>13. Shri V.R. Dravid
Secretary
NCERT (<i>Member—Convener</i>)</p> |
|--|--|

B. 4—FINANCE COMMITTEE

- | | |
|--|--|
| <p>1. Prof. S.K. Mitra
Director
National Council of Educational Research and Training
New Delhi (<i>Chairman</i>)</p> <p>2. Smt. J. Anjani Dayanand
Joint Secretary
Ministry of Education and Social Welfare
New Delhi</p> <p>3. Prof. M.V. Mathur
Director
National Staff College for Educational Planners and Administrators
New Delhi</p> | <p>4. Prof. C.N R. Rao
Indian Institute of Science
Bangalore</p> <p>5. Shri J.A. Kalyanakrishnan
Financial Adviser
Ministry of Education and Social Welfare and NCERT
Room No. 109 'C'
Shastri Bhavan
New Delhi</p> <p>6. Shri V R. Dravid
Secretary
NCERT (<i>Convener</i>)</p> |
|--|--|

B. 5—BUILDING AND WORKS COMMITTEE

- | | |
|---|--|
| <p>1. Director, NCERT
(<i>ex officio</i>), <i>Chairman</i></p> <p>2. Joint Director
NCERT (<i>ex officio</i>)</p> | <p>Prof. S.K. Mitra
Director, NCERT
Joint Director
NCERT</p> |
|---|--|

3. Chief Engineer, CPWD or his nominee
Shri N. Lakshmiah
Superintending Surveyor of Works (Food)
C.P.W.D., Indraprastha Bhavan
Indraprastha Estate
New Delhi
4. A Representative of the Ministry of Finance (Works)
Shri Mehr Singh, A.F.A.
Ministry of Finance (Works)
Nirman Bhavan
(III Floor)
New Delhi
5. The Consulting Architect of the Council
Shri K.M. Saxena
Senior Architect (C) I
C.P.W.D., Nirman Bhavan
New Delhi
6. Financial Adviser of the Council or his nominee
Shri J.A. Kalyanakrishnan
Financial Adviser, NCERT
Room No. 109 'C'
Shastri Bhavan
New Delhi
7. A Nominee of the Ministry of Education and Social Welfare
Smt. J. Anjani Dayanand
Joint Secretary
Ministry of Education and Social Welfare
Shastri Bhavan
New Delhi
8. A Civil Engineer of standing (Nominated by the President)
Shri H.U. Bijlani
Chief Engineer
Municipal Corporation of Delhi
Delhi-6
9. An Electrical Engineer of standing (Nominated by the President)
Shri I.C. Sanger
Addl. Chief Engineer (D)
Delhi Electric Supply Undertaking
Link House
New Delhi
10. A member of the Executive Committee nominated by the Committee
Prof. M.V. Mathur
Director
National Staff College for Educational Planners and Administrators
New Delhi
11. Secretary, NCERT (*Member-Secretary*)
Shri V.R. Dravid
Secretary, NCERT

B.6—PROGRAMME ADVISORY COMMITTEE

- I. 1. Prof. Shib K. Mitra
Director
NCERT
Chairman
2. Prof. A.N. Bose
Joint Director
NCERT
Vice-Chairman.
- II. Five University Professors or Heads of Departments representing education and other related disciplines nominated by the President of the Council
1. Dr. S.B. Adaval
Prof. and Head of the Education Department
University of Allahabad
Allahabad
2. Prof. R.K. Yadav, Dean
Faculty of Education
Banaras Hindu University
Kammachha
Varanasi-221005
3. Dr. N. Vedamani Manuel
Prof. and Head of the Education Department and Dean
Department of Education
University of Kerala
Thycaud
Trivandrum-14
4. Dr. A.W. Oak
Department of Research
Preconverbai Vithaldas Damodar, Thackersey, College of Education for Women
1, Natthibai Thackersey Road
Bombay-20
5. Prof. Km. Philomena Andrew
Women's Training College
Department of Education
Patna University (Campus)
Patna-400004.
- III. Five Directors of State Institutes of Education to be nominated by the President of the Council in rotation from all States and Union Territories.
1. Shri C. Gopinath Rao
Director
State Council of Educational Research and Training
Alia School Compound
Hyderabad-500001 (A.P.)
2. Shri P.C. Choudhuri
Vice-Principal-Incharge
State Institute of Education
P.O. Banipur
Dist. 24-Parganas (W.B.)
3. Shri S.D. Trivedi
Principal, S.I.E.
Allahabad (U.P.)
4. Shri G.N. Patel
Director, S.I.E.
Raikhad
Ahmedabad-380001 (Gujarat)
5. Shri L.K. Rambal
Principal
State Institute of Education
Government College of Education
Srinagar (J & K)
- IV. Two Representatives of each Department of the NIE of whom one shall be the Head and the Principal and one Professor/Reader from each of the constituent Institutions of the NCERT.
1. Prof. D.S. Rawat
Head
D.S.E.
2. Prof. Baquer Mehdi
D.S.E.

3. Prof. B. Sharan
Head, D.E.S. & M.
4. Prof. B.B. Ganguli
D.E.S. & M.
5. Prof. B.S. Parakh
Head
D.E.S.S. & H.
6. Prof. Anil Vidyalkar,
D.E.S. S. & H.
7. Prof. R.C. Das
Head, D.T.E.
8. Prof. P.N. Dave
D.T.E.
9. Prof. C.K. Basu
Head
D.E.P.F.E.
10. Prof. Perin H. Mehta (Smt.)
D.E.P.F.E.
11. Smt. A. Khanna
Head
D.T.B.
12. Dr. K. G. Rastogi
Reader
D.T.B.
13. Prof. M.M. Chaudhri
Head
D.T.A.
14. Shri Shankar Narayan
Reader
D.T.A.
15. Shri J.P. Nangia
Head
Publication Department
16. Miss K. Wadia
Editor
Publication Department
17. Shri P.K. Bhattacharya
Incharge-Head
Workshop Department.
18. Shri S.N. Saha
Principal
R.C.E. Ajmer
19. Prof. P.D. Bhatnagar
R.C.E., Ajmer
20. Dr. J.S. Rajput
Incharge Principal
R.C.E., Bhopal
21. Prof. S.N. Tripathi
Prof. in Science, R.C.E.
Bhopal
22. Prof. G.B. Kanungo
Principal, R.C.E.
Bhubaneswar
23. Prof. (Smt.) G.R. Ghosh
Prof. in Science, R.C.E.
Bhubaneswar
24. Dr. K.P. Nayak
Principal
R.C.E., Mysore
25. Prof. A.K. Sharma
Prof. in Science (Chemistry)
R.C.E., Mysore
26. Prof. Vijay Mulay (Smt.)
Principal
Centre for Educational
Technology
27. Prof. (Smt.) S. Shukla
Centre for Educational
Technology

APPENDIX C

Major Decisions taken by the Council during 1977-78

1. The Executive Committee

- 1.1 On the question of linking the relationship between Adult Education and Universalization of Primary Education it was emphasised that there should be coordination of the efforts of the Council's activities with the Directorate of Adult Education in the formal and non-formal education sectors. It was emphasised that even while the focus of NCERT will remain on the children of 6-18 years the Council should be involved in adult literacy programme and try to develop some training programmes to orient school teachers for adult literacy work.
- 1.2 On the policy and procedure of the publication of textbooks and other instructional material,
 - (a) It was decided that the responsibility for preparation of textbooks should largely be with the author/authors in the Council's Departments.
 - (b) For the production of textbooks, the Council should take immediate action for setting up of the Textbook Corporation so that the problems of production and distribution of textbooks is solved.
 - (c) In the matter of distribution, the Committee recommended that the existing arrangements with the Publications Division, Ministry of I. & B., Government of India, should continue and even private publishers should be asked to channelise the distribution of their textbooks through them.
 - (d) It was also recommended that associations of school teachers wherever they are interested, could also be involved in the task of distribution of books on payment of nominal commission.
- 1.3 The proposal for reviewing the functioning of the Council through a consultancy assignment to Administrative Staff College of India, Hyderabad, with a view to improving its functioning, was approved.

- 1.4 The Approach Paper prepared by the Council suggesting guidelines for the preparation of Sixth Five Year Plan was generally approved. The Committee, however, suggested that a few more areas be also included in the draft report.
- 1.5 (a) Approved the proposal regarding re-introduction/revival of Four-Year/Three-Year revised courses at graduate level in the Regional Colleges of Education.
- (b) The Post-Graduate Course in Life Sciences in the Regional College of Education, Bhubaneswar, was approved, redesignated as M Sc.Ed.—Life Sciences to include an educational component in it.
- (c) The Post-Graduate Course as well as the existing Post-Graduate Courses in Physics, Chemistry and Mathematics Education at the Regional College of Education, Mysore, should be open to qualified candidates from all over the country.
- (d) Directed that the Four-Year B.Sc. Ed. Course in Regional College of Education, Mysore, may continue, as it is a feeder course for the M.Sc. Ed Courses.
- (e) Approved the continuance of the existing one-year B.Ed. Course in the RCEs.
- (f) Approved that the RCE, Mysore, may start one-year B.Ed. Course in language.
- (g) One-year B.Ed. Course for training of teachers in Vocational subjects for the + 2 stage, such as Agriculture, Commerce and Technology may also be planned.
- 1.6 The draft Regulation (No. 65) regarding exemption of the Council's employees from the medical examination on their selection to higher posts in the Council was approved with the modification that the serving employees of the Council need not undergo fresh medical examination when appointed to a higher post, provided such employees have already undergone medical examination by the appropriate authority at the time of their initial appointment in the Council.

2. *The Establishment Committee*

- 2.1 Approved the Recruitment Rules for the posts of Technicians and Store Supervisors (Engg.) in the CET.
- 2.2 Amendment of the Recruitment Rules for the posts of UDC, Assistant were also approved.

3. *The Finance Committee*

- 3.1 Approved the continuation of the posts for the work pertaining to Third All India Educational Survey up to 31 December 1977.
- 3.2 Approved the creation of one post of Assistant in the office of the Field Adviser, J and K.
- 3.3 Approved the creation of a post of Grade II Teacher for the D.M. Schools of the RCE, Bhubaneswar.
- 3.4 Approved the creation of the posts of Sales Assistants and Accounts Clerks for the Journals Cell subject to the stipulation that all other posts of Sales Assistants have earlier been converted into those of Assistants in the usual scale of pay with the approval of Executive Committee.
- 3.5 The proposal for the creation of eight posts of Drivers for the various Field Offices was approved.
- 3.6 Approved the introduction of Primary Section in the D.M. School at the Regional College of Education at Mysore.
- 3.7 Approved the creation of one post of Accounts Officer, NIE.
- 3.8 Approved the creation of one post of Store Keeper Grade I for handling Stores.
- 3.9 Approved the revision of the rates of Daily Allowance payable to the non-official participants of the programmes such as Seminars, Workshops, etc.
- 3.10 Recommended that those PGTs who fulfil the required qualifications should be designated as Research Associates in the pay scale of Rs. 700-1600 which should be made personal to them and the posts of PGTs be abolished.
- 3.11 Approved the proposal for the conversion of one post of Technical Officer as Foreman in the Workshop Department of the Council.
- 3.12 Approved the creation of one post each of Editor, Production Assistant (Urdu) and Proofreader (Urdu) for a period of one year.

The Building and Works Committee

- 4.1 Approved the proposal for providing services in respect of the newly constructed quarters at the Regional College of Education, Mysore.
- 4.2 Approved the construction of eight each of Type I, Type II and Type III quarters at the Regional College of Education, Bhubaneswar.
- 4.3 Approved the construction of 96 quarters at the NIE Campus, New Delhi.

- 4.4 Approved in principle the construction of four additional Type IV quarters at the RCE, Mysore.
- 4.5 Agreed to the proposal for the construction of two additional storeys to the four-storeyed Library Building already under construction at the NIE Campus.
- 4.6 Agreed to the proposal for the construction of another Godown for the Publication Department.
- 4.7 Approved the proposal for the construction of a Shopping Centre and Community Hall at the NIE Campus.

APPENDIX D

External Research Projects supported by the NCERT during 1977-78

<i>S. No.</i>	<i>Title of Research Project</i>	<i>Amount of grant released</i>
1	2	3
		Rs.
1.	A Study of the Efficiency of School System	14,200.00
2.	A Study of the Educational Adaptation Social Ambitious and Performance of Scheduled Caste Students at the Higher Secondary and Collegiate Level in Rewa District	8,225.00
3.	Investigation on Non-formal Science Education and Development of Inexpensive Resources Material	27,000.00
4.	Role of Lady Teachers in Universalization of Primary Education	4,000.00
5.	Programmed Learning as a Function of Anxiety under Different Motivational Condition	4,000.00
6.	A Study of Factors determining Utilization of Education by Muslim Community of Borsad	2,000.00
7.	Achievement Norms Study of Ahmedabad Primary School-going Children	483.75
8.	A Study of the Incidence to Factors responsible for dropping out of Children from Municipal and Local Schools in Greater Bombay and Khar Distt., etc.	10,000.00
9.	Working Holidays Project and Evaluation Meets for Promoting Education among the Under-privileged Classes	12,710.03
10.	Diagnosis of Language Errors and Programmes of —Remedial Teaching in Sanskrit	9,800.00
11.	Development of Effective Teaching Method for School Subject	2,100.00

1	2	3
		Rs.
12.	Mass Copying in Secondary School Final Examination	4,500.00
13.	Study of Listening Comprehension of Pupils in Class VIII in Gujarat	1,800.00
14.	Working Holidays	1,950.00
15.	An Investigation into the Causes of Backwardness in Girls	3,400.00
16.	Survey of Area Skills in Some Selected Districts in West Bengal	8,000.00
17.	Developing Instructional Strategies for teaching Hindi as a Second Language to the Urdu-medium Students of Delhi, etc.	2,000.00
18.	Seminar on "Brain Development and Its Implication on Teaching of Languages and Linguistics"	8,738.00
19.	A Study to Investigate the Relationship between Resources put in, etc.	2,250.00
20.	To study the Effects of 'Noise' on the Teaching Process with special reference to the Calculation of Its Optimum Range in the Maintenance of School and Discipline	1,500.00
21.	The Diagnosis of Language Error and Programmes of Remedial Teaching in Hindi	7,500.00
22.	A Study of Utilization of Educational Facilities by the Slum Dwellers of Bangalore City	5,000.00
23.	A Study of the Problems and Needs of Secondary Students living in Slum Areas of Varanasi	2,500.00
24.	Non-formal Education Workshop	3,000.00
25.	An Experiment in Open Classroom etc	5,000.00
26.	Study of Sikshaniketan a Work-oriented Rural Institute in the District of Burdwan (West Bengal)	3,000.00
	Total	154,656.75

APPENDIX E

Grants given by the Council to Professional Educational Organisations during 1977-78

<i>Sl. No.</i>	<i>Name of the Organisation</i>	<i>Amount of Grant released</i>	<i>Remarks</i>
1	2	3	4
1.	English Language Teachers Association, Madras	Rs. 4,300 00	
2.	South Indian Teachers Union Council of Educational Research, Madras	Rs. 3,000.00	
3.	Vedhashala, Ahmedabad	Rs. 4,000 00	
4.	Association for Improvement of Mathematics Teaching, Calcutta-19	Rs. 3,500.00	
5.	All India Science Teachers Association, New Delhi-3	(i) Rs. 15,000.00	For Environment Integrated Science Education—A Symposium
		(ii) Rs. 6,500.00	For Annual Conference.
		(iii) Rs. ———750.00	For Publication of Journal
6.	Bangiya Bigyan, Calcutta	Rs. 3,000.00	
7.	Indian Association for pre-School Education, Coimbatore-2	Rs. 6,500.00	
8.	All India Basic Education Council, P.O. Sevagram (Maharashtra)	Rs. 20,000.00	
9.	All India Association on Mental Retardation, New Delhi	Rs. 3,000.00	
10.	All India Federation of Educational Association, New Delhi	Rs. 5,000 00	

1	2	3	4
11.	Indian Association for Programmed Learning and Educational Innovation, New Delhi	Rs.	4,500.00
12.	Indian Physics Association, Bombay-5	Rs.	4,000.00
13.	Association for Promotion of Science Education, Madras	Rs.	7,000.00
14.	Indian Association of Teacher Educators, Allahabad (U P.)	Rs.	14,000.00
15.	National Parent Teacher Association of India, New Delhi	Rs.	5,100.00
Total			Rs. 1,09,150.00

APPENDIX F

Participation in International/Exchange Programmes

(a) Deputation of the Council Officers abroad under Bilateral Cultural Exchange Programmes

1. Shri R.P. Nigam, Teacher, Demonstration Multipurpose School, R.C.E., Bhopal, visited Yugoslavia from 16 May 1977 to 15 June 1977 to study educational system of Yugoslavia.
2. Dr. L.R.N. Srivastava, Reader, Department of School Education, visited USSR from 25 May 1977 to 7 June 1977 to study Programmes of Non-formal Education.
3. Dr. A.K. Misra, Reader, Department of Education in Science and Mathematics, visited Czechoslovakia from 2 October 1977 to 2 November 1977 for study in the field of Science and Mathematics Education.
4. Smt. S.P. Gupta, Lecturer, DTE, visited Yugoslavia from 18 October 1977 to 27 October 1977 to study educational system of Yugoslavia with special reference to Teacher Education.
5. Shri J.C. Goyal, Reader, Department of Teacher Education, visited Czechoslovakia from 3 October 1977 to 4 November 1977 for study in the field of Teacher Education.
6. Dr. S.N. Panda, Reader, RCE, Ajmer, visited USSR from 16 to 27 November 1977 for study in the field of Teacher Education.
7. Dr. A.A. Kayande, Professor, RCE, Mysore, visited USSR from 23 November to 6 December 1977 in the field of Secondary Education with special reference to Science and Mathematics Education.
8. Smt. S.P. Patel, Reader, DSE, visited Romania from 30 December 1977 to 12 January 1978 for study in the field of Non-formal Education.
9. Shri Y.P. Aggarwal, Lecturer, DTA, visited Romania from 30 December 1977 to 12 January 1978 in the field of Instructional Aids.

10. Shri G. Guru, Lecturer, DESM, visited Yugoslavia from 5 to 14 March 1978 for study in the field of Curriculum at Elementary School Stage.

(b) *Deputation of the Council's Officers abroad for Advanced Training*

1. Prof. M.M. Chaudhri, Head, D.T.A. was deputed to undertake an eight-week training course under the UNESCO fellowship on the "Organisation of Correspondence Education with Special Emphasis on Teacher Training Programmes" held in Australia with effect from 30 September 1977.
2. Shri R.K. Gupta, Reader, DTE, Dr. O.S. Dewal, Reader, CET and Prof. A.K. Sharma, RCE, Mysore, attended a six-week training programme in the Organisation of Correspondence Education with Special Emphasis on Teacher Education organised under the UNDP Project No. 612 in Australia with effect from 30 September 1977.
3. A team of four officers of the Council namely Dr. D.S. Mulay, Reader, DESSH, Dr. R.D. Shukla, Reader, DESM, Shri H.S. Singha, Reader (Prog.) and Sh. S.N. Tripathi, Reader, RCE Bhopal, went to four Asian countries viz Philippines, Japan, Republic of Korea and Thailand to study Curriculum Innovative Projects for a month from 4 December 1977 under the Mobile Team Workshop on Curriculum Development organised by the UNESCO.
4. Dr. S. Prasad, Lecturer, DSE, was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the field of Non-formal education from 23 March 1977 to 17 June 1977.
5. Dr. J.S. Grewal, Reader in Education, RCE, Bhopal, was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the field of Pre-School Child Development from 15 April 1977 to 29 August 1977.
6. Dr. P.K. Mohanty, Lecturer, RCE, Bhubaneswar, was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the field of Vocational Education from 15 April 1977 to 29 July 1977.
7. Dr. S.L. Bhyrappa, Reader, RCE, Mysore was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the field of Pre-School Child Development from 23 April 1977 to 24 June 1977.
8. Shri Manjit Sen Gupta, Lecturer, WEVEU, was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the field of Vocational Education from 20 April 1977 to 23 August 1977.

9. Km. Chitra Sachdeva, Lecturer, DEPFE, was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the field of Pre-School Education from 23 April 1977 to 9 August 1977.
10. Dr. B.R. Goel, Lecturer, DSE, was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the field of Education Technology from 27 April 1977 to 29 July 1977.
11. Km. S. Majumdar, Lecturer, DESM, was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the field of Educational Technology from 25 April 1977 to 17 August 1977.
12. Dr. Kuldip Kumar, Reader, CET, was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the Educational Technology from 2 May 1977 to 8 August 1977.
13. Shri S.B. Maheswari, Reader, RCE, Ajmer, was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the field of Vocational Education from 16 April 1977 to 22 July 1977.
14. Smt. Raksha Saini, Lecturer, DSE, was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the field of Educational Technology from 14 September 1977 to 21 December 1977.
15. Dr. M.S. Murari Rao, Reader, RCE, Mysore, was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the field of Vocational Education from 14 September 1977 to 15 December 1977.
16. Dr. B. Deokinandan, Reader, DESM, was deputed to U.K. for training in the field of Mathematics under Commonweallh Education Fellowship Scheme for one academic year with effect from 3 October 1977.
17. Shri V.S. Gopalan, Field Adviser (NCERT), Trivandrum, was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the field of Vocational Education from 11 September 1977 to 16 December 1977.
18. Dr. K.M. Pant, Reader, DESM, was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the field of Science Education from 20 February 1978 to 26 May 1978.
19. Shri K.C. Singh Jain, Lecturer in Commerce, Ajmer was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the field of Vocational Education

- from 7 January 1978 for a period of three months.
20. Dr. (Km.) Girija Mobayi, Lecturer, RCE, Mysore, was deputed to U.K. for short-term training under Commonwealth Education Fellowship Scheme in the field of Pre-School Education from 7 January to 23 March 1978.
 21. Shri A.C. Lal, Asstt. Co-ordinator, PCDC, was deputed to U.K. for short-term training under the Commonwealth Education Fellowship Scheme in the field of Non-formal Education from 26 March 1978 to 16 July 1978.
- (c) *Deputation of the Council's Officers Abroad for Participation in International Seminars/Workshops/Conferences.*
1. Prof. P.D. Bhatnagar, Prof. in Science, Regional College of Education, Ajmer, was deputed to attend the International Conference on Improving University Teaching held at England from 8 to 11 June 1977. He also participated in the 31st Colloid and Surface Science Symposium at New York from 19 to 22 June 1977.
 2. Prof. M.M. Chaudhri, Head, DTA, was deputed to attend the Regional Experts Meeting for Coproduction of Cultural and Educational Audio-Visual Material in Asia organised by Asian Cultural Centre for UNESCO at Tokyo from 23 to 27 August, 1977.
 3. Dr. (Smt.) G.R. Ghosh, Prof. and Head of the Department of Science, Regional College of Education, Bhubaneswar was deputed to attend the 2nd Mycological Congress held at Florida (U.S.A.) from 27 August to 3 September 1977.
 4. Prof. M.M.S. Arora, Professor in Mathematics, DESM, was deputed to attend the Conference on "Informatics and Mathematics in Secondary Schools—Impacts and Relationships" organised by the International Federation for Information Processing at Varna, Bulgaria, from 19 to 23 September 1977.
 5. Prof. S.N. Tripathi, Head, Department of Education, Regional College of Education, Bhopal, and Shri H.S. Singha, Reader (Programme) attended the Joint Operational Study of on-going pilot projects in Education relating work and learning from 16 October to 12 November 1977. During the study visit the two officers visited Srilanka, Bangladesh and Thailand.
 6. Prof. Baquer Mehdi, DSE, Dr. R.D. Shukla, Reader, DESM, and Dr. D.S. Mulay, Reader, DESSH, undertook a study tour to some of the Curriculum Development Centres/Projects in Malaysia, Philippines, Republic of Korea and Japan from 25 October to 25 November 1977.
 7. Prof. B.S. Parakh, Head, DESSH, undertook the study tour of

Bangkok for Key Personnel in Population Education sponsored by UNESCO along with the nominees of some other countries from 24 October to 4 November 1977. The purpose of the visit was to review the learning materials and prepare guidelines for wider dissemination of the materials in the field of population education.

8. Professor P.N Dave, Professor in Education, was deputed to participate in research programme of the International Development Research Centre, Ottawa, on the subject, "Teacher Effectiveness" held at Dekar from 21 to 23 November 1977.
9. Prof. M.M. Chaudhri, Head, DTA, was deputed to attend the Regional Workshop in Educational Technology held at Kuala Lumpur, Malaysia, from 5 to 15 December 1977.
10. Prof. B. Ganguly, Professor in Biology, DESM, was deputed to attend the Conference on Integrated Science Education held in Netherlands from 28 March 1978 to 7 April 1978.
11. Prof. D.S. Rawat visited Singapore to participate in the International Conference on Reading organized by the International Reading Association. He also visited Djakarta (Indonesia) to participate in Asian Regional Seminar on Education for Rural Development organised by the UNESCO and worked as a Secretary of the Seminar.

(d) The Council's Officers who went Abroad on Special Assignments

1. Dr. M.T. Ramji, Reader, DSE, went on a teaching assignment at the College of Education, University of Somalia for two years with effect from 1 September 1977.
2. Shri P.M. Srivastava, Lecturer in Audio-Visual Education, R.C.E., Ajmer went on teaching assignment at the University of Somalia for one year with effect from 8 September 1977.
3. Shri S.D. Roka, Reader in Education has joined as teacher at the University of Somalia for a period of two years with effect from 5 September 1977.
4. Prof. H.N. Pandit, Head, PPEU, has been appointed as Education Economist to the Government of Nigeria under UNESCO assignment for a period of one year with effect from 10 February 1978.

(e) Visitors to the Council

1. Dr. Abdul A. Hamid, Vice-President, Teacher Training Department, Ministry of Education, Kabul, Afghanistan, visited the Council for a period of one week with effect from 6 May 1977.
2. The Education Minister of Maldives visited the Council on 25 May

1977. The policies and programmes of the Council were explained to him.
3. A team of five educators from Indonesia visited the Council from 5 to 9 November 1977 during its study visits to curriculum centres and projects in Asian countries under the Mobile Team Workshop on Curriculum Development organised by the UNESCO.
 4. The Council organised an educational visit for a team of six educationists from Malaysia from 26 November to 1 December 1977 during the team's study visit to selected Curriculum Development and associated projects.
 5. A five-member delegation headed by Prof. N.S. Egrov, Deputy Minister for Higher and Specialised Secondary Education, U.S.S.R., visited the NCERT on 13 January 1978.
 6. The Council arranged a study visit for a delegation of four Soviet Experts from the Academy of Pedagogical Sciences, U.S.S.R. for a period of four weeks with effect from 21 January 1978 under the Indo-Soviet Cultural Exchange Programme.
 7. Mr. M. Mchenzie, a high school teacher of Australia visited the Council from 2 to 4 February 1978.
 8. A group of teachers and teacher-educators from Bhutan visited the Council on 2 February 1978.
 9. A three-member team from Bangladesh visited the Council from 4 to 6 February 1978. The objective of the visit was to gather experience and understanding of the Indian models on the universal primary education, particularly with regard to curriculum development relevant to rural resettlement, evolving new teaching methodologies applicable to rural society, the continued and sustained support of the local community, the integration of the project with other local educational institutions and the projects relevant to the primary education system in the country.
 10. A three-member team from Bangladesh headed by Dr. (Mrs.) Ellen Sattar visited the Council from 4 to 6 February 1978.
 11. A three-member Jordan delegation under the leadership of His Excellency Mr. Hikmat Al-Saket, Under Secretary to the Ministry of Education, Jordan visited the Council on 8 February 1978.
 12. Mr. Lee Hijin, a Senior Teacher of the Republic of Korea visited the Council from 8 to 23 February 1978.
 13. Dr. Julil Ebrahim, Permanent Under Secretary, Ministry of Education, Bahrain, visited the Council on 25 February 1978.
 14. Mr. M. Fayon, Permanent Secretary, Education and Culture, Government of Seychelles visited NCERT on 6 March 1978 to explore the possibility of collaboration and assistance from NCERT in the field of textbooks publication. Mr. Fayon also visited

- Regional College of Education, Ajmer, and office of the Field Adviser, Jaipur, on 7 and 8 March 1978.
15. The Council organised a study tour for the two Yugoslavian Experts, namely, Mr. Jovan Djuricic and Mrs. Dobrila Letic, from 14 to 23 March 1978 under Indo-Yugoslav Cultural Exchange Programme 1977-78.
 16. A five-member team from Nigeria visited the Council on 15 March 1978.
 17. The High Commissioner of Trinidad and Tobago visited NCERT in July 1977.
 18. In August 1977 a group of teachers from Gainsville, Florida, U.S.A., visited NCERT.
 19. During January 1978, a delegation from Burma visited NCERT.
 20. The Education Secretary, Vietnam, who visited NCERT in March 1978, showed keen interest in the ERIC project and carried back with him a few sets of brochures and lists of ERIC programmes for selecting items which could be useful to the high schools in Vietnam.
 21. During April 1978, Mr. Gibert K. Sherman, Programme Officer, North India Branch, International Communication Agency, U.S.A. visited NCERT and listened to a few programmes of ERIC Project. He had also brought two films which were shown to the Academic Staff of NCERT.
 22. A team of Turkish officials, under the UNDP programme visited NCERT in October 1977. Science films were screened for them.
 23. Shri Surendra Nath Ramgostan, Principal Education Officer, and Mr. Jean Maurice Frank Richard, Director, Institute of Education, Mauritius, visited NCERT in October 1977.
 24. Mr. Lalo Toure, Director of Educational Television Ivory Coast, Africa, visited NCERT in December 1977.
 25. Dr. A. Bazergan, Vice-Chancellor of Bir-Ali-Sina University, Hamadas, visited NCERT in February 1978. A discussion was arranged on concepts of Educational Technology on the occasion.

APPENDIX G

I. Publications brought out by the Council during 1977-78

(R.P. indicates Reprint)

(a) (i) English Textbooks

1. *English Reader IV* (S.S.)(R.P.)
2. *English Reader V* (S.S.)(R.P.)
3. *Let's Learn English III* (S.S.)(R.P.)
4. *English Reader II* (S.S.)(R.P.)
5. *English Reader IV* (S.S.)(R.P.)
6. *Six One Act Plays*
7. *English Reader II* (core course)
8. *Dear to All the Muses*

(ii) English Teachers' Guides

1. *Teacher Guide and Environment Studies I & II*
2. *Parivesh Adhyayan Adhyapak Darshika* (H) I & II
3. *English Reader Book III Teachers' Guide*

(iii) English Workbooks

1. *Workbook for Let's Learn English II* (S.S.) (R.P.)
2. *Workbook for Let's Learn English III* (R.P.)
3. *Workbook to English Reader III* (R.P.)
4. *Workbook to English Reader II* (R.P.)

(iv) Mathematics Textbooks

1. *Insight into Mathematics III* (R.P.)
2. *Ganit Bhag II* (R.P.)
3. *Mathematics Part II* (R.P.)

4. *Insight into Mathematics II* (R.P.)
5. *Insight into Mathematics Book I*

(v) Science Textbooks

1. *Biology Part II* (R.P.)
2. *Physics for Classes IX-X*
3. *Chemistry for Classes IX-X*
4. *Rasayan Vigyan IX-X*
5. *Learning Science VI*
6. *Bhautiki XI-XII*
7. *Aao Vigyan Seekhen*
8. *Tibbiyat (Physics) (Urdu) IX-X*
9. *Learning Science for Class VI (H)*
10. *Physics for IX (Revised Edition)*

(vi) Hindi Textbooks

1. *Bal Bharati I*
2. *Nibandh Bharati XI*
3. *Rangini*
4. *Hindi Reader IV (R.P)*
5. *Katha Bharati*
6. *Vividha XI-XII*

(vii) Social Studies Textbooks

1. *Manusya Aur Vatavaran (R.P.)*
2. *Australia North Aur South America (Urdu)*
3. *Modern India for Class X (R.P.)*
4. *Our Country India Book II (R.P.)*
5. *Hamara Des Bharat (R.P.)*
6. *Man and Environment (R.P.)*
7. *India on the Move (R.P.)*
8. *History and Civics for Class VI (Urdu)*
9. *Political System*
10. *Bhartiya Arthvyavastha Ka Vikas*
11. *Our Economy (Urdu) IX-X*
12. *We and Our Country Part I for Class VI*
13. *Rajnitik Vyavastha*
14. *Evaluation of Indian Economy XI*
15. *Madhyakalin Bharat Part I (H) XI*
16. *Medieval India XI*
17. *General Geography of India (II Semester)*

18. *Bharat Ka Samanya Bhoogol XI* (II Semester)
19. *Lands and People* (Urdu) VI
20. *India on the Move* (Urdu) IX

(viii) Hindi Workbooks

1. *Meri Sulekh Pustika III*
2. *Workbook to Hindi Reader Book V*
3. *Workbook to Hindi Reader III*
4. *Workbook to Bal Bharati I*
5. *Workbook to Hindi Reader II*

(ix) Supplementary Readers

1. *Our Tree Neighbours*
2. *Udan*
3. *The Spices*
4. *Zarathustra*
5. *Iqbal—Zindagi—Shakhsiat Aur Shairee*

(b) Research Monographs and Other Publications

1. *Audit Report 1974-75*
2. *Kishore Sahitya Suchi*
3. *Objective Tests : An Introduction for Class X level*
4. *-do- Class XI level*
5. *Audit Report 1974-75 (Hindi)*
6. *Field Studies in the Sociology of Education :
A Report on Andhra Pradesh*
7. *Bal Sahitya Suchi*
8. *Report on Community on School Building*
9. *Directory of Secondary Schools Vol. III*
10. *History : Instructional Material Series—
Vol. III—Teaching Units for Middle Stage*
11. *Folders on Seminars Regarding Programme for Teacher
Education*
12. *M.Ed Dissertation on Teacher Education in India*
13. *Development of Exercises for Language Textbooks*
14. *ERIC Report 1974-77*
15. *NCERT Publications Catalogue*
16. *Audit Report 1975-76*
17. *Primary Education Curriculum*
18. *Report on Primary Education*

19. *Use of Text Material in Teaching List of Schools in India*, Vol. II
20. *Annual Report 1975-76 (Hindi)*
21. *Audit Report 1975-76 (Hindi)*
22. *Basic Concepts of Education*
23. -do- (Hindi)
24. *Handbook for Exhibition*
25. *Seminar Reading—Innovation in Schools*
26. *Innovation Practices in Elementary Teacher Education Institute in India 1975-76*
27. *Annual Report 1976-77*
28. *Man—Society and Education (NIE Series Lecture)*
29. *Memorandum of Association*
30. *Annual Report 1976-77 (Hindi)*
31. *Teacher Education Curriculum*
32. *Directory of Secondary Schools in India Pt. II Western Region*
33. *Balwadiyoan Ke Liye Karya Karam—Aur Karya Kalap*
34. *Objective Test—An Introduction NTS Exam.*
35. *New Educational Pattern 10 + 2 + 3*

(c) Journals

1. *NCERT Newsletter* April 77, May 77, June 77, July-Aug. 77, Sept. 77, Nov. 77, Dec. 77, Jan. 78, Feb. 78
2. *Indian Educational Review* : May 77, Aug. 77 (2), Dec. 77 (2), March 78
3. *School Science* May 77, Sept. 77, and Jan. 78
4. *Primary Teacher* July 77, Sept. 77, March 78 (2)
5. *Primary Shikshak* June 77, Oct. 77, Jan. 78, March 78

II. Classwise Statement of Textbooks published by Private Publishers during 1977-78

S.No.	Class	Name of the title	Name of the Publisher
1.	2	3	4
1.	III	<i>We and Our Country</i> Part I (Eng.)	M/s Frank Brothers and Co. Chandni Chowk, Delhi-110006
2.	III	-do- (Hindi)	-do-

1	2	3	4
3.	III	<i>Learning Science through Environment</i> (Eng)	M/s Macmillan Co. of India Ltd., New Delhi.
4.	III	-do- (Hindi)	-do-
5.	VI	<i>Mathematics</i> (Eng)	-do-
6.	VI	-do- (Hindi)	-do-
7.	VI	<i>Bharati Bhag I</i>	M/s Jnanda Prakashan, 24, Daryaganj, New Delhi.
8.	VI	<i>Lands and Peoples</i> (Eng)	M/s Oxford University Press, 2/10, Ansari Road, Daryaganj, New Delhi.
9.	VI	-do- (Hindi)	-do-
10.	VI	<i>History and Civics</i> (Eng)	M/s Oxford and IBH Publishing Co., 66, Janpath, New Delhi.
11.	VI	-do- (Hindi)	-do-
12.	VI	<i>Sankshipt Ramayan</i>	M/s Rajpal and Sons, Madarsa Road, Kashmere Gate, Delhi.
13.	IX	<i>We and Our Government</i> (Eng)	M/s Oxford and IBH Publishing Co. 66, Janpath, New Delhi.
14.	IX	-do- (Hindi)	M/s S. Chand and Co., Ram Nagar, New Delhi.
15.	IX	<i>Mathematics</i> (Eng)	-do-
16.	IX	-do- (Hindi)	-do-
17.	IX	<i>General Geography of the World</i> Volume I and Volume II (Eng)	M/s Allied Publishers, Pvt. Ltd., Asaf Ali Road, New Delhi.
18.	IX	<i>General Geography of the World</i> Volumes I and II (Hindi)	-do-
19.	IX	<i>Life Sciences</i> (Eng)	M/s Gowarsons, Mayapuri, New Delhi.
20.	IX	-do- (Hindi)	-do-
21.	IX	<i>Our Economy</i> (Eng)	M/s Eurasia Publishing House (P) Ltd., Ram Nagar, New Delhi.
22.	IX	-do- (Hindi)	-do-
23.	XI	English textbook (Core)	M/s Frank Brothers, Chandni Chowk, Delhi-6.
24.	XI	<i>English Supplementary Reader</i> (Core)	-do-
25.	XI	<i>Physics</i> (Eng)	M/s Arnold Heinemann Publishers

1	2	3	4
			(India) Pvt. Ltd., Safdarjung Enclave, New Delhi.
26.	XI	<i>Physics</i> (Hindi)	M/s Gurdas Kapur and Sons (P) Ltd., Chawri Bazar, Delhi-6.
27.	XI	<i>Chemistry</i> (Eng)	M/s Arnold Heinemann Publishers (India) Pvt Ltd., Safdarjung Enclave, New Delhi.
28.	XI	-do- (Hindi) Volumes I and II	M/s Gurdas Kapur and Sons (P) Ltd. Chawri Bazar, Delhi-6.
29.	XI	<i>Ancient India</i> (Eng)	M/s Eurasia Publishing House (P) Ltd., Ram Nagar, New Delhi.
30.	XI	-do- (Hindi)	M/s Goyal Brothers Prakashan, Paharganj, New Delhi.
31.	XI	<i>Mathematics</i> (Eng)	M/s Wiley Eastern, Safdarjang Enclave, New Dehli.
32.	XI	-do- (Hindi)	M/s S. Chand and Co., Ram Nagar, New Delhi.
33.	XI	<i>Understanding Society</i> (Eng)	M/s Mahavir Book Depot, Nai Sarak, Delhi.
34.	XI	-do- (Hindi)	M/s Jnanda Prakashan, 24, Daryaganj, New Delhi.
35.	XI	<i>Biology</i> Volume I and Volume II (Eng)	M/s Wiley Eastern, Safdarjang Enclave, New Delhi.
36.	XI	-do- (Hindi)	M/s Hemkunt Press, 1-15, Patel Marg, New Delhi.
37.	XI	<i>Elementary Statistics</i> (Eng) Volumes I and II	M/s Allied Publishers, Pvt; Ltd. Asaf Ali Road, New Delhi.
38.	XI	-do- (Hindi)	-do-
39.	XI	<i>Field Work Manual for Geography</i> (Eng)	M/s Oxford and IBH Publishing Co., 66, Janpath, New Delhi.
40.	XI	-do- (Hindi)	M/s Children Book House, South Extension, New Delhi.
41.	XI	<i>Physical Basis of Geography</i>	M/s Pitamber Book Depot, 888, East Park Road, Karol Bagh, New Delhi.
42.	XI	<i>Physical Basis of Geography</i> (Hindi) Volumes I and II	M/s Pitamber Book Depot, 888, East Park Road, Karol Bagh, New Delhi.
43.	XI	<i>Geography Workbook</i> (Eng)	M/s Neeta Prakashan, South Extension, New Delhi.

1	2	3	4
44.	XI	<i>Geography Workbook</i> (Hindi)	M/s Neeta Prakashan, South Extension, New Delhi.
45.	XI	<i>Science and Society</i> (Eng)	M/s Rajkamal Prakashan, Daryaganj, Delhi.
46.	XI	<i>Hindi Pratinidhi</i> <i>Ekanki</i>	-do-
47.	XI	<i>Sanskrit Poetry</i>	M/s Mahavir Book Depot, Nai Sarak, Delhi.
48.	XI	<i>Hindi Pratinidhi</i> <i>Kahaniya</i>	M/s Shiksha Bharti, Kashmere Gate, Delhi.
49.	XI	<i>Parijat</i>	M/s Children Book House, South Extension, New Delhi.
50.	XI	<i>Chayanika</i>	M/s Goyal Brothers Prakashan, Paharganj, New Delhi.

APPENDIX H

Description of the Instructional Learning Materials

1. Books/Brochures

- (i) "Preparation and Evaluation of Textbooks—Principles and Procedures" for the guidance of textbook authors and evaluators in Civics, Economics Grammar books in mother-tongue and supplementary readers in English.
- (ii) Development of Exercises for Language Textbooks.
- (iii) Nutrition/Health Education and Environmental Sanitation for students of primary classes as well as teachers' guide books on the subjects.
- (iv) Organisation of training programmes for method masters.
- (v) Organisation of training programmes for Secondary Teachers.
- (vi) Organisations of Training Programmes for Inspecting Officers and Science Supervisors.
- (vii) Organisation of Staff Programme for Laboratory Assistants.
- (viii) Organisation of Training Programme for Workshop Instructors.
- (ix) Teaching of Science by Using Local Resources.
- (x) "Indian Population and Development" for teachers.
- (xi) Population Education in the Classroom.
- (xii) "How to teach Literacy to the Adults" (Draft).
- (xiii) "Jan Jatiya Veeron Ka Jeevan Charitra" as a supplementary reading material for the children. Nine other similar booklets on tribals are in the draft form.
- (xiv) Innovations in Education in India (Part I—an inventory).
- (xv) Innovations in Education in India; A Report of the National Seminar.
- (xvi) Annotated Bibliography of Published Occupational Information Literature in India.
- (xvii) A Directory of Personnel in the field of Educational Technology in the Country (Vol-I).
- (xviii) Guidance in Schools.

(xix) Guidance Services in Schools.

2. Mimeographed Material

- (i) Mimeo lessons on sixteen difficult concepts in Science in self instructional style for primary school teachers.
- (ii) A manual in Hindi for training correspondence writers for writing correspondence lessons in self-instructional style. It has seven units.
- (iii) A package of six units of training manual for writing correspondence course materials and a guide for contact sessions.
- (iv) Eighty experimental activities written in self-instructional style for teaching science in primary schools using materials from environment.
- (v) Self-learning Lessons in Educational Psychology for B.Ed. correspondence courses (Draft).

3. Work Sheets

Work sheets giving a comprehensive list of experiments in Physics, Chemistry and Life Sciences for Classes XI and XII.

4. Journals

Secondary Science (Quarterly) for teachers, students and communicators.

5. Kits

- (i) Primary Science Kit
- (ii) Physics I Kit (for Class VI)
- (iii) Physics II Kit (for Class VII)
- (iv) Physics III Kit (for Class VIII)
- (v) Biology Demonstration Kit (for Classes VI, VII and VIII)
- (vi) Chemistry Demonstration Kit (for Classes VI and VIII)
- (vii) Chemistry Pupil's Kit

These kits are accompanied by guides for training teachers in carrying out experiments/demonstrations in the classes.

6. Teaching Aids

- (i) Low costs or no cost teaching aids including charts and models related to NCERT textbooks "Science is Doing" for primary schools. Some of these were exhibited in UNESCO workshop in Kuala Lumpur.

- (ii) Primers, workbooks, games and charts to teach literacy and numeracy to adults through stories, words, pictures, flip-charts, cutouts etc. developed for adult education programmes.

7. Audio Tapes/Slide-cum-Tape Material

- (i) 58 audio-tapes programmes using archival materials available with Akashvani. The programmes are of educational interest to the students. (Appendix A)
- (ii) Six audio programmes prepared during the training course for Radio Script Writers at Hyderabad.
- (iii) Twenty audio programmes related to Indian Folk and Classical Music.
- (iv) Slide-cum-tape materials on "Cold Welding" for training school teachers by self-instructional style for teaching science in the middle classes.
- (v) Tape-slide lessons for carrying information and developing skills in food and nutrition, child-care, personal health and hygiene for non-formal education of girls (11 to 14) in the rural areas. A work book in print has also been developed to go with the tape slide lessons.

8. Filmstrips

- (i) Three filmstrips with tape commentaries and teaching notes for teachers training with particular reference to correspondence-cum-contact programmes.
- (ii) Five filmstrips with tape-commentaries and teaching notes are under production. These are also meant for teachers training with particular reference to correspondence-cum-contact programmes.

9. Film Scripts

- (i) Environmental study.
- (ii) Self and Non-self.
- (iii) Elasticity
- (iv) 'Cell' and 'Motion' under the series history of science.
- (v) 'Elasticity' and 'Environment' on science subjects.
- (vi) Audio-visual Training—Graphic Aids.

10. Films/Video Tapes

- (i) English language versions of four films in 'Vigyan Ki Padhai' series of the multi-media package for training of primary school teachers in science.

- (ii) Revised Hindi version of the film no. 8 on Training of Nutrition in Vigyan Ki Padhai series.
- (iii) 'Soviet Puppet Show' in 16 mm colour. The shooting has been completed.
- (iv) 'Understanding Animals' in 16 mm.
- (v) Programmes produced on video tapes during ETV script writing training programme on (a) Air Around Us (b) Water Pressure (c) Carpet Weaving (d) Birth of a Bottle (e) Paper Toys (f) Coordinates.

APPENDIX I

Library of Audio Tape Materials

<i>Sl. No.</i>	<i>Name of the Programme</i>
1	2

1. *Jallian Wallah Bagh*
2. *The Profile of a President* by Dr. Radhakrishnan
3. *Wild life in India*
4. *My Seven Wonders of the World-V* Talk by Charles Fabri
5. *My Seven Wonders of the World-VI* Talk by James Gibson
6. *Dr. C.V. Raman*
7. *Bhutan : The Land and Its People*
8. *The Novel as a Mirror of Life*—Talk by Pearl S. Buck
9. *Bhakra Dam*
10. *Teaching of Science in the Modern World*
11. *National Museum New Delhi*
12. *Lali and Lions of Girnar*
13. *The Republic at Work*
14. *Kazi Nazrul Islam*
15. *Biography of Profulla Chandra Ray*
16. *Biography of Amrita Shergil*
17. *Imagination and Literature of Life*
18. *The Prophecy* : Biographical feature on Hans Christian Anderson
19. *Literature and Life*
20. *The Fight Against Diseases*
21. *Open Heart Surgery*
22. *Dr. Zakir Husain*
23. *Mother Teresa*
24. *Your Breath is Your life*

-
25. *Apostle of Progress*
 26. *The United Nations*
 27. *Strange and Beautiful World of Mushrooms*
 28. *Under the Banyan Tree*
 29. *Salarjung Museum*
 30. *Swami Vivekananda*
 31. *Musical Instruments of India*
 32. *Art of Short Story Writing*
 33. *India in the Year 2000*
 34. *The Ganga*
 35. *Gujarat Darpan (Hindi)*
 36. *Coir Industry (Hindi)*
 37. *Maharishi Raman (Hindi)*
 38. *Aryabhata*
 39. *Birla Planetarium*
 40. *Nursing as a Career*
 41. *Robert Frost and His Poetry*
 42. *Black Diamond*
 43. *Rural India*
 44. *Man and Agriculture*
 45. *Homi Bhabha*
 46. *A Sethu Himachalam*
 47. *Solar Energy*
 48. *Saurorjam (Malayalam version of the programme on Solar Energy)*
 49. *Saur Oorja—(Hindi version of the programme on Solar Energy)*
 50. *Power for Progress*
 51. *Gurudev and Mahatma*
 52. *Martin Luther King*
 53. *Nations Calling Card*
 54. *Circus ki Duniya (Hindi)*
 55. *Meghalaya Marches On*
 56. *Outer Harbour*
 57. *Poorvi Anchal ke Dhage*
 58. *Surdas Ka Sursagar*
-