

NCERT annual report

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National Council of Educational Research and Training

ANNUAL REPORT

1976-77



National Council of Educational Research and Training

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ACKNOWLEDGEMENTS

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 specially 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 FUNCTIONING AND ROLE

1.1 Introduction

The National Council of Educational Research and Training (NCERT) was established on 1 September 1961, encompassing the functions of more than half a dozen institutions set up by the Government of India in the post-independence era for the purpose of transformation of education, especially school education. It did not, however, remain static. It has been responding to new challenges from time to time, and has been growing and reshaping itself in the light of new national needs and aspirations.

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 to disseminate improved educational techniques and practices in schools.

1.2 Structure

In order to achieve these objectives effectively, the Council has been structured as in Table I. 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 prestigious 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 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. 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 unconventional 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 policies and programmes in the states and send back the necessary feedback for evaluation and improvement.

1.3 Functioning

The functioning of the NCERT is patterned on democratic lines. The decision-taking machinery consists of a number of committees as shown in Table II. 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. Nevertheless, 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. The 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 to oversee all programmes of the Council, 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 of work proposed by the members of staff, the Academic Committee/Coordination Committee/Educational Research and Innovations Committee consider the same for a second level of approval, from the point of view of inter-departmental

TABLE 1
Structure of NCERT

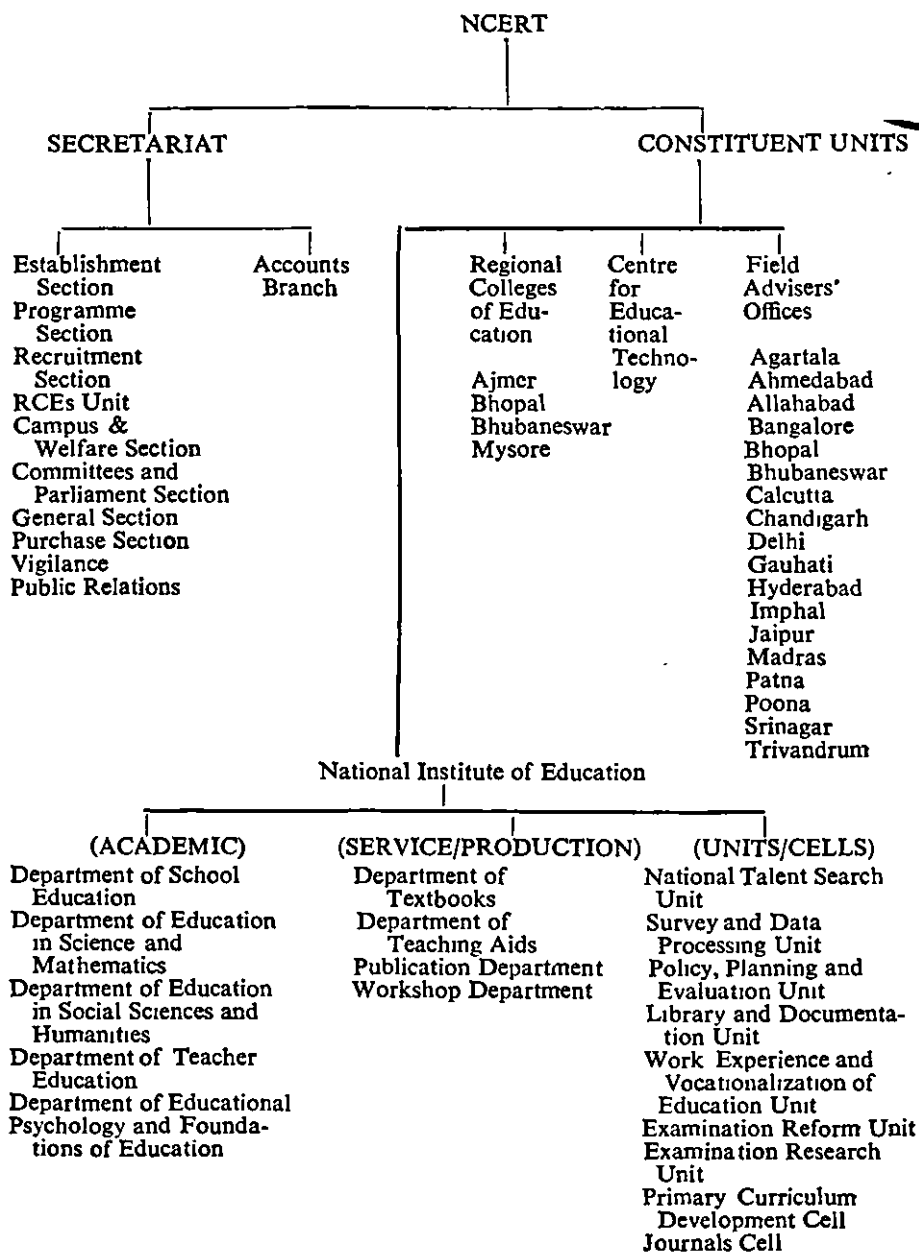
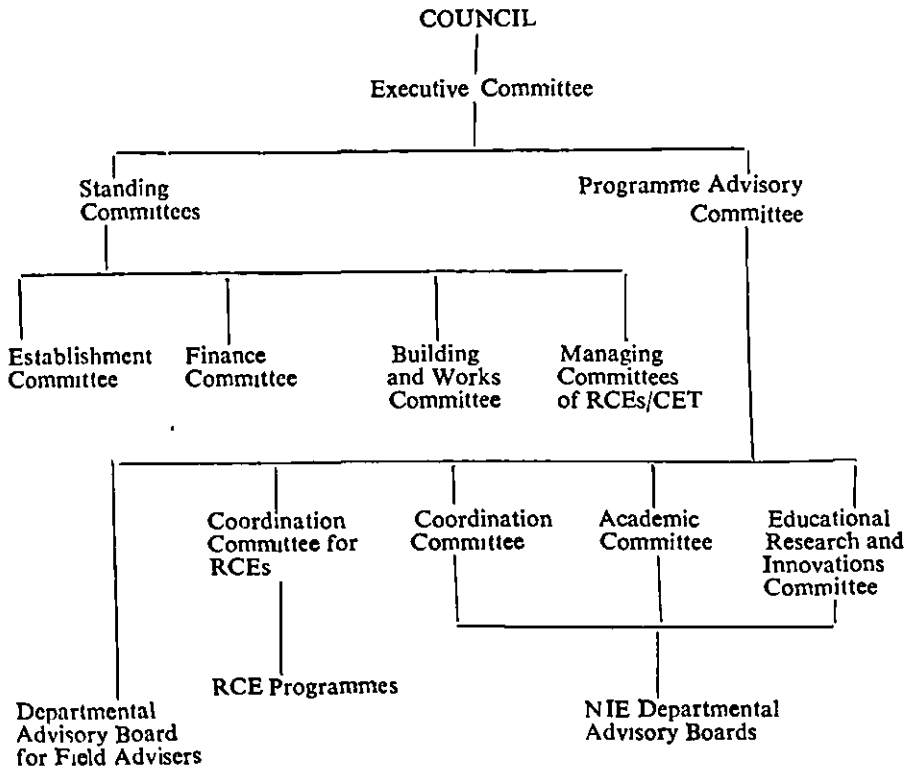


TABLE II
Functioning of NCERT



coordination and appraisal in terms of the priorities of the Council. All the research programmes are put up to the Educational Research and Innovations Committee under the Chairmanship of Dean (Research) which approves research proposals received from outside as well as inside the Council for academic approval and financial assistance. The Academic Committee under the Chairmanship of Dean (Academic) considers the other programmes like those concerned with the development and training of the academic departments, while the Coordination Committee under the Chairmanship of Dean (Coordination) considers the 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.)

1.4 Staff

The NCERT has a large body of academic and non-academic staff. The academic staff is governed more or less on the lines of the central universities, whereas the non-academic staff is governed by the Rules drawn up on the lines of the central ministries. During 1976-77, the following were the principal functionaries of the Council :

| | |
|-----------------------|--|
| <i>Director</i> | : Professor Rais Ahmed |
| <i>Joint Director</i> | : Professor Shib K. Mitra |
| <i>Secretary</i> | : Smt. J. Anjani Dayanand (till 7.9.1976) Shri V.R. Dravid (thereafter) |

DEANS

| | |
|------------------------|---------------------------|
| 1. <i>Research</i> | : Professor Shib K. Mitra |
| 2. <i>Academic</i> | : Professor R.C. Das |
| 3. <i>Coordination</i> | : Dr. R.G. Misra |

1.5 Role

The NCERT is uniquely situated to play a very important role in education in India. By working out suitable educational materials at the school level and by conducting programmes of teacher orientation, the Council makes it possible for educational policies initiated by the C.A.B.E. to be implemented by the states. Over the years, however, the Council has come to acquire a status of its own and has developed expertise in various fields of education.

The NCERT's role in Indian education has acquired added significance at the present juncture when the country is passing through a process of change in the field of education. The Council is primarily responsible for stimulating and accelerating transformation of education in the country and has launched upon a revision of curricula to suit the needs of the 10+2 pattern of school education, with the aim of making education more relevant to the needs of the society and geared to the attainment of national objectives.

Educational research is an important component of this qualitative improvement. This is one of the principal objectives of the NCERT. In addition to the research done in the departments of the NIE, the Council has been giving financial assistance through the Educational Research and Innovations Committee (ERIC) to research projects from outside the Council. The ERIC has so far financed 75 projects sponsored by outside agencies involving an expenditure of Rs. 7,24,000 during the period 1974-77. Details of such projects approved and financed during 1976-77 are given in Appendix D. Research projects of the NCERT are, however, covered under Sections on the work done by different constituents. The total expenditure on departmental research projects during 1976-77 was Rs. 5,36,000.

In the field of educational development, the NCERT stands out prominently. It has produced quality textbooks, developed original conceptual literature, and has brought out science kits. The thrust in this direction continues unabated. In fact, it has acquired renewed vigour in the context of the new curriculum.

Training and extension activities through which the NCERT carries innovations to practising teachers are certainly not the least important. The work done by the various constituents of the Council in the field of training and extension, as also in research and development, is mentioned under relevant Sections.

Besides taking up the improvement of school education itself, the Council also assists professional educational organizations in the country which undertake work related to school education. The Council has been operating this scheme of financial assistance for the past few years. The financial assistance provided by the Council during 1976-77 to various professional educational organizations is given in Appendix E.

The NCERT is also one of the implementing agencies for bilateral cultural exchange programmes signed by the Government of India with the governments of other countries. It, thus, regulates a two-way flow of educational ideas with foreign countries by sending delegations to other countries to study specific educational problems relevant to our requirements and arranging training for foreign nationals from developing nations. This is also done under the sponsorship of UNESCO and other international agencies. The Council deposes its officers to various international seminars/conferences and receives foreign visitors. Details of such international exchanges are given in Appendix F.

The NCERT also produces and publishes textbooks, teachers' guides, supplementary reading material, research monographs, educational surveys, journals, etc., for the purpose of effecting qualitative improvement in school education. Details of these materials are given in Section 2.8.

2. NATIONAL INSTITUTE OF EDUCATION

2.1 Department of Education in Science and Mathematics

The major thrust of the Department during 1976-77 was to translate into action the philosophy and objectives projected in the national document *The Curriculum for the Ten-year School—A Framework*. Details of the programmes undertaken pertaining to the new 10+2 pattern of education are as under :

(a) Curriculum Development

- (i) Twenty-three textbooks and two teachers' guides (13 English and 12 Hindi versions) have been developed as listed below :

| Class | Textbooks | Version |
|---|-------------------------|--------------------------------|
| I & II (Teachers' Guide to Environmental Studies) | — | (E. English, H. Hindi) E, H |
| III | Environmental Science | E, H |
| VI | Integrated Science | E, H |
| VI | Mathematics | E, H |
| IX | Mathematics | E, H |
| IX-X | (a) Physics | E, H |
| | (b) Chemistry | E, H |
| | (c) Life Sciences | E, H |
| XI | (a) Physics | E, H |
| | (b) Chemistry | E, H |
| | (c) Life Sciences | E, H |
| | (d) Mathematics | E, H |
| | (e) Science and Society | E |

The books are being followed in schools affiliated to CBSE, Delhi, from the 1977 academic year.

- (ii) A new approach in the experimental component of the science curriculum for the ten-year school is underway which would take into consideration the environmental resources available, improvisation and the use of inexpensive indigenous materials in science activities/experiments. An attempt is being made to take a look at

science as a whole, rather than think in terms of water-tight compartments of physics, chemistry and biology.

(b) Summer Science Institutes

The main focus of the Summer Science Institute organized in May, June, July 1976 was to assist the states either following or contemplating implementation of the 10+2 pattern of education.

In all, 120 such summer science institutes were organized which oriented nearly 5000 teachers. Discipline-wise details of the number of summer institutes are given below :

| <i>Subject</i> | <i>Total Number of Summer Science Institutes</i> | <i>Number of State-level Institutes</i> | <i>Number under the 10+2 Pattern of Education</i> |
|----------------|--|---|---|
| Physics | 27 (1088) | 12 (531) | 15 (557) |
| Chemistry | 28 (1174) | 13 (595) | 15 (579) |
| Biology | 27 (1077) | 12 (492) | 15 (585) |
| Mathematics | 35 (1562) | 16 (733) | 19 (829) |
| Science | 3 (125) | 3 (125) | — |

(The number in the parenthesis indicates the number of teachers trained.)

(c) Developmental Projects

(i) Resources and Problems

It is an investigatory project to develop a handbook for class room teachers. The project supported by the ERIC took the following steps :

Analysis of the syllabi for Classes I-XII, which have been prepared by the NCERT, and the syllabi of the states.

The analysis includes identification of the contents, key principles, basic cognitive objectives and values and abilities to be attained.

Preparation of a questionnaire to conduct a random survey of the environmental condition and the need of the teachers to utilize the immediate environment.

The draft questionnaire was prepared on the basis of the analysis of the syllabus.

A number of reference materials were consulted and some were collected. It includes journals, magazine reprints and newspaper cuttings.

Contacts were made with different institutions where studies on environment are in progress. A group from the World Wildlife Fund visited the Department and discussions were held. Discussions were also held with the Department of Science and Technology,

Government of India for contacts with the Man and Biosphere programme. Attempts are being made to contact various other agencies.

(ii) *Teaching Aids*

The film entitled 'Teaching Science through Environment' was completed with the active collaboration of the Department of Teaching Aids. Two other films 'Understanding Animals' and 'Cell Physiology and Function' were in various stages of development. Besides, a few films have been dubbed in Hindi.

(d) *National Science Exhibition*

The Sixth National Science Exhibition for Children was organized from 14 to 23 November 1976 in collaboration with the Jawaharlal Nehru Memorial Fund at Teen Murti Bhavan, New Delhi. Most of the exhibits displayed were selected items from various state-level and regional exhibitions held in 1975.

In addition, participants from Bhutan took part in the exhibition.

Besides the National Science Exhibition in Delhi, the NCERT assisted in the organization of 23 state-level exhibitions in different states and union territories.

Two popular lectures were organized for the benefit of the participants. Prof. J.V. Narlikar of the TIFR gave a very stimulating talk on 'What is the Universe Like?'. Prof. C.V. Subramaniam of Madras University spoke on 'Moulds, Mildews, Mushroom and You'.

(e) *Collaboration with other Organizations*

(i) Two programmes for the orientation of resource persons from all the states and union territories were conducted at the State Institute of Science Education, Allahabad, and the State Institute of Science Education, Trivandrum, in September-October 1976. About 60 experts from different states, RCE, Bhopal and Kishore Bharti participated in the courses. The participants of the programme also developed the subject-matter of the teachers' handbook for environmental studies for Classes I-II. The academic staff of the Department of Education in Social Sciences and Humanities and officers of the UNICEF also cooperated in these programmes.

(ii) About 200 teachers of the Uttar Pradesh Madyamik Sangh were briefed about science education programmes under the 10+2 pattern of education in a seminar organized at Hardwar in June 1976.

(iii) A group of 130 primary teachers was also trained on the approach to environmental studies, with the collaboration of the Municipal Corporation, Delhi and the Indian Association of Pre-school Education.

(iv) The academic members of the Department assisted the School TV

programme conducted by the Department of Education, Delhi Administration.

(f) Collaboration with Foreign Educational Agencies

A module writing workshop on science education in rural development was organized at the NCERT in November-December 1976, in collaboration with the Asian Centre for Educational Innovations for Development, Bangkok.

The countries represented in the workshop, supported by the UNESCO, were Afghanistan, India, Malaysia and Sri Lanka. The objective of the programme was to provide an opportunity for experts to share their experiences in the field of primary science education in rural surroundings and develop a functional package relevant to the rural life and needs of the learners in developing countries. Twelve instructional modules were prepared on the following :

- (i) Floods and You, (ii) Skills of Growing Vegetables at Home, (iii) Science Process of Classification, (iv) To Keep our Surroundings Clean and Beautiful, (v) Let us Make our School Clean and Beautiful, (vi) Soil Salinity and Your Crops, (vii) Keeping Poultry at Home, (viii) Teaching Process Skills of Classification, (ix) The Missing Smile (malnutrition), (x) Let us Conserve Nature and its Resources, (xi) Teaching Process of Measurement, (xii) Science Through Bicycle.

2.2 Department of Education in Social Sciences and Humanities

This Department has been directly involved in the development of modern curriculum, syllabi, textbooks and other instructional materials for the teaching of social sciences and languages. Orientation programmes on materials developed in the Department have been organized in various states to acquaint educational workers there with the recent trends and approaches in the teaching of social sciences and languages. Besides, research studies of pure and applied nature have also been undertaken to help the Department in carrying out its functions more efficiently.

(a) Setting-up of Editorial Boards

Since the framework for the ten-year school education under the new pattern was being developed, it was felt that syllabi and instructional materials, especially textbooks, to implement the new philosophy of education should be prepared. Senior university professors and other scholars of eminence were associated with this work. The following Editorial Boards assisted the Department.

| <i>Subject</i> | <i>Name of the Chairman</i> |
|-----------------------------|-------------------------------|
| 1. Hindi as Mother Tongue | Dr. H.L. Sharma |
| 2. Hindi as Second Language | Dr. S. Shivmangal Singh Suman |

| | |
|---|-----------------------------|
| 3. English | Prof. Ramesh Mohan |
| 4. Sanskrit | Dr. K. Raghavan Pillai |
| 5. Social Studies (Classes VI-VIII) | Dr. V.B. Singh |
| 6. History (Classes IX-XII) | Dr. R.S. Sharma |
| 7. Geography (Classes IX-XII) | Prof. Moonis Raza |
| 8. Civics, Economics, Sociology, etc. (Classes IX-X) | Prof. Malcolm S. Adiseshiah |
| 9. Political Science (Classes XI-XII) | Prof. Rasheeduddin Khan |
| 10. Economics (Classes XI-XII) | Prof. G.S. Bhalla |
| 11. Sociology (Classes XI-XII) | Prof. S.C. Dube |

Some senior members of the Department were associated with these Boards which had periodical meetings to (i) finalize the syllabi developed in the Department, and (ii) to appoint authors to write textbooks on the guidelines provided by the Boards. Drafts received by the authors were reviewed from time to time. The final responsibility of the textbooks thus prepared rested with the Editorial Boards.

(b) Publications

The following textbooks were finalized and sent to press for publication during the year :

CLASS VI

1. Ancient India
2. Prachin Bharat
3. Africa and Asia
4. Our Civic Life
5. Hamara Nagrik Jeewan
6. Desh Aur Uske Niwası
7. Textbook in Sanskrit

CLASSES IX-X

1. General Geography of the World—Part I for Class IX
2. Citizenship Education : We and Our Government for Classes IX-X
3. Our Economy—A Textbook in Economics for Classes IX-X
4. Pratibha—A Textbook in Sanskrit for Class IX for Semesters I and II
5. Supplementary Reader in Hindi for Classes IX-X
6. Bhartiya Arthavyavastha—Hindi Version of the Economics Textbook for Classes IX-X
7. Hum Aur Hamari Sarkar—Hindi version of Citizenship Education for Classes IX-X

CLASSES XI-XII

1. Elementary Statistics in Economics for Class XI
2. English Reader-Core-Main English Textbook for Classes XI-XII

3. Ancient India—History Textbook for Class XI
4. Pratinidhi Ekanki—Textbook for Hindi for Classes XI-XII
5. Sanskrit Kavya Taringini—Sanskrit Textbook for Classes XI
6. Geography Workbook for Classes XI-XII
7. Field and Laboratory Techniques in Geography for Classes XI-XII

The preparation of the Hindi version of the textbook entitled *Modern India* for secondary schools has been completed. This book came out in October 1976. The original English version prepared by Professor Bipan Chandra was first brought out in 1971 and has since been reprinted. The Hindi translation has been prepared by Shri Girish Mishra of the Delhi School of Economics, Delhi University, Delhi.

This Department also brought out one research monograph entitled *Position of Languages in School Curriculum in India* by Dr. M.G. Chaturvedi and B.V. Mohale.

To commemorate the Human Rights Day, which is celebrated every year on 10 December, this Department brought out one booklet entitled *Universal Declaration of Human Rights* by Dr. D.S. Muley. Copies of this booklet were distributed to higher secondary schools in the country through our Field Advisors in various states and union territories.

(c) *Projects on National Monuments*

At the instance of the Ministry of Education, the NCERT took up a project, in collaboration with the Archaeological Survey of India, to prepare materials for school children in connection with a programme relating to the "preservation of monuments located in different parts of the country".

A sub-committee set up for the purpose decided to take up the following assignments :

- (i) Preparation of a set of supplementary books, suitably perforated, which would contain pictures and sketches of these monuments;
- (ii) To highlight in the history syllabus and textbooks on the importance of these monuments as relics of Indian cultural heritage from very early times; and
- (iii) Adoption of measures for the preservation of the monuments with the help of schools which could take up projects for the study and preservation of the monuments found around them.

As regards No. (i), it has been decided that this perforated book will be in three volumes, roughly covering the ancient, medieval and modern period of Indian history. The material for the first volume has been collected for publication. As regards No. (ii), while preparing the new history syllabus, care was taken to lay special emphasis on the importance of Indian monuments and relics bearing the country's cultural heritage from very early times. As regards No. (iii), the Director General of the Archaeological Survey of India has been requested to prepare a monograph.

(d) Orientation Programme on Practical Activities to Improve Citizenship Education

With the introduction of the new 10+2 pattern of schooling, the Department has initiated the inclusion of project work of practical activities programmes as part of the Citizenship Education Curriculum. This programme requires that every student takes up these practical activities every year and prepares a write-up or report on each of these projects. The Department is now trying out these designs in 20 selected schools of Delhi as part of a research study on the development of citizenship activities. The State Institute of Education, Delhi is associated with the project. A one-day orientation course for the civics teachers of selected schools was held in the Department on 14 September 1976.

(e) National Seminar on the Identification of Values Commensurate with the Status of Women

A national seminar on the Identification of Values Commensurate with the Status of Women to be incorporated in the literature under 10+2+3 was held at the A. N. Sinha Institute of Social Studies, Patna, from 2-4 April 1976.

(f) Collaboration with States/Other Agencies

The Department provided consultancy to various education authorities/organizations. Special mention may be made of collaboration with the State Institutes of Education of Delhi, Haryana, Kerala and Madhya Pradesh; State Council of Educational Research and Training, Andhra Pradesh; Annamalai University; Education Departments of Delhi Municipal Corporation and New Delhi Municipal Committee, etc., in developmental programmes, such as development and revision of syllabi in the areas of social sciences and languages, preparation of handbooks and curriculum guides relating to the new syllabi under the 10+2 pattern and orientation courses for key persons engaged in their preparation.

(g) Foreign Collaboration

(i) UNESCO Project on Population Education

The Department of Education in Social Sciences and Humanities has taken up a project on Cooperative Development of Learning Units in Population Education, with the assistance of the UNESCO. A week-long national workshop was organized in May 1976 at the School of Education, University of Himachal Pradesh, Simla. The workshop developed study materials on the lines of the discovery approach.

Eight schools from the country have been identified. They are in the industrial, urban, rural, and tribal areas of the country. It is in these schools that the material developed would be tried out for about a month before it is finalized and sent to the UNESCO for its consideration.

(ii) *Workshop on Environmental Studies*

Representatives from the Department participated in organizing a workshop on Environmental Studies for northern India held at Allahabad in September 1976 and helped in the development of instructional material on the integrated syllabus for Classes I and II in Environmental Studies. The workshop was organized by the Department in collaboration with the UNICEF. The outcome of this workshop was discussed at Trivandrum with another group of resource persons for south India in September-October 1976.

2.3 Department of Teacher Education

(a) *National Council for Teacher Education*

The National Council for Teacher Education was set up by the Government of India, Ministry of Education and Social Welfare by Resolution No. F. 7-6/71-Schools 2, dated 21 May 1973. The functions of this Council are as follow :

1. To advise the Government of India on all matters concerning teacher education, including pre-service and in-service training, evaluation of the curricula for teacher education and periodical review of the progress in revising the curricula;
2. To advise state governments on any matter referred to the Council by them;
3. To review the progress of plan schemes, both central and state, concerning teacher education;
4. To advise the Government on ensuring adequate standards in teacher education;
5. Any other matter entrusted to the Council by the Government of India.

The National Council for Teacher Education functions through its various standing committees. The standing committees are :

1. Pre-school Teacher Education Committee
2. Elementary Teacher Education Committee
3. Secondary Teacher Education Committee
4. Technical, Vocational and Work Experience Teacher Education Committee
5. In-service Teacher Education Committee
6. Committee on Standards in Teacher Education
7. Committee for Teacher Preparation for Special Schools for the Physically Handicapped and Mentally Retarded
8. Committee to Determine the Equivalence of Foreign Degrees/ Diplomas in Teacher Education

The work of these committees is coordinated by a Steering Committee. The Steering Committee meets once or twice before the General Body Meeting of the National Council for Teacher Education.

The General Body Meeting of the National Council for Teacher Education takes place once a year towards the end of every financial year. The meetings of other standing committees are held once or twice a year as per the need felt.

During the year 1976-77, the following meetings were held :

(i) *Joint Session of the UGC Panel on Teacher Education and Members of the Concerned Committees of the National Council of Teacher Education*

As recommended by the Third Annual General Body Meeting of the National Council for Teacher Education held on 4 March 1976, the curricula for B.Ed. and M.Ed. prepared by the different committees of the National Council for Teacher Education for teacher training at different levels were to be developed by this body.

The joint session was held on 9 and 10 June 1976 in New Delhi which was attended by about 80 participants. It gave its recommendations on different aspects of the B. Ed. and M. Ed. courses. This joint session also suggested that an approach paper on teacher education may be prepared by a small committee. The approach paper was finally approved by the drafting committee on 6 December 1976. This approach paper was further discussed in a National Conference on Teacher Education held in New Delhi on 18 and 19 February 1977. The National Conference discussed the paper in detail and recommended that this paper may be further revised, keeping in view the changes in education policy. The conference also suggested the setting up of a committee to make detailed suggestions on working with the community in teacher education. This group met on 24 March 1977 and gave its recommendations. The recommendations of this committee were incorporated in the revised draft.

(ii) *Pre-school Teacher Education Committee*

A meeting of the Pre-school Teacher Education Committee of the National Council for Teacher Education was held on 19 August 1976 in New Delhi. It constituted a sub-committee to develop guidelines for the recognition of pre-school teacher training institutions. The committee also suggested the setting up of an editorial board to prepare textbooks and handbooks for student-teachers of pre-school teacher training institutions. Materials for preparing these textbooks and handbooks have been collected and will be finally presented to the editorial board for its approval before printing. The Elementary Teacher Education Committee of the National Council for Teacher Education met on 8 September 1976 and discussed the problem of work-load.

A meeting of the sub-committee of the Pre-school Teacher Education Committee was held on 26 August 1976 in New Delhi to develop

guidelines for the recognition of pre-school teacher training institutions and also to identify selected elements of pre-school teacher training for integration with the existing primary teacher education curriculum.

(iii) Elementary Teacher Education Committee

The third meeting of the Elementary Teacher Education Committee was held on 8 September 1976 in New Delhi. The committee suggested guidelines for the recognition of elementary teacher training institutions. The guidelines were approved with certain modifications. It was also suggested that in-service training courses of one month's duration during vacations may be prepared by Dr. D. V. Chickermane for the personnel of single-teacher schools located in remote rural areas. In this connection, a pamphlet was recommended for editing by the Department of Teacher Education. It was recommended to be circulated to all State Institutes of Education for the training of key personnel at the state level. The course was accordingly edited and has since been circulated to all the State Institutes of Education for necessary action.

(iv) Technical, Vocational and Work Experience Education Committee

The third meeting of the Committee on Technical, Vocational and Work Experience Education was held on 22 November 1976 in New Delhi. The committee also appointed a small working group to draw up guidelines which might include alternative strategies for teacher preparation for the vocational stream at the plus 2 stage.

(v) In-service Teacher Education Committee

The second meeting of the Committee on In-service Teacher Education was held on 30 October 1976 in New Delhi. The committee suggested that a comprehensive note on correspondence courses for primary school teachers developed by the State Institute of Education, Kerala, in collaboration with the All India Radio, may be obtained for circulation among other states, the Correspondence Courses Cell of the NCERT and members of the In-service Teacher Education Committee of the National Council for Teacher Education. This has already been attended to. It was also agreed by the committee that an orientation programme of 75 days' duration was necessary for those teachers who would be teaching Classes XI and XII in the schooling pattern of 10+2 and who have never been exposed earlier to any pedagogical training.

(vi) Committee on Standards in Teacher Education

The second meeting of the Committee on Standards of Teacher Education was held on 27 November 1976 in New Delhi. The committee suggested that since information regarding the system of centralized admissions

to teacher training institutions had not been received from all the states/union territories, it desired that the matter may be pursued with the non-responding states/union territories. The action is continuing.

(b) Appreciation of Fine Arts

The Ministry of Education entrusted this Department with the task of conducting refresher courses for the Appreciation of Fine Arts for the staff of the colleges of education in the country. During the period under report, two such courses were conducted, one at the Mahila Vidyalaya, Lucknow, from 22 September to 12 October 1976, which was attended by 44 participants representing 13 states, and the second at the Government College of Education, Patiala, from 30 March to 19 April 1977, which was attended by 26 participants from 12 states.

(c) Follow-up of the Implementation of the Ten-year School Curriculum

For some time, the Department has been coordinating the orientation programmes in connection with the implementation of the ten-year school curriculum. The states were given grants for conducting orientation courses for the primary and secondary school teachers. This responsibility of the Department has since been transferred to the Department of School Education.

(d) Research Projects

(i) Developing a Model for Forecasting Teacher Requirement in a State (Haryana)

In connection with this project, a conference of 11 District Education Officers of the Haryana State was convened on 7 April 1976 to orient them about the study and time schedule strategy and to finalize the questionnaire for the collection of data.

(ii) Development of Evaluation Tools for the Assessment of B. Ed. Practical Work

The evaluation tools used for the assessment of B. Ed. practical work in all the colleges of education in the country have been collected and classified activity-wise. This material has been presented to a workshop of 29 teacher-educators at the secondary level held from 21 to 26 February 1977 at the College of Education, Osmania University, Hyderabad. This workshop was also given the benefit of consulting the evaluation tools developed independently by the workshops of teacher-educators held previously at Hyderabad, Madras and Bhubaneswar. The workshop developed 17 rating scales for the assessment of different practical activities usually organized at the under-graduate level by the colleges of education.

(e) *Development of Teacher Education in the States*

The Department of Teacher Education has undertaken Intensive Teacher Education Programme (ITEP) for the all-round development of teacher education institutions, both at the primary and secondary levels. The States of Rajasthan and Andhra Pradesh were selected for this work at the primary teacher education level, while the State of Andhra Pradesh was selected for work at the secondary level.

(i) *Intensive Teacher Education Programme (at the Elementary Level)*

A conference of the principals of 32 teacher training institutes was conducted at the State Institute of Education, Udaipur, Rajasthan, from 10 to 14 January 1977. The main theme of the conference was the improvement of student teaching.

Two conferences of the principals of 12 teacher training institutes in Andhra Pradesh were conducted. The first conference was held at the SCERT, Hyderabad, from 6 to 8 October 1976, to discuss the problems related to the various aspects of TTIs, like physical facilities, curriculum methods, staff, admissions and administration, with a view to suggesting operational solutions and making necessary recommendations. The second conference was conducted at the SV University Department of Education, Tirupati, from 21 to 26 March 1977, for the development of a new curriculum for the teacher training institutes of Andhra Pradesh. This curriculum will be adopted by the state from the academic session 1978-79.

(ii) *ITEP (at the Secondary Level) Andhra Pradesh*

A conference of the principals of colleges of education, professors and heads of departments, deans of education and chairmen of boards of studies in education of all the three universities of Andhra Pradesh was organized by the Department of Teacher Education at the St. Ann's College of Education, Secunderabad, from 6 to 11 September 1976. Another workshop of the principals and teacher-educators of colleges of education was held at the SV University Department of Education, from 21 to 26 March 1977, for the development of a new B. Ed. curriculum for all the universities of Andhra Pradesh, following principles recommended by the Teacher Education Curriculum Framework developed by the National Council for Teacher Education. This syllabus will come into force in all the five universities of Andhra Pradesh from the academic session 1978-79.

(iii) *Qualitative Improvement of Teacher Education
Improvement of Student Teaching*

The Department has undertaken a few isolated programmes for the qualitative improvement of one particular aspect of teacher education, either at the primary or secondary level, like student teaching, evaluation, etc.

Two conferences of principals and teacher-educators to discuss the problems of student teaching and its evaluation at the secondary teacher education level were arranged. The first was held at Gopeshwar for the colleges affiliated to the Kumaon and Garhwal Universities in Uttar Pradesh from 17 to May 1976 and was attended by 34 participants. The second conference was held at Shillong for the benefit of the colleges of education affiliated to the North-eastern Hill University. It met from 23 to 29 September 1976 and was attended by 20 participants.

The Gopeshwar seminar was followed up by another seminar held from 3 to 7 January 1977 at DAV College, Dehradun, and was attended by 27 participants from the colleges affiliated to the Kumaon and Garhwal Universities.

(iv) Improvement of Evaluation Practices

At the secondary teacher education level, the Department organized a seminar for the principals of colleges of education of the States of Orissa and West Bengal from 25 to 30 October 1976 at the Regional College of Education, Bhubaneswar. The seminar, which was attended by 19 teacher-educators, discussed the principles of evaluation of the theory and practice of education courses at the under-graduate and post-graduate levels. They developed specimen question papers for the three core courses of the B. Ed. programme and finalized evaluation tools for the assessment of practical activities, including student teaching.

(f) Training and Extension

(i) The Department has undertaken experiments in microteaching, in collaboration with the Centre for Advanced Studies in Education, MS University, Baroda. In this connection, a few orientation courses have been conducted for teacher-educators for the adoption of microteaching and simulation techniques for the qualitative improvement of student teaching. One such course was conducted from 22 to 25 March 1977 at the Department of Education, University of Indore.

(ii) A conference of the principals of BT Institutes of Madhya Pradesh was conducted at Bhopal from 27 to 31 December 1976. The principals were oriented about the need and importance of introducing the 10+2 programme at the school level and its implications to the Elementary Teacher Training Programme.

(iii) The Department conducted an in-service course for science method masters of secondary teacher training colleges from 13 to 17 September 1976 at the NIE Campus, New Delhi. Attended by 24 experienced teacher-educators from the Regional Colleges of Education, the course was intended for the departments of courses in physics, chemistry and biology, according to the 10+2 curriculum, for Classes IX, X, XI and XII to

enable the teacher-educators to teach the relevant methodology effectively at the B. Ed. level.

(iv) The Department conducted two workshops on methods and materials, one for elementary teacher-educators of Kerala from 15 to 24 December 1976 and the other from 15 to 24 February 1977 attended by 46 elementary teacher-educators of Bihar. In these programmes, the teacher-educators were exposed to new methods and materials and media in relation to the ten-year school curriculum. During the course of this training, they developed teaching aids which were exhibited at the end of the course.

(g) *Clearing House*

The Department collects information on teacher education, both at the primary and the secondary level, about innovations, tested good practices, improvisations, experiments and any new practices followed so that the same may be disseminated to other institutions for their adoption. The Department maintains up-to-date lists of teacher training institutions at both the levels. The Department also conducts surveys of teacher education every five years and maintains statistics related to the various aspects of teacher education.

One of the techniques the Department employs for such dissemination of important information about innovations and experimentation is the Seminar Readings Programme. The teacher-educators, both at the primary and the secondary level, are requested to report original work they have done in the shape of articles and submit the same for national competition. The authors of articles winning this competition are paid a token prize of Rs. 500/- each, and are invited for a national seminar to discuss their papers. During the year under report, one such seminar was conducted at the State College of Education, Patiala, from 24 to 26 March 1977 which was attended by seven secondary and 18 elementary teacher-educators.

2.4 Department of Educational Psychology and Foundations of Education

(a) *Research*

(i) *A Study of Some Aspects of the Load of Home Work in Some Schools of Delhi*

The objective of this study was to make a quick but intensive study of the load of home work and its relationship with the academic achievement of the pupils. The sample included 162 students, 108 parents, 60 teachers and six schools of the union territory of Delhi. The important findings and conclusions were : (1) High-achievers always complete the home work, (2) Many parents could not give time to the students due to their illiteracy, lack of knowledge about the subjects and professional problems,

(3) There are both good and bad aspects of home work in terms of academic importance, keeping the children busy at home, stress and strain upon the students, and (4) A long-term policy on home work should be prepared.

The report has been submitted.

(ii) Studies of Adjustment Patterns of Boys with Scholastically Superior Ability

Twelve hypotheses were tested to ascertain the significance of differences in the adjustment patterns pertaining to the areas of home, health, social, emotional and school adjustments of boys of superior scholastic ability with average boys. Inter-group differences in the adjustment patterns of scholastically superior boys in relation to the variables of socio-economic status and educational achievement were also studied. The study did not reveal any significant difference in the adjustment patterns of average boys and boys with superior ability.

The work has been completed.

(iii) Developmental Norms Project

The project commenced in 1970. The broad objective of the study was to understand the development of children in the age-group 5-1/2 to 11 years, in order to improve the process of education. The specific aim was to investigate the relationships between the environmental process variables in the home and in school, academic achievement, cognitive and social development of children. The study was conducted at seven centres, viz., Delhi, Bombay, Trivandrum, Varanasi, Ranchi, Bangalore and Hyderabad. Final reports of most of the centres are complete.

(iv) Development of Science and Mathematics Concepts in Children in Primary Grades in India

During the final phase of the study, seven basic concepts relating to (1) Number, (2) Length, (3) Area, (4) Volume, (5) Weight, (6) Force, and (7) Energy were selected for detailed study. The effect of language development on the acquisition of science and mathematics concepts was also investigated during this phase. The report is being written.

(v) A Study of the Nature and Function of Group Process to Motivate Children

The aim of the study is to find out the relationship between moderation and group process with a view to improving the teaching-learning process. The findings of this study would be useful for the practising teachers and teacher-educators.

This project has been undertaken in collaboration with two external

centres, one at Calcutta and the other at Trivandrum.

Three sets of hypotheses have been prepared on the basis of certain background, social and personality variables. It is proposed to develop a psycho-analytic personality inventory.

(vi) Cooperative Research on First Generation Learning

The project aims at investigation of the psychological and educational characteristics of first generation learners. In addition to this Department, the work has been undertaken by four cooperating centres at various universities. The study is proposed to be conducted at three-grade levels, viz., Grades I, V and X.

Finalization of tests and tools has been completed in the Department.

(vii) Effect of Socio-cultural Deprivation on the Educational Development of Rural Children in the Age-group 6-11

The objective is to examine the relationship between the educational development of and the variables related to scheduled caste-non-scheduled caste boys-girls, upper-lower socio-economic strata and the exposure-non-exposure to educational TV.

So far, the data from one state only could be analysed. A brief report on this part is available.

(b) Diploma Course in Educational and Vocational Guidance—1976-77

The objective is to train guidance specialists (counsellors) for guidance bureaus, high and higher secondary schools and training colleges. This is an on-going programme and the 1976-77 session was held from 2 August 1976 to 1 May 1977. Twenty-seven trainees drawn from Delhi, Karnataka, Kerala, Madhya Pradesh, Orissa, Punjab, Rajasthan and Uttar Pradesh completed the course. The course content comprised six theory papers, practical work in schools and written assignments.

(c) Developmental Projects

(i) Development of Programmed Learning Materials in Science for Remedial Instruction in the Primary and Secondary Grades

The main aim of the project is to develop programmed learning materials in science for remedial instruction. As part of the work, scripts for developing multi-media programmes on certain selected topics in physics have been prepared.

(ii) Development of Learning Materials for Non-formal Education of Girls of the Age-group 11-14 in Rural Areas

The work started in the later half of the year 1976-77. The first problem was to develop a need-based curriculum. The curriculum and

filmstrips prepared by several agencies were reviewed at two meetings of experts.

(iii) Preparation of Supplementary Reading Material

The objective was to provide supplementary reading material in Hindi for the children of pre-primary and lower primary classes. With this aim in view, the first draft of ten scripts of picture-story-books was prepared.

(iv) Developmental Work with the Municipal Nursery Schools

The objective was to undertake intensive intervention work to raise these schools to the level of demonstration-cum-experimental schools and thus help the Corporation to take the first step towards gradually developing a net-work of model schools within the Corporation.

At the end of the first year, an evaluation study was undertaken. The Adhchini school showed better trends in terms of improved school readiness, intelligence and awareness of the immediate environment. The MMTC school showed improvement in the better utilization of the available building and equipment and school climate. A detailed report has been submitted to the department.

(v) Approach Paper for Guidance Services

An approach paper was prepared to properly organize guidance services for general and higher secondary education under the new pattern of education. The paper dealt with (1) guidance in education, (2) vocational guidance, (3) educational guidance, (4) social guidance, and (5) implementation. The paper was examined by eight experts who also discussed other issues concerning the formulation of programmes in guidance and counselling.

(vi) Development of Textbooks in Psychology for the School Stage

Manuscripts of three textbooks for Classes IX, X and XII were prepared and reviewed. They are (1) Understanding Human Behaviour, (2) Psychology—An Introduction to Human Behaviour, (3) Child Psychology.

The format of a teachers' manual for the textbook on Understanding Human Behaviour has also been prepared.

(vii) Development of Materials in the Area of Guidance

The following materials were prepared : (1) An annotated bibliography on occupational information materials. (2) A set of six guidance posters propagating the role of school guidance service in the new 10+2 pattern has been finalized as prototype material for the state-level agencies. (3) Revision work of the earlier published guidance literature/materials was taken up.

(d) Collaboration with States/Other Agencies

The Department deputed officers to work as resource persons at the following institutions and places :

1. Institute of Vocational Guidance, SIE, Gujarat
2. Institute of Vocational Guidance and Selection, Government of Maharashtra
3. State Institute of Education, Agartala, Tripura
4. ICSSR Research Methodology Course held at the NIE Campus, New Delhi
5. ICSSR Seminar on Identity and Adulthood held at the India International Centre, New Delhi
6. World Health Organisation, New Delhi
7. UPSC Programmes on Objective-type Test Construction
8. Ministry of Defence, Naval Academy, Cochin
9. Delhi Administration : Navayug School Admission
10. NDMC School in Adhchini Village and MMTC Colony

2.5 Department of School Education

(a) Universalisation of Elementary Education

The major focus of attention in the working of the Department was on universalisation of elementary education through studies and action programmes of both formal and non-formal nature. Under the category of work directed towards universalisation of elementary education through formal education, programmes on integrated approach to education, multiple class teaching in single-teacher schools, introduction of socially useful productive work (work experience) were taken up. These programmes aimed at making the curriculum more relevant to life, thus leading to greater enrolment and retention.

For those children who could not get enrolled at the appropriate age in the schools and those who dropped out without completing their education up to the primary standard, pilot projects on non-formal education were started in five centres, covering a variety of population samples, viz., hill population, scheduled tribes, scheduled castes, rural people and people in urban slums. Special efforts were made to introduce socially useful productive work in consonance with social, ecological and economic needs of the community so as to alleviate the socio-economic conditions of the community and the children. It was also made a medium of education so that work and education could go together and thereby increase the retentivity of these centres, as also provide sufficient motivation for enrolment. These pilot projects were designed to provide working models for different states to adapt/adopt as per their needs.

Most of the elementary school teachers are seldom aware of the

curriculum, effective teaching-learning processes, non-formal education programmes, integrated education, methods of multiple class teaching in a single teacher school, etc. Besides, they are also not aware of the methods of universalizing elementary education and of how to involve various agencies like health, agriculture and community, etc. A massive programme of orienting such teachers to these methods and exposing them to such knowledge was organized. Suitable introductory materials were given to them. They were also taken on visits to institutions like Indian Agricultural Research Institute, Central Health Education Bureau, etc., so that they could get a holistic idea of integrated education. These orientations have provided sufficient motivations to teachers as these programmes have a tremendous multiplier effect. A sample study of the impact of these programmes on enrolment showed that 30 per cent increase in enrolment was achieved in the sample schools.

(b) National Integration Project

Under the National Integration Project, financed by the Ministry of Education, four teachers' camps were organized where it was emphasized how, besides inculcating values of secularism, democracy, tolerance and mutual appreciation, real education would lead to national integration and international understanding. Students' camps on national integration were also organized with the active cooperation and collaboration of different state governments. Due emphasis was also given to the universalization of elementary education through formal and non-formal education programmes by making education more relevant to the needs of the children.

(c) Reading Readiness Project

One of the important factors for the children in Grades I and II is to develop the reading ability of the children. Our researches show that poor reading ability leads to poor comprehension and, thus, leads to dropout. The Department carried on its comprehensive Reading Project to find the correlation between reading ability and achievement in different school subjects. Reading tests were prepared and standardized. Data relating to reading score and achievement in school subjects were collected and analysed. These tests will be useful for primary schools to find out the level of reading ability of the children. Manuals of directions for the use of tests were also prepared. A handbook on Reading has also been prepared for the use of teachers.

(d) Seminar Readings Project

With a view to encouraging innovative classroom practices among the teachers of primary and secondary schools, seminar readings programmes were held like the previous years. Fifteen best teacher-authors of this

competition were awarded prizes and certificates.

(e) Collaboration with the CBSE

Besides the above programmes, the Department organized five orientation programmes for education officers and principals of higher secondary schools affiliated to the Central Board of Secondary Education. These orientation programmes were organized in the context of the new curriculum. This work was taken up at the instance of the Ministry of Education, Social Welfare and Culture, Government of India.

(f) Collaboration with the UNESCO

The Department undertook collection and dissemination of innovations in schools. Several voluntary organizations and institutions have also been working in this field. The Department collected, screened and disseminated these for wider use by teachers. At the instance of the UNESCO, a committee was formed under the chairmanship of the then Joint Director, NCERT, for collecting innovations in education in India. Some other departments of the NIE also collaborated with this Department and 16 innovations were studied through the case study method. A national seminar was organized in which the innovators and representatives of the concerned state departments of education participated. The report of the seminar and a booklet entitled *Innovations in Education in India* were published and circulated for wider use.

2.6 Department of Teaching Aids

The Department of Teaching Aids symbolizes the development of audio-visual education at the national level in the country. Its emphasis has been on the training of teacher-trainers in the field of audio-visual education, production of teaching aids and allied materials in the form of films, filmstrips, flannelgraphs study kits, etc. This Department is also engaged in the acquisition, propagation and lending of audio-visual aids like films and filmstrips to different educational institutions in the country. The Department also conducts research studies in the effectiveness of various teaching aids. Major activities/programmes of the Department conducted during 1976-77 are highlighted as under.

(a) Training Programmes

(i) Three-week Training Course in Audio-visual Education

The Department conducted a three-week training course in audio-visual education from 21 September to 11 October 1976, in which 25 teacher-educators from secondary training colleges all over India participated. The

emphasis of the course was to impart extensive training to the participants in the preparation of inexpensive teaching aids, as also in learning new techniques of modern technology which could be useful in teaching-learning situations.

(ii) Three-week Regional Training Course in Audio-visual Education at Gangtok (Sikkim)

The Department conducted a three-week regional training course in audio-visual education at Gangtok (Sikkim), in collaboration with the Directorate of Education, Gangtok. Twenty-five teachers drawn from all over Sikkim attended the course. The course concluded on 13 December 1976.

(iii) Three-week Technical Training Course

The Department conducted a three-week technical training course in the operation, maintenance and repair of AV equipment from 6 to 28 February 1977, in which 20 teachers of the Union Territory of Delhi participated. The trainees were also taken to the Base Production Unit, Doordarshan, and to the TV Studio at Vigyan Bhavan.

(b) Collaboration with States/Other Agencies

(i) A workshop on audio-visual education was organized by the Department, in collaboration with the Technical Teachers' Training Institute, Chandigarh, during May 1976, in which training was imparted to 27 teachers in various aspects of audio-visual education.

(ii) The Department assisted the State Institute of Education, Delhi, in organizing a seminar-cum-workshop for the commerce teachers of Delhi from 13 to 18 September 1976.

(iii) The Department assisted the Border Security Force Academy, Tekampur, in organizing a workshop on audio-visual education for the state police offices and other subordinate offices from 16 to 22 January 1977.

(iv) The Department assisted the Lady Irwin College (University of Delhi) in organizing a one-week workshop for the students of M.Sc. (Community Resource and Management) from 24 to 29 January 1977, and in conducting practicals on communication media in a rural development programme, flash cards, flannelgraphs, puppetry, etc.

(v) An AV Media Officer from the Gandhigram Institute of Rural Health and Family Planning, Madurai, was imparted orientation training in various areas of AV education from 21 to 28 February 1977.

(vi) The Department, again, assisted the State Institute of Education, Delhi, in organizing a workshop on the teaching of commerce from 28 February to 4 March 1977.

(c) Production Programmes

(i) A 16 mm film *Understanding Animals* was produced during the

period under review.

- (ii) A 35 mm filmstrip entitled *Rajasthan* was produced.
- (iii) The following films were got dubbed in Hindi :
 1. Chemistry Kit
 2. Teaching of Science Through Environment : Rocks and Soil
- (vi) Production of the following films was taken up during 1976-77 :
 1. History of Science—A series of 12 films
 2. NCERT
 3. Elasticity

(d) Research Projects

(i) The Department has compiled an evaluation report of the training courses organized from 1960-1972.

(ii) A revised edition of the All India Directory of Audio-visual Equipment and Materials was taken up by the Department. The above directory will cater to the needs of various educational institutions and other organizations which seek information and advice pertaining to the sources and availability of various types of audio-visual materials and equipment.

(iii) Work was initiated on the evaluation of the DTA products and prototypes.

(e) Collaboration with Foreign Countries/International Agencies

(i) Training of Afghan Nationals

Four Afghan teachers were imparted training in the various aspects of audio-visual education from 5 April to 29 June 1976 under the Indo-Afghan Cultural Exchange Programme.

(ii) Celebration of the 30th Anniversary of the UNESCO

The Department assisted the International Education Unit (NCERT) in arranging an exhibition-cum-display at the seminar of the UNESCO Associated Schools to commemorate the celebration of the 30th Anniversary of the UNESCO organized by the International Education Unit (NCERT) at the Department of Teaching Aids from 4 to 5 November 1976.

27 Department of Textbooks

(a) Evaluation of Textbooks from the Standpoint of National Integration

At the instance of the Ministry of Education and Social Welfare, the Department of Textbooks undertook a programme of evaluation of textbooks of English-medium schools in India from the standpoint of national integration. Under this programme, textbooks of Bengali and Assamese being used in the English-medium schools have been evaluated

during the year. Textbooks in other subjects have already been evaluated in the previous years.

(b) Collaboration with States/Other Agencies

The Department of textbooks seeks, from time to time, the cooperation of other organizations in the country. The Department provided academic as well as financial assistance in getting evaluated the textbooks of the Maharashtra State Board of School Education and the Maharashtra Bureau of Textbook Production and Curriculum Research. Textbooks in the subjects of English, Marathi, general science, physics, chemistry, biology, mathematics, history, geography and civics were evaluated comprehensively. Evaluation reports were sent to the concerned education authorities in the state for taking suitable necessary action.

(c) Developmental Programmes

(i) The Department develops conceptual literature on the principles and procedures for the preparation and evaluation of textbooks in different subjects. Under this programme, the Department finalized a brochure on the principles and procedures for the preparation and evaluation of textbooks in civics. Work on the development of brochures on the principles and procedures for the preparation and evaluation of textbooks in economics and grammar, supplementary readers in English, mother tongue textbooks, textbook in second languages, environmental studies (social studies) and development of exercises in language is also in progress.

(ii) During the year, the Department developed tools for the evaluation of textbooks in science, mathematics, civics and environmental studies (social studies).

(iii) The Department prepared criteria and tools for the evaluation of the syllabi in natural sciences, mathematics, social sciences and languages.

(iv) The Department has developed tools for the try-out of textbooks in natural sciences, mathematics, social sciences and languages.

(v) The Department is preparing an annotated bibliography of good reading material in English.

(d) Research Projects

The Department completed a research study Comparative Study of School Curriculum (Classes IX—X) and continued work on the following research studies during the year under report :

(i) Compilation and linguistic analysis of the vocabulary of primary classes belonging to Hindi-speaking areas

(ii) 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

- (iii) Comparative study of standards as reflected in the syllabi of science, mathematics, social sciences, English and Hindi of the states where there are public examinations at the end of Class X
- (iv) Comparative study of mother tongue textbooks
- (v) Importance of illustrations in geography textbooks
- (vi) Study of material in history textbooks, which
 1. jeopardizes national integration,
 2. promotes national integration
- (vii) A study of the evolution of textbooks and their role in formal education in the context of changing society (ancient to modern period, with special emphasis on the post-independence period)

(e) National Centre for Textual Material

The Department maintains a National Centre for Textual Material (NCTM) where the syllabi, textbooks and other reading material of all the states, etc., have been kept. During the period under report, new textbooks and supplementary readers brought out by the states have been added to this Centre.

2.8 Publication Department

The Publication Department produces and distributes a wide range of publications in the field of education, namely, school-level textbooks, workbooks, teachers' guides, supplementary reading materials, research monographs and reports, educational surveys, handbooks and other instructional materials, educational journals, pamphlets and brochures.

A most significant feature of the Publication Department during the period under report was the association of private-sector publishers with the NCERT in the task of bringing out most of the new 10+2 pattern textbooks for the First Phase of the programme of introducing these textbooks for the session 1977-78 for Classes I, III, VI, IX and XI. Since 56 first editions of textbooks had to be produced and distributed, the Council decided that in view of the Publication Department's limited resources, a large number of these textbooks should be farmed out to private-sector publishers for printing, publication and distribution as an experiment. Accordingly, out of the 56 titles, rights to publish and distribute 48 titles were assigned to private-sector publishers. The remaining eight titles as well as reprints of the old-pattern textbooks for the remaining school classes were undertaken by the Publication Department itself.

During the period under report, in addition to the 48 new textbooks assigned to private-sector publishers, the Department itself brought out 155 titles (original editions, and revised editions/reprints included). The list of books brought out is given in Appendix G. The category-wise

break-up is given below :

| <i>Category</i> | <i>No. of Titles Brought Out</i> |
|--|----------------------------------|
| Books | 68 |
| Teachers' guides and workbooks | 11 |
| Supplementary readers | 11 |
| Research monographs and other developmental materials and reports | 39 |
| Periodicals | 26 |
| Total | <u>155</u> |

The Publication Department made a sale of Rs. 75.45 lakhs during the year under report. In addition, a sale of US \$ 730.60 was made through direct export orders.

The Publications Division, Ministry of Information and Broadcasting, New Delhi, our National Distributors, continued the sale and distribution of the Council's publications in northern, eastern and western zones through their sales emporiums at New Delhi, Bombay and Calcutta. The southern region and Gujarat were served by the Publication Department, which also continued to attend to export orders directly.

All the council's journals were also directly distributed and sold by the Department.

Under the Technical and Economic Cooperation with Developing Countries Programme of the Ministry of External Affairs, Government of India, New Delhi, the Council's publications worth Rs. 6,632.35 were supplied to the Government of Tonga through the Consulate General of India, Sydney, Australia.

The Department continued to participate in Book Fairs and Exhibitions to publicise the NCERT publications. The Department participated in the 8th National Book Fair organized by the National Book Trust, New Delhi, at Ahmedabad in January 1977. It also participated in International Book Fairs/Exhibitions held at Kuala Lumpur, Bangkok, Ankara, Mexico City, Suva (Fiji), Hongkong, Cairo, Bologna (Italy), Belgrade during the period under report, by sending selected Council's publications through the National Book Trust.

The Department also continued to impart training to students of the College of Vocational Studies, Delhi University, Delhi. During the period under report, under-graduate students (Book Publishing) of the above college were imparted practical training in marketing of publications.

During 1976-77, the Department accorded copyright permission to adopt/adapt NCERT publications to the following agencies :

1. Jammu and Kashmir Board of School Education, Jammu and Kashmir.

2. Directorate of Education (Science Branch), New Delhi
3. Gujarat University, Ahmedabad
4. Gujarat State Board of School Textbooks, Ahmedabad
5. Textbook Nationalisation Unit, Allahabad
6. Madhya Pradesh Textbook Corporation, Bhopal
7. Himachal Pradesh Board of School Education, Simla
8. State Institute of Science Education, Haryana, Gurgaon
9. State Institute of Education, Haryana, Gurgaon

2.9 Workshop Department

(a) *Development of Kits and Kit Items*

(i) *Development of Kits for Classes IX, X, XI and XII*

Equipment and electronics kits for the new syllabus are being developed. The requirements of the syllabus have been identified and some simple and low-priced electronic circuits illustrating basic concepts in electronics and use of electronic devices such as basic tubes (diode and triode), basic semi-conductors, circuits (rectifier, amplifier, oscillator, modulator, etc.) have been assembled. Also, miscellaneous circuits using light dependent resistor, toy motor, thermostats, relay, gas tube, diode, simple switching circuits, binary circuits, etc., have been developed.

(ii) *Development of Equipment for Teaching Primary Science*

The cost of the earlier model has been brought down considerably by redesigning the Primary Science Kit. Special designs of Magnetic Compass, Water Wheel, Measuring Cylinder, Water Pump, Spring Balance and Decimeter Cube Vessel were developed for the use of the students of a Blind School.

(iii) *Development of Inexpensive Substitutes for Conventional Apparatus*

The following items were developed :

1. Strapping Balance
2. Optical Micrometer
3. Optical Bench
4. Spring Balance
5. Single Pan Balance
6. Lever Apparatus
7. Inclined Plane
8. Cell Holder and Switch
9. Overflow Jar
10. Common Balance
11. Water Timer
12. Current Reverser

13. Linear Expansion Apparatus
14. Heating Source
15. Telegraph
16. Heating Stand and Funnel Stand
17. Wire Test Tube Holder
18. Tripod Stand
19. Velocity of Sound Apparatus
20. "U" Tube Manometer
21. Short Interval Timer
22. Electric Motor
23. Deflagrating Spoon
24. Carbon Arc Furnace
25. Salt Water Rheostat
26. Kipp's Gas Generator
27. Dropping Funnel
28. Simple Micrometer
29. Micro Projector
30. Compound Microscope
31. Siren Disc
32. Centre of Gravity App.
33. Conductivity of Heat
34. Rotation Machine
35. Composition of Forces
36. Dipping Needle

(b) *Production of Kits and Kit Items*

- (i) The Department undertook mass production of primary science kits as required by the UNICEF.
- (ii) One thousand one hundred and two primary science kits, other than the UNICEF supply order, were also produced during the period under review. Of these, 900 kits were despatched to the following two states :

| | |
|----------------------|----------|
| 1. Himachal Pradesh | 400 kits |
| 2. Arunachal Pradesh | 500 kits |
- (iii) The Department also despatched the following other types of kits to the various states :

| | |
|--------------------------------|----|
| 1. Physics I Kit | 76 |
| 2. Physics II Kit | 45 |
| 3. Physics III Kit | 77 |
| 4. Biology Demonstration Kit | 46 |
| 5. Chemistry Demonstration Kit | 46 |
- (iv) One set of kits consisting of Physics I, Physics II, Physics III, Biology Demonstration and Chemistry Demonstration kits was sent to

Addis Ababa, Ethiopia, through the Ministry of External Affairs.

(c) Maintenance and Service to the other Departments of the NIE

The Department erected a large number of partitions in the various departments of the NIE. Besides this, it manufactured a large number of miscellaneous items like book-stands, chart boxes, reception counters, notice-boards, etc. It also carried out a large number of furniture repair jobs in the NIE. The Department also erected a shed, and constructed a steel structure for the classrooms of the Central School on the NIE Campus. The Department also undertook the work of erecting the NCERT sign-board.

The Department undertook repair and maintenance of all air-coolers, air-conditioners, water-coolers and fans of the Campus. The Department had been maintaining and providing the services of Public Address System in the NIE auditorium and conference room. It installed fans in the auditorium and the conference room of the NIE. The Department had been maintaining the NIE vehicles and has been attending to both minor and major repair work of the vehicles. Major overhauling of the Gillotine Shear and Hydraulic Press of the Department was also done.

(d) Training of Apprentices

The Workshop Department trains apprentices in various trades under the Apprenticeship Act, 1961. Under this scheme, the Department trained ITI apprentices and one graduate engineer during the year.

(e) Work on Science Exhibition

The Department contributed and extended full cooperation to the Department of Education in Science and Mathematics in the organization of the National Science Exhibition held at Teen Murti House. Like the previous years, the Workshop Department prepared several exhibits and assisted the Department of Education in Science and Mathematics in putting up all the stalls and fabricated the main entrance gate of the Exhibition.

(f) Other Miscellaneous Works

(i) The Department prepared a curriculum for different vocations at the +2 stage. Drafts on different vocations were prepared and discussed several times in the committee set up by the Council for this purpose and then these were finalized and submitted.

(ii) The Workshop collaborated with the Department of Education in Science and Mathematics in bringing out the following two books :

1. Organization of Training Programme for Workshop Instructors
2. Teaching of Science by Using Local Resources

2.10 Work Experience and Vocationalization of Education Unit

(a) National Document on Vocationalization of Education

The Unit prepared a draft on the vocationalization of higher secondary education, which was revised after a national conference in June 1976.

(b) District Vocational Surveys

Four vocational surveys were conducted in collaboration with the Regional Colleges of Education in the districts of Ganganagar, Durg, Mysore and Cuttack. A workshop was also organized in November 1976 for giving guidelines to the states for conducting quick surveys.

(c) Preparation of Syllabi in Vocational Subjects

The Unit prepared syllabi in 25 vocations in the major areas of agriculture, commerce, engineering, home science, para-medical sciences and a couple of other courses such as tourism and photography. The lists have been supplied to the Central Board of Secondary Education, Delhi Administration and Kendriya Vidyalaya Sanghathan. The syllabi were sent to some states as well. Karnataka has so far adopted and elected the system proposed by the NCERT. Tamil Nadu has been working on a comprehensive plan for introducing vocational courses from 1978.

2.11 Examination Research Unit

The Examination Research Unit was set up by the Council in April 1975 to provide a research base for its programmes of examination reform and test development for the identification of talent. During the period under review, it undertook the following programmes :

(a) Non-verbal Test of Intelligence

Under this project, a test is prepared and supplied every year to the Ministry of Education and Social Welfare in connection with the National Merit Scholarship Scheme in approved residential secondary schools. During the period under report, two tests were prepared and supplied to the Ministry in May and September 1976.

(b) General Mental Ability Test

Under this project, a test is to be prepared every year for the NCERT's National Talent Search Scheme for Class X. During the period under report, one test of general mental ability was prepared for the National Talent Search Examination, 1977.

(c) Measurement of Affective Outcomes of Primary School Education

The main objective of the project is to develop a set of tools/

procedures for measuring affective attributes (interests, attitudes, values) of pupils at the end of primary school education. Analysis of the affective content of primary school language textbooks is in progress.

(d) Assessment of School Environments

The main objective is to develop a tool for measuring school environment. The project was approved by the ERIC as a pilot project covering three schools, one municipal, one central and one rural. The work is in progress.

(e) Differential Aptitude Tests Battery

The main objective of the project is to develop tools for measuring developed abilities of pupils in Class VIII of schools in the Hindi regions. The battery consists of 11 tests which have been tried out and finalized on the basis of item analysis. The tests are for use in guidance and counselling.

(f) Studies in Science Talent

This project aims at studying the dropout rate in science talent, causes of the dropout, study of the examination results and a detailed analysis of the background factors of those selected for this scheme and those who applied for it. Reports have been prepared for the dropout rate study and the background factors study. Causes of the dropout are being studied.

(g) Social-Cultural Change and Changes in Creative Functioning in Children

This project aims to study the effects of temporal change on creative behaviour. Tests of creativity and other tools have been prepared and data are being collected for this study.

(h) Serum Uric Acid, Intellectual and Personality

This study will attempt to find out the biochemical basis of cognitive abilities and personality. Tools for this have been prepared. Arrangements are being made for the collection of blood samples.

(i) Evaluation of the Comprehensive Internal Assessment Scheme Adopted by the Board of Secondary Education, Rajasthan, Ajmer for Classes IX, X and XI

The main objective of the project is to understand the difficulties, as also the ways and means to overcome these for effective implementation of the scheme.

During the period under report, the relevant literature on the scheme was studied and consultations were held with the academic staff of the Board. Tools for the study were then decided. Tools were prepared and the first tryout was arranged in September 1976.

2.12 Examination Reform Unit

The following are the important programmes undertaken by the Unit during 1976-77:

(a) *Development Programmes*

(i) *Developing Question Banks*

A workshop for the orientation of 75 post-graduate teachers of Kendriya Vidyalaya Sanghathan, teaching sciences, social sciences, languages and mathematics, was held for preparing question banks. Sample illustrative material in the form of objective-based essay type, short answer type and very short answer type questions was developed. Apart from this, about 1,000 objective-based questions on different topics of the syllabi prescribed for Class IX were also prepared.

(ii) *Seminar on Grading*

A seminar on grading was organized, which was attended by 20 experts from all over India. These delegates came from different agencies concerned with examinations, e.g., UGC, IITs, State Boards of School/Secondary Education, teacher training colleges, universities, etc.

Major recommendations were as follow :

1. Grading should be done on a seven-point scale.
2. The practice of declaring results in terms of 'pass' or 'fail' be done away with.
3. Students should be given opportunities to improve their grades.
4. For the time, grades may be determined on the basis of marks.
5. The quality of question papers should be improved.
6. Teachers, paper-setters and examiners should be oriented in the new system of grading.

(iii) *Development of Conceptual Material on Evaluation Procedures*

A series of following monographs were developed :

1. Guidelines for the maintenance of evaluation standards under the semester system.
2. Mechanics of grading in examination.
3. Evaluation at the higher secondary stage (academic and vocational subjects).

These were circulated to state-level educational agencies, particularly the State Boards of School/Secondary Education.

(iv) *Study on the New Approach of Evaluation Conducted by the West Bengal Board for Work Education*

To study external examination in work education recently introduced

by the West Bengal Board of Secondary Education, ten schools were visited in Calcutta and the evaluation scheme for work education in terms of educational projects and productive projects was observed in operation. A report on the study was prepared to identify the shortcomings and suitable recommendations were made to the Board.

(v) In-depth Study of Autonomous Schools in Rajasthan

Two schools of Rajasthan, Vanasthali Vidyapith and Vidya Bhawan in Udaipur, are completely autonomous schools. The third school, Marudhar Kesari Vidyalaya (Ranavas), has also developed a scheme of internal assessment and uses new practices in evaluation. The pattern of autonomy and the evaluation system of these schools were studied, in order to develop a comprehensive scheme of curriculum and evaluation for them.

(vi) Classroom Learning Improvement Project

In order to verify and validate the approach of integrating teaching and testing in the classroom through objective-based instruction and evaluation, a project entitled Classroom Learning Improvement Project (CLIP) was developed and tried out in Class VII in one of the Central Schools of Delhi. The results, which have been encouraging till now, are proposed to be followed up.

(vii) Test Development in Hindi, English, Biology, Economics and Geography

Unit tests brochures for the secondary stage were prepared by a group of subject-experts and trained item-writers. These brochures are under print for wider circulation and use.

(viii) Publications

The following publications were finalized by the Unit during the year :

1. Use of Test Material in Teaching
2. Reforming Examination—Some Emerging Trends
3. Instructional Objectives of School Subjects
4. Education in Hungary
5. Project Report on Correspondence Courses at the School Level in Delhi, Madhya Pradesh and Rajasthan
6. Unit Tests in Geography for Class IX
7. Unit Tests in English for Class IX

(b) Short-term Training Course in Language Testing

A short-term training course in language testing was organized to train language teachers in testing pupil achievement. It was attended by 21 teachers.

(c) Collaboration with States/Other Agencies

(i) Working Groups for the Development of Model Question Papers for 10+2 in Languages, Social Studies, Science and Mathematics for CBSE

Sample question papers in Hindi, English, geography, economics, commerce, history and civics, physics, chemistry, biology and mathematics were developed for Class X, in collaboration with the CBSE.

Question papers, complete with blueprints, scoring keys and question-wise analysis, were prepared in each group. A small brochure in each subject was also prepared for the use of teachers and students.

(ii) Scheme of Evaluation in Health Education

A workshop was held in Delhi for evolving a scheme of internal assessment in health education in collaboration with the Central Board of Secondary Education. The Central Board of Secondary Education intends to use these guidelines for the evaluation of health education.

(iii) Scheme of Evaluation in Work Experience

A comprehensive scheme was developed in collaboration with the CBSE on evaluation in work experience indicating the approach, criteria of evaluation, tools, techniques and guidelines for the use of teachers. The scheme is being considered for implementation by the CBSE.

(iv) Consultative Contribution to the Sikkim Programme of Teacher Training

A course on educational evaluation offered under the training programme for teachers organized by the Department of Education, Sikkim, was conducted by the Unit and all conceptual and illustrative material was provided.

(v) Development of Test Material at the Middle Stage for Sikkim

Test material for the middle school stage was developed in collaboration with the Department of Education, Sikkim. The preparation of material and orientation was conducted as part of the plan to streamline the pattern of evaluation at the middle school stage in Sikkim, and to train the teachers in the techniques of improving classroom teaching and testing. A compendium of question papers for Class VIII in all subjects was an important outcome.

(vi) Evaluation Workshop for the Orientation of the Paper-setters from Nagaland

A workshop for training the paper-setters of the Nagaland Board as

part of the examination reform programme launched by the Nagaland Board of School Education was held. Sample question papers, complete with the design, blueprint, outline answers, marking scheme and question-wise analysis, were prepared in English, Ao, Angami, history, geography, commercial geography, public administration, science and mathematics, and a brochure was developed on the preparation and use of such balanced question papers. The Nagaland Board of Education intends to print and circulate these brochures to the schools for the guidance of students and teachers.

(d) Foreign Collaboration

(i) Short-term Training Course in Educational Evaluation for Foreign Nationals

A short-term training course was organized for ten teacher-educators, administrators and planners from Afghanistan under the Bilateral Cultural Exchange Programme. During the eight-week course, they were trained in the new concept of evaluation, school evaluation and diagnostic testing.

The following extract from the report the group personally presented to the President of India deserves special mention:

“... Shall we make an humble suggestion for serious consideration, that India may also keep education on its export list, with educational evaluation particularly examination reform as the first item on it.”

(ii) A Case Study on Examination Reform in India

At the request of the UNESCO, the NCERT took up the development of a case study on examination reform in India. The task was entrusted to Professor H.S. Srivastava, Head of the Examination Reform Unit. The book, in English, French and Spanish editions, is being published by the International Bureau of Education, Geneva.

2.13 National Talent Search Unit

The Unit looks after the National Talent Search Scheme designed to identify and nurture talent in the country. Till 1976, the scheme was known as the National Science Talent Search Scheme under which 350 scholarships were awarded on the basis of an examination conducted at over 400 centres in the country, followed by an interview of the candidates selected according to their performance in the above test. These scholarships were tenable at the B.Sc., M.Sc. and Ph.D. stages according to the specific rules for the continuation of the award. Ten more scholarships were awarded for studies in mathematics only.

The Executive Committee of the NCERT considered the recommendations of the Review Committee and accepted them with modifications

during December 1976. According to these recommendations, for 1977 there will be two examinations, one at the end of Class X under the new pattern which will be conducted under the new scheme called the National Talent Search Scheme. The other examination will be held, as usual, under the old scheme called the National Science Talent Search Scheme. The number of scholarships in the former case shall be 350, and 100 in the latter. The 1977 examination, as per the recommendations, shall be held during the month of May. The main feature of the new examination will be that the awardees will be free to pursue their studies in any of the courses like basic sciences, social sciences, engineering and medicine, unlike those under the National Science Talent Search Scheme who are restricted to study basic sciences only.

The Unit also undertook a regular follow-up programme of the awardees during 1976. The awardees at the under-graduate level were placed at 12 summer schools at different centres of higher learning in the country. The post-graduate awardees, as usual, were placed at the national laboratories and the Centre of Advanced Studies for the Execution of Research Projects under the guidance of renowned scientists.

The break-up of the awards made during the year 1976-77 on the basis of the examination held earlier is given in the table below :

State-wise Distribution of Candidates Selected for Awards in 1976 under the National Science Talent Search Scheme

| <i>S. No.</i> <i>Name of State/ Union Territory</i> | <i>No. of Candidates Appeared in the Examination</i> | <i>Called for Interview</i> | <i>No. of Candidates Selected for Awards</i> | |
|---|--|-----------------------------|--|--------------------|
| | | | <i>Basic Sciences</i> | <i>Mathematics</i> |
| STATES | | | | |
| 1. Andhra Pradesh | 869 | 62 | 14 | — |
| 2. Assam | 73 | 10 | 6 | — |
| 3. Bihar | 287 | 31 | 14 | — |
| 4. Gujarat | 140 | 14 | 3 | — |
| 5. Haryana | 75 | 8 | 3 | — |
| 6. Himachal Pradesh | 42 | 2 | — | — |
| 7. Jammu and Kashmir | 78 | 2 | — | — |
| 8. Karnataka | 360 | 55 | 5 | — |
| 9. Kerala | 319 | 83 | 21 | — |
| 10. Madhya Pradesh | 831 | 30 | 9 | — |
| 11. Maharashtra | 374 | 73 | 25 | 3 |
| 12. Manipur | 6 | 2 | 1 | — |
| 13. Meghalaya | 4 | 1 | — | — |
| 14. Nagaland | — | — | — | — |

| | | | | |
|---------------------------|-------------|-------------|------------|----------|
| 15. Orissa | 130 | 20 | 11 | — |
| 16. Punjab | 200 | 4 | 1 | — |
| 17. Rajasthan | 891 | 82 | 29 | — |
| 18. Sikkim | — | — | — | — |
| 19. Tamil Nadu | 775 | 69 | 17 | — |
| 20. Tripura | 10 | — | — | — |
| 21. Uttar Pradesh | 1566 | 65 | 19 | — |
| 22. West Bengal | 712 | 134 | 67 | 2 |
| UNION TERRITORIES | | | | |
| 1. A and N Islands | 9 | — | — | — |
| 2. Arunachal Pradesh | — | — | — | — |
| 3. Chandigarh | 30 | 5 | 2 | — |
| 4. Dadra and Nagar Haveli | — | — | — | — |
| 5. Delhi | 901 | 262 | 99 | 1 |
| 6. Goa, Daman and Diu | 5 | 2 | — | — |
| 7. Lakshadweep | 3 | — | — | — |
| 8. Mizoram | — | — | — | — |
| 9. Pondicherry | 108 | 6 | 1 | — |
| Total | 8798 | 1022 | 347 | 6 |

2.14 Survey and Data Processing Unit

Major programmes of the Unit during 1976-77 were :

(a) *Third All-India Educational Survey*

The Ministry of Education and Social Welfare, during 1973, desired that the NCERT should conduct the Third All-India Educational Survey. The actual work of the survey began in the third week of November 1973. Unlike the preceding two surveys which were limited to very few items with limited objectives, the present survey was very comprehensive in nature and wide in content coverage.

During the period under review, national tables were compiled from the various state tables received. In respect of schedules for teacher training institutions at the pre-primary, elementary and secondary levels, physical education institutions for the physically handicapped, pre-primary schools and coaching institutes and in respect of the Ashram Schools of the Hindi-speaking states, the data were analysed in the Unit and reports on various aspects were prepared.

(b) *Wastage and Stagnation*

The Unit conducted a study on wastage and stagnation on a priority basis, as requested by the Ministry of Education and Social Welfare.

(c) *Potentiality for Vocationalized Higher Secondary Education in the Union Territory of Delhi*

The Union Territory of Delhi has switched over to the 10+2 pattern

and the first batch of pupils of Class X was to write the examination in March 1977. The Delhi Administration had to make provision for vocational courses at the +2 stage. But there was no information about the proportion of the number of students opting for this course after Class X. Hence, the Delhi Administration made a request to the NCERT to undertake a sample survey of the proportion of pupils opting for the vocational course. The survey was started in mid-September 1976 and completed in mid-November 1976.

(d) Processing of Data

The Unit had the major task of processing the data relating to the Third All India Educational Survey. Work on the National Science Talent Search Scheme, which is an annual feature, was also undertaken. In addition, the Unit processed the data relating to the various research projects conducted by the departments of the NCERT, as also those relating to the Ph.D. work of the various NCERT staff members and Research Fellows.

2.15 Policy, Planning and Evaluation Unit

During 1976-77, the Policy, Planning and Evaluation Unit continued to prepare position papers for national/international conferences and seminars and to study the educational developments in India and abroad. The International Education Unit was merged with the Policy, Planning and Evaluation Unit with effect from 9 February 1977, with additional responsibilities.

Under the International Technical and Economic Cooperation, the Unit organized a seven-week training programme for 28 Afghan women teachers. The Unit also arranged visits for foreign experts to the Council, details of which are given in Appendix F.

The Unit prepared a country paper for the seventh Commonwealth conference held at Accra, Ghana, in 1977. A comparative study of the curriculum load in India and six other countries at various stages of socio-economic development was prepared for the Council.

The following lectures were arranged under the NIE Lecture series :

1. Prof. B.D. Nag Chaudhari — Ethology and Education
2. Prof. S.C. Dube — Man, Society and Education : Some Questions Concerning a Preferred Future

These lectures have a direct bearing on the alternative educational futures. Keeping in view the importance of the subject, the Unit initiated a project on Alternative Educational Futures. In its first phase, the Unit has prepared and circulated the following four working papers :

1. School-going Population in India—1971-2026
2. Population Growth and Educational Facilities in India

3. Indian Educational System : Top Heavy and Bottom Weak
4. Implementation of Constitutional Directives on Education : Progress, Problems and Future Strategies

2.16 Library and Documentation Unit

The National Institute of Education (NIE) has a fairly large library. It has a collection of more than one lakh books and about 5,000 bound journals.

The library subscribes annually to 260 journals, both Indian and foreign. In addition, 35 journals are being received gratis. A few journals are received on exchange basis also.

During 1976-77, 2751 books were added to the library, comprising of 412 books purchased and 2339 books received gratis.

2.17 UNICEF-assisted Projects (including Primary Curriculum Development Cell)

(a) Science Education Project (Project I)

Though the quantum of UNICEF assistance in the Science Education Project is limited only to a small percentage of primary schools, the catalytic influence of the project has led to progressive development of science education programmes in various states from their own resources. Ten states and three union territories have embarked on universal introduction of the new improved science education programme in all their primary schools. From the reports received from the states, it appears that a total of 63, 200 primary and over 9,000 middle school kits have been provided by the various states from their own resources. They have also trained over 2,00,000 primary teachers and 1.28 lakhs middle school teachers from their own resources.

Since the problem of supplying science kits to all primary schools is a formidable one, a different strategy is being worked out by developing the concept of using the environment and improvisation from local resources for the teaching of science in primary schools. A preliminary workshop had already been organized for developing materials for using local resources for the teaching of primary science.

During the year, the following publications on the training and orientation of the various categories of staff have been prepared and printed for the various training and orientation programmes :

1. Organization of the training programme for method masters
2. Organization of the training programme for workshop instructors
3. Organization of the training programme for primary inspectors of schools and science supervisors
4. Teaching science by using local resources

5. Curriculum guide on nutrition, health and environmental education for primary schools

An extension of the Science Education Project for developing regional centres for the development of syllabi and instructional materials for the primary stage is for nutrition, health education and environmental sanitation. It has to be integrated with the primary science curriculum. Five regional centres have been set up, one each at Coimbatore, Calcutta, Baroda, Jabalpur and Ludhiana. All the centres have developed curricula, instructional materials and training materials for the teachers. They have trained 450 resource persons and about 3,300 teachers who, in turn, will act as resource persons covering experimental schools, ranging from 100-500 schools at four centres and 3,000 schools at the Coimbatore centre. During the year, a national conference of the directors and staff of the centres was organized for exchange of opinion and materials and to take stock of the situation for planning the future work. The states are to use the experimental materials in selected schools for a tryout during the next academic year.

The evaluation of the science education programme was taken up last year and continued during the current year in five selected states. The tools developed and tried out in Haryana were modified and translated into the regional languages of Madhya Pradesh, Kerala, Pondicherry, Rajasthan and Manipur. Analysis of the evaluation data is in progress.

(b) Primary Education Curriculum Renewal Project (Project 2)

The objective of the project is to develop innovative curricula which satisfy the educational requirement of the under-privileged children. The challenge is to develop suitable instructional materials and strategies based on the needs of the children living in the communities selected for the project. This project is being taken up on an experimental basis in 30 experimental schools in each of the 15 states located in three different areas. The states are : Andhra Pradesh, Assam, Bihar, Delhi, Gujarat, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Mizoram, Orissa, Rajasthan, Tamil Nadu and Uttar Pradesh.

The NCERT has constituted a Primary Curriculum Development Cell for monitoring this work in the states. At the state level, the agency responsible for executing and supervising the project is the State Institute of Education or its equivalent organization.

Each participating state has identified three teacher training schools which will be involved in this project, besides 30 experimental schools. They have started the development of a curriculum plan and syllabi and the preparation of all instructional materials such as textbooks, teachers' guides, workbooks, etc. The programme has been so phased that the materials for Classes I and II will be ready for use in the academic session 1977-78.

The corresponding orientation programmes of teacher-educators, supervisors and the training of teachers of experimental schools will be taken up in the next summer.

(c) Developmental Activities in Community Education and Participation Project (Project 3)

In this project, each participating state mentioned above has to establish two community education centres to develop programmes and activities for the various target groups, in cooperation with various departments and voluntary agencies working for the education and welfare of the community. Each state has formed a coordinating committee. The first step in the project is to undertake a survey of the needs of the community and to identify the various socio-economic conditions of the community. Based on the survey, educational activities are to be prepared and executed. The State Institute of Education has to train the teachers and community workers and to develop instructional materials for the different age-groups. Community centres have started functioning in the States of Bihar, Rajasthan, Uttar Pradesh, Assam, Mizoram, and Tamil Nadu, and are expected to be established in the remaining participating states very shortly.

2.18 Journals Cell

The Journals Cell was created in November 1976 to coordinate and look after the publication of the journals of the Council. The Cell brought out the following issues during 1976-77.

1. Journal of Indian Education—May, July, September, November 1976 and January, March 1977
2. Indian Educational Review—April, July, October 1976 and January 1977
3. Primary Teacher (English)—July, October 1976 and January 1977
4. Primary Shikshak (Hindi)—July, October 1976 and January 1977
5. School Science—July, October 1976 and January 1977

3. CENTRE FOR EDUCATIONAL TECHNOLOGY

The Centre, set up in May 1973, has been working in five main areas which are as follow :

1. Study and development of new and effective systems of education.
2. Research and development work in (a) software and (b) hardware.
3. Training for competencies and capabilities in the field of educational technology.
4. Evaluation of programmes, materials and learning systems.
5. Collection and dissemination of information and development of banks for software and hardware and extension work.

The Centre has undertaken a number of programmes during 1976-77, the major ones of which are :

(a) Programme Initiated at the Constituent Level

(i) *Multi-media Package for the In-service Training of the Primary School Teachers in Science*

A. Modification of the Package

The multi-media package prepared by the Centre for the in-service training of primary school teachers in science was modified on the basis of the feedback of its first operation in October 1975. This consisted of validation of the self-study material, validation and development of non-detailed activities on all the topics and revision of some of the radio and TV programmes.

In collaboration with the state ET Cells, the Centre organized a number of orientation-cum-demonstration camps in the SITE states in which resource persons and teacher-monitors were oriented in the use of modified multi-media packages.

The modified package was offered for the second time in July 1976 for 15 days before the SITE programme was withdrawn. More than 22,000 primary school teachers were simultaneously oriented in the content and methodology of science in the six SITE states.

B. Extension of the Multi-media Package

Encouraged by the success of the in-service training programme of primary teachers in science through multi-media package during SITE, further work to extend the package as well as to make the inputs available in the non-SITE areas was undertaken. To this end, English versions of four films of the package were prepared by March 1977. The rest of the films are also being rendered into English. Translation of activity booklets and study materials into English has also been done. Work relating to the revision and editing of three teacher-monitors' handbooks brought out during the SITE experiment is underway. A single teacher-monitors' handbook is proposed to be published in the near future. Work on bringing out an information folder on the 12 films of the package has also been initiated.

A series of workshops, each of four days' duration, were organized at Allahabad, Chandigarh and Pune to familiarize and orient the teacher-educators of the States of Uttar Pradesh, Punjab, Haryana, Himachal Pradesh, Chandigarh, Jammu and Kashmir, Delhi, Maharashtra, Tamil Nadu and Kerala with the multi-media package.

Two training programmes using the multi-media package, each of 15 days' duration, were organized in Uttar Pradesh and in the tribal areas of Madhya Pradesh.

The Governments of Uttar Pradesh, Gujarat and Madhya Pradesh, with the help of the Centre, took action to adopt/adapt the multi-media package and to utilize it for the training of their teachers in science.

C. Evaluation of the Multi-media Package

The impact of the multi-media package on the in-service training of the teachers was evaluated both during its first run in October 1975 and the second run in July 1976. The potential of the package was assessed in an experimental study in November 1976. The results of all these studies indicated positive gains on the part of the teachers in knowledge about the content and methodology of science. Their attitude to experimentation in science also changed in the desired direction.

(ii) Seminar on Educational Technology

A national seminar on educational technology was organized in Mysore in June 1976. A report highlighting the policies and major tasks in educational technology has been brought out.

(iii) Correspondence-cum-Contact Programme

A four-day conference on the correspondence-cum-contact programme was organized in February 1977 in Mysore to consider matters relating to the improvement of correspondence lessons, writing of self-instructional

materials, other media inputs and organization of contact programmes. This was attended by two principals and 22 subject conveners and lesson writers from the Regional Colleges of Education of the NCERT.

A package of programmed learning materials on difficult concepts of science of the primary school syllabus has been developed and tried out on the primary school teachers of Delhi. This will be further tried out at a teacher training school in Udaipur.

(iv) Feasibility Study of Alternative Learning Systems of Education

The Social Work and Research Centre (SWRC), Tilonia, Rajasthan, completed Phase I of the feasibility study entrusted to it in 1974-75 for developing alternative and effective systems of education at the primary level in rural areas.

A committee appointed by the Director to assess the project recommended the continuation of the project for another year.

(v) Educational Broadcasts for Schools

The case study on primary school broadcasts in Jalgaon (Maharashtra), covered under the District Educational Project, has been completed. The study pointed towards the need for an infrastructure and active teachers' participation for greater acceptance of radio programmes in schools.

(vi) Data Bank and Software Bank

The Centre initiated work on the preparation of a directory of persons working in the field of educational technology.

On the basis of the information available from the survey of audio-visual production equipment, an institutional catalogue showing the availability of CCT and video-tape recorders, film, slide, filmstrip and transparency making equipment and other equipments has been prepared.

The Centre developed a nucleus software bank for toys, films, broadcast materials, etc. Nursery rhymes in four regional languages were collected as a part of this programme.

(b) Special Project

Under the Audio Tapes Project financed by the ERIC, the Centre prepared 42 programmes of educational interest for school children from the archival recordings available at the AIR.

(c) Programmes Initiated with the Collaboration of the Ministry

Orientation in Educational Technology

A two-week seminar-cum-workshop was organized in February 1977 for the orientation of the officers concerned with educational technology of the ten states where Educational Technology Cells have been set up.

(d) Programmes Initiated in Collaboration with Other Organizations

A study regarding the impact of the SITE on primary school children was carried out in collaboration with the ISRO. A summary of the findings has been sent to the Space Application Centre, Ahmedabad.

As a part of the phased programme of creating a pool of trained ETV script-writers in areas where Doordarshan has started or is proposing to start the ETV programme, a 15-day orientation-cum-selection workshop was organized in Calcutta in February 1977 for orientation and selection of promising ETV script-writers.

(e) Programmes Initiated with Foreign Collaboration

(i) The services of Mr. L. Goodman as Chief Technical Adviser have been available to the Centre since November 1976 under the UNDP programme IND 612.

(ii) Substantial equipment for Close Circuit Television (CCTV), consisting of Portapack, electronic cameras, switchers and picture monitors with other accessories, has been received from the UNESCO for setting up TV and audio studios.

(iii) Prof. S. Shukla attended an international conference on Evaluation and Research in Educational Television and Radio held at the Open University, Milton Keynes (UK) during the period.

(iv) The Centre participated in the Inter Project Country Study visits and Advanced Level Workshop in Japan sponsored by the UNESCO and the National Institute of Education Research, Japan, respectively. The objective was to study the comparative status position of educational technology in various countries in the Asian Pacific region and to exchange views and experiences on the innovative practices in this field.

(v) Two members of the staff of the CET were sent for short training in Audience Research and TV production for formal and non-formal education to Malaysia and UK, respectively, under the UNDP programme IND 612.

(vi) In a programme sponsored by the Japan International Cooperation Agency, one Lecturer of the Centre completed a six-week training course in educational technology at the Tokyo Institute of Technology, Japan.

4. REGIONAL COLLEGES OF EDUCATION

Four Regional Colleges of Education were established for the purpose of effecting qualitative improvement among school teachers. These four colleges are located at Ajmer, Bhopal, Bhubaneswar and Mysore. They are responsible for looking after teacher education in their respective regions. Each regional college has a Demonstration School attached to it. These Demonstration Schools offer the same courses as the Central Schools and are affiliated to the Central Board of Secondary Education. They provide facilities for the regional colleges to experiment and innovate practices in teaching. These institutions are, in fact, educational laboratories for the regional colleges. The Regional Colleges of Education organize both pre-service and in-service training programmes. A number of changes have occurred in the organization of the curricula of these colleges. These changes are reflected in the reports which follow.

4.1 Regional College of Education, Ajmer

The Regional College of Education, Ajmer, continued to make progress in the field of education in the year under review. Admissions were made to the following courses of studies :

Four-year Science Courses

| | |
|--|----|
| 1. Ist Year B.Sc. (Hons./Pass) B.Ed. | 53 |
| 2. 3rd Year B.Sc. (Hons./Pass) B.Ed. | 47 |
| 3. Final Year B.Sc. (Hons./Pass) B.Ed. | 24 |

One-year B.Ed. Courses

| | |
|-------------------------------|----|
| 1. One-year B.Ed. Science | 84 |
| 2. One-year B.Ed. Commerce | 31 |
| 3. One-year B.Ed. Agriculture | 8 |
| 4. One-year B.Ed. Hindi | 42 |
| 5. One-year B.Ed. English | 33 |
| 6. One-year B.Ed. Urdu | 21 |
| 7. M.Ed. (Science Education) | 11 |

The college also runs a summer school-cum-correspondence course to which 37 women and 175 male teachers were admitted.

This course is run at two levels, one for secondary school teachers and the other for elementary school teachers. These courses are now in progress. The extension services department of the college helped in the propagation and implementation of the 10+2 scheme.

The college assisted the NIE departments in the areas of Work Experience, National Talent Search Scheme and Vocational Survey of Rajasthan (Ganganagar District). A conference of non-formal education was also conducted. The college brings out the following publications :

1. RCE News Letter
2. Trends in Education

4.2 Regional College of Education, Bhopal

The Regional College of Education, Bhopal, was set up in 1964 and since then it has been working in collaboration with all the State Departments of Education in the western region. This college is affiliated to the University of Bhopal. Currently, the focus of its activities has been on the implementation of the 10+2 scheme.

Various departments of the college have been engaged in in-service activities, research, production of material and extension work.

The Department of Science has planned new programmes leading to M.Sc. in education. The language department has been busy with the preparation of materials for the language laboratory and programmes for tribal areas. The Department of Education has done work in the area of microteaching, guidance and counselling. The audio-visual department is using effectively the subject kits supplied by the Delhi University and the National Museum, for cultural programmes.

A new Department of Correspondence Education has been created to carry on correspondence education for teachers to prepare them fully for teaching jobs under the new pattern of education. The department started organizing correspondence-cum-contact programmes for secondary school teachers of the western region. Correspondence lessons were prepared in the following areas : (1) physical sciences, (2) biological sciences, (3) mathematics, (4) social sciences-I (history and civics), (5) social sciences-II (geography and economics), (6) English, (7) Hindi, (8) art and culture. Three thousand, three hundred and eighty-two teachers from Madhya Pradesh, Maharashtra, Gujarat and Goa are receiving correspondence education in the above areas. The state governments have taken very prompt action in deputing teachers for this programme according to the scheduled period, and have given full cooperation for the success of the programme. Details showing the subject-wise and state-wise registration are given in the

table below :

Details Showing the Number of Teacher-trainees Enrolled for the Correspondence-cum-Contact Course

| <i>Name of the State</i> | <i>Physical Sciences</i> | <i>Biological Sciences</i> | <i>Mathe- matics</i> | <i>Social Sciences I</i> | <i>Social Sciences II</i> | <i>Eng- lish</i> | <i>Hindi</i> | <i>Art and Culture</i> | <i>Total</i> |
|--------------------------|--------------------------|----------------------------|----------------------|--------------------------|---------------------------|------------------|--------------|------------------------|--------------|
| Madhya Pradesh | 189 | 186 | 177 | 183 | 179 | 190 | 8 | 10 | 1122 |
| Maharashtra | 198 | 160 | 215 | 127 | 114 | 253 | 73 | — | 1140 |
| Gujarat | 158 | — | 234 | 180 | — | 274 | 160 | 69 | 1075 |
| Goa | 47 | 15 | 34 | 26 | 26 | 55 | 50 | 3 | 256 |
| | 592 | 361 | 660 | 516 | 319 | 772 | 291 | 82 | 3593 |

Enrolment of the elementary teacher-educators under this programme is in process and 300 teacher-educators have been enrolled for this programme. So far, three contact sessions have been held.

The college has been running the four-year B.Sc./B.Sc. (Hons.) B.Ed. and B.A. (Hons.) B.Ed. courses in science, language, agriculture, art, commerce, work experience and B.Ed. (SS/CC). During the current year, admissions to the first and the second year of the above courses have been stopped. Work experience has been made compulsory. M.Ed. (Elementary Education) and B.Ed. (Early Childhood) are the two new courses developed under education, and M.Sc. (Ed.) is the third course planned for introduction during the year, for which clearance from the Uchcha Shiksha Anudhan and the University of Bhopal has been obtained.

Extention and in-service work has been intensified during the year under report. Eight in-service programmes in different subject-areas, with special reference to the 10+2 pattern, have been organized. Requests of the state governments to organize certain courses for their personnel have been complied with to their satisfaction, with the accompanying results of the impact on school practices. The following are some of the in-service programmes organized during the year :

1. A meeting of the coordinators of the region was held at the Regional College of Education, Bhopal from 14 to 15 June 1976.
2. A content course in geography was held at Panaji from 8 to 19 October 1976.
3. A content course in biology was held at Panaji from 11 to 20 October 1976.
4. A conference for the Career Masters of the Goa State was held at Panaji from 11 to 20 October 1976.
5. A conference for mathematics teachers was held at this college from 5 to 8 November 1976.
6. A conference on the 10+2 (Elementary Education) was held at this

college from 24 to 27 November 1976.

7. A conference on physics at the under-graduate level was held at this college from 21 to 26 March 1977.
8. A workshop on environmental science was held at this college from 21 to 26 March 1977.

The internship programme during the year has been quite successful, with a large number of teachers of cooperating schools participating in an orientation programme and students' teaching organized in different schools in Madhya Pradesh, Maharashtra and Gujarat. This provided experience to the student-teachers in all areas of their work.

4.3 Regional College of Education, Bhubaneswar

The Regional College of Education, Bhubaneswar, was established during the Third Five-year Plan by the National Council of Educational Research and Training as part of a broad programme of improving secondary education in the eastern region of the country. It serves the States of West Bengal, Bihar, Orissa, Assam, Nagaland, Manipur, Tripura, Andaman and Nicobar Islands, Arunachal Pradesh, Sikkim, Mizoram and Meghalaya.

The college is affiliated to the Utkal University and is managed and controlled by the governing body of the NCERT. A management committee set up by the governing body exercises such powers of administration as are delegated to it by the governing body from time to time. The vice-chancellor, Utkal University, is the chairman of the management committee and the principal of the college is its vice-chairman. The administrative officer of the college functions as the member-secretary.

(a) Extension Programmes

A number of orientation seminars/courses for key persons of different states in the eastern region were organized by this college. The objective of the programmes was to orient the key persons in the ten-year school curriculum prepared by the NCERT, so that they, in turn, plan for effective implementation of the new curriculum in their respective schools. Following programmes were organized during the year :

1. Orientation seminar for key persons of Bihar was held at Patna from 5 to 7 April 1976 for three days and was attended by 31 participants.
2. Two seminars were organized at this college, in collaboration with the Board of Secondary Education, Orissa, on the teaching of physical sciences and life sciences under the ten-year school curriculum during the period from 15 to 30 June 1976 for 16 days. Fifty-four and forty-six college teachers from Orissa participated.

The aim of these seminars was to orient the delegates in the content and methodology of the teaching of science at the school stage envisaged in the new curriculum so that they may, in turn, orient school teachers of their states.

3. A workshop on work experience, with special reference to the ten-year school curriculum, was organized by the college at Kohima (Nagaland) from 20 to 25 September 1976 for six days and 20 teachers participated in it. This was at the request of the Government of Nagaland for orienting school teachers in the new pattern of education.
4. A seminar on the teaching of English for the elementary teacher-educators of Orissa was organized at this college from 11 to 16 October 1976 for six days. Twenty-seven elementary teacher-educators participated in it. This was organized to improve instruction in secondary training schools.
5. An orientation course in work experience for the teacher-educators of secondary training schools and the teachers of secondary schools was organized at this college from 8 to 13 November 1976 for six days. Twenty-two teachers participated in the course. The aim of this course was to motivate the subject-teachers to handle programmes in secondary training schools and secondary schools.
6. A workshop was organized by this college in Calcutta from 17 to 18 October 1976 for two days to frame a syllabus in life sciences for the post-graduate course to be started at this college from the academic session 1977-78 for teaching at the plus 2 stage in the new curriculum. The workshop was attended by university professors.

(b) Pre-service Training

The college has been offering the following courses, and the student strength during 1976-77 was as follows :

| <i>S. No.</i> | <i>Courses</i> | <i>Strength</i> |
|---------------|----------------------------|-----------------|
| 1. | Second Year B.A., B.Ed. | 54 |
| 2. | Second Year B.Sc., B.Ed. | 64 |
| 3. | Third Year B.A., B.Ed. | 56 |
| 4. | Third Year B.Sc., B.Ed. | 71 |
| 5. | Final Year B.A., B.Ed. | 38 |
| 6. | Final Year B.Sc., B.Ed. | 40 |
| 7. | B.Ed. (Science) Secondary | 75 |
| 8. | B.Ed. (Arts) Secondary | 46 |
| 9. | B.Ed. (Science) Elementary | 10 |
| 10. | B.Ed. (Arts) Elementary | 10 |
| 11. | M.Ed. | 16 |
| Total | | 480 |

In pursuance of the decision of the Executive Committee of the Council, no fresh admissions were made during 1976-77 for the four-year courses leading to B.Sc., B.Ed. and B.A., B.Ed. degrees.

(c) In-service Training Courses

(i) Summer School-cum-Correspondence Course

The programme of summer school-cum-correspondence courses leading to the B. Ed. degree was started at this college in 1966. The NCERT, with the provision of this programme, has not only demonstrated its great concern about the backlog of untrained teachers, but has also given a laudable and effective scheme for clearing the backlog. This course is designed to form a connecting link between professional education and content-cum-methodology courses. The total duration of B. Ed. training through summer schools would be about 14 months, including two summer sessions of eight weeks each, during which period the candidate is required to stay on the campus of this college for an intensive instructional programme. The intervening period of ten months between the two summer sessions is utilized for a correspondence course and supervised field experiences, including practice teaching. The total enrolment for this course during the year 1976-77 has been 246.

The courses of studies for B. Ed. (SS/CC) have been revised with effect from the 1977-78 session and, accordingly, there are B. Ed. (Secondary) SS/CC and B. Ed. (Elementary) SS/CC, having work experience classes.

(ii) Opening of Sub-centres

This college has two sub-centres—one at Gangtok (Sikkim) and the other at Port Blair. And a third is proposed at Aizawl in Mizoram. Here, the students are admitted for the B. Ed. (SS/CC) examination. The number of students at Gangtok was 161 and at Port Blair, 225. The work has just started at the request of the Union Ministry of Education.

(d) Development Programmes

(i) Correspondence-cum-Contact Course

The college has started a correspondence-cum-contact course for the orientation of high school teachers and elementary teacher-educators of secondary training institutions in the eastern region. The course was started in January 1977 and it covers the following areas:

1. Physical Sciences
2. Biological Sciences
3. Mathematics

4. History and Civics
5. Geography and Economics
6. English
7. Hindi as a Second Language
8. Art and Culture

The course consists of six-month instruction through correspondence, followed by a 15-day contact programme. The purpose of the contact part of this course is to clarify the difficulties of the trainees in different subject-areas, to give them practical/laboratory experience, and to orient them in certain new innovations and practices connected with the implementation of the ten-year schooling pattern.

As already stated, a similar course has been designed for the elementary teacher-educators. This course intends to enrich the subject-cum-methodology knowledge of the teacher-educators, with particular reference to the course of studies for Classes I to VIII, and to acquaint them with the specific problems and techniques of elementary education. It covers the following areas :

COMPULSORY

1. Principles of Elementary Education
2. Current Problems of Elementary Education
3. Child Development and Health Education
4. Organization, Administration and Supervision of Elementary Education
5. Content-cum-Methodology of Teaching

OPTIONAL (One of the Four) Content-cum-Methodology of Teaching

1. Hindi as the Mother Tongue
2. Social Studies
3. Science
4. Elementary Mathematics

4.4 Regional College of Education, Mysore

During the year 1976-77, this college kept up continuous progress in its programmes, courses of study, extension and research activities. It established more contacts and worked in close collaboration with the State Departments of Education of the southern region to promote excellence and better standards.

As decided by the NCERT to implement the programmes suggested by the Ministry, the college gave top priority to the implementation of the ten-year school curriculum under the emerging 10+2 pattern of education. For effective implementation of the curriculum, it was felt

that it was essential to orient the officials of the State Department of Education and the faculty of the colleges of education. The programmes were directed with this objective in view. Further, all the in-service programmes conducted during the year for the teachers of secondary schools are related to the ten-year school curriculum.

(a) Correspondence-cum-Contact Programme

The most significant programme during the year was the introduction of the correspondence-cum-contact programme. This programme has the objective of enriching the content and methodology in the subject-areas of art and culture, English, Hindi, mathematics, social sciences I and social sciences II, physical sciences, biological sciences for the secondary school teachers. The State Departments of Education of the southern states, including Pondicherry, were requested to select and depute teachers for the course.

(b) Extension Programmes

(i) A workshop for science club sponsors for the teachers of secondary schools of Karnataka was held. Training was imparted in improving the apparatus with the locally available materials.

(ii) With a view to upgrading science teaching in eight rural high schools of Hunsur Taluk, under the Bharani project of the University of Mysore, a conference of heads and science teachers of the concerned schools was held at this college.

(iii) Orientation conferences for the heads and teachers of Cooperating Schools for the four-year B.A. Ed. and B. Sc. Ed. internship were held in Bellary (Karnataka) and Pondicherry. For the one-year B. Ed. internship, conferences were held at Tiruchirapalli, Coimbatore, Trivandrum, Mercara and Hyderabad.

(iv) At the request of the Department of Education, Pondicherry, two special lectures, one on the teaching of grammar and the other on the contemporary English usage, were held during the year. This was followed by a sustained programme on the teaching of English for one week.

(v) Guidance has an important place in the new ten-year school curriculum. With a view to orienting headmasters and teachers on the importance of guidance, three programmes were conducted. At the request of the State Council of Educational Research and Training, Tamil Nadu, two programmes for the heads of secondary schools were conducted at Madras and Tiruchirapalli. Thirty heads of schools participated in each programme. A similar programme for the secondary schools of the Mysore city was held at this college.

(c) *Pre-service and In-service Teacher Training Programmes*

The enrolment for 1976-77 is as below :

| | |
|--|-----|
| I. <i>M. Sc. Ed.</i> | |
| Physics | 6 |
| Chemistry | 17 |
| Mathematics | 10 |
| II. <i>Four-year Courses</i> | |
| I B. Sc. Ed. (Semester) | 58 |
| II B. Sc. Ed. (Semester) | 56 |
| III B. Sc. Ed. (Semester) | 57 |
| IV B. Sc. Ed. (Semester) | 39 |
| II B. A. Ed. | 15 |
| III B. A. Ed. | 29 |
| IV B. A. Ed. | 15 |
| III. <i>One-year B. Ed. (Semester)</i> | |
| Science | 82 |
| Mathematics | 40 |
| Elementary | 15 |
| IV. <i>B. Ed. (SSCC)</i> | 245 |

(i) Three orientation programmes on the ten-year school curriculum for education officers and teacher-educators of Karnataka, Tamil Nadu and Kerala were conducted by this college, in collaboration with the Field Offices of the concerned states.

(ii) An orientation programme for educational officials of the Union Territory of Pondicherry was conducted by this college at Pondicherry. About 40 officials participated in the programme.

(iii) A workshop was conducted on the content-cum-methodology course in mathematics for the resource persons and the staff of the State Institute of Education, at Poojapura, Trivandrum, Kerala.

(d) *Research Projects*

(i) *Project on the Preparation of Graded Materials in Urdu for Standards V, VI and VII*

The project was conducted with the financial assistance of the Educational Research and Innovations Committee of the NCERT. Thirteen selected Urdu teachers from primary and secondary schools of Karnataka worked for ten days in preparing 25 graded lessons. The materials have been printed.

A one-day workshop was held to orient 60 teachers handling Urdu as

the first language in the Urdu schools of the Mysore city for trying out the materials in their schools. The materials have been tried out and evaluated.

(ii) Project on the Error Analysis of Written Expression in English Based on the SSLC Examination

The above project has been taken up by the English department of the college. It is at the stage of data analysis. This would take a considerable time as several hundred answer scripts have to be analysed and card-indexed. It is hoped that the project will lead to material production for remedial instruction and to the production of language laboratory lessons.

(e) Demonstration Multipurpose High School

The school has changed over to the scheme of the Central Board of Secondary Education under the 10+2 pattern. Accordingly, all the English-medium classes have been converted to the Central scheme. But the Kannada-medium classes (Standards VI and VII) continue to be covered by the Karnataka State Secondary Education Scheme.

5. FIELD OFFICES

The NCERT has 18 field offices, out of which two field offices—Agartala and Imphal—are without field officers. Addresses of the Field Advisers are given in Appendix A.

During the year 1976-77, these outposts of the Council in the states undertook the following activities, which are reported statewise :

5.1 Assam, Meghalaya and Arunachal Pradesh

The field office took up the work of assistance in the implementation of the 10+2 scheme in the state. It organized two orientation courses for the headmasters and principals of high and higher secondary schools of Assam, Meghalaya and Arunachal Pradesh. It helped the NCERT in the collection of data for the Third All-India Educational Survey and also in the survey of dropouts. It gave wide publicity to the NTS and NSTS schemes of the NCERT. The field office was concerned about the setting up of continuing education centres in the region. Four centres in all, one in Manipur and three in Nagaland, have already been approved.

The Board of Secondary Education of Assam was granted Rs. 2.06 lakhs by the NCERT for its teacher training programmes. The field office assisted them in this work. The field office helped the Board of School Education, Mizoram, in providing financial and academic assistance for the organization of orientation programmes in social studies and work experience. Another programme for women teachers of primary schools and community leadership was organized and financial and academic assistance was given to the States of Assam, Meghalaya and Arunachal Pradesh.

The field office collaborated with the UNICEF in their programmes aimed at the improvement of science teaching, curriculum renewal and enrichment of the community in educational development.

5.2 Andhra Pradesh

On behalf of the Ministry of Education, the field office prepared a directory of primary schools in Andhra Pradesh, made a quick survey

about wastage and stagnation at the primary level and collected some more information on the structure of pay and allowances of different categories of teachers and also the position of the TTIs for training teachers in the Urdu medium. The field office also supplied the NCERT's book *English Reader* to the schools directly.

The field office has been collaborating with the SCERT in the organization of workshops and orientation courses for teachers towards the implementation of the 10+2 scheme.

The field office assisted the UNICEF-aided projects No. 1,2 and 3 of the states. The field office also helped in the Indo-Dutch project being implemented in 20 primary schools.

5.3 Bihar

The field office helped the NCERT in the organization of state-level science exhibitions.

It assisted the State Departments of Education in the development of a curriculum for secondary schools for the 10+2 scheme. It helped in organizing seminars and workshops.

It also assisted the UNICEF-aided projects No. 1,2 and 3 of the state at various stages of their implementation.

5.4 Delhi

The Delhi field office organized 29 summer institutes in non-science subjects and work experience, orientation courses for Inspectors of schools of the Municipal Corporation of Delhi, and an orientation programme for rural science teachers. It collected data for the Ministry of Education from the Delhi Administration on the implementation of the 10+2 scheme and gave academic guidance and financial assistance in conducting programmes for the training of resource personnel and organization of summer institutes. In both these areas, the field office of Delhi has been very active.

5.5 Gujarat

On behalf of the Ministry of Education, the field office collected the following information :

- (i) Availability of exercise books at the control rate.
- (ii) Number of students offering Sindhi with the Arabic script.
- (iii) Recruitment rules and conditions of primary and secondary teachers in Gujarat.

The field office supplied material prepared by the NCERT to the SIEs,

State Boards of Textbooks, teacher training and other institutions. It helped in conducting the NTS/NSTS examination in the states.

This office helped in organizing workshops for paper-setters in English, Hindi and social sciences; organized a three-day conference of directors and coordinators of extension services for the implementation of the 10+2 scheme. It also organized a four-day seminar on teacher education.

It also helped in the UNICEF-aided projects No. 2 and 3 of the state.

5.6 Haryana, Punjab and Himachal Pradesh

The field office organized a conference on the implementation of the 10+2 scheme. It helped in collecting data for the Survey and Data Processing Unit and organized a programme for science teachers to orient them for preparing students for the NSTS/NTS examination. It helped the Department of Teacher Education, DEPF, DESSH, Department of Textbooks, DESM, Department of School Education and RCEs in their various programmes arranged in the states. On behalf of the Ministry of Education, the field office collected information. It also worked towards the preparation of a scheme of centres of continuing education.

It also helped in the UNICEF-aided projects No. 2 and 3 of the state.

5.7 Jammu and Kashmir

The field office organized a state-level conference for popularizing the 10+2 scheme. It also assisted in the organization of a National Integration Camp of Girls in Srinagar. The field office popularized the NTS/NSTS scheme, and organized science exhibition at the state level and an all-India science teachers conference.

It provided assistance to the science exhibition programme.

5.8 Karnataka

This field office helped teachers of the region at conference levels in understanding the 10+2 scheme. It also helped in the popularization of the NTS/NSTS scheme of the NCERT.

It provided assistance to the state government and various agencies in the areas of non-formal education, evaluation, and experimental projects.

The field office helped the UNICEF-aided projects No. 2 and 3 of the state.

5.9 Kerala

The field office helped the State Institute of Education in offering

orientation courses towards the implementation of the 10+2 scheme. It also assisted the State Department of Education in upgrading their textbooks in science, mathematics and geography.

5.10 Madhya Pradesh

The field office organized an orientation programme for the implementation of the 10+2 scheme and helped in the popularization of the NSTS. It also organized and published lectures for the purpose of guiding teachers and students towards the greater success of the NSTS.

The office helped the Board of Secondary Education in developing question banks and curriculum guides. It helped the State Institute of Education in its nutrition and educational programmes, besides organizing state-level science exhibitions.

The field office assisted the UNICEF-aided projects No. 2 and 3 in the state.

5.11 Maharashtra

The field office helped creating public opinion in the implementation of the 10+2 scheme. It helped in the collection of data for the survey of wastage and stagnation in primary schools, collected information on pay-scales, service conditions and work-load of the teachers, assessed the impact of the school educational broadcasts, and helped in the preparation of a directory of teachers' training institutions in Maharashtra and Goa.

The office helped the UNICEF-aided projects No. 1, 2 and 3 of the state.

5.12 Orissa

The field office assisted the Ministry of Education in collecting information on dropouts and stagnation at the primary level and supplied them the list of primary and middle schools.

It helped the state government in popularizing and orienting teachers regarding the new ten-year school pattern. It helped in the popularization of the NTS/NSTS scheme. It also assisted different schools in getting financial support for experimental projects in the region.

The office helped the UNICEF-aided project No. 1 in the field of science education.

5.13 Rajasthan

The field office helped in popularizing the NTS/NSTS scheme and in

preparing a pamphlet titled *NCERT Ke Rajasthan Main Barhte Charan*. It helped in providing financial assistance for experimental projects.

The office helped the state government in understanding the new pattern of education.

It helped primary school teachers from Afghanistan to have a look at the educational activities in the state.

5.14 Tamil Nadu

With the assistance of the state government, the field office organized training programmes for secondary school teachers in science and mathematics for the implementation of the 10+2 scheme.

The office helped the NCERT in conducting academic programmes for the benefit of secondary school teachers.

The field office helped the UNICEF-aided projects No. 2 and 3 of the state.

5.15 Uttar Pradesh

The field office organized several seminars and orientation programmes for the implementation of the 10+2 scheme. It helped different departments of the NIE and the RCEs in their programmes. It helped in the carrying out of an occupational survey of Mathura district.

It helped in orienting teachers and preparing personnel to guide the students for the NSTS/NTS scheme. It also helped extension services projects.

It provided assistance to the UNICEF-aided projects No. 1,2 and 3.

5.16 West Bengal

This field office organized orientation seminars on the teaching of science and work experience. It also organized a seminar on the principals/headmasters of the Hindi-medium schools where various points regarding the new school curriculum were clarified.

The field office collected and supplied information to the Union Ministry of Education regarding recruitment of primary and secondary school teachers. Besides sending the information needed by the various NIE departments/units, this office distributed NTS/NSTS forms among various educational institutions/individuals and also helped various schools/individuals in getting the NCERT textbooks in time. It also screened experimental projects received from various schools and released grants to the awardees.

6. RECEIPTS AND EXPENDITURE

During the year 1976-77, the Council received a grant of Rs. 4,97,12,785.00 from the Government of India. In addition, the Council realised an amount of Rs. 68, 57,739.00 from the sale of its publications, and miscellaneous receipts amounting to Rs. 55,56,125 00 were also received.

Against the total funds of Rs. 6,21,26,649.00, the Council incurred an expenditure of Rs. 6,18,95,545.00 under Plan and Non-Plan Sections. Besides, an expenditure of Rs. 2,53,456.00 was also incurred on the Third All-India Educational Survey.

Receipts and Expenditure for 1976-77

67

| | <i>Receipts</i> | | <i>Payments</i> |
|---|--------------------------|--|---------------------------|
| Opening Balance | 56, 97, 126.00 | <i>Non-Plan Expenditure</i> | |
| Grants received from the Government of India and other agencies | | (a) Pay & Allowances, Programmes, etc. | 4, 21, 15, 592.00 |
| (a) Main grant from the Government of India | 4, 97, 12, 785.00 | (b) Loans and Advances | 16, 07, 668.00 |
| (b) Specific grants from the Government of India and other agencies | 38, 78, 237.00 | <i>Plan Expenditure</i> | |
| Receipts | | (a) Pay & Allowances, Programmes, etc. | 1, 97, 79, 953.00 |
| (a) Sale proceeds of publications, etc. | 68, 57, 739.00 | (b) Third All-India Educational Survey | 2, 53, 456.00 |
| (b) Other receipts | 55, 56, 125.00 | (c) Expenditure out of specific grants | 33, 17, 062.00 |
| Provident Fund and C.D. Account | 85, 62, 145.00 | Provident Fund & C.D. Account | 74, 87, 479.00 |
| Deposits, advances, Suspense and Remittances | 2, 17, 39, 071.00 | Deposits, Advances, Suspense and Remittances | 2, 47, 63, 327.00 |
| CET | 45, 39, 641.00 | CET | 45, 16, 644.00 |
| | | Balances refunded to the Government of India | 55, 117.00 |
| | | Closing Balance | 26, 45, 971.00 |
| Total | 10,65, 42, 869.00 | | 10, 65, 42, 869.00 |

Appendices

APPENDIX A

Field Advisers of the Council

1. Field Adviser (NCERT)
Kannachal
Navagraha Road
Gauhati
2. Field Adviser (NCERT)
Geetanjali
T. C. No. 15/1019
Jagathy
Trivandrum
3. Field Adviser (NCERT)
3-6/147-2 Himayat Nagar
Hyderabad
4. Field Adviser (NCERT)
B-47, Prabhu Marg
Tilak Nagar
Jaipur
5. Field Adviser (NCERT)
E 1/66, Arera Colony
Bhopal
6. Field Adviser (NCERT)
555/E, Mumfordganj
Allahabad
7. Field Adviser (NCERT)
119, Budheswari Colony
Bhubaneswar
8. Field Adviser (NCERT)
714, 9th Cross
West of Chord Road
Rajaji Nagar
Bangalore
9. Field Adviser (NCERT)
1-B, Chandra Colony
Ahmedabad
10. Field Adviser (NCERT)
No. 5, Hindi Prachara
Sabha Street, T. Nagar
Madras
11. Field Adviser (NCERT)
285/10, Koregaon Park
(Near Bund Garden)
Poona
12. Field Adviser (NCERT)
House No. 72/E
(Vidya Sidhi Sadan)
Road No. 10 (H)
Rajendra Nagar
Patna
13. Field Adviser (NCERT)
17, Rafi Ahmed Kidwai Road
Calcutta
14. Field Adviser (NCERT)
House No. 23
Sector 8 (A)
Chandigarh
15. Field Adviser (NCERT)
Maqbul Manzil
First Floor
Rajbagh
Srinagar
16. Field Adviser (NCERT)
P. G. Hostel, NIE Campus
New Delhi
17. Field Adviser (NCERT)
Imphal
18. Field Adviser (NCERT)
Agartala

APPENDIX B

Composition of Committees

B.1 The Council

- | | |
|--|---|
| (i) The Minister for Education and Social Welfare President ex-officio | 1. Prof. S. Nurul Hasan Union Minister for Education and Social Welfare Shastri Bhavan New Delhi |
| (ii) Chairman of the University Grants Commission ex-officio | 2. Prof. Satish Chandra Chairman University Grants Commission Bahadur Shah Zafar Marg New Delhi |
| (iii) Secretary to the Ministry of Education and Social Welfare ex-officio | 3. Shri K. N. Channa 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 5. Prof. R. C. Mehrotra Vice-Chancellor Delhi University Delhi 6. Prof. K. Satchidananda Murty Vice-Chancellor Sri Venkateshwara University Trupati |

(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
8. Education Minister
Andhra Pradesh
Hyderabad
9. Education Minister
Bihar
Patna
10. Education Minister
Gujarat
Ahmedabad
11. Education Minister
Assam
Shillong
12. Education Minister
Haryana
Chandigarh
13. Education Minister
Himachal Pradesh
Simla
14. Dy. Education Minister
Jammu & Kashmir
Srinagar
15. Education Minister
Kerala
Trivandrum
16. Education Minister
Madhya Pradesh
Bhopal
17. Education Minister
Maharashtra
Bombay
18. Education Minister
Manipur
Imphal
19. Education Minister
Meghalaya
Shillong
20. Education Minister
Karnataka
Bangalore
21. Education Minister
Nagaland
Kohima
22. Education Minister
Orissa
Bhubaneswar

23. Education Minister
Punjab
Chandigarh
 24. Education Minister
Rajasthan
Jaipur
 25. Education Minister
Tamil Nadu
Madras
 26. Education Minister
Government of Tripura
Agartala
 27. Education Minister
Sikkim
Gangtok
 28. Education Minister
Uttar Pradesh
Lucknow
 29. Education Minister
West Bengal
Calcutta
 30. The Chief Executive Councillor
Delhi Administration
Delhi
 31. Education Minister
Government of Goa, Daman & Diu
Panaji (Goa)
 32. Education Minister
Mizoram
Aizal
 33. Education Minister
Government of Pondicherry
Pondicherry
- (vi) All members of the Executive Committee not included above
34. Deputy Minister
Ministry of Education and Social
Welfare
Shastri Bhavan
New Delhi
 35. Prof. Rais Ahmed
Director
National Council of Educational
Research and Training
Sri Aurobindo Marg
New Delhi
 36. Prof. M. V. Mathur
Director
National Staff College for Educational
Planners and Administrators
New Delhi
 37. Prof. C. N. R. Rao
Indian Institute of Science
Bangalore

38. Smt. Anutai Vagh
Sanchalika
Gram Bal Shiksha Kendra
Vikaswadi—Kosbad Hill
Tal. Dahanu, Dist. Thana
(Via Dahanu Road Stn., W. Rly)
Maharashtra
39. Master A. A. Kaifi
R/O Maleratta, Koker Masjid
P. O. S. R. Ganj
Srinagar
40. Prof. S. K. Mitra
Joint Director
National Council of Educational
Research and Training
New Delhi
41. Prof. A. N. Bose, Dean (C) & Head
of the Workshop Department
NCERT
New Delhi
42. Prof. R. C. Das, Dean (A) & Head
of the Department of Teacher Edu-
cation
NCERT
New Delhi
43. Dr. K. P. Nayak
Principal
Regional College of Education
Bhopal
44. Smt. J. Anjani Dayanand
Joint Secretary
Ministry of Education and Social
Welfare
Shastri Bhavan
New Delhi
45. Shri J. A. Kalyanakrishnan
Financial Adviser, NCERT and
Ministry of Education & Social Welfare
Room No. 109 'C'
Shastri Bhavan
New Delhi
- (vii) Such other persons, not exceeding twelve, as the Government of India may, from time to time, nominate. Not less than four of these shall be school teachers.
46. Shri Jagdish Mishra
General Secretary
All India Primary Teachers' Federation
Exhibition Road
Patna
47. Shri J. S. Sigamani
Headmaster
St. Patrick's Middle School
Melur, Tuti-corin
Distt. Tirunelvali
Tamil Nadu

48. Smt. Sayeeda Begum
Teacher
Govt. Girls High School
Pamore Distt.
Anantnag (Jammu & Kashmir)
49. Shri A. N. Thaker
Principal
Thaker's High School
Ellisbridge
Ahmedabad
50. Director General
ICAR, Krishi Bhavan
New Delhi
51. Director General of Employment
and Training
(Training side)
Ministry of Labour
(DGE&T), Shram Shakti Bhavan
New Delhi
52. Dr. Malcolm Adiseshiah
Vice-Chancellor
Madras University
Madras
53. Prof. A. P. Jambulingam
Principal
Technical Teachers
Training Institute
Adyar, Madras
54. Prof. C.S. Jha
Director
Indian Institute of Technology
Kharagpur
55. Dr. (Smt.) S.K. Sandhu
Director
Central Health Education Bureau
(Directorate General of Health
Services)
Temple Lane
Kotla Road
New Delhi
56. Shri P. R. Chauhan
Commissioner
Kendriya Vidyalaya Sangathan
Nehru House
Bahadur Shah Zafar Marg
New Delhi
57. Prof. Tapas Majumdar
Chairman, Zakir Husain Centre for
Educational Studies
Jawahar Lal Nehru University
New Delhi

58. Shri V. R. Dravid
Secretary
NCERT
New Delhi

(Secretary)

B.2 Executive Committee

- (i) President of the Council who shall be the ex-officio President of the Executive Committee
- (ii) (a) The Minister of State in the Ministry of Education and Social Welfare who shall be the ex-officio Vice-President of the Executive Committee
- (b) A Deputy Minister in the Ministry of Education and Social Welfare nominated by the President, NCERT
- (c) Director of the Council
- (iii) Chairman of the University Grants Commission, Member ex-officio
- (iv) Four educationists with known interest in school education (two of whom shall be school teachers) nominated by the President, NCERT
1. Prof. S. Nurul Hasan
Union Minister of Education and Social Welfare
Shastri Bhavan
New Delhi
 2. —
 3. Prof. D.P. Yadav
Deputy Minister
Ministry of Education and Social Welfare
Shastri Bhavan
New Delhi
 4. Prof. Rais Ahmed
Director
National Council of Educational Research and Training
New Delhi
 5. Prof. Satish Chandra
Chairman
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi
 6. Prof. M.V. Mathur
Director
National Staff College for Educational Planners and Administrators
New Delhi
 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, Dist. Thana
(Via Dahanu Road Stn., W. Rly)
Maharashtra

- | | | |
|--|--|-------------|
| | 9. Master A.A. Kaifi R/O Maleratta, Koker Masjid P.O. S.R. Ganj Srinagar | |
| (v) Joint Director of the Council | 10. Prof. S.K. Mitra Joint Director National Council of Educational Research and Training New Delhi | |
| (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 Head of the Department of Education in Science and Mathematics, NCERT New Delhi | |
| | 12. Prof. R.C. Das Head of the Department of Teacher Education, NCERT New Delhi | |
| | 13. Dr. K.P. Nayak Principal Regional College of Education Bhopal | |
| (vii) One representative of the Ministry of Education and Social Welfare | 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. Kalvanakrishnan Financial Adviser, NCERT Room No. 109 Shastri Bhavan New Delhi | |
| | 16. Shri V.R. Dravid Secretary NCERT New Delhi | (Secretary) |

B.3 Establishment Committee

- | | | |
|---|---|------------|
| (i) The Director, NCERT | 1. Prof. Rais Ahmed Director, NCERT New Delhi | (Chairman) |
| (ii) The Joint Director, NCERT | 2. Dr. S.K. Mitra Joint Director, NCERT | |
| (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 | |

- | | |
|---|--|
| <p>(iv) Four educationists to be nominated by the President, of whom at least one is a scientist</p> <p>(v) One representative from the Regional College of Education to be nominated by the President</p> <p>(vi) One representative of the National Institute of Education, Delhi to be nominated by the President</p> <p>(vii) Two representatives, one each from the regular academic and non-academic staff of the Council</p> <p>(viii) Financial Adviser, NCERT</p> <p>(ix) Secretary, NCERT</p> | <p>4. Prof. B. Venkataraman Tata Institute of Fundamental Research Homi Bhabha Road Bombay</p> <p>5. Prof. M.V. Mathur Director National Staff College for Educational Planners and Administrators New Delhi</p> <p>6. Prof. S.V.C. Aiya No. 59, 1st Block East Jayanagar, Bangalore</p> <p>7. Dr. Salamatullah Consultant, NCERT New Delhi</p> <p>8. Prof. G.B. Kanungo Principal Regional College of Education Bhubaneswar</p> <p>9. Prof. (Smt.) P.H. Mehta Head, Department of Educational Psychology and Founda- tions of Education, NCERT New Delhi</p> <p>10. Prof. R.P. Singh Policy, Planning and Evaluation Unit, NCERT New Delhi</p> <p>11. Shri K.M. George Superintendent, 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</p> |
|---|--|

(Member-Convener)

B.4 Finance Committee

1. Prof. Rais Ahmed (*Chairman*)
Director
National Council of Educational
Research and Training
New Delhi

2. Smt. J. Anjani Dayanand
Joint Secretary
Ministry of Education and
Social Welfare
Shastri Bhavan
New Delhi
3. Prof. M.V. Mathur
Director
National Staff College
for Educational Planners and
Administrators
New Delhi
4. Prof. C.N.R. Rao
Indian Institute of Science
Bangalore
5. Shri J.A. Kalyanakrishnan
Financial Adviser
Ministry of Education and
Social Welfare and NCERT
Room No. 109 'C'
Shastri Bhavan
New Delhi
6. Shri V.R. Dravid (*Convener*)
Secretary
NCERT

B.5 Building and Works Committee

- | | |
|---|--|
| 1. Director, NCERT (<i>Chairman</i>) ex-officio | Prof. Rais Ahmed Director, NCERT |
| 2. Joint Director, NCERT, ex-officio | Dr. S.K. Mitra Joint Director NCERT |
| 3. Chief Engineer, CPWD, or his nominee | Shri N. Lakshmiah Superintending Surveyor of Works (Food) CPWD, 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. | Consulting architect of the Council | Shri K.M. Saxena Senior Architect (C) I CPWD, 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 |
| 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 <i>(Member-Secretary)</i> | Shri V.R. Dravid Secretary, NCERT |

B.6 Programme Advisory Committee

- | | | | |
|----|--|----|--|
| 1. | Prof. Rais Ahmed (<i>Chairman</i>) Director NCERT | 3. | Dr. S.B. Adaval Prof. & Head of the Department Department of Education University of Allahabad Allahabad |
| 2. | Dr. Shb K. Mitra (<i>Vice-Chairman</i>) Joint Director NCERT | | |

4. **Prof. R.K. Yadav**
Dean
Faculty of Education
Banaras Hindu University
Kamachha
Varanasi
5. **Dr. N. Vedamani Manuel**
Professor and Head of the Department
of Education, and Dean
Department of Education
University of Kerala
Thycaud
Trivandrum
6. **Dr. A.W. Oak**
Department of Research
Premcoonerbai Vithaldas Damodar
Thackersey
College of Education for Women
1, Nathibai Thackersey Road
Bombay
7. **Prof. (Kum.) Philomena
Andrew**
Women's Training College
Department of Education
Patna University (Campus)
Patna
8. **Shri C. Gopinatha Rao**
Director
State Council of Educational Research
and Training
Alia School Compound
Hyderabad
9. **Shri P.C. Choudhuri**
Vice-Principal-in-Charge
State Institute of Education
P.O. Banipur, Dist. 24 Parganas
West Bengal
10. **Shri S.D. Trivedi**
Principal, State Institute of Education
Allahabad
11. **Shri G.N. Patel**
Director, State Institute of Education
Raikhad
Ahmedabad
12. **Shri L.K. Rambal**
Principal, State Institute of Education
Govt. College of Education
Srinagar
13. **Head of the Department**
Department of School Education
NCERT
14. **Dr. L.R.N. Srivastava**
Reader
Department of School Education
NCERT
15. **Head of the Department**
Department of Education in Science
and Mathematics
NCERT
16. **Prof. B. Sharan**
Professor
Department of Education in Science
and Mathematics
NCERT
17. **Head of the Department**
Department of Education in Social
Sciences and Humanities
NCERT
18. **Prof. B.S. Parakh**
Professor
Department of Education in Social
Sciences and Humanities
NCERT
19. **Head of the Department**
Department of Teacher Education
NCERT
20. **Shri B.N. Pandey**
Reader
Department of Teacher Education
NCERT
21. **Head of the Department**
Department of Educational Psycho-
logy and Foundations of Education
NCERT
22. **Prof. C.K. Basu**
Professor
Department of Educational Psycho-
logy and Foundations of Education
NCERT

23. Head of the Department
Department of Textbooks
NCERT
24. Dr. R.G. Rastogi
Reader
Department of Textbooks
NCERT
25. Head of the Department
Department of Teaching Aids
10-B, Ring Road
New Delhi
26. Shri Shankar Narayan
Reader
Department of Teaching Aids
10-B, Ring Road
New Delhi
27. Head of the Department
Publication Department
NCERT
28. Kum. K. Wadia
Editor
Publication Department
NCERT
29. Head of the Department
Workshop Department
NCERT
30. Shri P.K. Bhattacharya
Reader
Workshop Department
NCERT
31. Shri V.N. Wanchoo
Principal
Regional College of Education
Ajmer
32. Prof. P.N. Dave
Professor
Regional College of Education
Ajmer
33. Principal (Dr. K.P. Nayak)
Regional College of Education
Bhopal
34. Prof. J.S. Rajput
Professor of Science
Regional College of Education
Bhopal
35. Principal (Prof. G.B. Kanungo)
Regional College of Education
Bhubaneswar
36. Dr. (Smt.) G.R. Ghosh
Professor (Science)
Regional College of Education
Bhubaneswar
37. Principal (Shri S.N. Saha)
Regional College of Education
Mysore
38. Prof. A.K. Sharma
Professor of Science (Chemistry)
Regional College of Education
Mysore
39. Principal
Centre for Educational Technology
40. Dr. (Smt.) S. Shukla
Professor
Centre for Educational Technology

APPENDIX C

Major Decisions of the Council during 1976-77

1. The Executive Committee in its meeting held on 28 May 1976 approved the creation of one post of OSD, along with other posts. On receipt of the report of the OSD, the Executive Committee will further consider the question of commercialisation of textbook production.
2. Considering the recommendations of the Committee constituted for the reorganization of the existing courses and the introduction of new courses in the Regional Colleges of Education, the Executive Committee took the decision given in the table on page 86.
3. The Executive Committee in its meeting held on 30 December 1976 approved the establishment of Field Offices on permanent basis.
4. The recommendations of the Review Committee set up by the Council to go into the question of the National Talent Search Scheme were accepted with the following modifications:
 - (i) At the B.Sc. level, there may be the examination suggested in the report but it should be both at 14 years and 15 years of education, i.e., at the end of 10+2+3 and also at the end of 10+2+2.
 - (ii) All scholarships with suitable revalidation should be available for study up to the Ph.D. stage, except the scholarships in professional subjects where they will be available up to the second degree.

It was also decided that the number of scholarships to be awarded at various levels should be determined from the point of view of optimum utilization of funds available.

5. In the same meeting, the Committee approved the setting up of 100 Centres of Continuing Education of teachers in the states. The scheme is proposed to generally replace the summer institute programmes being conducted through various Departments of the Council. The Centres will be run in collaboration with the states on sharing basis.
6. The Executive Committee in its meeting held on 30 December 1976 considered the avenues of promotion for the PGTs in the NIE Departments, RCEs and in the offices of Field Advisers and accepted the recommendations of the Establishment Committee that in view of the revised qualifications laid down with the revised pay-

scale of the post of Lecturer, the selection to the higher post can benefit only a few. It was accordingly decided that their experience could be utilized by selecting a few of them as Assistant Field Advisers in the scale of Rs. 700-1300 and recruitment rules amended suitably.

7. The policy regarding deputation of academic staff to various countries on appointment or on assignments with world bodies such as the UNESCO was also considered and it was accordingly decided that after a non-NCERT employee is appointed to a post, he may not be allowed to accept a foreign assignment or any appointment in India on deputation or with lien on the post unless he has put in three years of permanent service in the Council. The Committee also decided that the serving employees of the Council may not be allowed to accept successive foreign or Indian assignments before the lapse of five years. Further, no employee should normally be permitted to be away from the NCERT on deputation on a foreign assignment for a period of more than two years, except for short-term deputation of three months or less unless relaxed by the President, NCERT.
8. The Establishment Committee in its meeting held on 10 September 1976 also considered the cases of Class II officers for exemption from medical examination on their selection for Class I posts in the Council and it was decided that no fresh medical examination may be undertaken provided such employees have already undergone medical examination by the appropriate authority.
9. The Finance Committee in its special meeting held on 5 April 1976 considered the creation of various posts for the CET. In so far as the post of Project Officer for Open School is concerned, it was decided that the same may be filled by internal adjustments. Similarly, for the posts of Production Officer and Editor, the Committee decided that these posts should be created in the Publication Department of the Council and all printing work of the CET be assigned to them. The Committee also approved certain administrative posts for the CET like those of Superintendent, Stenographer, etc.
10. The Finance Committee in its meeting held on 8 September 1976 considered the setting up of a Kendriya Vidyalaya (Classes VI-XII) jointly by the IIT, the NCERT and the JNU and the same was approved.
11. The Finance Committee in its meeting held on 5 April 1976 also considered the conversion of the grade of Professional Assistants and SRAs in the Council into the appropriate grade of school teachers in Delhi and decided that such posts be converted into PGTs.
12. The Finance Committee also considered and approved the rationalization of the pay-scale of the post of Steward in the Council and Caretaker in the Regional Colleges of Education.
13. The proposal for the setting up of a Correspondence Education Unit in the NCERT and the creation of various posts was also approved.
14. In view of the expanding role of the Field Advisers and increase in their staff strength, the Finance Committee approved the increase in the ceiling for office-cum-residence accommodation. The Committee also considered and approved the delegation of financial powers to the Field Advisers up to Rs. 5000/- on any single approved academic programme and up to Rs. 500/- in so far as experimental projects are concerned. In addition, the Committee also approved the establishment of a separate unit of Field Adviser in Delhi and the payment of special pay to the Field Adviser, Delhi.

15. The proposal to introduce correspondence-cum-contact courses for secondary school teachers in the Regional Colleges of Education as also for the creation of various posts was approved.

Reorganization of Courses in the Regional Colleges of Education

| | Regional Colleges of Education | | | |
|--|--|-------------------------|---|--------------------------------|
| | <i>Ajmer</i> | <i>Bhopal</i> | <i>Bhubaneswar</i> | <i>Mysore</i> |
| Existing Courses (Pre-service) | | | | |
| 1. Four-year B.Sc., B Ed | | | To stop admission this year | To continue (60) |
| 2. Four-year B.A., B.Ed. | — | To | stop | admissions |
| 3. One-year B.Ed. | To reduce intake to 240 | To reduce intake to 200 | To reduce intake to 120 | To redistribute intake to 120 |
| 4. B.Ed./SSCC | To continue in all the four colleges with an intake of 250 in each college | | | |
| 5. M.Ed. | To continue 10 | To continue 10 | To continue 10 | — |
| 6. M.Sc. Ed. (Two-year course) | — | — | — | To continue (60) |
| 7. PUC | — | — | — | To continue in DM School (120) |
| New Courses (Pre-service) | | | | |
| 1. M.A., M.Sc. | | | Courses proposed may be submitted by the colleges to the Council at an early date | |
| 2. B.Ed. (Elementary) | To start (20) | To start (40) | To start (20) | To start (20) |
| 3. B Ed. (Elementary/SSCC) | To start (100) | — | To start (100) | — |
| 4. B.Ed./Diploma Vocational | To start | To start | To start | To start |
| 5. + 2 Vocational Course (Elementary Teacher in DM Schools) | To start (20) | To start (20) | — | To start (20) |
| In-service Programmes | | | | |
| 1. Elementary teacher-educators: contact-cum-correspondence course (10 months + 15 days) | To start | To start | To start | To start |
| 2. Headmasters and supervisory staff (15 days) | To start | To start | To start | To start |
| 3. Secondary school teachers: contact-cum-correspondence course (6 months+15 days+15 days for work experience) | To start (3000) | To start (3000) | To start (3000) | To start (3000) |
| | @ 250 per batch for 12 batches | | | |

APPENDIX D

Outside Research Projects Supported by the NCERT during 1976-77

| <i>S. No.</i> | <i>Title of the Research Project</i> | <i>Amount of Grant Released (in Rupees)</i> |
|---------------|---|---|
| 1. | An Investigative Study of the Training Colleges of the Country, etc. | 4,000.00 |
| 2. | Survey of Area Skills in Some Selected Districts of West Bengal | 20,000.00 |
| 3. | A Study of Effectiveness of Pre-service Teachers Training Programme at Elementary Level in Rajasthan | 7,000.00 |
| 4. | Problem of Education of the Weaker Section of Society, with Special Reference to the Weaker Section of Baroda | 10,000.00 |
| 5. | Study of Listening Comprehension of the Pupils of Classes VIII-X in Gujarat | 11,400.00 |
| 6. | Depiction of Girls/Women in Children Books of the NCERT | 6,000.00 |
| 7. | Study of Problems and the Pattern of Functioning of Single-teacher Schools in Rajasthan | 2,990.00 |
| 8. | Determination of Communication in New Hindi Poetry from the Point of its Teaching | 15,000.00 |
| 9. | Achievement Norms Study of the Ahmedabad Primary School-going Children | 4,500.00 |
| 10. | A Psychological Study of Tribal Children, with Special Reference to Denotified Tribals in UP | 8,900.00 |
| 11. | Working Holidays | 10,000.00 |
| 12. | Research and Development Programme in Education | 4,500.00 |

| | |
|---|--------------------|
| 13. Construction of Test of Numerical Ability | 3,900.00 |
| 14. Study of Effectiveness of Some Measures Adopted for Increasing Enrolment | 6,000.00 |
| 15. A Study into Educational Adoption, Social Ambition and Performance of the Scheduled Caste Students at Higher Secondary and Collegiate Levels in Rewa District | 7,000.00 |
| 16. Introduction of Education in Primary Schools Pilot Study | 9,000.00 |
| 17. A Study of the Efficiency of School System | 6,000.00 |
| 18. Teaching Bengali as a Second Language | 11,000.00 |
| 19. Establishment of a Unit for Compilation of Data for Visualising Vocations for the Development of Vocational Education at the + 2 stage | 25,000.00 |
| 20. Graded Grammar in Dravidian for High School | 20,000.00 |
| 21. Development of a Curriculum for the Mentally Retarded Handicapped Children | 6,000.00 |
| 22. Attitude of the Parents and Students of Aurangabad | 3,365.00 |
| 23. Development of Effectiveness Teaching Methods for School Subjects | 4,600.00 |
| 24. Diagnosis of Language Errors, etc. | 7,500.00 |
| 25. Psychological Study of Work Adjustment | 5,000.00 |
| 26. Role of Lady Teachers in the Universalisation of Primary Education | 4,000.00 |
| 27. Research on Early Primary Education | 17,400.00 |
| 28. A Study to Investigate the Relationship Between the Resources Put in School Science Education and Output | 2,000.00 |
| 29. Study of Pattern with Parental Preference in Relation to Adolescence, etc. | 7,000.00 |
| 30. Problem of Secondary Schools in Border Area' | 500.00 |
| Total | 2,49,555.00 |

APPENDIX E

Grants Given by the Council to Professional Educational Organizations during 1976-77

| <i>S. No.</i> | <i>Name of the Organization</i> | <i>Amount of Grant Released (in Rupees)</i> |
|---------------|---|---|
| 1. | SITU Council of Educational Research Madras | 3,000.00 |
| 2. | Association of Mathematical Teachers of India, Madras | 5,000.00 |
| 3. | Association for the Improvement of Mathematics Teaching, Calcutta | 850.00 |
| 4. | National Parent-Teacher Association New Delhi | 2,400.00 |
| 5. | Gram Udyog Mandal, New Delhi | 10,000.00 |
| 6. | Indian Physics Association, Bombay | 3,000.00 |
| 7. | Indian Association of Pre-school Education, New Delhi | 1,900.00 |
| 8. | All India Science Teachers Association New Delhi | 6,343.00 |
| 9. | Indian Association of Programmed Learning, New Delhi | 4,500.00 |
| 10. | All India Federation of Educational Associations, New Delhi | 5,000.00 |
| 11. | National Parent-Teacher Association New Delhi | 3,500.00 |
| | Total | 45,493.00 |

APPENDIX F

Participation in International/Exchange Programmes

(a) Deputation of Council Officers Abroad under Bilateral Cultural Exchange Programme

(i) Dr. S.A. Hussain, Lecturer in Urdu, Regional College of Education, Bhopal, visited Iran from 16 February to 3 June 1976 for study in the field of Work Experience.

(ii) Shri S.A. Khuraishi, Lecturer in Agriculture, Regional College of Education, Mysore, visited Iran from 16 February to 3 June 1976 for study in the field of Work Experience.

(iii) Smt. R. Saini, Lecturer, DSE, visited the USSR to study the centres of pioneer work in the USSR, from 4 to 15 May 1976.

(iv) Prof. A.K. Sharma, RCE, Mysore, visited Yugoslavia for study in the field of Pedagogy, from 12 to 31 May 1976.

(v) Shri S.C. Chaudhri, Reader, WEVEU, visited the Federal Republic of Germany for study in the field of Work Experience and Vocationalisation of Education, from 31 May to 13 June 1976.

(vi) Shri T.G. Satyanarayanan, Headmaster, DM School of the RCE, Mysore, visited Yugoslavia from 8 December 1976 for a period of 15 days to study the educational system of Yugoslavia.

(b) Training Programmes for Foreign Nationals

(i) The Council organized a training programme for a batch of 28 primary school teachers from Afghanistan from 10 February to 31 March 1977. The main objective of the course was to acquaint the trainees with the various aspects of primary education in India and the developments made in the field. The programme was organized under the ITEC programme of the Ministry of External Affairs.

(ii) The Council organized a pre-primary teacher training course for two Bhutanese girls, viz., Kum. Sonam Lhamu and Kum. Pem Choden. The course started on 19 July 1977 and was of 32 weeks' duration.

(iii) The Council organized a three-month study course training programme for two Nepalese teachers, from 16 October 1976 to 15 January 1977.

(c) Deputation of Council's Officers Abroad for Advanced Training

(i) Dr. L.C. Singh, Reader, DTE, was deputed to the UK, under the Short-term Commonwealth Education Fellowship Scheme of the UK Government, April 1976, for a period of three months, for study in the field of Programmed Learning.

(ii) Shri K.J. Khurana, Reader, DESM, was deputed to the UK for a period of three months from April 1976 for training in the field of environmental Studies under the Commonwealth Education Fellowship Scheme of the UK Government.

(iii) Prof. M.M.S. Arora, Professor of Mathematics, DESM, underwent training in the field of Teaching of New Mathematics in the UK under the Commonwealth Education Fellowship Scheme.

(iv) Kum. Indu Seth, Lecturer, CET, was deputed to attend a training course in Educational Technology organized by the Japanese National Commission for UNESCO in Tokyo, from 12 August to 30 September 1976.

(v) Dr. V.G. Gupta, Lecturer, RCE, Ajmer, attended a course in Educational Technology in the UK, from 14 September 1976 to 29 June 1977, under the UK Government's Commonwealth Education Fellowship Scheme.

(vi) Dr. M.S. Samer, Lecturer, RCE, Mysore, was deputed to UK for training in the field of Teaching of Mathematics, from 21 September 1976 to 31 August 1977, under the Commonwealth Education Fellowship Scheme of the UK Government.

(vii) Smt. V. Gupta, PGT, RCE, Ajmer, attended a course for Associateship for Science Education, specializing in Biology, from 22 September 1976 to 26 June 1977, in the UK under the Commonwealth Education Fellowship Scheme of the UK Government.

(viii) Dr. V.N.P. Srivastava, Lecturer, RCE, Ajmer, was deputed to the UK, under the UK Government's Commonwealth Education Fellowship Scheme, for training in the field of Science and Technology, for one academic year from 27 September 1976.

(ix) Kum. P. R. Lalitha, Lecturer, RCE, Mysore, was deputed for training in the field of Science Education from 4 October 1976 to 1 July 1977 under the Commonwealth Education Fellowship Scheme of the UK Government.

(x) Dr. I.S. Sharma, Lecturer, DTB, was deputed to the UK for attending a training course leading to the Associateship in Curriculum Development under the Commonwealth Education Fellowship Scheme, for one academic year from 5 October 1976.

(xi) Dr. M.R. Chilana, Lecturer in the RCE, Ajmer, was deputed to the UK for the diploma in Commonwealth and Overseas Educational Administration, under the Commonwealth Education Fellowship Scheme, for one academic year from 4 October 1976.

(d) Deputation of Council's Officers Abroad for Participation in International Seminars/ Workshops/Conferences

(i) Prof. (Smt.) S. Shukla, Consultant, CET, was deputed to attend a conference on Individualized Learning organized by the Association for Programmed Learning and Educational Technology in Scotland, from 5 to 8 April 1976.

(ii) Prof. (Smt.) S. Shukla, Consultant, CET, was also deputed to attend the International Conference of Evaluation and Research in Educational Television and Radio at Mitton Keynes, Open University, London, from 9 to 13 April 1976.

(iii) Prof. (Smt.) Perin H. Mehta, Head, Department of Educational Psychology and Foundations of Education, was deputed to attend the Seventh Round Table for the Advancement of Counselling held at Wurzburg, Germany, from 11 to 15 April 1976.

(iv) Prof. M.M. Chaudhri, Head, Department of Teaching Aids, was deputed to attend the Union Regional Workshop on Educational Broadcasting organized by the Asian Broadcasting Union in Tehran, from 2 to 6 May 1976.

(v) Prof. Rais Ahmed, Director, NCERT, attended a meeting of the Indo-US Commission in New York and visited the educational institutions there from 3 to 9 May 1976.

(vi) Prof. Rais Ahmed, Director, NCERT, attended the Commonwealth Meeting in connection with Educational Research, from 10 to 15 May 1976, in London.

(vii) Prof. H.N. Pandit, Head, PPE Unit visited the UK for studying the Open University System there from 30 May to 13 June 1976.

(viii) Dr. P.D. Bhatnagar of the Regional College of Education, Ajmer, attended the 50th Conference of Colloid Surface Science and 2nd International Conference of University Teaching at Heidelberg, Germany, in June 1976.

(ix) Dr. Shib K. Mitra, Joint Director, attended the Unesco's Symposium on the Psychological Bases of Programmed Learning at Toilisi (USSR), from 29 June to 6 July 1976.

(x) Prof. Rais Ahmed, Director, NCERT, participated in the International Summer College on Tertiary Level Physics Teaching organized by the International Centre for Theoretical Physics from 7 July to 19 August 1976 as Director of the College.

(xi) Prof. D.P. Rawat, Head, DSE, attended the Sixth World Congress on Reading held in Singapore from 17 to 19 August 1976.

(xii) Dr. L.C. Singh, Reader, DTE, was deputed to attend the International Conference on Cross Cultural Research held at the Tilburg University, Holland, from 12 to 16 July 1976.

(xiii) Prof. A.N. Bose, Head, DESM, attended the Unesco's Regional Meeting on the Trends and Problems in Science and Technology Education in Asia held in Singapore from 20 to 26 July 1976.

(xiv) Prof. M.M.S. Arora, Professor of Mathematics of the DESM, was deputed to participate in the Third International Congress on Mathematical Education organized by the International Commission on Mathematics Instruction (ICMI), Karlsruhe, West Germany, from 16 to 21 August 1976.

(xv) Dr. K.P. Nayak, Principal, Regional College of Education, Bhopal, was deputed by the Council to participate in the seminar on National Equality in Education and Teaching held at Novisad, Yugoslavia, from 14 to 16 September 1976. The seminar was organized by the Yugoslav Commission for UNESCO.

(xvi) Shri Ramesh Chander, Reader, DESSH, was deputed to attend Phase II of the Group Training Course in Population Education and Population Aspects of Educational Planning organized by the Regional Office for Education in Asia, Bangkok, from 13 September to 1 October 1976, in Bangkok.

(xvii) Shri W.A. Siddiqui, Lecturer, Regional College of Education, Ajmer, was deputed to attend the Regional Field Operational Seminar on Curriculum Development for Work-oriented Education in Asia organized by the National Institute for Educational Research of Japan in close co-operation with the Asian Centre of Educational Innovation for Development in Tokyo, from 11 September to 7 October 1976.

(xviii) Shri S.L. Gajwani, Reader, DSE, was deputed to attend the Second Regional Workshop on Curriculum Development for Moral Education in Asia organized by the National Institute of Educational Research Centre for Education Studies in Asia in Tokyo, from 12 November to 10 December 1976.

(xix) Shri P.K. Bhattacharya, Reader in Technology, Workshop Department, was deputed to attend the Commonwealth Regional Seminar on Low-Cost School Science Equipment organized by the Commonwealth Secretariat, London, at Nassau, Bahama, from 15 to 26 November 1976.

(xx) Prof. P.N. Dave, Professor of Education, Regional College of Education, Ajmer, was deputed to attend the Regional Seminar on Alternative Approaches to School Education at Primary Level organized by the UNESCO Regional Office for Education in Asia, Bangkok, in Manila, from 6 to 14 December 1976.

(xxi) Prof. G.S. Shrikantia, Head, Library and Documentation Unit, was deputed to attend the Regional Seminar on Documentation and Information Support for Educational Innovation organized by the UNESCO Regional Office for Education in Asia at Bangkok, from 15 to 21 February 1977.

(xxii) Prof. M.M. Chaudhri, Head, DTA, was deputed to attend the International Conference on Association of Programmed Learning and Educational Technology, from 28 to 31 March 1977.

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

(i) Dr. (Smt.) R. Murlidharan, Reader, DEPFE, was deputed to Malta as Consultant to organize a training seminar on Early Childhood Education there for a period of two months from 12 July 1976.

(ii) Shri S.A. Khuraishi, Lecturer in Agriculture, Regional College of Education, Mysore, was deputed to Addis Ababa, Ethiopia, on a special assignment as Professor in the Awasa Junior College for a period of two years from 6 November 1976.

(f) Visitors to the Council

(i) The Council organized visits to Indian Institutions of Science and Technology for a group of five scientists from Sri Lanka from 18 April to 1 May 1976.

(ii) Mr. Mohd. Aref Yadgari, a science specialist in the Curriculum and Textbook Directorate of the Ministry of Education, Kabul, Afghanistan, visited the NCERT from 28 May to 4 June 1976 on a one-week observational training in Curriculum Improvement.

(iii) Dr. R.O. Iradale of the University of Leeds, UK, visited the Council on 17 January 1977.

(iv) A training course in the field of Educational Evaluation was organized by the NCERT for a group of ten Afghan officials from 19 August to 15 October 1976, under the Indo-Afghan Cultural Exchange Programme.

(v) The Council organized a study tour for two Iranian experts, namely, Mr. Ali Asghan Sayyadi and Mrs. Frank Adibi to study the programme of Vocational and Technical Education in India, from 6 to 11 December 1976. This was arranged under the Indo-Iran Cultural Exchange Programme.

(vi) Mr. P.J. Gachathi, Permanent Secretary in the Ministry of Education, Kenya, visited the Council on 10 February 1977. He was accompanied by Mr. J.M.G. Muhoro, Deputy Director of Education.

(vii) Dr. Ogunniyi, Miss W. Rokicka and Dr. A.G. Belskiy of the Unesco office, Bangkok, visited the Council during February 1977.

(viii) Mr. Alexander Stevenson, Deputy Director and Overseas Programme Coordinator in the Economic Development Institute of the International Bank for Reconstruction and Development visited the Council on 17 February 1977 to discuss the possibilities of cooperation/association in the areas of training in Education.

(ix) Prof. Aya Abubakar, Vice-Chancellor, Ahmadu Bello University, Zaria, Nigeria, visited the Council during his visit to India from 1 to 13 March 1977.

(x) Dr. John Oxenham of the Institute of Development Studies, University of Sussex, visited the Council during his visit to India from 5 to 10 March 1977.

(xi) Dr. Arnold E. Ross of the Australian National University visited the Council on 11 March 1977 and discussed the various activities in the field of Science and Mathematics.

(xii) Dr. Steward Tinsmen, Education Attache, US Permanent delegation, visited the Council on 15 March 1977 to study the UNESCO activities in the establishment of cooperation network such as APEID, International Educational Reporting Service, etc

APPENDIX G

Publications Brought out by the Council during 1976-77 (R. P. indicates Reprint)

I. English Textbooks

1. Let's Learn English Book I (S. S.) (R. P.)
2. Let's Learn English Book II (S. S.) (R. P.)
3. Let's Learn English Book III (S. S.) (R. P.)
4. English Reader Book I (S. S.) (R. P.)
5. English Reader Book III (S. S.) (R. P.)

II. Science Textbooks

1. Vigyan Aao Karke Seekhen Part III (R. P.)
2. Vigyan Aao Karke Seekhen Part IV (R. P.)
3. Rasayan Vigyan Part I (R. P.)
4. Chemistry Part II (R. P.)
5. Biology Part I (R. P.)
6. Jeev Vigyan IX-X (R. P.)
7. Chemistry IX-X (R. P.)
8. Science is Doing for Class IV (R. P.)
9. Physics IX-X (R. P.)
10. Science is Doing for Class V (R. P.)
11. Life Sciences IX-X (R. P.)
12. Bhautiki Bhag I (R. P.)
13. Rasayan Vigyan IX-X (R. P.)
14. Physics Part III (R. P.)
15. Chemistry Part I (R. P.)
16. Jeev Vigyan Part I (R.P.)
17. Jeev Vigyan Part II (R.P.)
18. Jeev Vigyan Part III (R.P.)
19. Bhautiki IX-X (R.P.)
20. Bhautiki Bhag III (R.P.)
21. Physics Part II (R.P.)

III. Mathematics Textbooks

1. Arithmetic Algebra Part II (R.P.)
2. Arithmetic Algebra Part III (R.P.)

3. Mathematics Part II—IX-X (R.P.)
4. Ganit Part I—IX-X
5. Insight into Mathematics Book I (R.P.)
6. Insight into Mathematics Book II (R.P.)
7. Insight into Mathematics Book V (R.P.)
8. Mathematics Part I (R.P.)
9. Ganit Part II (R.P.)
10. Rekhaganit Bhag I (R.P.)
11. Rekhaganit Bhag III (R.P.)
12. Geometry Part II (R.P.)
13. Geometry Part III (R.P.)

IV. Social Studies Textbooks

1. Independent India (R.P.)
2. Modern India (Urdu)
3. Madhya Kalin Bharat (R.P.)
4. Medieval India (R.P.)
5. Europe and India (R.P.)
6. Samajik Adhyan—Hamara Desh Bharat I (R.P.)
7. India on the Move (R.P.)
8. Bharat Vikas Ki Oar (R.P.)
9. Africa Aur Asia (R.P.)
10. Man and Environment
11. Manushya Aur Vatavaran
12. Australia Aur America (R.P.)
13. Africa and Asia (R.P.)
14. Modern India (R.P.)
15. Europe and India (Urdu)
16. Shasan Aur Sanvidhan (R.P.)
17. Aadhunik Bharat for Class X (R.P.)
18. Manav Samaj Ka Itihas (R.P.)
19. Qadim Hindustan (Urdu)
20. Europe Aur Bharat (R.P.)
21. Our Country India Book I

V. Hindi Textbooks

1. Rashtra Bharati Bhag I (R.P.)
2. Rashtra Bharati Bhag II (R.P.)
3. Rashtra Bharati Bhag III (R.P.)
4. Kavya Bharati (R.P.)
5. Kahani Sankalan (R.P.)
6. Aao Padhen Aur Seekhen—Meri Chauthi Pustak
7. Aao Padhen Aur Khojen (R.P.)

VI. English Workbooks

1. Workbook to English Reader Book I (S.S.)
2. Workbook to English Reader Book II (S.S.)
3. Workbook to English Reader Book III (S.S.)
4. Workbook to Let's Learn English Book I (S.S.)
5. Workbook to Let's Learn English Book II (S.S.)
6. Workbook to Let's Learn English Book III (S.S.)

VII. English Teachers' Guides

1. Teachers' Guide to English Reader Book II (G.S.)
2. Teachers' Guide to English Reader Book V (S.S.)

VIII. Hindi Workbooks

1. Meri Abhyas Pustika Book I
2. Meri Abhyas Pustika Book III
3. Meri Abhyas Pustika ((Rani, Madan, Amar)

IX. Supplementary Readers

1. The Microbes
2. Mirza Ghalib
3. Sant Tukaram
4. Kanoon Sambandhi Vyavsaya
5. Hamare Swasthya Rakshak
6. Architect, Civil Engineer Aur Anya Karamchari
7. Yatayat Karamchari
8. Lipik Varg Ke Vyavsaya
9. Bharat Ki Kathayen
10. Janjatiya Veeron Ka Jeevan Charitra

X. Reports, Research Monographs and other Publications

1. NCERT Annual Report 1974-75
2. NCERT Annual Report 1974-75 (Hindi)
3. Primary Teacher Curriculum
4. Ten-Year School Curriculum (Hindi)
5. Higher Secondary Education and its Vocationalization
6. Guidance and Counselling in Indian Education
7. Audit Report 1973-74
8. Field Studies in Sociology of Education—Report on Mysore
9. Curriculum for the Ten-Year (Urdu)
10. Educational Research and Innovations (Revised edition)
11. Samajik Parivartan Ke Liye Prathmik Shiksha
12. Yuvkon Ke Liye School Ke Bahar Ke Kriya Kalaap
13. Higher Secondary Education and its Vocationalization
14. Syllabi for Classes III-V
15. Syllabi for Classes IX-X
16. Syllabi for Classes VI-VIII
17. Preparation and Evaluation of Textbooks in the Mother Tongue
18. Audit Report 1973-74 (Hindi)
19. Structure and Working of Science Models
20. National Science Exhibition for Children—1976
21. Unesco Folder
22. Universal Declaration of Human Rights
23. Field Studies in Sociology of Education—Report on Maharashtra
24. The Position of Languages in School Curriculum in India
25. The Curriculum for the Ten-Year School (R.P.)
26. Prathmik Shiksha Ke Kuch Pramukh Paksh
27. Some Salient Aspects of Primary Education
28. Pathya Pustak Pandulipiyan Ki Yojna
29. Teacher Education : Problem and Perspective—An Approach Paper
30. Educational Research and Innovations

31. National Science Talent Scheme—Information Brochure
32. Innovations in Education in India—Seminar Report
33. Innovations in Education in India—An Inventory
34. Keynote Address by Prof. Rais Ahmed
35. Ethology and Education—NIE Lecture Series
36. Tarun Sahitya Suchi
37. Non-formal Education for Dropout Children and Rural Development
38. National Survey of Teacher Education at Elementary Level
39. Pre-primary Teacher Education Curriculum