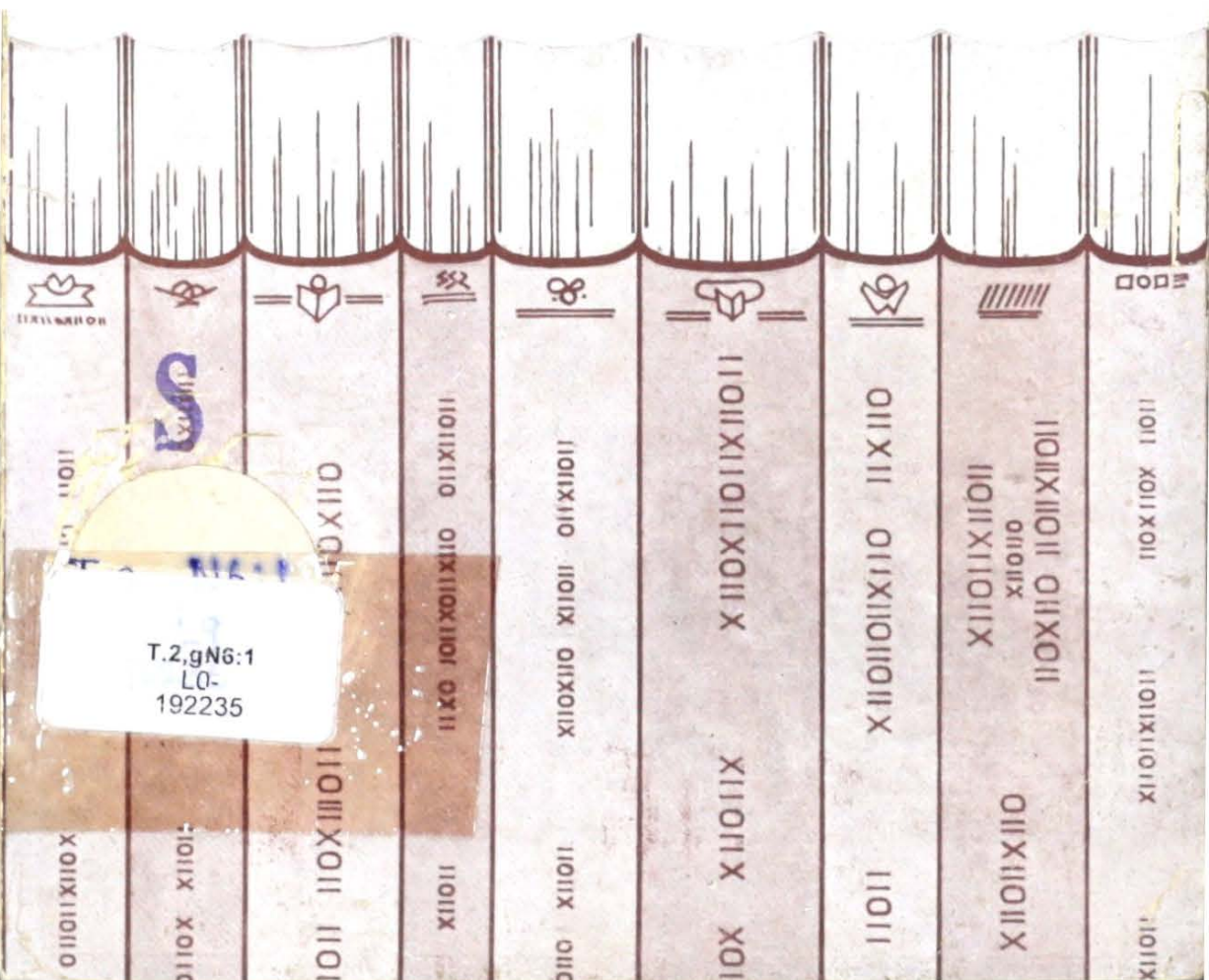




NCERT

Annual Report

1978-79



T.2,gN6:1
LQ-
192235

ANNUAL REPORT 1978-79



National Council of Educational Research and Training

December 1979
Pausa 1901

PD 1T

© National Council of Educational Research and Training, 1979

Published at the Publication Department by V. K. Pandit, Secretary, National Council of Educational Research and Training, Sri Aurobindo Marg, New Delhi and printed at The Caxton Press Pvt Ltd., Rani Jhansi Road, New Delhi.

CONTENTS

<i>Acknowledgements</i>	iv
1. NCERT : Role and Structure	1
2. New Directions	9
3. Universalisation of Elementary Education : Non- formal Education and Community Education	14
4. Socially Useful Productive Work and Vocationalisation of Education	18
5. Curriculum and Textbooks	23
6. Teacher Education : Training and Orientation	27
7. Research, Innovation and Survey	38
8. Educational Technology	73
9. The Search for Talent	80
10. Working with States	83
11. Consultancy and Information Services	88
12. Publications	93
13. International Assistance and Programmes	97
14. Receipts and Expenditure	106

APPENDICES

A Grants given by the Council to Professional Educational Organisations during 1978-79	111
B Field Advisers of the Council	113
C Composition of Committees	115
D Major Decisions taken by the Committees during 1978-79	139
E External Research Projects supported by the Council during 1978-79	143
F Participation in International/Exchange Programmes	150
G Publications brought out by the Council during 1978-79	157

ACKNOWLEDGEMENTS

THE National Council of Educational Research and Training (NCERT) is indebted to the Union Minister of Education and Social Welfare for his keen interest in its affairs. 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 organisations and institutions and, in particular, to 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.

NCERT : Role and Structure

THE first phase in the national programme for the improvement of school education began with the establishment of a few institutions by the Government of India in 1954. After a review of their work and of the progress of the entire programme of school

improvement, it was decided that these institutions should be brought together under an autonomous organisation. Thus, the National Council of Educational Research and Training (NCERT) came into being on 1 September 1961 and took over the functions of these institutions. From its very inception it has played a dynamic role, responding to new challenges from time to time and growing and reshaping itself in the light of the changing national needs and aspirations.

The objectives of the NCERT, as indicated in its Memorandum of Association, are to assist and advise the Ministry of Education and Social Welfare in implementing policies and major programmes in the field of education, particularly school education. For the realisation of these objectives, the Council undertakes the following programmes and activities :

- (a) Conducting, aiding, promoting and coordinating research in all branches of education ;
- (b) Organising pre-service and in-service training, mainly at an advanced level ;
- (c) Organising extension services for institutions engaged in educational research, training of teachers and providing extension services to schools ;
- (d) Developing and experimenting with improved educational techniques and practices ;
- (e) Collecting, compiling, processing and disseminating educational information ;
- (f) Assisting States and State-level institutions in developing and implementing programmes for qualitative improvement of school education ;
- (g) Collaborating with international organisations like the UNICEF, the UNESCO, etc , and with national-level institutions of other countries in developing educational programmes, and extending facilities for training and study to educational personnel of other countries ;
- (h) Serving as the Secretariat of the National Development Group of the Asian Programme of Educational Innovation for Development (APEID).

Role and functions

By virtue of its objectives and its unique position, the NCERT plays an important role in the nation's educational development. By

developing and trying out suitable educational materials and practices at the school level, by organising programmes of teacher education and by conducting research on educational problems, the Council makes the effective implementation of educational programmes possible. Over the years, the Council has come to acquire a status of its own and has developed expertise in various areas of education.

The role of the NCERT has acquired an added significance at the present juncture when the country is making a concerted effort to transform the educational system. As part of its activity, the Council has undertaken revision of curricula and preparation of textbooks to suit the needs of the new pattern of school education. It has also undertaken experimental programmes of non-formal education so that sufficient experience becomes available for adopting non-formal education as a major strategy for universalisation of elementary education. It has assisted the States in conducting surveys and developing curricular and instructional materials for the programme of vocationalisation of school education.

Research and innovations in the field of education are actively encouraged and supported by the Council through its Educational Research and Innovations Committee (ERIC). Financial assistance is given to individuals and institutions for undertaking research relevant to educational needs. Besides supporting the research effort of others, the Council itself conducts significant research in the different areas of education. The Council also operates a scheme of research fellowships to attract and promote research talent. The NCERT produces quality textbooks, low-cost science kits for elementary and secondary schools, laboratory equipment and teaching aids. These programmes have acquired renewed vigour in the context of the new curriculum.

The training and extension activities, through which the NCERT helps the practising teachers to adopt innovative practices, are important functions of the Council. In order to ensure a multiplier effect, the Council has adopted the strategy of training key persons at the State level. The work done by the various constituents of the Council in the field of training and extension as also in research and development is discussed in the relevant sections of this report.

NCERT produces and publishes textbooks, students' workbooks, teachers' guides, supplementary reading material, research monographs, journals, etc., for the purpose of effecting qualitative improvements in

school education. It also conducts educational surveys, the findings of which help in the location and establishment of schools.

The dissemination of educational information is a major function of the Council. As part of this activity it publishes four journals covering different content areas and catering to different levels of readers. The 'Indian Educational Review' covers research and is meant primarily for educationists and research workers. The 'Journal of Indian Education' disseminates information about innovative attempts and approaches that are meaningful for teachers and teacher educators. 'School Science' deals with science and science teaching at the school level and is intended mainly for science teachers and students. 'The Primary Teacher' is published both in Hindi and English and caters specifically to the needs of primary teachers and teacher educators.

Besides directly taking up programmes for the improvement of school education, the Council also assists professional educational organisations 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 it during 1978-79 to various professional educational organisations is given in Appendix A.

The NCERT is also one of the implementing agencies for the bilateral cultural exchange programmes entered into by the Government of India with the governments of other countries. It thus maintains a two-way flow of educational ideas with other countries by sending delegations there to study specific educational problems relevant to our requirements and by arranging training and study for foreign nationals from developing nations. This is also done under the sponsorship of the 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 the relevant section as well as in Appendix F.

Structure and administration

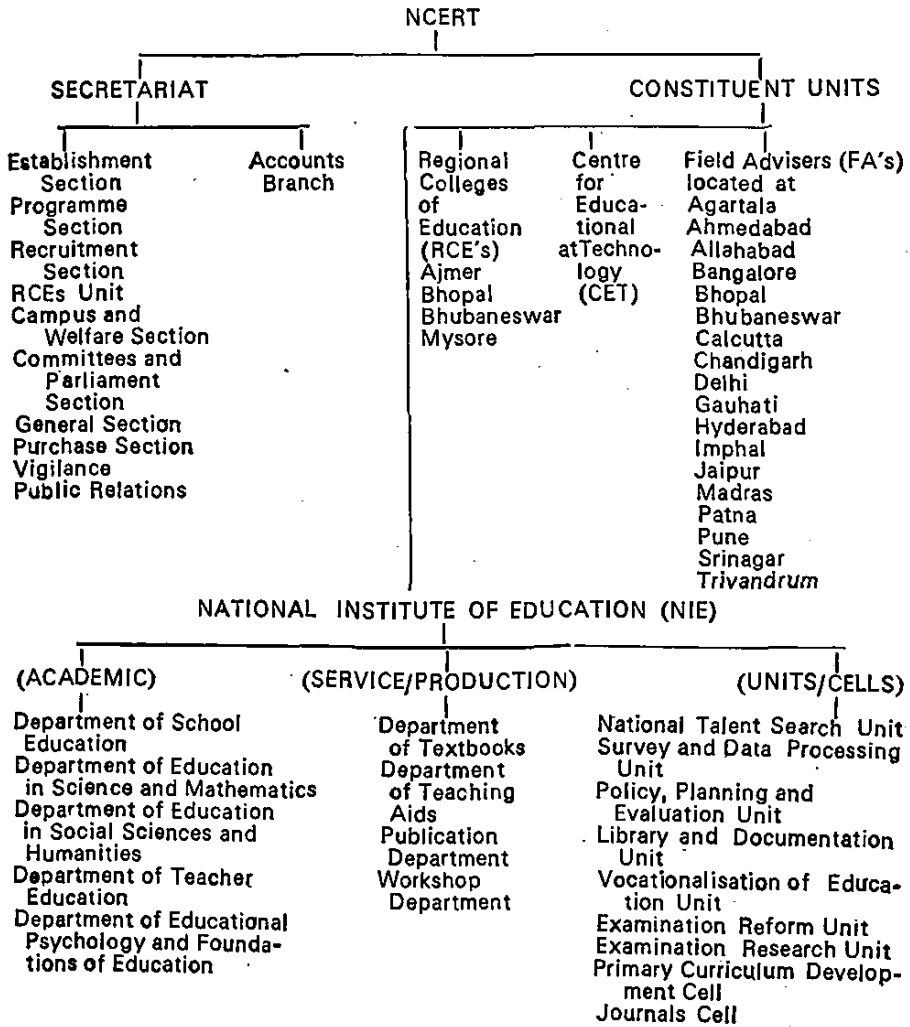
In order to achieve its objectives effectively and fulfil its role, the NCERT has, broadly speaking, five major constituents :

- (i) The Secretariat which is responsible for coordination and for providing administrative support ;

- (ii) The National Institute of Education (at Delhi) which comprises different Departments/Units which concern themselves with the development of academic programmes of importance for the improvement of school education ;
- (iii) The four Regional Colleges of Education (at Ajmer, Bhopal, Bhubaneswar and Mysore) which develop and offer innovative teacher education programmes ;
- (iv) The Centre for Educational Technology (at Delhi) which has the status of a Regional College of Education and is concerned with distant-learning systems and other educational technology programmes ;
- (v) The Field Advisers' Offices (at State Headquarters) which maintain an effective liaison with the State Departments of Education and State-level institutions.

The organisational framework of the NCERT is given in Chart 1. The decision-making machinery consists of a number of committees, as shown in Chart 2.

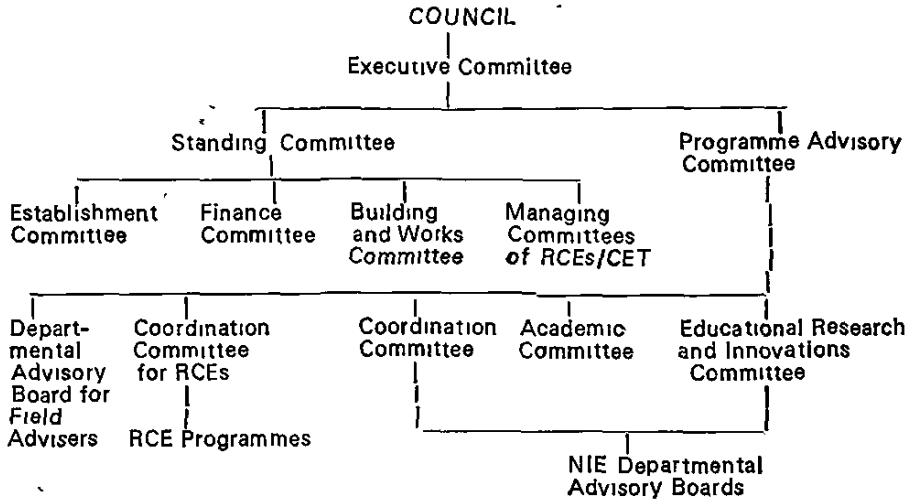
CHART 1
Structure of NCERT



Note: For the addresses of the Field Advisers' Offices please see Appendix B.

CHART 2

Functioning of NCERT



The apex body is the Council with the Union Education Minister as its President, the Union Minister of State for Education as its Vice-President, and the Ministers of Education from the States/Union Territories, the Chairman of the U G.C., the Secretary of the Ministry of Education and Social Welfare, four Vice-Chancellors of Universities drawn from each region and eminent teachers and educationists as its members. The list of members of the Council is given in Appendix C1. The Council meets at least once in a year.

The NCERT is administered by a smaller governing body called the Executive Committee. The Committee operates through a number of Standing Committees and through the Programme Advisory Committee. The membership of the various Committees is given in Appendices C2, C3, C4, C5, C6. The important decisions taken by these Committees during the year are given in Appendices D1, D2, D3.

The Programme Advisory Committee is an academic body which oversees all the programmes of the Council, lays down broad guidelines and decides the priorities of the various programmes of the Council. These programmes are processed by a number of other committees and boards in the light of the guidelines laid down by the Programme Advisory Committee. The first-level consideration and approval of programmes is by the Departmental Advisory Board (DAB) of each

Department/Unit of the NIE. The Academic Committee/Coordination Committee/Educational Research and Innovations Committee, makes a second-level examination of proposals, particularly from the point of view of ensuring inter-departmental coordination. The research programmes are examined by the Educational Research and Innovations Committee (ERIC); it approves research proposals received for financial assistance from outside as well as from within the Council. While the Academic Committee, under the Chairmanship of the Dean (Academic), considers the programmes of the academic departments of the NIE, the Coordination Committee, under the Chairmanship of the Dean (Coordination), considers the programmes of the service/production departments of the NIE.

There is also a Coordination Committee under the Chairmanship of Dean (Academic) for the Regional Colleges of Education. In order to ensure closer links with universities and the State government of the region served, each Regional College of Education has a Management Committee; the representatives of the State government concerned are members of this Committee and the Chairman is the Vice-Chancellor of the university to which the College is affiliated.

An Advisory Board under the Chairmanship of the Dean (Coordination) advises the Council on the programmes of the Field Advisers' Offices. This Board includes representatives of the State Governments. At the State level, an Advisory Committee under the Chairmanship of the Secretary of the Education Department of the State concerned advises the Field Adviser.

The following were the principal executives of the Council during the year 1978-79 :

Director	Dr. Shib K. Mitra
Joint Director	Dr. A.N. Bose
Secretary	Shri V.R. Dravid, I.A.S. (up to 10 August, 1978)
	Shri V.K. Pandit, I.A.S.
<i>Deans</i>	
Research	Dr. R.C. Das
Academic	Dr. R.C. Das
Coordination	Dr. A.N. Bose

2

New Directions

THE priority programmes of the Council during 1978-79 were largely determined by the emerging social concerns and the national tasks of overall economic development. These programmes related to equalisation of educational opportunities,

linking education more closely with economic development and provision of community education as a support to the promotion of elementary education, the desirability of checking population growth and the need to promote moral values and national integration.

The main directions in the universalisation of elementary education in which the Council's effort was concentrated were the development of programmes which would help the underprivileged sections of the population, who had remained outside the reach of education, to have the benefit of educational facilities. Since, in their case, economic and social reasons prevent their enrolment in the formal system or are responsible for their premature withdrawal from schools, non-formal education is to be adopted as the major means of meeting their educational needs. Consequently, the Council undertook experimentation in different modes of non-formal education, special emphasis being given to the development of programmes of particular significance for the promotion of education in rural and backward areas, among girls, and among the Scheduled Castes and Scheduled Tribes.

In view of the need for developing educational programmes which are relevant to the particular needs of specific groups and specific areas, the Council continued the experimental programme of decentralised curriculum formulation. In addition to developing relevant curricular materials, with the collaboration of elementary school teachers, it has also launched a programme under which the prospective teachers are helped to develop competence to prepare area- and group-specific textual materials which can be used in non-formal education centres. The learning episodes so developed relate to the day-to-day experiences of the elementary school children.

The promotion of elementary education requires the support of the community, and therefore the Council continued to experiment with the development of suitable programmes of community education, the purpose being to provide in a specific area a package of educational services which cater to the varying educational needs of different age-groups.

A particular priority of the Council is to develop programmes which will ensure a closer and more effective linkage of education with the tasks of economic development. Thus work relating to the introduction of socially useful productive work as an essential ingredient of the school curriculum continued. The instructional programme followed in the non-formal education centres lays emphasis on pro-

moting among students skills which will not only lead to increasing returns from existing economic activities but will also help in diversifying the occupational life of the community. In keeping with this, one of the Regional Colleges of Education studied the potentialities of the cultivation of edible mushrooms as a major socially useful productive activity in secondary schools. Similarly, a socio-economic survey was undertaken by another constituent of the Council to develop a curriculum for the continuing education of weavers.

In the area of vocationalisation of education, the Council continued to do research and development work. It established collaborative arrangements with various organisations such as the Nursing Council of India, the Indian Council of Agricultural Research, etc., for developing courses in various vocational fields. Investigations into the vocational exploration programme at the secondary level were undertaken to develop a means of assisting students to make appropriate educational and vocational choices. Assistance was provided to the States in conducting surveys, in developing suitable curricula in different vocational areas, in the orientation training of teachers and in evaluating the effectiveness of the programmes that they have undertaken.

Considering that the teacher continues to be the kingpin of the educational process, the effort of the Council continued, as before, in the direction of upgrading the competence of school teachers. It has helped the States and teacher training institutions to upgrade their teacher education curricula particularly in the light of the framework developed by the National Council for Teacher Education. It collaborated with the State Governments and State Institutes of Education, etc., in organising massive programmes of in-service training for teachers. It also assisted the State Boards of Teacher Education to take effective measures for improving the standards of teacher education. The Centres for Continuing Education, established by the NCERT, continued to offer programmes relevant to the professional needs of teachers. These Centres provide a mechanism by which the in-service training of teachers can be undertaken on a decentralized basis; they also provide teachers an opportunity to take advantage of the teaching-learning resources available in the Centre, as and when required. A significant feature of this scheme is the equal sharing of

expenditure between the NCERT and the State governments, ensuring thereby the latter's continued interest and participation.

A major shift during the year under review took place in the approach to curriculum development. Realising that education has to become one of the major instruments for social, economic and cultural development and for the consequent improvement in the quality of life, the concept of curriculum has been changed. The Council has initiated the process of developing the curriculum around various developmental themes and relating them to the surroundings of the child, its family and its community.

The new curriculum includes topics like improved crop yields, rural electrification, urban slums, small-scale industries, reforestation, soil erosion, land reform, population education, etc., with emphasis on providing children with an understanding of these and other problems and the competence to deal with them.

The concern of the NCERT with important social problems was reflected in the effort to develop materials in regard to population education, the need for increasing productivity from economic activities and the promotion of moral values among the students. National integration camps for students and teachers were held to inculcate among them an appreciation of the country's unity within its cultural diversity.

Since implementation of educational programmes is primarily the responsibility of the State governments, the Council continued to collaborate with their Departments of Education and with State-level institutions like the SCERTs/SIEs in developing and implementing academic programmes which are significant for the improvement of school education. These included improvement of curricula, training of teachers and key-level personnel, development of textual materials in relation to the upgraded curriculum, etc.

The Council continued to experiment with developing new strategies of learning. Its Centre for Educational Technology has been exploring the potentiality of modern media for promoting education, particularly through its distant-learning systems. The Department of Teaching Aids helped the States to develop low-cost indigenous teaching aids which make teaching-learning more effective. An alternative and integrated approach to the teaching of science has been evolved which utilises the resources available in the child's environ-

ment. This approach indicates, among other things, that effective teaching of science need not necessarily depend upon expensive laboratories. A very successful demonstration of this approach is the Hoshangabad Science Teaching Programme which is assisted by the Council. This project aims at teaching science to students through the discovery or investigative method. Beginning with 16 village schools, the project now covers the entire district of Hoshangabad. Premier institutions like the Tata Institute of Fundamental Research, Delhi University, University Grants Commission, colleges of the State, etc.. are participating in this project.

3

Universalisation of Elementary Education : Non-Formal Education and Community Education

THE working group on Universalisation of Elementary Education set up by the Ministry of Education and Social Welfare indicated some strategies for organising part-time non-formal education for children in the age-group 6-14 with a view to an early

realisation of the goal of providing free and compulsory education for this age-group on a universal basis. With these strategies in mind, and realising that a very large number of non-enrolled children belong to the weaker sections, like the Scheduled Castes and the Scheduled Tribes, and to urban slums and other economically backward areas, the NCERT has undertaken several projects with the purpose of finding out the best way of providing meaningful education to these children. These projects are being implemented by the Field Advisers, the Regional Colleges of Education and the various Departments of the National Institute of Education.

The Field Advisers and the Regional Colleges of Education have established non-formal education centres. About 200 such centres were functioning in 1978-79. The main purpose in establishing these centres was to develop a variety of models, the experience of which is expected to help the States to develop non-formal education as a major strategy to provide education to children who, for various socio-economic reasons, either cannot enrol in the formal system or drop out from it prematurely.

The curricular programme of these centres is based on the findings of intensive household surveys undertaken with a view to determining not only the number of children for whom educational facilities have to be provided but also to identify the economic and other interests of the communities to which these children belong so that their education can be woven around the requirements of the people. The Council has developed suitable guidelines for helping teachers to organise the programme effectively.

In collaboration with the Literacy House, Lucknow, and other organisations, instructional material has been developed for the non-formal education centres. Keeping in view the extra speed with which children of the age-group 9-14 tend to learn, this instructional material has been developed in the form of primers, emphasising literacy, and numeracy and need-based information. These primers meet the educational needs of urban children, rural boys and girls and tribal children.

In the first phase, materials have been developed for the nine States which have been identified as being educationally backward. Of these, four States have the Hindi medium and five their respective languages as the media of instruction. Parallel materials in Urdu were also developed for use in Hindi-speaking States and in Jammu and

Kashmir State. Along with each primer, an instructors' manual has also been developed. A short book of functional mathematics has also been prepared for use in non-formal education centres. A teachers' guide has been prepared in Hindi, English, Assamese, Telugu, Bengali and Oriya. Visual charts developed around the principal themes contained in the teachers' guide have been prepared by the Council's Department of Teaching Aids. The non-formal education centres of the Council are quite popular and their enrolment has exceeded their capacity. A large number of requests have also come from the States for the above instructional material for use in their own centres of non-formal education.

The Council's Department of School Education also experimented with alternative models of non-formal education through five non-formal centres in rural areas, each representing a distinct socio-economic category. The Bhumiadhar centre in Uttar Pradesh covers a hilly area predominantly populated by the Scheduled Castes; the Bariarpur centre in Bihar covers Mushahirs, the lowest among the Scheduled Castes hierarchy, the Barauli centre in Uttar Pradesh caters to the needs of the poorer sections of a rural community. While the Mankodi centre in Gujarat caters to the needs of tribal children, the Kilkheri centre in Delhi provides facilities for children living in an urban slum. These centres are engaged in providing part-time instruction. The programme of these centres aims at motivating drop-outs, giving them education which is integrated with socially useful productive work and providing literacy, numeracy and attitudinal training for health and in community living.

The experience has indicated that unless the community is closely involved, enrolment and attendance of children cannot be fully ensured. The Council, has, therefore, taken up work in the areas of adult and community education. In the area of adult education, the Council has been collaborating with the Directorate of Adult Education, particularly in the development of instructional material. The Department of Teaching Aids of the Council prepared such materials on adult education for the State of Haryana and Delhi as a primer, a workbook, cut-out games, flash cards, and a teachers' guide. These were subsequently refined and finalised and the Delhi Administration is printing these materials. The Regional College of Education, Bhopal, also conducted workshops on adult education for orienting the teachers of Madhya Pradesh. It has collaborated with the Bhopal University as

well as the Directorate of Panchayat and Social Welfare of Madhya Pradesh for this purpose.

The developmental activities in community education continued to be implemented with UNICEF assistance. The specific objective of the projects being implemented is to develop new types of educational activities as a means of meeting the minimum educational needs of large groups that are partially or totally deprived of education. As indicated earlier, this project is based on the assumption that children's education, to be meaningful, has to proceed concurrently with gradual change and modification of their socio-economic environment. This can be achieved through the education and stimulation of the community at large; this implies that the educational needs of not only the pre-school and out-of-school child but also of all the drop-outs and the mothers have to be effectively met. It is also felt that by consolidating educational service for these groups, particularly in blocks covered by the Integrated Child Development Services, the reinforcement of other services can be maximised.

A related objective of the programme is to test whether by removing the dichotomy of the school and the community, the former can extend its assistance to the latter so that school may become a catalyst for social change. So far 30 community education centres have been set up in different States. The experience of organising these centres has revealed the desirability of further expansion of the programme.

The holding power of the formal system needs to be enhanced to prevent the large-scale wastage that takes place at the primary level, particularly among girls and children in rural, tribal and the poorer urban areas. Efforts to develop new approaches to education, therefore, become imperative. With UNICEF assistance, the NCERT has been implementing the curriculum renewal project. The objective of the project is to develop innovative curricula which can meet the educational needs of children who remain in the school only a few years. Expansion of educational facilities is to be accompanied by a qualitative adjustment of the curriculum to the life style of the child and to the socio-economic opportunities likely to be available for him. The meaningfulness of existing primary education is attempted to be enhanced through gradual infusion into the elementary school curriculum of innovative ideas tested in the experimental educational programmes.

The project has become operational in 15 States. 450 schools (30 in each State) have been selected for the project.

4

Socially Useful Productive Work and Vocationalisation of Education

SOcially useful productive work and vocationalisation of education provide the major means of linking school education with economic development. The objective is to promote such skills among students as are socially relevant and

help them in later life to function as socially useful and productive citizens. The Ishwarbhai Patel Committee recommended that socially useful productive work, advocated in Mahatma Gandhi's philosophy of education, should be given a central place in the curriculum at all stages of education and, to the extent possible, the content of the different school subjects should be related to it. A significant feature of this programme is the relating of school activities to the primary needs of the learner and the local community. The purpose is to acquaint children with the world of work and to help them to perform manual work individually and collectively. It should lead to development of positive attitudes to work and such socially desirable values as dignity of labour, self-reliance, cooperation, etc.

During the year under report, a number of workshops and training courses were organised to develop a model curriculum on socially useful productive work, to clarify the concepts and method of developing curriculum and to train teachers in organising different activities. A study indicating the status of the programme was also conducted in selected schools.

Vocationalisation of education is an essential feature of the educational reform that is under way. If higher secondary education is to be socially relevant and economically meaningful to the student, it must be integrated with the goals of national development, which comprise, among other things, the removal of unemployment and underemployment, provision of facilities for rural development and encouragement to cottage and small industries. By training students in skills which are of direct use to the community, the programme of vocationalisation contributes significantly to the realisation of these tasks.

During the year a number of programmes were undertaken to assist in clarifying concepts, in developing suitable curricular and instructional materials and in orienting teachers and administrators. Eighty-four courses have been identified in diverse fields—agriculture, industry, commerce, para-medical, etc., in which a vocationalisation programme can contribute by training middle-level personnel.

The document on vocationalisation prepared by the NCERT in consultation with experts, recommended strongly that all vocational programmes should be carefully planned on the basis of valid data on employment potential. One of the major responsibilities of the Vocationalisation of Education Unit (VEU), therefore, is to conduct model surveys to assist States in planning their programmes. A study of

vocational opportunities in the areas of agriculture, commerce, industry, health and home science was undertaken in the State of Andhra Pradesh. The Study Report together with the recommendations was sent to the State government. The project was undertaken to assist the State in identifying suitable vocations for which vocational programmes could be started at the post-secondary stage. The State has constituted committees to prepare curricula so that the new programmes are started during the academic session 1979-80.

Karnataka and Gujarat started vocational programmes in selected higher secondary schools/junior colleges/colleges during the academic session 1977-78. The former selected 21 vocational courses and enrolled 1030 students in 13 selected junior colleges. On the other hand, Gujarat admitted 3000 students, mostly in commerce and home science courses, in 30 institutions. While all the courses in Karnataka extend over a period of two years, those in Gujarat have been designed for durations ranging from one to three years. The VEU undertook evaluation studies in these two States to help them identify difficulties faced by the institutions and to take necessary steps to solve these difficulties. Two evaluations in Karnataka and one in Gujarat were completed. The reports of these studies and the observations of the Unit were sent to the respective States and also to the Ministry of Education, Government of India. Karnataka has taken several steps to improve the position and it is expected that corrective steps to make the courses more attractive during the next session will be taken in these States.

A number of seminars were organised during the year.

At the instance of the Planning Commission, a two-day seminar on vocationalisation of education was held at Delhi in which 40 participants drawn from different States took part. In the seminar the general philosophy of vocationalisation, its nature, difficulties faced in the States which have already started vocational programmes, and steps to successfully implement the scheme were discussed.

A three-day seminar was organised in Karnataka to discuss the problems faced by the vocational institutions in the State. Forty heads of junior colleges and teachers teaching vocational courses participated in the seminar. A particular feature of the seminar was the special talks given by future employers of the State wherein the shortcomings of the course desirable remedies to be found to improve the practical content of the courses, employment opportunities available, and steps to be taken by the government

in the placement of the vocational students were critically examined. The discussions indicate that employment potential do exist for those who have the right type of training and education, and that the entire curricula would need to be designed in such a way that the employment needs are met without sacrificing the academi content. It was also observed that the employers were glad to extend their support for the courses provided certain administrative hurdles were removed.

At the request of the NCERT's Field Adviser in Uttar Pradesh, a seminar on vocationalisation of education was held with about 30 participants comprising ex-Vice-Chancellors, university professors, State Assembly members, teachers' unions leaders and State officers. It was interesting to observe that even after so much of publicity by the NCERT and news media the participants had a very distorted picture of vocationalisation and it was really difficult to convince the participants of the necessity for vocationalisation in the present stage of economic development of the country. A comprehensive report was prepared for submission to the government for implementation.

Orientation training of personnel constituted another major activity during the year. At the request of the Government of Tamil Nadu, six orientation programmes, each with 50 heades of institutions participating, were conducted at Coimbatore, Tiruchirapally, Ramanathapuram/ Kanyakumari, Tirunelveli and Thanjavur. The purpose was to discuss various problems faced by the schools, which have started vocational programmes, in the matter of the appointment of part-time teachers, provision of adequate equipment and suitable instructional materials, merits and inadequacies of syllabi, placement difficulties, employment opportunities, and administrative problems. Most of the headmasters were found to have a very hazy appreciation of the vocational programmes and several of them felt that the best scheme would be to identify separate institutions where only vocational courses could be run. Another interesting observation was that the courses were being run more successfully in the rural areas than in the urban centres. The cooperation of development agencies was more easily forthcoming than in the cities and towns.

Orientation programmes for the officers appointed to conduct district vocational surveys were conducted in Tamil Nadu, Tripura and Haryana. The programme in Tamil Nadu was conducted at Madras for 40 officers together with the Chief Educational Officers. A similar programme was conducted in Agartala and in Gurgaon (Haryana). The

main purpose of these orientation programmes was to instruct Survey Officers in the use of various schedules and questionnaires prepared by the VEU and the methods of collection of data. As a consequence Tamil Nadu has completed surveys in six districts, Tripura in one district, and Haryana in two districts.

5

Curriculum and Textbooks

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

the major thrust of the Council during the year continued to be in the area of curriculum development and preparation of textbooks and related materials for the new pattern of education. Illustrative of the Council's efforts in curriculum development are the publications entitled "Educational Objectives at the Primary Stage—A Developmental Approach", and "Effective Use of School Curriculum".

The publication on objectives gives a detailed list of the developmental objectives of education at the primary stage which have to be thoroughly grasped by the teachers before they start their work. A sample analysis sheet for making conceptual analysis of the curriculum in relation to these objectives has also been provided for the use of the teachers. It is expected to help the teacher to realise that the school syllabus, which is often confused for the curriculum, does not adequately help him to achieve the major developmental objectives at the primary stage. He may, therefore, have to look for more learning experiences to be provided to the child for the achievement of various objectives through school and out-of-school activities.

Effective use of school curriculum emerged from a project which was undertaken by the Councils Department of School Education, with the purpose of improving the effectiveness of teachers. This approach adopted involved a conceptual analysis of the curriculum in relation to the objectives of education and development of teaching-learning strategies and teaching skills suited to teaching different types of content. The nature of the child at different stages of his development was emphasized as an important determinant of the curriculum. Similarly, the desirability of building curriculum around the immediate environment and community of the child was also stressed. The project included observation of classroom and out-of-class activity, conceptual analysis of the curriculum, a study of the child and preparation of suitable literature for the use of teachers. The two departments primarily involved in this activity were the Department of Education in Social Sciences and Humanities and the Department of Education in Science and Mathematics. The work done by them during 1978-79 is discussed below.

Social sciences

The Department of Education in Social Sciences and Humanities has played a significant role in the development of curriculum and syllabus and preparation of instructional materials in the disciplines of history.

geography, civics, political science, economics, sociology, social studies and Hindi (as mother tongue and as second language), English, Sanskrit, fine arts, moral science and yoga. Apart from the curricular programmes directly related to school teaching, the Department has developed textual materials on population education, the status of woman and moral and spiritual values for incorporation in the school textbooks.

The Department also worked on the preparation of supplementary readers and workbooks (including the perforated ones) for students and handbooks, guidebooks, readings in various subjects and source books, etc., for teachers.

The question of incorporating material on population education in textbooks was considered in a national workshop organised in July 1978. Educationists, social scientists and field workers in the areas of population education and family welfare participated in this workshop. A source book on population education was developed, comprising five volumes devoted to population explosion and its various implications, the strategy of implementing the population education programme, teaching population education through various school subjects, a demographic profile and a bibliography and glossary of technical terms in population education.

A working group to suggest the materials that could be emphasized to promote Gandhian values in school curricula held three meetings in which a list containing Gandhian values was developed and elaborated for curricular implication. An analysis of the present school syllabus and textbooks in the context of Gandhian values was also undertaken. The report of the working group, which is under preparation, will cover an analysis in the context of Gandhian values of the present school syllabus and textbooks of the States of Andhra Pradesh, Gujarat, Maharashtra, and West Bengal. A bibliography of Gandhiji's works and writings on Gandhiji from the point of view of school students is also under preparation.

The need for promoting moral and spiritual values among students also received the Department's attention. A working group meeting on moral and spiritual education was organised in July 1978. The members of the working group discussed the recommendations of various committees and commissions on this important educational problem, especially their relevance in modern world. The working group recommended that the NCERT should take up the production of supplementary

books that would help to inculcate moral and spiritual values in young children. Work on such books has been taken up.

Science and mathematics

During the year the main thrust of the Department of Education in Science and Mathematics was on giving final touches to the publication of textbooks in science and mathematics for the new pattern of school education. One of the major activities was the development of a single textbook in science for class IX, based on a composite course in science for the secondary stage (Science Alternative 1) as recommended by the Ishwarbhai J. Patel Committee.

Work on the secondary science project, which envisages activity-oriented teaching in classes IX-X, including demonstration experiments for teachers, and laboratory activity, home activity and supplementary reading material for children, continued. The material required for class IX was prepared by teachers and resource persons at a workshop and was refined in the Department. It is being tested in nine schools. Constant contact was maintained with these schools and the difficulties experienced by them in implementation and the means to overcome these were discussed with the teachers. The material for class IX would be so refined that it will be possible to bring out both English and Hindi editions for trial in a wider spectrum of schools.

The textbooks and supplementary readers brought out during the year in social sciences, languages, science and mathematics are listed in Appendix G.

The Department also continued to implement the pilot project on nutrition/health education and environmental sanitation in primary schools. The project is in operation at the five Regional Centres of Coimbatore, Jabalpur, Baroda, Calcutta and Ludhiana. Each centre has developed an instructional package in the regional language, which includes, syllabus, textual materials for students (Classes II to V), teachers' guide, teaching aids, syllabus for teacher training schools and reference manual for teacher training schools, teachers and parents. The programme was undertaken in the experimental schools after the orientation of teacher educators, supervisors and primary school teachers. On the basis of feedback and survey, the instructional package has been revised.

The Department also worked on the preparation of supplementary readers on various topics of scientific interest.

6

Teacher Education : Training and Orientation

THE improvement of teacher education has been a major function of the NCERT. The three main directions in which this has been attempted include introduction through the Regional Colleges of Education of innovative programmes of pre-service and

in-service education of teachers, research into the problems of teacher education and collaboration with the State governments to improve the teacher education programmes of the existing institutions. The main activities that have been undertaken during 1978-79 are discussed below

Pre-service teacher education programmes

Pre-service teacher education programme continued to be organised in the four Regional Colleges of Education at Ajmer, Bhopal, Bhubaneswar and Mysore on a regional basis. The following courses were offered.

Four-year courses in arts and science

With the progressive phasing out of the four-year course in these colleges since 1976, only the last year courses were continued. Only at Mysore the four-year course in science continues. The enrolment in these colleges during 1978-79 were as follows :

Ajmer	B.Sc. B.Ed. (final year)
Bhopal	B.Sc. B.Ed. (final year)
Bhubaneswar	B.Sc. B Ed. (final year)
Bhubaneswar	B.A. B Ed. (final year)
Mysore	B A. B.Ed. (final year)
Mysore	B.Sc. B.Ed. (4-year course)

One-year B.Ed. course

All the Regional Colleges offer a one-year B.Ed. course in different subjects after a student has obtained his Bachelor's degree. Although the duration of the course is the same as is prevalent in other parts of the country, the training programme of the Regional Colleges has certain innovative and experimental features. These include long duration internship as the method of practice teaching, internal evaluation and integrated content-cum-method course. The trainees are also oriented in areas like work-experience and socially useful productive work. From 1977-78, a specialised B.Ed course in elementary education has been started.

The enrolment in various courses is given in the table below.

	<i>Ajmer</i>	<i>Bhopal</i>	<i>Bhubaneswar</i>	<i>Mysore</i>
Science	114	69	113	92
Languages	159	77	72	—
Commerce	39	32	15	—
Agriculture	8	5	—	—
B.Ed. (Elementary)	—	39	—	18
	320	222	200	110

M.Ed. course

Regional Colleges of Education at Ajmer, Bhopal and Bhubaneswar offer a non-year post-graduate course in education leading to the award of the M.Ed. degree. The courses offer different specialisations in different colleges. The following were offered during 1978-79.

<i>College</i>	<i>Specialisation</i>	<i>Enrolment</i>
Ajmer	Science education	32
Bhopal	Elementary education	10
Bhubaneswar	Curriculum construction	32
	Educational administration, and Educational measurement	

M.Sc. Ed. course

A two-year post-graduate course in mathematics, physics and chemistry, together with methodology of teaching, is being offered by the Regional College of Education at Mysore. The enrolment for this course in 1978-79 was 77. The RCE, Bhubaneswar, offers the post-graduate course in life science, together with the methodology of teaching. The enrolment for the course in 1978-79 was 20.

In-service degree education programmes of RCEs

B.Ed. (summer school-cum-correspondence course)

To clear the backlog of untrained teachers in secondary schools, all the four Regional Colleges of Education offer a summer school-cum-correspondence course leading to B.Ed. degree for teachers who are already working. Teachers are trained through two consecutive

summer vacations supplemented by correspondence lessons in between two summers. At the end they appear in the B.Ed. degree examination of the University. The course is very popular and the enrolment during 1978-79 was as follows :

Ajmer	212
Bhopal	245
Mysore	250
Bhubaneswar	Secondary 260
	Elementary 103

Other in-service programmes in the Regional Colleges of Education

Short in-service training programmes are conducted in all the Regional Colleges of Education on the basis of felt needs of the region or at the request of State governments. Some of the programmes implemented during 1978-79 are indicated in Annexure 6.1.

The various departments of NIE undertook, as usual, the in-service training of teachers and key level personnel of the State Councils of Educational Research and Training, State Institutes of Education. Some of the important programmes of in-service training organised during the year are indicated in Annexure 6.2.

The Department of Teacher Education at the National Institute of Education has focussed its effort on the improvement of teacher education with a view to making it an effective tool for the implementation of the National Policy on Education. The Department conducted research on teacher education, developed curricular and instructional materials, carried out developmental programmes in collaboration with different States and promoted innovations and experimentation. Among the important programmes that the Department implemented during the year were :

- (a) Work in the development of multi-media kit on teaching skills; out of the five films on the concept of micro-teaching, one is ready;
- (b) Implementation of a pilot project to see the feasibility of using micro-teaching to improve the general competence of teacher in service;
- (c) Organisation of seminar readings on innovative ideas developed and tried out by the teacher educators of training institutions;

- (d) Orientation of personnel from the State Institutes of Education and SCERTs in micro-teaching; and
- (e) The development of procedures for forecasting teacher requirements of Haryana.

The Department of Teacher Education serves as the secretariat of the National Council of Teacher Education which functions through its steering and academic committees. Meetings of these committees were organised in the year. Among other things, the recommendations made by these committees relate to the implementation of the curricular framework on the conditions of affiliation of teacher education, preparation of instructional materials and textbooks based on the curricular framework, survey of the needs of teacher education for special schools for the physically and mentally handicapped children, etc. The Department has initiated development and training programmes as a follow-up action of these recommendations.

The Department of Educational Psychology and Foundations of Education conducts a nine-month diploma course in vocational guidance and counselling at the NIE, New Delhi. This course, which is open to teachers as well as in-service teachers/teacher educators/counsellors, etc, helps in the preparation of counsellors and guidance workers for employment in schools where there is need to help students to make appropriate educational and vocational choices. The trainees were drawn from Punjab, Himachal Pradesh, Karnataka, Tamil Nadu, Mizoram, Delhi, Chandigarh, Sikkim and Jammu and Kashmir. During the year 23 trainees completed the course.

ANNEXURE 6.1

In-service Training Programmes organised by the RCEs

Ajmer

1. Correspondence-cum-contact courses for secondary school teachers
2. Seminar on the methodology of teaching geography
3. Workshop to review the textbook in book-keeping and commercial practice
4. Workshop on raising the achievement motivation
5. Workshop on identification and solution to difficult topics in +2 stage chemistry curriculum
6. Workshop on planning and preparation of instructional materials for teaching mathematics in elementary classes
7. Workshop on instructional material in mathematics for primary level
8. Workshop on research designs
9. Workshop on micro-teaching

Bhopal

1. Correspondence-cum-contact courses for secondary school teachers.
2. Enrichment course for English teachers of M.P. working in tribal schools
3. Workshop on creative methods of teaching
4. Workshop on population and safety health education for primary teacher educators of M.S. and Goa
5. Workshop for teacher educators in physical science, biology and mathematics for training in correspondence lesson writing
6. Workshop on innovations and teaching of agriculture
7. Workshop on library management for secondary school librarians
8. Working on commerce teachers
9. Workshop on graphic arts and modelling

Bhubaneswar

1. Correspondence-cum-contact programme in eight subject matter areas for secondary school teachers and teacher educators
2. Vocational programme for six month's duration in various trades geared to the needs for school drop-outs
3. Orientation of key persons from Bihar in physical science, biological science and mathematics
4. Seminar on adult education plans and action strategies
5. In-service course for agriculture teachers of Orissa
6. Workshop on elements of educational research for primary teacher educators
7. Population education (Port Blair)
8. Workshop on innovative practices in primary education (Mirza, Assam)
9. Training of teachers in socially useful productive work
10. Workshop on development of syllabus for M.Ed./B.Ed.
11. Orientation programme on educational technology
12. English language teaching for secondary school teachers (Shillong)
13. English language teaching for secondary school teachers (Jorhat, Assam)
14. Workshop on child play materials

Mysore

1. Orientation for key personnel to train heads of higher secondary schools in Tamil Nadu
2. Training of resource persons in physics, chemistry, biology and mathematics for teachers of Kerala
3. Workshop on question bank at +2 level for Karnataka teachers
4. Workshop in content-cum-methodology in biology for secondary school teachers in Karnataka
5. Revision of lessons of correspondence-cum-contact programme for secondary school teachers of southern region
6. Contact programme for elementary educators (I batch)
7. Seminar on micro-teaching

8. **Course of techniques of administration and supervision for heads of middle and high schools of Pondicherry**
9. **Contact programme for elementary teacher educators (II Batch)**
10. **Orientation programme for key personnel in the techniques for preparing lessons for correspondence-cum-contact programme for Andhra Pradesh**
11. **Seminar on problems of pre-primary education in Karnataka**
12. **Workshop on audio-visual education for primary school teachers of Nanjangud**
13. **Workshop on environmental studies**
14. **Orientation seminar on micro-teaching**
15. **Workshop on preparation of teacher manual for textbooks of physics for class XI**
16. **Working group meeting to prepare draft curriculum in physical education for classes I to X**
17. **Workshop in geography for teachers of Karnataka**
18. **Workshop in mathematics**
19. **Discussion of papers selected for seminar reading award for teacher educators**
20. **Seminar on correspondence education**
21. **Seminar on evaluation materials in social science**
22. **Workshop on preparation of vocabulary in Hindi**

ANNEXURE 6.2

In-Service Training Programmes organised by the NIE Departments

A. Science

1. NCERT organised 37 summer science institutes in physics, chemistry, biology and mathematics and trained 1744 teachers in these institutes to enable them to teach at the higher secondary level.
2. Work on the national project for the training of in-service teacher education personnel in environmental studies was started in July 1978. Two British experts, Mr. R.F. Morgan and Mr. R. Manchee, were associated with the project. The slides, audio-tapes and other materials for training have been developed. The resource persons' training seminar/workshop was held in December 1978, followed by two regional workshops for the eastern region in Coimbatore.
3. A workshop was held in Srinagar for training science club sponsors in the design of experiments for science clubs/activities and in starting science clubs in schools.

B. Social sciences and humanities

4. *Intensive course for teachers of English*

The Council organised two ten-day intensive courses for about 80 teachers of English of the Central Tibetan Schools Organisation at Mussoorie from May 29 to June 8, 1978 and at Kalimpong from October 16 to 25.

5. *Orientation course in English*

A six-day orientation course in English for the primary and middle school teachers of five schools run by the Andhra Education Society was organised.

6. *Language laboratory training programme*

A language laboratory training programme was organised in the Language Laboratory of the Institute of English, Calcutta, from December 15 to December 23, 1978.

7. *Orientation programme in adult education*

An orientation programme for teachers, supervisors working in the field of adult education in the rural areas of the Union Territory of Delhi was organised from February 19 to February 28 1979.

8. *Orientation programme in geography*

Two 10-day orientation programmes for geography teachers/ teacher educators were organised from February 19 1979 to act as key persons of the Karnataka State at the RCE, Mysore; and Kerala State at Trivandrum from November 13 to 22. Seventy teachers of these States attended the programme.

9. *Summer institutes*

Sixty-two summer institutes were organised in the following subjects : English—15, Hindi—14, Sanskrit—4, History—9, Geography—5, Economics—9, and Political Science—6.

C. *Teacher educators*

10. A national competition on seminar readings for elementary and secondary teacher educators was organised. Seven secondary teacher-educators and 10 elementary teacher educators were awarded prizes.

11. A six-day orientation programme in the uses of micro-teaching technique for developing general teaching competence of the prospective teachers was organised at Mysore. Forty-nine persons from different States and Union Territories benefited from the training.

12. A regional training course in micro-teaching for the secondary teacher educators from the eastern States was organised at Banaras Hindu University

D. *Educational psychology and guidance*

13. An orientation programme in educational psychology (guidance and teaching) was organised at the College of Educational Psy-

chology and Guidance, Jabalpur, for the District Education Officers belonging to northern and western regions. The programme oriented the District Education Officers to the new developments in educational psychology. The role of DEOs in planning, organising and administration of educational programme and in-training of teachers was also discussed in detail.

14. An orientation programme in educational psychology (learning and development) was organised to orient the SIE personnel to the current developments in educational psychology and to develop strategies for improving the teaching-learning process at the primary grades.
15. A training programme for the diploma course in educational and vocational guidance was organised. This was a nine months' training course for those preparing to serve as school counsellors. Twenty-three trainees were trained in this course during 1978-79.
16. A training course for career masters was organised at Shillong for career masters and school teachers of Meghalaya.

E. Measurement and evaluation

17. An orientation course on methods of teaching and techniques of evaluation was organised for the academic staff members of Layola College, Madras.
18. An all-India training course in educational evaluation was organised in June 1978 at Simla, for developing a strategy to improve evaluation practices at the elementary stage of education.

F. Vocationalisation

19. Six orientation programmes were conducted in Tamil Nadu during March 1979 to discuss various problems faced by those schools which have started vocational programmes.
20. An orientation-cum-training programme for textbook writers and evaluators was organised in Patiala from October 25 to 29, 1978.
21. A similar programme was organised in Hyderabad from March, 1979.

7

Research, Innovation and Survey

Research and innovation

RESearch is an important function of the Council. It undertakes, aids, promotes and, to the extent possible, coordinates research activities in the different branches of education. The ERIC approves research proposals and

projects from all the departments and constituent units of the Council and makes available grants to individuals as well as for institutional research projects outside the Council. It has adopted a standard procedure for evaluating research proposals received by the Council for financial assistance. A number of fellowships at post-graduate and post-doctoral levels are also made available from the ERIC funds for motivating young scholars for research. One of the significant steps that the Council's Educational Research and Innovations Committee (ERIC) has taken is to list priority areas for educational research which may need financial assistance from the NCERT. Although these priorities are not intended to preclude the consideration of other relevant proposals, the limited resources at the disposal of the ERIC make it imperative for the Council to be selective in its assistance.

One of the priority areas in the field of education is the fulfilment of the constitutional directive to provide free and compulsory education to all children up to the age of 14. Research and innovation, which will help to bring within the ambit of education girls and children belonging to the weaker sections of the community, specially Scheduled Castes and Scheduled Tribes, is therefore, being encouraged. The research input into this programme is of many types: experimentation in non-formal education as a possible strategy for providing education to the out-of-school children; evolving organisation and methods of self-learning; development of new strategies of education which do not depend on utilising teachers and classrooms, particularly for areas where the establishment of schools may not be economically viable; the possible social and educational interventions which will counteract the effects of deprivation; designing of development-oriented educational structures to link education to programmes of economic development, with emphasis on the maximum development of human resources; work with differential curriculum to meet the specific needs of various population groups; methodologies to maximise learning on the part of the children.

The above are illustrative of the important problems which require immediate attention; research into them is likely to contribute to the knowledge and understanding of the educational process. The problems of the classroom, teacher effectiveness, in-service education, educational administration and supervision, child development and the process of learning, curriculum analysis and development, changing culture and

values with special reference to content and methods of moral and secular education, are no less important in improving the effectiveness of the system of school education. While they will receive support, the quantum of assistance will depend on their relative priority.

Completed research projects

Annexures 7.1 and 7.2 show lists of 25 completed departmental and 15 outside research projects. Their extracts have been published in the second report of the ERIC. A few research projects completed during the year have been summarised below.

Departmental projects

1. *Research on grading issues*

Comparability of standards in subjects, one of the important issues in examination reform, was investigated in this study.

There appears to be some notion of the 'intrinsic difficulty' of a subject as specified by the course content, the method of teaching, and the tradition reflected in marking answer-papers and reporting results, as also by the variable motivation and interests of pupils. The investigation attempted to study the differences in standards in curricular subjects offered at the higher secondary level.

The study was carried out on a large and representative sample of students who appeared in the higher secondary examination, 1975, conducted by the Central Board of Secondary Education. The standards of subjects were compared by calculating the average grades for all students offering a pair of subjects and by the marking of a specified subject (English) common to all pairs as the reference. Total scores were used, which provide a more general type of reference score. The results of the latter analysis support the prevailing views about subject standards.

2. *A study of the effectiveness of performance-based instruction in the teaching-learning-evaluation process of science courses by qualified science teachers*

The effort to improve the teaching-learning-evaluation process has highlighted the need for educators to state the specific information they expect the learner to master, the conditions under which the

learning shall take place, and the level of performance the learner is expected to maintain. These three facets are today included in a term called 'Performance Based Instruction' (PBI).

The materia for the research was developed in three different workshops by teams of teachers, field advisers, teacher educators, textbook writers and evaluation-measurement specialists. The literature was titled as 'Performance Based Instruction Guides' (PBI Guides). The total course for class IX in physics, chemistry, and life sciences has been reported under five headings: (a) Content-analysis in terms of concepts, rinciples, applications and skills; (b) Entry behaviour, (c) Behavioural objectives and learning experiences for each objective; (d) student self-appraisal check lists, specifying what the student knows, the new vocabulary, the new principles and theories, and their applications in daily life phenomenon; and (e) Self-evaluation for each behavioural objective.

3. Standardisation and simplification of techniques for isolation of plants protoplasts for cell physiological demonstrations in high schools

The investigation was undertaken with a view to simplifying the technique of protoplast studies so that high school students could carry out investigatory experiments or projects in biology courses at the higher secondary level. The details of the techniques have already been published in educational as well as research journals in botany. Experiments based on this study have also been included in the experimental course in biology developed by the NCERT for the higher secondary stage.

4. A study to determine the impact of reading on the achievement of pupils in different school subjects

Seven reading tests for class I and three for class II were developed. These tests were tried out on a sample of 250 children in 12 different dialectical areas of Hindi. Difficulty value and discrimination value were calculated and the tests revised. These tests were later administered on a sample of around 4100 students of class I and 4500 students of class II, covering 22 dialectical areas in seven Hindi-speaking States. The data were analysed by computer and the tests showed positive and high correlation coefficients, ranging between

0.76 to 0.96, between reading ability and achievement. An attempt was further made to study the impact of reading ability on achievement in other school subjects. The major findings include: positive and significant correlation between reading ability and achievements of pupils in different school subjects and general academic achievement; rural children show poorer reading ability in comparison to their urban counterparts; the occupations of the families to which the children belong do not play any specific role in determining the reading ability of children; the difference in reading ability between boys and girls is generally insignificant.

Completed projects outside NCERT

1. *Educational adaptations, social ambition and performance of scheduled caste students at various educational level in Rewa district of Madhya Pradesh*

The study revealed that the Scheduled Caste students did not take full advantage of the facilities and programmes instituted by the Government. Home environment and social constraints were responsible for the low educational development. This resulted in under-utilisation of available facilities. While the drop-outs belong not only to backward classes but to other categories also, in the case of Scheduled Castes the children dropped out from the system at an early stage in the hope of getting gainful employment. The role of institutions promoting motivation and aspiration level amongst the Scheduled Castes was not so significant. The assumption that the unwillingness of the parents to send their children to school is responsible for poor enrolment was found to be only partially correct. Poverty and social constraints, on the one hand, and poor programmes in schools, on the other, were mainly responsible for lower adaptation amongst Scheduled Caste students. The aspiration level of non-Scheduled Caste students compared to that of their counterparts was found to be higher. Hence their educational adaptation, social ambition and performance at college level or even at lower level was higher.

2. *A study to investigate the relationship between 'output' and 'input' on science education of higher secondary schools of Delhi Administration*

The conclusions that emerged from this study indicate the following:

- (i) Facilities for science education in Delhi higher secondary schools were adequate by area and density of population;
- (ii) Unit cost in the rural areas for both boys' and girls' schools was found to be higher than in urban schools;
- (iii) 'Output' matrices correspond with input matrices of men and material resources;
- (iv) Performance of girls was also good as compared to that of boys, but they had offered biology as a subject whereas the boys were more for the non-medical group;
- (v) Costs were proportionately the same, by size and course;
- (vi) Students from urban areas showed better results compared to students from rural areas;
- (vii) Science teaching in rural schools was uneconomic in terms of the cost-size relationship and was 'poor' in quality.

3. *Mass-copying in secondary school final examinations*

The pilot study attempted to find out the factors associated with mass-copying behaviour of students in the final secondary examinations. The students who had developed habit of mass-copying in the examinations generally came from families of poor socio-economic background and uncongenial home environment; the parents of such students had a poor educational background. These and other constraints force students to avoid regular studies and resort to mass-copying as an easy way of getting through the examinations. Generally more of such students were found to be in schools which differed substantially from others in faculty composition and administration.

4. *Identification of job-oriented courses for higher secondary institutions—based on regional demand survey in Midnapore, West Bengal (First Phase)*

This study, which was based on a survey in Midnapore, revealed that there was scope for courses in crop cultivation, poultry and dairy farming, fishery, multipurpose health education, principles of cooperation and cooperatives, cutting and tailoring, pitch board modelling and preparing, teaching education, carpentry and smithy, printing, publishing and book binding, music and dramatics, sewing, knitting and embroidery. It also indicated that in the second phase, courses like horticulture soil and water management, farm equipment servicing and

maintenance, automobile servicing and maintenance would need to be instituted.

5. *A techno-economic study of local skills in West Bengal : A sample survey of the districts of Howrah and Malda*

A techno-economic survey of districts of Malda and Howrah gave a feasibility report on vocationalisation of education in relation to employment opportunities in the districts. Some of the findings are reported here.

(i) *Howrah*

- (a) Important differences exist in the occupational distribution of employed workers in the four blocks covered for the purpose.
- (b) Among the self-employed, the relationships between the openings in each district with vocational training given in two technical training institutions were found to be heterogeneous.
- (c) Courses run by these institutions were mainly for draftsmen, grinder, or in refrigeration and air-conditioning, etc., which had no relevance with the job opportunities in these districts. Because of this students coming out from these institutions had been finding it difficult to get jobs.

(ii) *Malda*

- (a) In this district, a little below 30 per cent were self-employed in cultivation while one-fourth were weavers. Nearly one-tenth were engaged in sericulture.
- (b) Lack of formal education in general and technical education in particular was evident among industrial workers in the district.

The study suggests that there is scope for self-employment or employment in agriculture, sericulture, weaving and fruit preservation and processing, for which training should be given. There does not exist any arrangement for training in these professions.

Some on-going projects are shown in Annexure 7.3 (Departmental) and Annexure 7.4 (Outside Projects).

The details of financial assistance given during the year by the ERIC to outside agencies for research may be seen in Appendix E.

Survey

A planned development of educational facilities requires a periodic review of achievements and assessment of further needs. With a view, therefore, to obtaining information as to the extent to which different regions have been provided with educational facilities, all-India educational surveys have become a regular feature of the Council's work. These are undertaken generally at five-year intervals, coinciding with the national plans and the Council has so far completed three All-India Educational Surveys.

For the period under review the main programme of the Survey and Data Processing Unit was the Fourth All-India Educational Survey undertaken with a view to providing data helpful for the programme of universalisation of elementary education. Towards this end the Unit developed two information schedules: (i) Village information form, and (ii) School information form, to be canvassed in all the villages and schools in the country. The analysis procedures at various levels, block, district and State levels, were developed. The 'guidelines for survey officers' were also prepared which contained aims and objectives of the survey, concepts and definitions of terms used in the survey and various details regarding the organisations of the survey covering training programmes, canvassing, scrutiny procedures, procedures of data analysis, preparation of block maps and preparation of district and State reports. These guidelines were printed and supplied to all the officers in the State up to the block level, who were directly involved in the survey.

At the national level two training programmes were organised for the State level officers in charge of the survey. After these officers returned to their States they got the information forms printed in their regional languages. The staff of this Unit visited all the States and Union Territories and trained the survey staff of the State and district levels. In this training all aspects of the survey from canvassing of schedules, scrutiny producers of the completed forms, tabulation procedure, etc., were discussed in detail.

The States were supplied, in sufficient number, the tables to be developed at block, district (printed in both cases) and State levels (mimeographed). When the block tables were being prepared in the States, the staff visited all the States and Union Territories to check, on sample basis, these tables for consistency and accuracy. Further,

the staff has been visiting States in connection with the finalisation of States tables. In most of the States the tabulation at the block and district levels has been completed.

ANNEXURE 7.1

Completed Departmental Projects

<i>Sl. No.</i>	<i>Title</i>	<i>Department</i>
1.	Survey of Problems faced by the Asian Teachers and Their Attitudes towards Innovation in Classroom Teaching	D.E.P.F.E.
2.	Development of Science and Mathematics Concepts in Children at Primary Grades in India	..
3.	A Study of Some Aspects of the Load of Homework in Some Schools in Delhi	..
4.	Social Psychology of Education—An Annotated Review of Research	..
5.	Social Reinforcement and the Study Behaviour of the Primary School Children	..
6.	Changing Teacher Behaviour through Feedback	..
7.	Research on Grading Issues	..
8.	A Study of the Effectiveness of Performance-based Instruction in the Teaching-Learning Evaluation Process of Science Courses by Qualified Science Teachers	..
9.	A Survey of Students' Most Pressing Problems in Their University Lives	..
10.	A Study of the Cognitive Effects of the Educational Television Programmes broadcast by the Delhi TV Centre	..
11.	Standardisation and Simplification of Techniques for Isolation of Plants Protoplasts for Cell Physiological Demonstration in High Schools	D.E.S.M.
12.	Experimental Studies on Differential Effectiveness of Micro-teaching Components	D.T.E.
13.	Third All-India Educational Survey	S.D.P.U.

<i>S. No.</i>	<i>Title</i>	<i>Department</i>
14.	A Study to determine the Impact of Reading on the Achievements of Pupils in Different School Subjects	D.S.E.
15.	Innovations in Education	"
16.	Auxiliary Reading Material in English for Middle Stage	D T.B.
17.	A Detailed Study of Textbooks in English as a Foreign Language for Middle Schools in the State of Maharashtra to determine how far the Content of the Textbooks and Its Presentation takes into account Latest Trends in the Teaching and Learning of English	"
18.	Private Costs of Education in Eastern States	R.C.E. Bhubaneswar
19.	Effect of Micro-teaching under Simulated and Real Conditions and its Retention in relation to Macro Situation and the Resultant Gain in Attitude	" "
20.	Mushroom Cultivations as Work Experience/ Vocational Programme	"
21.	Effect of Simulated Information on Assessment of Cognitive Competence—A Test of Expectancy Hypothesis	"
22.	A Survey of Occupational and Productive Resources and Teaching of Vocational Courses at +2 Level in a Set of Districts of West Bengal for the Period 1980-1995	" "
23.	Conservation of Aquatic Ecosystems in and Around Bhubaneswar	"
24.	Contribution of Oriya Poets to the Medieval Bengali Literature	"
25.	Research Project in Urdu	RCE, Mysore

ANNEXURE 7.2

Completed Outside Projects

<i>Sl. No.</i>	<i>Title of the Project</i>	<i>Principal Investigator</i>
1.	Educational Adaptation, Social Ambition and Performance of Scheduled Caste Students at the Various Educational Levels in the Rewa District of Madhya Pradesh	Shri Yogendra Narain Misra, Government College of Education Rewa (M. P.)
2.	A Psychological Study of Tribal Children (with special reference to the Denotified Tribes of U. P.)	Dr. R. N. Pandey Government Post-Graduate College Rampur (U. P.)
3.	Construction of Listening Comprehension Test in Gujarati for Pupils of Classes VIII, IX and X to study the Effect of Exercises for Improving it	Dr. B. V. Patel M. B. Patel College of Education, Sardar Patel University Vallabh Vidyanagar (Gujarat)
4.	An Action-Research Project on Early Primary Education in Delhi	Mrs. Mina Swaminathan Director Indian Association for Pre-School Association IIPA Hostel, Ring Road New Delhi
5.	A Study to Investigate the Relationship between 'Output' and 'Input' on Science Education of Higher Secondary Schools of Delhi Administration	Shri R. K Sharma Principal Government Boys Higher Secondary School, Bijwasan

<i>Sl. No.</i>	<i>Title of the Project</i>	<i>Principal Investigator</i>
6.	Towards a Teaching Profession	Shri G. Ramanathan Plot No. 64 West High Court Road, Bajaj Nagar Nagpur-440 010
7.	Construction Tests of Mental Abilities	Dr. (Mrs.) Usha Khare Department of Psychological Research and Testing, Doyana Prabodhinee, 510, New Sadashivpeth, A Pune-411 030
8.	Mass-copying in Secondary School Final Examination	Dr. J. Mandal Department of Applied Psychology, University College of Science and Technology, Calcutta University, and Eastern India Centre for Mass Communication Studies Calcutta
9.	An Educational Survey on Bastar District, Madhya Pradesh	Dr. T. B. Naik Chairman Board of Secondary Education, Madhya Pradesh, Bhopal
10.	Identification of Job-oriented Courses for Higher Secondary Institutions—Based on Regional Demand Survey in Midnapore, West Bengal	Late Prof. A. K. Gayen Indian Institute of Technology Kharagpur
11.	A Techno-economic Study of Local Skills in West Bengal : A Sample Survey of the Districts of Malda and Howrah	Prof. P. K. Bose and Prof. S. P. Mukherjee Calcutta University Calcutta

<i>Sl. No.</i>	<i>Title of the Project</i>	<i>Principal Investigator</i>
12.	Holiday Camps for Under-privileged Children	Shri Prabhu Chaudhary Secretary, Bal Kunj H-216, Model Town Delhi-110 009
13.	Seminar on Research and Development Programmes in Education	Prof. A.C. Dave Gowda Institute of Social and Economic Change Bangalore-550 040
14.	Seminar on Brain Development and Its Implications on Teaching of Language and Linguistics	Prof. V.I. Subramoniam International School of Dravidian Linguistics, Kerala Paanini Memorial Building, Nannaya Hall Trivandrum-
15.	Comprehensive Area Development Scheme, Nadukani Project	Rev. M.J. Wilson Nadukani Project Kattakada Kerala

ANNEXURE 7.3

On-going Departmental Projects

<i>Sl. No.</i>	<i>Title</i>	<i>Department</i>
1.	An Exploratory Study on the Interests, Concerns, and Problems of School Students in the Field of Health	D.E.P.F.E
2.	A Study of the Awareness and Reaction of Teachers towards the Introduction of Population Education in Schools	"
3.	A Study of the Nature and Function of Group Process to Motivate Children	"
4.	A Study of the Attitude of Teachers and Parents towards the Introduction of Sex Education in Schools	"
5.	A Study of Cognitive Development of Children— 2 to 13 Years—A Longitudinal Study	"
6.	A Study to Test the Efficacy of the Technique of Transcendental Meditation in relation to Academic Performance, Creativity, Intelligence Growth Rate, Learning Ability, Motivation, Anxiety, Parent-pupil Expectation, Discrepancy and Adjustment	"
7.	A Longitudinal Investigation into the Process and Characteristics of Drop-out	"
8.	A Study of the Motivation of Correspondence Course Students	"
9.	Explorations in Optimising Learning Science in School	"
10.	Research on First Generation	"

<i>Sl. No.</i>	<i>Title</i>	<i>Department</i>
11.	A Study of the Effectiveness of Two Methods of Teaching Population Education in Schools	D.E.P.F.E.
12.	Development of Learning Material for Non-formal Education in Rural Areas in the Age-group 11— to 14 Years	"
13.	Development of Criteria for Electing a Stream and Courses Within a Stream at Higher Secondary Stage	"
14.	To Investigate the Effectiveness of Vocational Exploration Programme at the Secondary School Level for Vocationalisation	"
15.	To Study the Effect of Socio-cultural Deprivation on the Educational Development of Rural Children in the Age-group 6-11 Years	"
16.	A Feasibility Study of Home Intervention Programme for the Socially Disadvantaged Children in Classes I and II	"
17.	Survey of Rural Talent Search Scheme	"
18.	Review of the Studies in the Field of Population Education	"
19.	Action-oriented Studies to Develop Need-based Instructional Resource for the Educational Development of Young Children in Rural Areas	"
20.	Developmental Norms Project 5½—11 Years Normative Study	"
21.	Use of Living Organisms in School (An Investigatory Project to Develop a Handbook for Classroom Teacher)	D.E.S.M.
22.	Resource and Problems (An Investigatory Project to Develop a Handbook for Classroom Teacher)	"
23.	Experimental Project to Develop Need-based and Community-oriented Self-learning Instructional Materials in Biology for the Elementary Level	"

Sl.No	Title	Department
37.9	Rural Pupils of the Formal System and Drop-out Children at this Stage	
24.	Investigations leading to the Development of Model Instructional Materials for Secondary and Higher Secondary Levels in Life Science for the Guidance of Book-writers	D.E.S.M.
25.	To Develop the Laboratory Course in Physics Based on 'Open-ended Experiment' for Secondary Stage	"
26.	A Comparative Review of Science Education in U.K. and India with Special Reference to the Chemistry Teaching in Secondary Schools	"
27.	Influence of Nutritional Awareness of Mothers on the Nutritional Status of Primary Schools Children in the Union Territory of Delhi	"
28.	Analysis of Some Laws and Principles of Physics for Levels of Cognition of the Students (age group 15+ — 18+ years) at Higher Secondary and Under-graduate level	"
29.	Effect of Pre-instructional Disclosures of Behavioural Objectives on the Psychomotor and Related Cognitive Objectives in Physics Experiments among the Secondary Students	171
30.	A Study of the Problems of Teaching Spoken Bengali to the Hindi-speaking Children	181
31.	Fundamental Research on Language Thought and Communication	191
32.	A Social Psychological Study of Learning Hindi and English as Second Language	D.E.S.S.H.
33.	Position of History Teaching in Delhi Schools at the Higher Secondary Stage	20
34.	Identification and Gradation of Map Skills to be Introduced at the Entire School Stage	"
		"
		"
		"

Sl. No.	Title	Department
35.	A Graphic Analysis of the Devanagari Script as Used for Reading and Writing Hindi	D.E.S.S.H.
36.	A National Baseline Survey in Population Education	"
37.	Population and Education Policies : A Country Case Study of India	"
38.	Linguistic Analysis and Description of the Phonological Variations in Standard Hindi	"
39.	Contrastive Sound Systems of Hindi and Malayalam	"
40.	Verb Form Frequency Count in Hindi	"
41.	An Integrated Approach to Primary Education	D.S.E.
42.	Structuring Primary School Curriculum to suit Multiple-class Teaching Situation in Single and Two-teacher Schools in Rural Areas	"
43.	Relevance of Traditional Youth Dormitories to Non-formal Education in Tribal Areas in India	"
44.	Effective Use of School Curriculum and Their Sub-studies	"
45.	A Study to Determine the Impact of Reading on the Achievement of Pupils in Different Subjects	"
46.	Developing a Handbook in Reading for Primary School Teachers and Its Try-out	"
47.	Implementing Pre-service Curriculum in Reading in Junior Teacher Training Institutions	"
48.	Preparation of a Graded Bibliography of Children's Literature	"
49.	To Study Different Mechanisms for Audio-visual Aids Utilisation at (a) Teacher Training Level (b) Schools, and (c) Colleges.	D.T.A.
50.	A Study of the Conditions of Rural Schools for the Development and Use of Simple Teaching Aids	"

<i>Sl. No.</i>	<i>Title</i>	<i>Department</i>
51.	Evaluation of DTA Products and Prototypes	D.T.A.
52.	Status of Audio-visual Education in India	"
53.	A Study of the Methodology of Teaching Various Subjects	D.T.E.
54.	A Study of Teaching Competencies in Developing Cognitive Process in Pupils	"
55.	Adjustment and Effectiveness of Beginning Teachers	"
56.	A Study of Social Cohesion in Elementary, Secondary Teacher Training Institutions and its Relationship with Performance of the Students	"
57.	A Study of the In-service Needs of Secondary Teacher Educators	"
58.	A Study of the Problems having a Bearing on Teacher Education for 10+2 Stage with reference to Maharashtra	"
59.	A Study of the Role Expectations of the Primary and Secondary School Teachers working with Community with a view to evolve Correspondence Course for Teacher Education Programmes at Both Levels (Primary and Secondary)	"
60.	Case Studies of Teacher Education Institutions (Elementary/Secondary)	"
61.	Developing a Model for Forecasting Teacher Requirement in a State	"
62.	Development of Tools for Admission to Teacher Education Institutions	"
63.	Development of Tools for Supervision and Evaluation of Student Teaching and Other Practical Work in Colleges of Education	"
64.	Effect of Classroom Behaviour Training (CBT) on Classroom Questioning Behaviour of Teachers	"

<i>Sl. No.</i>	<i>Title</i>	<i>Department</i>
65.	Development of Norms for Secondary Teacher Education Colleges	D.T.E.
65.	Determining the Optimum Size of a Secondary Training College	"
67.	Planning and Designing of Educational Research : A Handbook for Teacher Educators	"
68.	An Experimental Study of the Effectiveness of Different Strategy of Teaching Skills acquired by the Student Teachers through the Technique of Micro-teaching	"
69.	A Study of the Reasons for Non-enforcement of Conditions of Affiliation laid down by the Universities	"
70.	Study Innovative Practices in Elementary and Secondary Teacher Education	"
71.	Compilation and Linguistic Analysis of Hindi Vocabulary	D.T.B.
72.	Contribution of Themes of Various Categories included in Language Textbooks towards the Achievement of Instructional Objectives of the Language	"
73.	Different Forms of Hindi Literature included in Hindi Textbooks for Secondary Classes (IX and X): An Investigation into their Effectiveness from the Standpoint of Instructional Objectives and Interest of Children	"
74.	Comparative Study of Science Textbooks of Middle and Secondary Classes of Some States	"
75.	A Study of Evolution of the Textbook and Its Role in Formal Education in the Context of Changing Society (Ancient to Modern Period with Special Emphasis on Post-Independence Period)	"

Sl. No.	Title	Department
---------	-------	------------

- | | | |
|-----|---|--------|
| 76. | To Study the Material in History Textbooks which
(i) Jeopardises National Integration (ii) Promotes National Integration | D.T.B. |
| 77. | Comparative Study of Standards as Reflected in the Syllabi of Science and Mathematics of the States where there is Public Examination at the End of Class X | |
| 78. | Importance of Illustrations in Geography Textbooks | |
| 79. | A Study in the Comprehensibility of the Language used in Science and Social Science Textbooks at Primary Level | |
| 80. | Procedures for the Distribution of Nationalised Textbooks in India | |
| 81. | Practices and Procedures for the Printing of School Textbooks in the States of India | |
| 82. | Policies and Procedures regarding the Periodic Change of Textbooks | |
| 83. | Study of Procedures and Practices of Evaluating Manuscripts and Textbooks in the States | " |
| 84. | Student Reaction to Some Problems of Education — A Follow-up Study | E.R.U. |
| 85. | A Comparative Study of the Levels of Academic Achievement of Pupils at Improved External Examinations and School Evaluation at Secondary Stage | |
| 86. | An Exploratory Study of the Attitudes of Teachers towards the Scholastic Achievement of Class IX and Class X Pupils of Varying Socio-economic Background | |
| 87. | Evaluation of Personalised System of Instruction (Ketter Plan) in Mathematics at Class VII Level | " |

Sl. No. Department	Title	Department
88.	Serum Urate Concentrations, Intellectual Style and Personality	E.R.U.
89.	Research and Development in Talent Search	"
90.	Social and Cultural Change and Changes in the Creative Functioning of Children	(d)
91.	Studies in Science Talent	"
92.	An Evaluation of the Comprehensive Internal Assessment Scheme Adopted by the Board of Secondary Education, Rajasthan, Bikaner, for Classes IX, X and XI	"
93.	Assessment of School Environment	"
94.	Development of Psychological Tests for Selection of Police Officers	"
95.	Measurement of Affective Outcomes of Primary School Education	"
96.	Non-verbal Test of Intelligence	"
97.	Development and Administration of Selection Tests for the Management Trainees of the Steel Authority of India Limited and Their Follow-up	"
98.	Fourth All-India Educational Survey	S.D.P.U.
99.	Computer-based Data Bank in the NCERT	"
100.	Developing a Library of Audio-visual Tapes	G.E.T.
101.	(A) A Study of the Extent of Utilisation of School Broadcasts in Delhi (B) A Study of the Extent of Utilisation of School TV Programmes in Delhi	"
102.	A Study of Primary School Television Programmes of Delhi Doordarshan	"
103.	Socio-economic Survey for Developing a Curriculum for Continuing Education of Weavers	"
104.	Monitoring of Radio Programmes of Young Children broadcast from AIR Stations, Delhi and Patna	"

<i>Sl. No.</i>	<i>Title</i>	<i>Department</i>
105.	National Activities in Educational Innovations comprising : (a) Inter-Project, Inter-institution Study Visits of Educational Workers (b) National Directory of Educational Innovations	P.P.E.U.
106.	Feedback from Teachers and Students in the Implementation of the 10+2 Curriculum	FA—Delhi
107.	Determination and Development of Schemes of Thought in Science during Adolescence	RCE—Ajmer
108.	Ecological Studies of the Surrounding Aquatic Realm	..
109.	A Study of the Perceptions of Secondary School Learning Environment by Students, Staff and Administrators	RCE—Bhopal
110.	To develop Instructional Material for the Promotion of Creative Thinking and to determine its Effectiveness	..
111.	Development of Activities for the Physics Syllabus of Classes IX and X	..
112.	Project Environment	..
113.	Commercial Breeding of Ornamental and Exotic Fishes and Study on the Problems of Their Maintenance	..
114.	Effect of Insecticides on Tissue Chemistry of Some Fresh Water Edible Fishes	..
115.	To design and develop Instructional Kits for Work Experience Programme	..
116.	An Ecological Study of Seasonal Variations of Algal and Fungal Flora of the Lakes for Bhopal	..
117.	Developing Source Materials for Teachers working in Secondary Schools and Training Colleges to inculcate Socialistic and Democratic Values and Attitudes	..

<i>Sl. No.</i>	<i>Title</i>	<i>Department</i>
118.	Standardisation of California Psychological Inventory for Teachers -	RCE— Bhopal
119.	Involvement of the B.Ed. (Agr.) One Year Students in the Preparation of Instructional Material in Technical Agr. for the Higher Secondary Schools (+2) Vocational Agricultural Courses	..
120.	The Effect of Teacher Led and Three Other Classroom Approaches of Teaching Population Education on Classes IX and X of the 10+2 Pattern on the Knowledge Attitudes and Beliefs About Population Explosion in India	..
121.	Sequential Attainment of Concept in Chemistry through Periodic Table at the Secondary Stage	..
122.	Development and Persistence of Analytic Ability in Culturally Different Elementary School Children and Their Effects on Certain Cognitive Performances	RCE—Bhu- baneswar
123.	Parental Child Rearing Practices and Value Orientation and Underlying Dynamics of Study Habit of Elementary School Children in Low Income Group	..
124.	Survey and Cultivation of Edible Mushrooms as a Work Experience Vocational Programme for the High/Higher Secondary Schools	..
125.	Know Your Food Fishes and Their Nutritive Value	..
126.	Systematic Studies of the Fauna in and Around Bhubaneswar for the Development of Museum	..
127.	Know the Life between Tide Marks	..
128.	Know about the Helminth Parasites of Man with special reference to Filariasis	..
129.	Culture and Breeding of Commercially Important Fish under Controlled Conditions	

Sl. No.	Title	Department
130.	Know the Plants around You (A Teachers Hand-book)	RCE—Bhubaneswar
131.	Teacher Education Programme as perceived by Trained Working Teachers of the Eastern Region	"
132.	An Investigation into the Implementation of the Recommendations on Secondary Teacher Education made by the Education Commission (1964-66)	"
133.	Teacher's Personality Components, as Determinants of Job Satisfaction	"
134.	Measuring Achievement Responsibility in Elementary School Children and a Programme to Improve Certain Non-intellective Variables	"
135.	Measuring Attitudes of School Students : Developing a Suitable Methodology	"
136.	A Survey of Teachers under Training (1976) in the RCE, Bhubaneswar	"
137.	School Teachers : Job Satisfaction Vs Study of Values	"
138.	The Role of Steroids and Other Related Compounds in Evolution and Spawning of Fresh Water Fish	"
139.	Corrosion of Steel and Other Metals in Bhubaneswar Atmosphere	"
140.	Molecular Thermodynamics and Viscous Flow Properties of Liquid Mixtures and Polymer Solutions	"
141.	Vocational Survey of Puri and Koonjhar Districts	"
142.	Teachers Guide to Modern Prose (English)	"
143.	A Diagnostic Investigation into Formation, Development and Conservation of Mathematical Concepts in Students at Primary Level in Rural and Urban Areas of South Indian States	RCE—Mysore
144.	Relationship between Lesson Kinetic Structures and Learning Outcomes in School Science	"

<i>Sl. No.</i>	<i>Title</i>	<i>Department</i>
145.	A Study of Competence in Reading Comprehension in English among Pupils of Class X in the Schools of Mysore City	RCE— Mysore
146.	Analysis of Common Errors in Written English Composition of School Leavers	
147.	Study of the Innovative Practices Prevalent in Schools in the Southern Region	
148.	Identification of Deficiencies and Difficulties in Secondary Schools Teachers and Finding Ways and Means to Help Them	

ANNEXURE 7.4

On-going Outside Projects

<i>Sl. No.</i>	<i>Title of the Project</i>	<i>Agency/Individual</i>
1.	A Study of the Manpower Needs and Planning regarding Teacher Education	Dr. K.K. Pillai, Dean Faculty of Education University of Anna- malai, Annamalainagar Tamil Nadu
2.	A Study of the Problems and Needs of Secondary Students Living in the Slums of Varanasi	Dr. Surya Nath Singh Banaras Hindu Univer- sity, Varanasi
3.	A Study of Educational Back-wardness of the Scheduled Caste Students and a Need-oriented Plan for Their Development	Dr. R.P. Singh, Reader Department of Educa- tion, Patna University Patna
4.	Development and Try-out of Curriculum for Mentally Handi-capped Children	Dr. N.N. Shukla, H J College of Education Samshodhan Sadan South Avenue, Khar Bombay-52
5.	Problems of Education of the Weaker Sections of Society with Specific Reference to the Weaker Sections in Baroda Districts, Gujarat State	Prof A.S Patel, Head Department of Psycho- logy, M S. University of Baroda, Baroda
6.	A Study of Factors determining Utilisation of Educational Facili-ties by Muslim Community of Borsad Town and Their Educa-tional Needs	Dr Punambhai Patel Principal, Shri R.P. Ananda College of Education, Borsad

<i>Sl. No.</i>	<i>Title of the Project</i>	<i>Agency/Individual</i>
7.	A Study of the Patterns of Parental Preferences in relation to Adolescents Personality, Achievement and Adjustment	Dr. A. K. Gupta, Director Model Institute of Education and Research, B.C. Road, Jammu-180001
8.	Programmed Learning as Function of Anxiety Under Different Motivational Conditions	Sri Devendra Srivastava Lecturer, Dayanand Subash National College Unnao (U.P.)
9.	To Study the Effects of Noise on the Teaching-Learning Process, (Focussing on Attention, Concentration and Retention) with Special Reference to the Calculation of its Optimum Range in the Maintenance of School and Discipline	Shri N.D. Nandurdikar Chembur Comprehensive College of Education Chembur Naka Bombay-400 071
10.	Psychological Development and Learning in Young Children in Poverty and Effects of Interventions	Dr. (Smt.) Sushila Singhal and Dr. (Smt.) Prabha Ramalingaswami J.N.U., New Delhi-110 057
11.	Children's Judgements of Personal Happiness	Prof. Ramadhar Singh Professor of Psychology, Indian Institute of Technology Kanpur
12.	Identification of Selection Criteria for National Talent	Dr. (Km.) Sudesh Gakhar, Reader in Education, P.U. Chandigarh
13.	Policy of Non-detention in Andhra Pradesh: An Evaluation Research	Dr. Uday C. Desai Member of Faculty Administrative Staff College of India, Bela Vista, Hyderabad-500 475

<i>Sl. No.</i>	<i>Title of the Project</i>	<i>Agency/Individual</i>
14.	A Study of Properties of Learning Environment of Achieving Classes of Rajasthan Schools	Dr. Ram Pal Singh Jai Lal Institute of Education, Ajmer
15.	A Study of the Utilisation of Educational Facilities by the Slum Dwellers of Bangalore City In relation to Their Economic Background	Dr. A. S. Seetharamu Institute of Social and Economic Change Bangalore-560 040
16.	Developing Instructional Strategies for Teaching Hindi as a Second Language to the Urdu Medium Students of Delhi on the Basis of an Identification of Variables Involved in the Different Aspects of Hindi Attainment of Urdu Medium Children	Shri Jaipal Tarang T.G.T. (Hindi), Jamia Hr. Sec. School, Faculty of Education, Jamia Millia Islamia New Delhi-110 025
17.	Graded Grammars in Dravidian for High School Classes	Dr. V. I. Subramoniam University of Kerala Trivandrum
18.	The Attitude of the Parents and Students of Aurangabad to the Acquisition of English : A Psycho-socio-linguistic Study	Dr. Keshav Mutalik Marathwada University University Campus Aurangabad (Maharashtra)
19.	The Diagnosis of Language Errors and a Programme of Remedial Teaching in Hindi	Sh. L. K. Oad, Principal Banasthali Vidyapeeth College of Education P.O. Banasthali, Rajasthan
20.	The Diagnosis of Language Errors and Programme of Remedial Teaching in Sanskrit	Sh. P. C. Jain, Institute of Higher Studies and Research, B-20, Ganesh Marg, Bapu Nagar, Jaipur
21.	Determination of Communicability in New Hindi Poetry from the Point of View of its Teaching in the Upper Secondary and Under-graduate Classes	Mrs. N. Jain, Reader Department of Hindi Delhi University Delhi-110 007

<i>Sl. No.</i>	<i>Title of the Project</i>	<i>Agency/Individual</i>
22.	A Study of the Effect of Micro-teaching upon General Teaching Competence and Teacher Attitude of B.Ed. Trainees in Shillong	Dr. Mathew George Department of Educational Research and Studies Nehu, Shillong
23.	Development of Effective Teaching Methods for School Subjects—A Statistical Investigation into the Problems with Special Emphasis on Factor Analysis	Shri K. S. Gupta, Head of the Department of Education, Calcutta University, Calcutta
24.	Elementary Non-formal Education for Non-enrolled and Drop-out Children Below the Age of 14	Dr. D. V. Chickermane Research Director Research Centre in Rural Education, Chickermane House, Gokaran -581 326 Karnataka
25.	Developing an Effective Model of Non-formal Education for Rural Development—A Systems Approach	Prof. G. B. Shah Gujarat University University Campus Udhana-Megdhall Road Surat-395 007
26.	Investigation on Non-formal Science Education and Development of Inexpensive Resource Materials	Prof. A. M. Ghose, Indian Association of Extra-curricular Scientific Activities, 93/1, Acharya Profulla Chandra Road Calcutta-700 009
27.	A Study of the Effectiveness of Some Important Measures Adopted for Increasing Enrolment and Attendance in Primary Schools in Rajasthan	Shri B. L. Vyas, State Institute of Education Rajasthan, Udaipur
28.	Preparing a Documented History of the Sevagram Experiment	Shri Radha Krishna Gandhi Peace Foundation New Delhi

<i>Sl. No.</i>	<i>Title of the Project</i>	<i>Agency/Individual</i>
29.	Introduction of Work Education in Primary Schools—A Pilot Study	Prof. S. C. Dash Director, S. I. E. (Orissa) Bhubaneswar
30.	Role of Lady Teachers in the Universalisation of Primary Education	Smt. Latika Gupta Principal Calcutta Girls B. T. College, 6/1 Swinhoe Street, Calcutta-19
31.	A Study of the Incidence and Factors Responsible for the Dropping out of Children from Municipal and Local Authority Schools in Greater Bombay and Thana District Standards I to VII during the Years 1973-74 to 1976-77	Dr. (Smt.) Madhuri R. Shah, Vice-Chancellor SNDT University Bombay-403 020
32.	Management of Primary Schools under Panchayati Raj in Rajasthan	Prof. Iqbal Narain University of Rajasthan Jaipur
33.	Indian Public Schools : A Study of Their Growth and Development	Dr. R. B. Mathur University of Lucknow Lucknow
34.	The School Complex	Prof. Jai B. P. Sinha, A.N.S. Institute of Social Science Patna
35.	A Study of the Problems and Pattern of Functioning of Single Teacher Schools in Rajasthan (Joint Project of ICSSR and NCERT)	Dr. P. L. Verma, Research Officer, Directorate of Primary and Secondary Education, Rajasthan Bikaner
36.	A Study of Efficiency of a School System	Shri M. Duraiswamy, SITÚ Council of Educational Research, 95-A, Ramakrishna Mutt Road Rajah Annamalaipuram Madras-600 028

<i>Sl. No.</i>	<i>Title of the Project</i>	<i>Agency/Individual</i>
37.	A Sociological Study of Student Unrest : Causes and Remedies	Dr. S. K. Srivastava Department of Sociology B. H. U., Varanasi
38.	Analysing Teaching Behaviour of In-service and Pre-service Teaching through Inter-action Analysis Procedure	Prof. K. P. Pandey Himachal Pradesh University, Simla
39.	A Psychological Study of Work Adjustment and Teaching Success—Primary School Teachers	Prof. S. Narayana Rao Department of Psychology S. V. U. College Sri Venkateswara University, Tirupati (A. P.)
40.	A Study of Teaching Competency of Secondary School Teachers	Dr. B. K. Passi, Professor and Head of the Department of Education, Indore University, Indore
41.	A Study of the Effectiveness of Pre-service Teacher Training Programme at Elementary Level in Rajasthan	Shri B. L. Vyas, Director S. I. E., Udaipur
42.	An Investigation into the Causes of Backwardness in Girls Education in the State of West Bengal with Special Reference to the Age-group 6-14	Mrs. Santi Dutt Principial, Institute of Education for Women 20 B, Judges Court Road, Hastings House Alipore, Calcutta
43.	Bibliography of Education of Women in India (1850-1975)	Mrs. Madhuri R. Shah Vice-Chancellor, S. N. D. T. Women's University Bombay-400 020
44.	Case Study of Sikshaniketan—a Work-oriented Rural Institution in the District of Burdwan	Prof. H. B. Mujumdar Vidya Bhawan, Visva Bharati, Santiniketan (W. B.)

<i>Sl. No.</i>	<i>Title of the Project</i>	<i>Agency/Individual</i>
45.	An Experiment in Open Classroom (Free Learning Environment)	Smt. Sudesh Sain, Vidya Bhawan, Udaipur Rajasthan
46.	Education for Integral Rural Development in Ranchi District	Father M. V. D. Bogaert S. J. Xavier Institute of Social Service, Ranchi
47.	Innovations in Learning Methodology to Supplement Lecturing in the First and Second Year of B.Sc. in Physics	Dr. R. G. Takwale Department of Physics University of Poona Poona-411 007
48.	Patterns of Student Participation in the University Administration	Dr. R. Upadhyaya Reader in Education B. H. U., Varanasi
49.	Experimentation in Methods for Improving Instructions in Training Colleges	Dr. S. P. Kulshrestha 110, Karanpur Dehradun (U.P.)
50.	Vocationalisation at the Higher Secondary Stage of the 10+2+3 Pattern of Education	Dr. (Mrs.) J. Kothal Pillai, Madurai University Madurai
51.	Establishing Norms for Speed in Reading Tamil in standards. 6 to 8	Prof. T. R. Soundaraaja Rao, Educational Research Sri Ramakrishna Mission Vidyalaya Teachers College Coimbatore-641 020 (Madras)
52.	Constructing a Battery of Psychological Tests and Establishing Profile Norms	Smt. Usha Khire, Janna Prabodhini, Deptt. of Psychological Research and Training, 510, Sadashiv Peeth, Pune-411 030
53.	Education Income Relationships: A Case Study of Alumni of Selected West Bengal Educational Institution	Dr. K. Mukerji, Prof and Head of the Department of Commerce, and Dean, Faculty of Commerce, University of Calcutta, Calcutta (W. B.)

<i>Sl. No.</i>	<i>Title of the Project</i>	<i>Agency/Individual</i>
54.	The Survey of Kaval Towns with regard to the Availability and Use of Teaching Aids in Schools	Sh. E. P. Bhardwaj, Retd. Principal, B-339, Sector B Mahanagar, Lucknow
55.	Problems, Aspirations, Values and Personality Pattern of Tribal Students of Mirzapur	Dr. S. S. Srivastava Lecturer, Banaras Hindu University, Vanarasi
56.	Problems of Girls Studying in Co-educational Institutions of Varanasi Region	Dr. Kamala Rai, Lecturer Banaras Hindu University Varanasi
57.	Research in Physics Education Using Non-formal Methods	Sh. S. N. Singhal, Deptt. of Physics, Udaipur University, Udaipur (Rajasthan)
58.	Development of Educational Programme in Science for Upper Primary Level Based on Environment Approach	Sh. B. P. Joshi, Director State Institute of Science Education, Udaipur
59.	A Study of the Effectiveness of Using Educative Toys in Teaching Science to Vth Standard Over the Traditional Methods	Sh. Shankarayama S. Sastry Hassan (A. P.)
60.	Identity Formation of Scheduled Caste Students	Dr. (Mrs.) Suman Chitnis T. I. S. S., Bombay
61.	Social Psychological Problems of the Rural Students Migrating to Urban for Studies	Dr. Subimal Dev Calcutta
62.	Teaching of Bengali in Classes VII and VIII in Schools in W. B. to Those whose Mother Tongue is not Bengali	Dr. Subhash Chatterjee Calcutta University Calcutta

<i>Sl. No.</i>	<i>Title of the Project</i>	<i>Agency/Individual</i>
63.	A Study of the Agricultural Education as a Subject in the Secondary/Senior Secondary Schools of Delhi	Sh. D. K. Gupta, Govt. Coeducation Teachers' Training Institute Darya Ganj, Delhi
64.	Achievement of Tribal Students in relation to Their Intelligence, Motivation and Personality	Dr. Tribhuwan Singh B. H. U., Varanasi

8

Educational Technology

THE Council has been deeply concerned with the need for widening access to education and reducing the existing disparities between the different regions of the country and between the different sections of the population. Simultaneously, every effort

has to be made to improve the quality of education. The mass media provide a technology by which knowledge and information can be communicated more effectively, irrespective of the distance between the sources from which the knowledge emanates and its receivers. India has to move away from the traditional attitude of thinking that technology has to be incorporated in the conventional teacher-centred activity. A new attitude, which considers systematic application of all the resources of science to the learning process, and ultimately to the reform of the entire education system, is needed.

The Council continued, during the year, to implement experimental and development programmes using mass media of communication as well as traditional low-cost teaching aids as supports to the education system. The Centre for Educational Technology and the Department of Teaching Aids of the Council undertook programmes for providing radio and TV support to education and also for utilising toys and games and other audio-visual aids in making the teaching-learning process effective.

The Centre has undertaken the following programmes during the year.

Educational radio

(i) A feasibility project on teaching Hindi as a first language to children in classes I to III with the help of radio and supportive materials has been designed. As a part of Phase I of the project, a 10-day workshop was held in Mount Abu and a week-long workshop in Delhi for preparing outlines of radio programmes and supportive materials. Actual broadcast would commence in July 1979 for class I and for classes II and III in the subsequent years.

(ii) On the request of UNESCO, the Centre organised a 3-week joint Indo-Maldives training programme for educational radio production to familiarise the Indian as well as Maldivian participants with the techniques of style and presentation of educational broadcasting and to give them operational skills of equipments.

(iii) A training course at Bangalore was organised for script-writers for primary school radio broadcasts. The scripts written in different formats were produced, tried out and revised in the light of reactions of the primary school children.

Educational television

(i) The Centre organised two selection-cum-orientation workshops, one at Lucknow and the other at Srinagar, for the training of ETV script writers as a part of its programmes to develop a pool of trained ETV script writers in different parts of the country where educational TV programmes are telecast or proposed to be telecast in the near future.

(ii) At the request of the Municipal Corporation of Delhi, the Centre organised a training programme to train 160 TV user teachers of primary schools of the Corporation.

Distant learning/correspondence education

A series of 5 two-day regional seminars on correspondence education were organised in November-December 1978 at Bhopal, Delhi, Ajmer, Mysore and Bombay. The aims of these seminars were to provide a forum to discuss various aspects of open and distant learning systems and ways and means to improve and strengthen them. Some of the experts from abroad who had come to India to attend the International Conference on Correspondence Education in November 1978 provided consultancy in these seminars.

Educational toys/games

A number of folk and traditional toys played by Indian children were sent by the Centre to UNESCO for exhibition at the time of 20th General Conference in Paris. A slide-cum-tape programme, a video-tape, a short film and a brochure were prepared to go with the toys.

The Centre organised in Delhi a national workshop on low-cost/simple play materials and games for children. Low-cost/simple play materials were displayed, and their preparation and uses as aids for teaching children were demonstrated and discussed.

Multi-media package

The Centre organised at Jorhat in Assam a 4-day workshop for demonstration of the multi-media package developed by the Centre for in-service training of primary teachers in science. Teacher trainers and other officials concerned with training primary teachers from West Bengal, Mizoram, Nagaland, Assam, Arunachal and Manipur participated. Similar demonstration camps in Port Blair for teachers of Andaman and Nicobar Islands were organised.

Production

The Centre has produced a number of films entitled :

Teaching of Nutrition

Vigyan Ki Padai

Educational Toys

Soviet Puppet Show

Innovations in Education.

As in the past, the Department of Teaching Aids (DTA) continued with research and development, particularly in the design and development of low-cost teaching aids. Some of the important activities undertaken by the Department are discussed below.

1. Research projects

(a) Evaluation of DTA products and prototypes

During the year, two production-oriented workshops for the production of teaching aids, viz., tape/slide, system, etc., in science subjects for classes IX and X were conducted. Thirteen tape-slides systems were evolved during these workshops. In order to finalise these products, the Department decided to pre-test the material in terms of authenticity and appropriateness of the visuals, content and the concepts covered in the filmstrips. A group of experienced teachers and subject experts from NCERT were invited to give their reactions. Two filmstrips "Magnetic Effect of Current" and "The Behaviour of Gases" were also evaluated.

(b) Status of audio-visual education in India

The objective of this project was to ascertain the status of audio-visual education in the country to enable the Department to formulate future programme for the improvement of school education in the country. The status of audio-visual education would be studied in terms of awareness, training, production, utilisation, equipment and funds. A comprehensive questionnaire meant for the B.Ed. training colleges and for junior training colleges and dealing with the above aspects of audio-visual education was prepared and was sent to all the teacher training colleges in Maharashtra and Uttar Pradesh.

2. Production of films

The progress made in the production of films is indicated below for each of the film.

Film on Micro-teaching	Script has been written. Shooting is to be done at Department of Education, University of Indore, July 1979.
Film on Self and Non-self	Script has been developed with the collaboration of the Department of Science and Mathematics.
Film on Environment	Shooting has been completed. The final print of this film is likely to be made available by the end of June 1979.
Film on Elasticity	Script has been finalised and shooting was in progress.
Film on A. V. Teaching (Graphics)	Script has been completed and shooting was in progress.

3. Filmstrips and tapes-cum-slides

Apart from preparing trial prints of four filmstrips, the Department has produced a set of coloured slides with tape commentary on Sanchi Stupas for rural and urban school children. About forty coloured enlargements were ready. Some more are to be added.

4. Production workshops and training

(a) Rural workshops

Since 75 per cent or more of the primary schools in India are located in the rural areas and it is difficult, for reasons of resources constraints, to provide to each school equipment and teaching aids, one has to think of developing in teachers the competence to prepare them locally. With this purpose in view the Department has organised workshops for school teachers. In these workshops craftsmen or artisans, subject experts and the media communication people are brought together to develop simple aids. The aids so developed have to be of low-cost and produced with local resources and local technology. Two such workshops were organised during the year as indicated below.

- (i) *Low-cost aids at Nandurbar, Maharashtra* : A workshop for the production of low-cost material for the rural primary school teachers of Nandurbar, Dhulia District, Maharashtra, was organised for 32 teachers of the tribal area of Dhulia District for a period of 11 days in October, 1978.

- (ii) *Low-cost aids at Velanad, Kerala* : A workshop on low-cost teaching aids for 35 rural primary school teachers of Trivandrum District was organised from January, 14-23, 1979 in 'Mitrani Ketan', a voluntary organisation at Velanad. During the course of this workshop, a number of low-cost teaching aids were developed. Assessment on them was done by involving the school children of the Velanad village.

In order to provide objectives and methodology of production of various teaching aids to different teachers throughout the country, the Department has started a programme of production of such inexpensive teaching aids as spring balance with bambao sticks and jute strings, etc.; use of old hacksaw blade and bicycle spoke, etc., to understand the concept of contraction and expansion of metals; two dimensional geometrical shapes with the help of match sticks and bicycle valve tube; and a divider made of Babool (Acacia) thorns and bicycle valve tube.

(b) *Production-oriented workshops* : These included the following :

- (i) *Topics Identification* : A two-day workshop on the identification of concepts and sub-concepts for the preparation of materials was arranged in which teachers from Delhi Administration, experts from Department of Science and Mathematics participated. A number of topics, with detailed concepts and sub-concepts, were identified for the preparation of filmstrips and other materials pertaining to the science subjects of classes IX and X.
- (ii) *Teaching Aids on Science Topics for Classes IX and X* : This workshop was conducted at the Regional College of Education, Bhopal. Rough formats of 8 filmstrips on science subjects were evolved. The follow-up work on these filmstrips is in progress and tryout prints of four filmstrips are ready. Two of them have been pretested by a group of teachers and experts from NCERT.
- (iii) *Teaching Aids in the Areas of Physics, Chemistry, Biology and Mathematics* : A production-oriented workshop was conducted in collaboration with the 'SISE, Allahabad, from December 15 to 23, 1978 for the preparation of teaching aids in the areas of physics, chemistry, biology and mathe-

ematics. In the course of this workshop seven scripts along with visuals in rough shape were developed.

- (iv) ***Social Sciences*** : Production-oriented workshop on social sciences was organised in collaboration with the SIE, Delhi, in the month of September 1978 for a period of 12 days for the preparation of material in the areas of history and geography. The follow-up work is in progress. Report of the workshop has been prepared.

5. Acquisition lending and utilisation of teaching

Aids

During the period, 33 new films were added to the Central Film Library of this Department bringing the total to 8,035 films. The temporary membership of 317 members was cancelled and fifty new members were enrolled. The total membership of Central Film Library stood at 3,300 on March 31, 1979. We loaned out 7,354 films and 9 filmstrips to various educational institutions throughout the country. Fortyfour film-shows were conducted for the benefit of different local educational institutions.

9

The Search for Talent

ONE of the Council's major activities is to identify and nurture talent in the country at various terminal stages at the secondary and higher secondary levels. From 1964 to 1976, the NCERT operated what was known as the National Science Talent

Search Scheme to identify pupils with a marked aptitude for scientific studies. Under this scheme, a large number of scholarships were awarded to pupils all over the country.

With effect from 1977, the NCERT, acting on the basis of recommendations made by the Review Committee, enlarged the scope of the scheme. In addition to the basic sciences and social sciences, professional courses such as medicine and engineering, have also now been included within the scope of the scheme.

During the year under review, there were three national level tests—one each at the end of classes X, XI and XII, wherever there is a public examination at the end of these classes.

The number of candidates who took the National Talent Search Examination in 1978 at the end of classes X, XI and XII was 37464, 8760 and 17831, respectively.

The awardees thus selected will receive scholarships up to Ph.D. level in the case of the basic sciences, the agricultural sciences and the social sciences and in the case of professional courses up to M.D./M.S./M. Tech. after suitable revalidation by the NCERT.

The Council has taken some specific steps to step up the participation in these tests of rural children and children from the weaker sections of society to correct the imbalance in the award of these scholarships as between the urban and the rural students. Some of these steps are :

1. Intensification of publicity so as to cover the remotest areas in the country through the mass communication media.
2. Conducting interviews separately for the basic sciences and the social sciences, with a State representative on each of the Interview Boards.

The details regarding the number and value of scholarships are given below.

<i>Sl. No.</i>	<i>Name of Examination</i>	<i>No. of Scholarships</i>	<i>Value of the Scholarship</i>
1.	Class X	250	(a) Rs. 150 per month for two years plus Rs. 200 per annum as book grant; then (b) Rs. 200 per month up to the second degree in the

<i>.Sl No.</i>	<i>Name of Examination</i>	<i>No. of Scholarships</i>	<i>Value of the Scholarship</i>
			basic and the social sciences and up to the first degree in engineering and medicine plus Rs. 300 per annum as book grant.
2.	Class XI	100	(a) Rs. 150 per month for one year plus Rs. 300 per annum as book grant; then (b) Rs. 200 per month up to the second degree in the basic and the social sciences, and up to the first degree in engineering and medicine plus Rs 300 per annum as book grant.
3.	Class XII	150	Rs. 200 per month up to the second degree in the basic and the social sciences and up to the first degree in engineering and medicine plus Rs. 300 per annum as book grant.

Regular follow-up programmes for the awardees have also been undertaken. During 1977-78, awardees at the under-graduate level were placed at 12 summer schools and practice summer schools at different centres of higher learning in the country. Post-graduate students were allotted to the National Science Laboratories and the Centres of Advanced Studies where these NSTS scholars were given individual attention in the execution of independent research projects.

10

Working with the States

THE Council implements its programmes with the active cooperation of the States/ Union Territories, close contact with whom is maintained through its Field Offices and the Regional Colleges of Education. It is through these that information regarding

the Council's programmes in the States/Union Territories is disseminated and feedback obtained.

A brief account of the Council's programmes conducted in collaboration with the various State agencies is given below.

Textbook evaluation

A programme for evaluating the nationalised textbooks was taken up by the Department of Textbooks in Madhya Pradesh in collaboration with the Textbook Corporation of the State. In all, 40 textbooks in the four minority languages of the State, namely, Sindhi, Marathi, Gujarati and Urdu, were evaluated by 20 evaluators. The finalised reports were submitted to the Madhya Pradesh Textbook Corporation

A similar programme was conducted in Andhra Pradesh, where the SCERT, Hyderabad, conducted a textbook evaluation workshop. Forty textbooks were evaluated in the workshop

A programme of evaluating manuscripts was taken up for the State of Himachal Pradesh. The Council assisted the Board of School Education in the selection of manuscripts for textbooks to be prescribed in Himachal Pradesh. Five hundred and eighty manuscripts were evaluated by 75 evaluators.

Science kits

The science kits produced by the Workshop Department of the Council, which were originally developed in collaboration with the UNICEF, are becoming increasingly popular. During the year, a very large number of primary and middle school science kits were supplied to various States. Nine thousand and eighteen primary school science kits (amounting to a total value of Rs. 18.94 lakhs) were produced and despatched to different States against a purchase order from UNICEF. An additional 1623 primary school science kits were sent to Andhra Pradesh, Meghalaya, Himachal Pradesh, Jammu & Kashmir and Kerala against their direct requests; a number of middle school kits were also sent to these States; the total value of these 1623 primary school science kits plus the middle school kits was Rs. 4.76 lakhs. Science kits were also supplied to Kendriya Vidyalayas.

Teacher training and orientation

A six-day orientation programme in the use of micro-teaching techniques for developing the general teaching competence of

prospective teachers was organised at Mysore by the Department of Teacher Education; the programme was attended by 49 participants from 29 States/Union Territories.

A regional training course in micro-teaching for secondary teacher-educators from West Bengal, Assam, Bihar, Orissa and Uttar Pradesh was organised by the Department of Teacher Education, and was attended by 63 participants

Improvement of science education

The Department of Education in Science and Mathematics did considerable work during the year in collaboration with the States under the Science Education Programme. Nine hundred and seventy-two teacher training institutions have been supplied with equipment for improvement of science teaching at school level. Paper for printing of books under UNICEF Projects 1, 2 and 3 of the programme was supplied to the States.

The Department of Education in Science and Mathematics also assisted the State Institute of Science Education, Madhya Pradesh, in arranging a number of State-level science exhibitions.

A Hindi version of the Teachers' Guide for Environmental Studies for classes I and II was also developed.

The eighth national science exhibition for children

A significant programme for encouraging science talent and creativity in children in the different States/Union Territories has been the organisation by the Council, in collaboration with the Jawaharlal Nehru Memorial Fund, of a national science exhibition for children at Teen Murti House, New Delhi, as part of Jawaharlal Nehru's birthday celebrations.

The eighth National Science Exhibition for Children held this year was inaugurated by Shri N. Sanjiva Reddy, President of India, on 13 November 1978 at Teen Murti House. Dr. P. C. Chunder, Union Minister for Education presided over the inaugural function.

More than 400 science exhibits, mostly fabricated by school children, were displayed. Twenty-six States/Union Territories, organisations like the Kendriya Vidyalaya Sangathan, the Directorate

of Education, Delhi Administration, the New Delhi Municipal Committee, the Municipal Corporation of Delhi and the Birla Industry and Technology Museum, Calcutta, put up their exhibits, and about 400 students accompanied by about 200 teachers participated in this exhibition.

The themes for this year's exhibition were : Technology for Rural Development; Energy and Fuel; Man and Machine; Communication and Transport; Space Science, Man and Environment; Population; Food and Agriculture; Nutrition and Health; and Innovation in Teaching of Science and Mathematics.

In addition two popular lectures were arranged for the benefit of the participating students and teachers.

Reform of primary education

The Primary Curriculum Development Cell continued to monitor and take stock of the programmes of UNICEF Projects 2 and 3 in 15 States. During the year under review, it also organised three national conferences at Madras, Gauhati and Patna.

At the request of the Government of Sikkim, a PCDC Team of the Council helped them in developing a curriculum for primary level in the State.

Vocationalisation

Through its Vocationalisation of Education Unit, the NCERT continued collaborating with the States, a detailed report of which may be seen in Chapter 4.

Teaching aids

Several production-oriented workshops were conducted by the Council's Department of Teaching Aids in different States and Union Territories for the State Institute of Education and State Institute of Science Education. A production-oriented workshop in collaboration with the SISE, Allahabad, for the preparation of teaching aids in physics, chemistry, biology and mathematics, was conducted and seven scripts along with connected visuals were developed.

The Department also organised a production-oriented workshop of social science in collaboration with the State Institute of Science

Education, Delhi, for the preparation of materials in history and geography.

R.C.E. programmes of assistance to States

The Regional Colleges of Education organised a number of programmes in different States of the region in collaboration with the State Departments of Education for the benefit of their teachers and teacher-educators. The staff members were also deputed to act as resource persons in various workshops and seminars conducted by the State education authorities.

The Technology Department of the Regional College of Education, Bhubaneswar, assisted the Board of Secondary Education, Orissa, in preparing syllabus for socially useful productive work and in curriculum in sculpture.

Prof. K.C. Panda of RCE, Bhubaneswar, helped in the preparation of *teacher education curriculum of the States of Bihar, Orissa and Assam.*

Educational technology

The Council's Centre for Educational Technology (CET) continued to work in close collaboration with the different States and Union Territories in the training programmes and evaluation studies in the field of educational radio, educational television, correspondence education, media utilisation, etc. These programmes were organised to help the States for better planning of programmes and to train their personnel in the different fields of educational technology. The programme of teacher training and materials production conducted by the CET made a significant impact on the States who have collaborated.

During the year under review, the CET collaborated with the universities and oriented their senior teachers in various aspects of educational technology through an orientation course in educational technology for teacher-educators.

Several universities offered special papers on educational technology in the teacher training courses. Courses on educational technology were systematically organised by the CET in collaboration with other departments of the Council and subjects like micro-teaching, media of planning and selection, communications, programme instruction group training, personalised system of instruction, etc., were covered.

Centres for continuing education

The Council has launched a new scheme for establishing a large number of centres for continuing education to cater to the needs of teachers serving in different parts of the country in a less expensive and effective manner. The functions and activities of the centres are detailed below :

1. Each centre will provide continuing education to the secondary school teachers and primary teacher-educators working in its catchment area.
2. It will also provide assistance to various constituents of the NCERT in the development of materials and programmes of in-service training of teachers.
3. Each centre may take up other approved programmes such as those concerned with primary education for rural drop-outs, etc.
4. Training of resource persons for non-formal education and adult education may also be undertaken by a centre.

Under the scheme the annual recurring expenditure of Rs. 59,400 for a centre is to be shared on 50-50 basis between the NCERT and the State Government/Union Territory concerned. But an initial non-recurring expenditure of Rs. 17,000/- per centre is to be provided in full by the NCERT.

During the year under review, 39 centres were established in different States. In all 90 centres have so far been established covering the States and Union Territories of Andhra Pradesh, Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Bihar, Chandigarh, Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Orissa, Kerala, Maharashtra, Manipur, Mizoram, Nagaland, Pondicherry, Tamil Nadu and Uttar Pradesh. Out of these 90 centres, 50 centres conducted programmes during the year under review.



Consultancy and Information Services

THE Council provides consultancy and information services on request to States, Union Territories and other agencies working in the field of education. Individual staff members of the Council also, as and when required by the various institutions, serve as

members of expert panels, editorial boards, different types of academic groups, etc. Since this consultancy service of the Council is so extensive that it is not possible to list here all the work done during the year, a few major activities in this regard are mentioned below.

Department of Education in Science and Mathematics and Workshop Department

An eight-member team from the Ministry of Education, Vietnam, headed by Dr. Tran Don Quoi and accompanied by Mr. S. Hakansson from the Unesco's Equipment Division, Paris, visited India in the first week of November 1978, to study science equipment, its manufacture, and related aspects. The DESM and the Workshop Department of the Council took the team on a visit to two science equipment manufacturers of Delhi, to the CSIO and the Indo-Swiss Training Centre at Chandigarh and also to a local school in Delhi to give them an idea of the utilisation of science equipment.

At the instance of the Union Ministry of Education and Social Welfare, the DESM screened the entries received at the national level for the Third International Competition of Youth in the Electronic Age for the Third World Telecommunication Exhibition (TELECOM 1979), Geneva.

The DESM provided consultancy, to Punjab, Haryana, Himachal Pradesh, Rajasthan, Tripura and Andaman & Nicobar Islands on the use of environmental and local resources for teaching science at primary level; to West Bengal in reviewing their curriculum in primary education in science; to Bihar in adopting the NCERT integrated science textbooks for its secondary study; to the States and Union Territories of the north-eastern region in improving science in their schools; to Delhi Administration in organising the school television programme and to Directorate of Education, Delhi, the Municipal Corporation of Delhi and the New Delhi Municipal Committee in a large number of programmes conducted by them.

The Council provided consultancy in the selection of teachers for the Tibetan Schools and the Kendriya Vidyalayas and to the schools of the Department of Atomic Energy as regards their curriculum development, training and extension activities.

Consultancy was provided to the Technical Teacher Training Institute, Northern Region, Chandigarh, in the preparation of test items in chemistry for polytechnic students.

The Head of the Workshop Department is a member of the Indian Standards Institution's sub-committee for educational equipment and thus the Council participates in the formulation of the standards for educational equipment. The Indian Standards Institution was provided with consultancy service in design and development of glassware.

The Workshop Department of the Council provided consultancy to Delhi Administration and the Central Board of Secondary Education in the areas of training, vocations, syllabi in technical streams, etc., as and when required.

During the year under review, consultancy was provided to other countries also. Under the bilateral cultural exchange programme, the Information Materials Centre of the DESM provided the instructional materials and other relevant information to Tunisia, Cuba and Belgium.

Regional College of Education, Ajmer

The Regional College of Education, Ajmer, continued to provide consultancy service to various schools and colleges in the State of Rajasthan. The Commerce Department of the College also provided consultancy service to the State Institute of Education, Delhi, the Board of Secondary Education, Rajasthan, and to some local schools.

Department of Education in Social Sciences and Humanities

The DESSH helped the Central Board of Secondary Education in the modification and finalisation of social sciences and language curriculum for the higher secondary stages.

The Department collaborated with the Kendriya Vidyalaya Sangathan, Tibetan Schools Organisation, Andhra Education Society, SIE, Delhi, the Education Department of Delhi Administration, Delhi Municipal Corporation and the Municipal Corporation of Bombay in the orientation of their teachers. It also collaborated with Gandhi Peace Foundation, Jain Study Circle, Sri Aurobindo Centre, etc., in their academic programmes.

Library and Documentation Unit

The Library and Documentation Unit continued to provide information and reference services to researchers and the academic staff of the Council and to the Union Ministry of Education and Social Welfare. It also provided consultancy services to research workers from all over India.

Policy, Planning and Evaluation Unit

This Unit prepared the country paper for the Regional Conference of Education Ministers held at Colombo in July 1978. The Unit also prepared a brief for the address of the Indian Delegation to the UNESCO General Conference held at Paris in October 1978. A questionnaire and the country paper were prepared for the 37th Session of the International Conference on Education, Geneva, July 1979.

The Unit, during the year under review, commented on the UNESCO Budget for 1979-80, on the agenda for the UNESCO General Conference held at Paris in October 1978, on the implementation of resolutions No. 68 and 69 passed by the International Conference on Education at its previous sessions, on the Akash Bharati report and on the report of the Commissioner for Linguistic Minorities

Examination Reform Unit

During the year, the Unit provided consultancy to the following organisations and agencies as part of its examination reform programme :

- (i) *Assam* : The State was helped to develop programme of evaluation in socially useful productive work.
- (ii) *Bihar* : The Board was helped in developing a phased programme of examination reform.
- (iii) *Kerala* : The State was helped to develop a programme for try-out of the Internal Assessment Project in Attingal District.
- (iv) *Maharashtra* : The on-going project, Improvement of Written Examinations, was reinforced through consultancy and training.
- (v) *Orissa* : Consultative services were provided to the Board for reviewing its programmes.

A group of senior officials of the Mahatma Gandhi Institute, Moka, Mauritius, was provided a six-week orientation in the concept and techniques of evaluation. The group was also helped to develop an examination reform programme for its country.

Department of School Education

The Department continued to provide consultancy services to various State Departments of Education, in the areas of non-formal

education, curriculum use and implementation and socially useful productive work. The officers of the Department visited different States and worked with the authorities in the Departments of Education, SIEs and SCERTs.

Department of Teacher Education

The Department of Teacher Education continued to provide consultancy services in the areas of micro-teaching, teacher effectiveness, curriculum development for teacher education, etc., particularly in the field of elementary teacher education.

Services rendered to other organisations

1. *Development of Psychological Tests for Recruitment of Sub-Inspectors of Police:* This project was undertaken by the Council at the request of Ministry of Home Affairs. A battery of 18 tests was developed which will be used in the actual selection of personnel.
2. *Selection Tests for various agencies:* The Council developed psychological tests, achievement tests and general knowledge tests for assisting different government and semi-government organisations in the selection of their employees' cadres at different levels. During the year under review, assistance in four such selections was provided.

The Council continued to receive consultancy from various experts from India and abroad.

12

Publications

THE publication and supply of quality textbooks and related instructional materials and dissemination through the medium of print of information regarding the results and findings of the Council's researches and experiments in education, is a very import-

ant and regular feature of the Council's activities. Through the Publication Department, it 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.

The publication activity during the year continued to be centred on the production and distribution of new textbooks for the new pattern of education; and 62 first-edition English/Hindi textbooks and 26 new Urdu textbooks, i.e., a total of 88 new textbooks were brought out. In addition to this, 66 reprint textbooks, 17 research and developmental publications and 39 issues of the Council's journals were also brought out.

As per the decision taken by the Council earlier, all these titles were brought out by the Publication Department of the Council; however, the private-sector publishers, who had brought out some of the Council's textbooks in the previous year were reassigned the rights to reprint and distribute them during 1978-79; thus the private-sector publishers published and distributed 45 reprint textbooks during the year. The Japanese publishing firm, M/s Teikoku-Shoin & Co., brought out during the year under report, a second Japanese edition of the NCERT textbook, *India on the Move*, the first edition of which they had brought out earlier; for this second edition the publisher will pay royalty at the rate of 10% as against the 7% royalty paid for the first edition.

The NCERT supplementary reader, *Iqbal*, by Jagannath Azad, won the Urdu Literature Award of the Punjab Government.

The Publications Division of the Ministry of Information and Broadcasting, New Delhi, the national distributors for NCERT publications, continued the sale and distribution of Council's publications in the Northern, Eastern and Western Zones through their Sales Emporia at New Delhi, Bombay and Calcutta. The Southern Zone was served by the Publication Department direct. All the Council's journals were also distributed and sold by the Council itself.

The category-wise break-up of the titles brought out is as under :

(1) New first-edition textbooks	62 + 26 Urdu = 88
	textbooks
(2) Reprint textbooks	66
(3) Workbooks	12

(4) Supplementary Readers	3
(5) Research Monographs and Developmental Materials/Reports	17
(6) Periodicals (counting each issue)	39
(7) Textbooks published by private publishers	45

The Council participated in the following book fairs/exhibitions in India :

- (1) National Book Fair held at Bangalore
- (2) National Children's Science Exhibition held at Teen Murti House, New Delhi.

The Council also participated in the International Book Fairs/ Exhibitions as detailed below during the year 1978-79 by sending selected NCERT publications through the National Book Trust, New Delhi :

- (1) Festival of School Books organised by the Central Union Torino, Rome, in October-November 1978
- (2) The 10th Singapore Festival of Books and Book Fair, August 26, 1978 to September 4, 1978
- (3) National Book Exhibition, Ghana (Accra), November 1978
- (4) 30th Frankfurt Book Fair, 1978
- (5) 11th International Book Fair, Sophia, 1978
- (6) 11th International Book Fair, Cairo
- (7) International Children's Book Exhibition, Ankara
- (8) Exhibition of Indian Books in Dacca and Chittagong
- (9) Book Exhibitions in Mauritius, Kenya and Tanzania
- (10) Children's Book Exhibition in Switzerland

During the year permission was given to the following State governments/nationalised textbook agencies for adoption of a number of NCERT textbooks :

- (1) Gujarat Secondary Education Board, Gujarat
- (2) SIE, Poona, Maharashtra
- (3) SIE, Gurgaon, Haryana
- (4) Board of School Education, Himachal Pradesh
- (5) M. P. Board of Secondary Education, Bhopal

During the year, the sale of NCERT publications amounted to Rs. 84,67,264.93. A sum of Rs. 7,76,720.28 was received as royalty from private-sector publishers. In addition, royalty amounting to \$ 4869.10 was received from M/s Teikoku-Shoin & Co, for the Japanese edition of *India on the Move*.

A detailed list of the titles brought out during the year is given in Appendix G.

Journals

Journals occupy pride of place in NCERT's publishing activity. They cater to a wide range of readers, from primary school teachers to research workers. *The Primary Teacher/Primary Shikshak* published simultaneously in English and Hindi, transmits to practising teachers and administrators authentic information about the educational policies being decided upon and pursued at the Central level. It also aims at giving meaningful and relevant material for direct use in the classroom. *Indian Educational Review* provides a medium for dissemination of research findings and information regarding research in education and for exchange of experience among research workers, scholars, teachers and others working in the field of educational research. *The Journal of Indian Education* provides a forum for teachers, teacher-educators and research workers to encourage original and critical thinking in education through discussion of current educational views. It is a bi-monthly publication.

School Science is a quarterly journal of science education which serves as an open forum for the discussion of various aspects of science education, its problems, prospects and the individual experiences of teachers and students.

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

13

International Assistance and Programmes

THE Council is one of the major institutions in the country for promoting international contacts and utilising international assistance in the field of education. During the year, it has been associated with UNESCO/APEID, UNICEF, UNDP, British

Council, Commonwealth, ITEC/TCS and Bilateral Cultural Exchange Programmes.

UNESCO/APEID

Our participation in UNESCO activities has been of a twofold nature: (i) direct participation in UNESCO programmes, and (ii) participation in UNESCO activities through APEID (Asian Programme for Educational Innovation and Development). The direct participation in UNESCO activities included sponsoring and receiving of specialists to various workshops, seminars, internship training programmes and the study visits. During the year, the Council participated in the following regional and international meetings sponsored by UNESCO:

1. Regional Workshop on Systems Approach for Education (Bangkok)
2. Meeting of Regional Experts for Research and Training in Literacy (Delhi)
3. Meeting on Policy Studies in the Training of Educational Personnel (Bangkok)
4. Inter-country Mobile Training Programme in Population Education (Indonesia, Philippines and Bangkok)
5. Study of Decentralised Area Planning and Educational Research and Development (Philippines, Thailand and Malaysia)

Under the study-visits and fellowship programmes, the Council received 22 specialists from Afghanistan, Bhutan, Indonesia, Maldives, Mauritius, Thailand and Vietnam in the areas of curriculum, development of science kits, instructional material, teacher education, population education, etc. Besides these specialists, the Council received two science educators for attachment from Thailand.

The Council also acts as an Associated Centre of the Asian Programmes of Educational Innovation for Development (APEID) and thus is actively involved in the designing, development and implementation of APEID activities in the region. During the year, the Council participated in the following important regional and national meetings sponsored by the APEID:

- (i) Technical Working Group Meeting on Alternative Structure Linking Formal and Non-Formal Education with Emphasis on Universalisation of Education (Thailand)
- (ii) Technical Working Group Meeting on Selection, Maintenance and Repairs of Science Equipment (Malaysia)

- (iii) **Second Regional Workshop on Pupils' Evaluation with particular reference to Moral Education in Asia (Japan)**
- (iv) **Study Group Meeting on Development of Curriculum Material, Teacher Education Material and Science Instructional Material (Thailand)**
- (v) **Study Group Meeting on the Use of New Educational Techniques for Preparing Teachers with Reference to Universalisation of Education (Thailand)**
- (vi) **Sub-Regional Workshop in Educational Technology with Special Reference to Development of Low-cost Educational Materials (Nepal)**
- (vii) **Regional Workshop and Seminar on Correspondence Education (Australia)**
- (viii) **Special Task Force Meeting for the Sixth Regional Consultation Meeting (Thailand)**
- (ix) **Exchange of Key Persons in Open Learning System with Korea Under APEID's programme, the Council organised two national programmes, namely:**
 - (i) **In-country Workshop on Curriculum Development in Udaipur;**
 - (ii) **National Workshop in Educational Technology in Delhi.**

In the second cycle of APEID, India is one of the seven countries which has benefited from the attachment/internship programme for training in specific fields. During 1978, a total of 17 participants were received in eight Associate Centres of the APEID. Out of these, the Council received five educators from Bangladesh, Malaysia and Thailand for on-the-job training in curriculum development, development of instructional material in science and mathematics, and production of audio-visual materials. Under this programme, two educators from the Council were deputed to avail themselves of training facilities in curriculum development in science and mathematics and documentation and information support for educational innovation.

During the year, the Council entered into the following three contracts with UNESCO/APEID:

- (i) **Comparative Study of Secondary School Biology Education in Asia with special reference to human ecology, environment studies, rural community health, hygiene and nutrition, skill development, natural resources use and conservation.**
- (ii) **Base Line Survey of Population Education.**

- (iii) **Sub-Regional Workshop for West Asian Countries in Laboratory Procedures and Maintenance of School Science Equipment with special reference to biology.**

During the year, a separate Secretariat of the National Development Group (India) of APEID was set up in the Council. The Secretariat, *inter-alia*, assists the National Development Group in coordinating and implementing the APEID activities in the country.

UNICEF

With UNICEF assistance the following projects continued to be implemented during the year.

Science education programme

This continuing project, begun in 1970-71, has undergone a pilot phase and a wider extension phase with UNICEF support for development of curriculum, instructional and training materials, supply of kits to primary schools and training of teachers and other educational personnel. It also includes upgrading of elementary teacher training institutions with a supply of laboratory equipment, workshop tools and library books.

During the year, 8,999 primary science kits were allotted to different States, bringing the total number of primary schools under the project to 47,571 and about 13,500 teachers were trained. One hundred and forty-nine teacher training schools have been supplied with equipment, etc.

The catalytic influence of the project is evidenced by the fact that 11 States and 5 Union Territories have introduced the programme in all the primary schools, and some 65,000 kits have been provided by various States from their own resources.

An extension of the project was the establishment of five Regional Nutrition Education Centres in 1975 to develop a package of instructional materials and training programmes in nutrition, health and environmental sanitation suitable for primary classes, which have been tried out in a selected number of schools. These are being integrated as part of the science curriculum, and extended to the States

A new dimension to the project taken up since last year is the development of local resources and improvisation to teach environmental science at the primary level and thus do away with the kits which prove expensive. Through a series of workshops at regional levels, a Handbook for Primary Teachers has been developed and 22

States are being assisted to adapt and translate the same into regional languages to suit their respective curricula.

The evaluation of the Science Education Programme has been completed and a report prepared.

Primary education curriculum renewal

Under this project work in 15 States continued, covering 450 schools, with the active collaboration of 45 teacher training schools and the SIEs/SCERTs of the States in the Primary Curriculum Renewal Programme. The instructional materials for classes I, II and III are being tried out in schools and work is in progress to complete the package programme for the primary stage.

Three regional conferences were organised to take stock of the work done in different States, to exchange experiences and to plan future work.

A national-level conference was organised to develop a minimum learning continuum for the primary stage, and a working group developed the guidelines for the States to develop their own programmes of Minimum Learning Continuum.

Comprehensive access to primary education

The Council has started the implementation of UNICEF-assisted project "Comprehensive Access to Primary Education". The main objective of this project is to develop a large number of learning materials (episodes) for out-of-school children based on the local specific problems. The project assumes that the goal of universal elementary education can be achieved through full-time as well as part-time schooling, providing for a convergence of the methodologies and modalities of formal and non-formal education. The major focus of the project are girls and learners from the Scheduled Castes, Scheduled Tribes and backward classes.

Keeping in view the needs and background of the disadvantaged child, the "modular" approach to learning/instruction has been adopted. Each module is based on a local specific problem or on learning situations relevant to the needs of the learners, both felt and perceived. The problems are identified after visiting the villages/blocks and are divided into sub-problems. Based on the sub-problems, self-contained self-learning capsules are developed.

The major thrust of the project is to decentralise the process of developing primary education curriculum along with the corresponding teacher training curriculum. In order to achieve the goal of production of problem-based learning materials, the production-cum-training mode at the elementary teacher training institutions is adopted. This approach is aimed at imparting meaningful training to students, teachers of elementary teacher training institutions, to enable them to develop relevance-based learning modules (episodes), preferably in the self-learning form. The Central Project Team at NCERT has already conducted two workshops to train the personnel from the States who will be engaged in conducting the production-cum-training programmes for teacher-educators. As part of the project, 20 distant teacher-training capsules and 60 relevance-based learning episodes for out-of-school children in the age-group of 9-14 years have been developed.

Developmental activities in community education and participation

Work on this project continued in 30 centres established in 15 States to develop educational programmes and activities for various target groups of the community, particularly school drop-outs, mothers and adults. Through this project several models of non-formal education programmes are emerging, which may be adopted or adapted by various States.

Children's media laboratory

Through this project inexpensive and effective use of different media is being made to develop materials of educational and entertainment value for very young children.

Studies of available play materials and toys have been made in four States—Karnataka, Gujarat, Tamil Nadu and Bihar—and handbooks for teachers have been prepared in regional languages in collaboration with the States.

A National Workshop on Low Cost/Simple Play Materials was organised in October 1978, where these were displayed and demonstrated.

Three hundred items of indigenous play materials and toys were selected and the collection sent for display at the XX General Conference of UNESCO at Paris.

Ten illustrated books for children were prepared; six of them have been printed and the rest are in press.

International Year of the Child programmes

The International Year of the Child programmes undertaken by the NCERT focus on the deprived child, and his special needs and problems. An account of these programmes from January to March 1979 is given below.

Books for Young Children

The Children's Media Laboratory (CML) of the NCERT prepared, with UNICEF assistance, a set of 10 picture books for pre-school and primary school groups of children of the age-group 4-8. These books are colourfully illustrated and are meant to facilitate language development of the children and to stimulate their interest in reading. The books are being distributed among Balwadis and primary schools of the disadvantaged areas. The translation of these into the regional languages is underway.

Bal Geet

A collection of more than a hundred children's songs and rhymes has been published in collaboration with the Mobile Creches for use at the pre-school and primary school level. This book has been illustrated by the children of Mobile Creches

Pamphlets for Parents

A set of ten pamphlets for parents and teachers has been developed. These pamphlets outline ways of organising learning experience for children in order to keep them occupied and entertained. Written in simple Hindi, these pamphlets are on the following themes : festivals, science experience, play and creative activities, books and toys stories for children, games and songs. It is proposed to distribute these pamphlets through Mahila Mandals and Anganwadi workers.

Teachers' Workshops

A National Workshop on Low Cost/Simple Play Materials and Games organised by the Children's Media Laboratory, listed the

available waste materials in various States and their effective utilisation in educational and play materials. Both detailed and abridged versions of the report of the workshop are available. As a follow-up of the national workshop, similar workshops at the State level were conducted in Punjab and Orissa for the teachers of pre-primary and primary institutions

Films

One Film 'Khilona' and a slide-cum-tape on Indian toys has been produced by the CET.

Another film entitled, 'Krishna and the Magic Chariot' has been completed. This film stresses the need for the development of curiosity in the children.

UNDP

During the year, under UNDP fellowship programme, the Council arranged for the training of two educators from Afghanistan in the area of teaching of mathematics and science and preparation of instructional material in science and nutrition.

During the year, the Centre for Educational Technology continued to receive UNDP assistance in the form of fellowships, experts, consultancies and equipments. Two members of the Centre were sent abroad for training in educational television and educational radio, respectively. The services of an expert on educational television were also made available to the Centre. In addition, five consultancies were provided in correspondence education. These consultancies were used for developing manuals for writers of correspondence education, holding discussions/seminars in various institutions of the country on writing lessons, organisation and management of correspondence education and for organising a training course in film animation, and developing a manual on it. Equipment like cameras, video recorders, etc., were also supplied to the Centre.

The British Council

Three projects are currently being implemented in collaboration with the British Council. These are :

- (i) *National Project for the Training of In-service Teacher Education Personnel in Environmental Studies:* The services of two

experts, Mr. R.F. Morgan, Consultant, In-service Teacher Education and Environmental Studies and Mr. R.A. Manchee, Specialist in Production of Audio-visual Material, were availed of for developing learning material and syllabus content centred round children's activities in their own environment. Four regional workshops at Mirza (Assam), Coimbatore (Tamil Nadu), Pune (Maharashtra), and Srinagar (Jammu and Kashmir) were held. Ninety specialists participated in the seminar. The workshops helped in producing eight reports on the subject.

- (ii) *Examination Reform Project* : Two seminars, namely (a) Seminar on Management of Public Examination, and (b) Seminar on Research in Examination, were conducted and the services of Dr. P.D. Neale from the Association Examination Board, Hampshire, and Dr. G.M. Forrest from the Joint Matriculation Board, Manchester, were availed of.
- (iii) *A Programme for the Development of British Support for Teaching of English in India* : The proposal for availing of the services of a Resident Specialist in the field of material production was finalised and a grant for books and journals on English language, pedagogy and applied linguistics was received.

The Council also sponsored a number of specialists for higher training in the areas of educational technology, science, mathematics, vocational education and non-formal education under the British Council Technical Cooperation and Training Programme.

Commonwealth programmes

During the year, the Council participated in two conferences organised under the Commonwealth programmes :

- (i) Commonwealth In-service Teacher Education Conference in Colombo, Sri Lanka ; and
- (ii) Workshop on Teaching about the Commonwealth in Nairobi and Ghana.

ITEC/TCS programmes

Under the Indian Technical and Economic Cooperation Programme of the Ministry of External Affairs, Government of India, the Council

developed and arranged one month's training for a batch of 30 teachers from Afghanistan. The training covered new trends in education, curriculum development and teacher education in developing countries. The trainees also visited a number of educational institutions in Delhi and Bombay.

One educator from Nepal was received and given nine months' training under the Technical Cooperation Scheme (TCS) under the Colombo Plan.

Bilateral cultural exchange programmes

The Council acts as one of the implementing agencies for the Bilateral Cultural Exchange Programmes of the Government of India. During the year, the Council deputed two persons to study the educational pattern in USSR and Yugoslavia. The Council also supplied textbooks, supplementary readers, pedagogical and methodological literature, research monographs and educational films and filmstrips to twelve countries: Afghanistan, Bulgaria, Czechoslovakia, France, Federal Republic of Germany, Hungary, Mexico, Poland, Syria, ARE, UAE and Yugoslavia. Besides, one of the Council's specialists went as a member of the Indian delegation which visited Vietnam and Thailand for working out details of bilateral cultural exchange programme.

Other programmes

The Council received a number of visitors from various academic institutions for the study of the educational programmes and activities of the Council. The visitors came from countries like Korea, Malaysia, Mauritius, Norway, USA, Fiji and Tanzania. The Council also deputed a number of its specialists to various international meetings and conferences, such as the International Conference on Integrated Science (Netherlands), Regional Workshop on Moral Education in Asia (Japan), International Congress on Teaching of Human Rights (Australia), Workshop for a Joint Study on Moral Education in Asia (Japan), Meeting of Indo-American Joint Media Working Group on Films and Broadcasting in the United States of America and Asian Seminar of Education Technology (Japan).

The details regarding the participation by staff members of the Council in various international programmes abroad are given in Appendix F.

14

Receipts and Expenditure

DURING the year 1978-79, the Council received a grant of Rs. 5,97,29,897.00 from the Government of India. In addition, the Council realised an amount of Rs. 1,01,29,557.00 from the sale of its publications, while miscellaneous receipts

amounted to Rs.74,25,917.00. Besides, the balance of Rs.28,93,103.00 left with the Council out of the grant released by the Government during 1977-78 was also carried over to the year 1978-79.

As against the above mentioned funds, the Council incurred an expenditure of Rs. 4,93,39,394.00 under the 'Non-Plan' and Rs. 2,18,17,211.00 under the 'Plan' Sections. Besides, an expenditure of Rs. 32,61,856.00 was also incurred against the specific grants.

Provisional Statement of Receipts and Expenditure of the Council for the Year 1978-79

<i>Receipts</i>		<i>Payments</i>	
Opening balance	Rs. 37,13,998 00	Non-Plan Expenditure	
Grants received from the Govt. of India and other agencies		(a) Pay & alls. and programmes	Rs. 4,93,39,394 00
(a) Main grant from the Govt.	Rs. 5,97,29,897 00	(b) Loans and advances	Rs. 17,85,433.00
(b) Specific grant from the Govt. of India and other agencies	Rs. 23,74,338.00	Plan Expenditure	
		(a) Pay & alls. and programmes	Rs. 2,18,17,211.00
		(b) Expenditure out of specific grants	Rs. 32,61,856.00
Receipts		Provident Fund & C.D. Account	Rs. 51,96,246.00
(a) Sale proceeds of publications	Rs. 1,01,29,557.00	Deposits, Advances & Suspenses and Remittances	Rs. 3,04,49,961.00
(b) Other receipts	Rs. 74,25,917 00	Closing balance	Rs. 74,52,185.00
Provident Fund & C.D. Account	Rs 58,00,087,00		
Deposits, Advances, Suspense and Remittances	Rs 3,01,28,492,00		
	<u>Rs 11,93,02,286 00</u>		<u>Rs. 11,93,02,286.00</u>

Appendices

APPENDIX A

Grants given by the Council to Professional Educational Organisations during 1978-79

<i>Sl. No.</i>	<i>Name of Professional Educational Organisation</i>	<i>Amount of Grant Released</i>	<i>Remarks</i>
1	2	3	4
1.	English Language Teachers' Association of India, Madras-28	Rs. 5,000.00	
2.	Association for Improvement of Mathematics Teaching, Calcutta	Rs. 3,500.00	
3.	The Institution of Engineers (India), Calcutta	Rs. 2,000.00	
4.	Association of Geography Teachers of India, Madras	Rs. 3,500.00	
5.	Indian Association for Pre-School Education, Coimbatore	Rs. 6,500.00	(1. For Pub. Journal (Rs. 2,500/-) 2. Annual Conf. (Rs. 4,000/-)
6.	Sri Vivekanand Vidya Parishath Nellore-2	Rs. 3,000.00	
7.	Bangiya Bijnan Parishad Calcutta	Rs. 3,000.00	
8.	The Allahabad Geographical Society (Rgd.), Allahabad	Rs. 2,000.00	
9.	All-India Science Teachers' Association, Lodi Estate, New Delhi	Rs. 3,250.00	
10.	Indian Association for Programmed Learning, Surat	Rs. 5,000.00	

1	2	3	4
11.	Association of Mathematics Teachers of India, Madras	Rs. 6,500.00	
12.	Bhartiya Shiksha Mandal New Delhi	Rs. 5,000.00	
13.	All-India Federation of Educational Association, New Delhi	Rs. 5,000.00	
14.	Indian Physics Association Bombay	Rs. 8,600.00	Actually released Rs. 7,800/- & adjusted balance of last year grant.
15.	All-India Association on Mental Retardation, Delhi-52	Rs. 3,500.00	
16.	Association for Improvement of Mathematics Teaching, Calcutta	Rs. 3,500.00	
17.	Indian Association of Teacher Educators, Allahabad	Rs. 7,000.00	Actually released Rs. 4,200/- & adjusted balance of last year grant.
Total		Rs. 75,850.00	

APPENDIX B

Field Advisers of the Council

1. Shri D.C. Upreti
Field Adviser (NCERT)
Kannachal
Navagraha Road
Gauhati-781003
2. Dr. M. Haridas
Field Adviser (NCERT)
Geetanjali
T.C. No. 15/1019
Jagathy, Trivandrum-14
3. Dr. K.V. Rao
Field Adviser (NCERT)
3-6/147-2, Himayat Nagar
Hyderabad-500029
4. Shri H.N. Gupta
Field Adviser (NCERT)
B-47, Prabhu Marg
Tilak Nagar
Jaipur-302004
5. Shri M.K. Gupta
Field Adviser (NCERT)
E-1/66, Arera Colony
Bhopal-462014 (M.P.)
6. Shri Prabhakar Singh
Field Adviser (NCERT)
555/E, Mumford Ganj
Allahabad-211002 (U P)
7. Shri S.K. Gupta
Field Adviser (NCERT)
119, Budheswari Colony
Bhubaneswar-751006
(Orissa)
8. Shri S.R. Rao
Field Adviser (NCERT)
714, 9th Cross
West of Chord Road
Rajaji Nagar
Bangalore-560010
9. Shri B P Misra
Field Adviser (NCERT)
1-B, Chandra Colony
Ahmedabad-380006
10. Shri W A.F. Hopper
Field Adviser (NCERT)
No 32, Hindi Pracharasabha
Street, T. Nagar
Madras-600017
11. Shri S L. Gajwani
Field Adviser (NCERT)
285/10, Koregaon Park
(near Bund Garden)
Poona-411001
12. Dr. S.P. Sharma
Field Adviser (NCERT)
Road No. 2
Rajendra Nagar
Patna-800016

13. Shri C. Bhattacharay
Field Adviser (NCERT)
P. 23, C.I.T., Road
(L.V. Scheme)
Calcutta-700014
14. Dr. M.R. Chilana
Field Adviser (NCERT)
House No. 23, Sector-8(A)
Chandigarh-160018
15. Dr. S. Prasad
Field Adviser (NCERT)
Nizam Manzil
Sher-i-Kashmir Colony
Sector-2, Rampura
Chhatabal
P. O. Karan Nagar
Srlnagar-190010 (J & K)
16. Shri A C. Pachauri
Field Adviser (NCERT)
C/O State Institute of
Education
Govt. of Manipur
Imphal-795001
17. Dr. M.N. Singh
Field Adviser (NCERT)
Kamaji Road
P.O. Laitumkhra
Shillong-793003
18. Shri R.B. Banerjee
Field Adviser (NCERT)
P.G. Hostel, NIE Campus
New Delhi-110016

APPENDIX C

C. 1 THE COUNCIL

**Members of the National Council of Educational
Research and Training General Body (Under
Rule 3 of the Council)
(From 1.4.78 to 30.9.78)**

- | | |
|---|--|
| (i) The Minister for Education and Social Welfare
President (ex-Officio) | 1. Dr. Pratap Chandra Chunder
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 P. Sabanayagam
Secretary
Ministry of Education and
Social Welfare, Shastri Bhavan
New Delhi |
| (iv) Four Vice-Chancellors of Universities, one from each Region, nominated by the Government of India (April 1, 1978—
September 30, 1979) | 4. Dr. C.D.S. Devanesen
Vice-Chancellor
North Eastern Hill University
Shillong-793 001 |
| | 5. Prof. R.C. Mehrotra
Vice-Chancellor
Delhi University
Delhi |

- (v) One representative of each State Government and Union Territory with a legislature, who shall be the Education Minister of the State/Union Territory (or his representative) and in the case of Delhi the Chief Executive Councillor, Delhi (or his representative)
6. Prof. K. Satchidananda Murty
Vice-Chancellor
Sri Venkateshwara University
Tirupati-517502 (A.P.)
 7. Shri D.A. Debholkar
Vice-Chancellor
Poona University
Ganesh Khind
Poona (Maharashtra)
 8. Education Minister
Andhra Pradesh
Hyderabad
 9. Education Minister
Assam
Shillong
 10. Education Minister
Bihar
Patna
 11. Education Minister
Gujarat
Ahmedabad
 12. Education Minister
Haryana
Chandigarh
 13. Education Minister
Himachal Pradesh
Simla
 14. Dy. Education Minister
Jammu & Kashmir
Srinagar
 15. Education Minister
Kerala
Trivandrum
 16. Education Minister
Madhya Pradesh
Bhopal

17. Education Minister
Maharashtra
Bombay
18. Education Minister
Manipur
Imphal
19. Education Minister
Meghalaya
Shillong
20. Education Minister
Karnataka
Bangalore
21. Education Minister
Nagaland
Kohima
22. Education Minister
Orissa
Bhubaneswar
23. Education Minister
Rajasthan
Jaipur
24. Education Minister
Punjab
Chandigarh
25. Education Minister
Tamil Nadu
Madras
26. Education Minister
Government of Tripura
Agartala
27. Education Minister
Sikkim
Gangtok
28. Education Minister
Uttar Pradesh
Lucknow

- 29. Education Minister
West Bengal
Calcutta**
- 30. The Chief Executive Councillor
Delhi Administration
Delhi**
- 31. Education Minister
Government of Goa, Daman
and Diu
Panaji (Goa)**
- 32. Education Minister
Mizoram
Aizal**
- 33. Education Minister
Government of Pondicherry
Pondicherry-1**
- (vi) All members of the
Executive Committee not
included above**
- 34. Dr. S.K. Mitra
Director
National Council of Educa-
tional Research and Training
Sri Aurobindo Marg
New Delhi-16**
- 35. Prof. M.V. Mathur
Director
National Staff College for
Educational Planners and
Administrators
New Delhi-16**
- 36. Prof. C.N.R. Rao
Indian Institute of Science
Bangalore**
- 37. Smt. Anutai Vagh
Sanchalika
Gram Bal Shiksha Kendra**

Vikaswadi—Kosbad Hill
Tal. Dahanu, Distt. Thana
(Via Dahanu Road Stn.
W. Railway)
Maharashtra-401 703

38. Master A.A. Kaifi
R/O Maleratta, Koker Masjid
P.O. S.R. Ganj
Srinagar-2 (J & K)
39. Dr. A.N. Bose
Joint Director
National Council of Educa-
tional Reserach and Training
New Delhi-16
40. Prof. B.S. Parakh
Head of Department
DESSH, NCERT
New Delhi-16
41. Prof. R C. Das
Dean (A) and Head of the
Department of Teacher Educa-
tion, NCERT
New Delhi
42. Dr. K.P. Nayak
Principal
Regional College of Educa-
tion, Bhopal (M.P.)
43. Smt. J. Anjani Dayanand
Joint Secretary
Ministry of Education and
Social Welfare
Shastri Bhavan
New Delhi
44. Shri J.A. Kalyanakrishnan
Financial Adviser, NCERT and
Ministry of Education and
Social Welfare, Room No.
109 'C' Shastri Bhavan
New Delhi

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

45. Shri Jagdish Mishra
General Secretary
All-India Primary Teachers'
Federation, Exhibition Road
Patna (Bihar)
46. Shri J.S. Sigamani
Headmaster
(from 1.4.78 to 30.9.78)
St. Patrick's Middle School
Melur, Tuticorin-2
Distt. Tirunelveli
(Tamil Nadu)
47. Smt. Sayeeda Begum
Teacher
Govt. Girls High School
Pompore, Distt. Anantnag
(Jammu & Kashmir)
48. Shri A.N. Thaker
Principal
Thaker's High School
Ellisbridge
Ahmedabad-380 006
(Gujarat)
49. Director-General
I.C.A.R., Krishi Bhavan
New Delhi
50. Director-General of Employ-
ment and Training
(Training side)
Ministry of Labour
(DGE & T), Shram Shakti
Bhavan
New Delhi-1
51. Dr. Malcolm Adiseshiah
Vice-Chancellor
Madras University
Madras-600 005

52. Prof. A. P. Jambulingam
Principal
Technical Teachers' Training
Institute, Adyar
Madras-600 020
53. Prof. C.S. Jha
Director
Indian Institute of Technology
Kharagpur
54. Dr. (Smt.) S.K. Sandhu
Director
Central Health Education
Bureau (Directorate General
Health Services)
Temple Lane, Kotla Road
New Delhi
55. Shri P.R. Chauhan
Commissioner
Kendriya Vidyalaya Sangathan
Nehru House
Bahadur Shah Zafar Marg
New Delhi
56. Prof. Tapas Majumdar
Chairman
Zakir Husain Centre for
Educational Studies
Jawaharlal Nehru University
New Delhi
57. Shri V.R. Dravid
Secretary
NCERT
New Delhi-110016
(from April 1, 1978 to
August 10, 1978)
Shri V.K. Pandit
Secretary
NCERT
New Delhi-110018
(from August 11, 1978 to
March 31, 1979)

(From October 1, 1978 to March 31, 1979)

- | | |
|--|---|
| <p>(i) The Minister for Education and Social Welfare
President (ex-Officio)</p> | <p>1. Dr. P.C. Chunder
Union Minister for Education and Social Welfare
Shastri Bhavan
New Delhi-1</p> |
| <p>(ii) Chairman of the University Grants Commission
(ex-Officio)</p> | <p>2 Prof. Satish Chandra
Chairman
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi-1</p> |
| <p>(iii) Secretary to the Ministry of Education and Social Welfare
(ex-Officio)</p> | <p>3. Shri P. Sabanayagam
Secretary
Ministry of Education and Social Welfare
Shastri Bhavan
New Delhi-1</p> |
| <p>(iv) Four Vice-Chancellors of Universities, one from each region, nominated by the Government of India for two years with effect from October 1, 1978</p> | <p>4. Dr. S K. Mukherjee
Vice-Chancellor
Calcutta University
Calcutta (West Bengal)</p> <p>5. Shri S S. Wodeyer
Vice-Chancellor
Karnataka University
Dharwar (Karnataka)</p> <p>6. Shri Ishwarbhai J. Patel
Vice-Chancellor
Gujarat University
Ahmedabad (Gujarat)</p> <p>7. Dr. A.M. Khusro
Vice-Chancellor
Aligarh Muslim University
Aligarh (U.P.)</p> |

- (v) One representative of each State Government and Union Territory with a legislature, who shall be the Education Minister of the State/Union Territory (or his representative) and in the case of Delhi the Chief Executive Councilor, Delhi (or his representative)
8. Education Minister
Andhra Pradesh
Hyderabad
 9. Education Minister
Assam
Shillong
 10. Education Minister
Bihar
Patna
 11. Education Minister
Gujarat
Ahmedabad
 12. Education Minister
Haryana
Chandigarh
 13. Education Minister
Himachal Pradesh
Simla
 14. 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
Govt. of Goa, Daman & Diu
Panaji (Goa)
32. Education Minister
Mizoram
Aizal
33. Education Minister
Government of Pondicherry
Pondicherry-1

- (vi) All Members of the Executive Committee not included above
34. Minister of State
Ministry of Education and
Social Welfare
Shastri Bhavan
New Delhi
 35. Deputy Minister
Ministry of Education and
Social Welfare
Government of India
New Delhi-1
 36. Director
National Council of Educational
Research and Training
Sri Aurobindo Marg
New Delhi-16
 37. Prof. M.V. Mathur
Director
National Staff College for
Educational Planners and
Administrators
New Delhi
 38. Prof. C.N.R. Rao
Indian Institute of Science
Bangalore
(Karnataka)
 39. Smt. Anutai Vagh
Sanchalika
Gram Bal Shiksha Kendra
Vikaswadi—Kosbad Hill
Tal. Dahanu, Dist. Thana
(Via Dahanu Road Stn. W. Rly.)
Maharashtra
 40. Shri A.A. Kaifi
Mughal Bagh
Bagwan Pora, Lal Bazar
Srinagar (J & K)

41. Prof. A.N. Bose
 Joint Director
 National Council of Educational Research and Training
 New Delhi
42. Prof. B.S. Parakh
 Head of DESSH, NCERT
 New Delhi-16
43. Prof. R.C. Das
 Dean (A) and Head of the
 Department of Teacher
 Education
 NCERT
 New Delhi-16
44. Dr. K.P. Nayak
 Principal
 Regional College of Education
 Mysore (Karnataka)
45. Mrs. J. Anjeni Dayanand
 Joint Secretary
 Ministry of Education and
 Social Welfare
 Shastri Bhavan
 New Delhi-1
46. Shri J.A. Kalyanakrishnan
 Financial Adviser, NCERT and
 Ministry of Education and
 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 (nominated for two years with effect from October 1, 1978)
47. Shri Gopal Krishan Saini
 Headmaster
 Govt. Primary School
 Mukhliana
 District Hoshiarpur
 (Punjab)

48. Smt. Kamala Dubey
Headmistress
Girls Primary School
Mohan Nagar
Sagar (M.P.)
49. Shri Nanimadhab Barua
Principal
Govt. Boys Hr. Sec. School
Tezpur, Distt. Darrang
Assam
50. Sister Rachel
Headmistress
Mount Carmel High School
for Girls
Kanjikuzhy, Kottayam
Kerala
51. Chairman
Central Board of Secondary
Education
New Delhi
52. Commissioner
Kendriya Vidyalaya Sangathan
New Delhi
53. Director
Central Health Education
Bureau (D.G.H.S.)
New Delhi
54. Deputy Director General
Incharge of Agricultural
Education
I. C. A. R., Ministry of Agriculture
New Delhi
55. Director of Training
Directorate General of Employment and Training
Ministry of Labour
New Delhi

Special Invitee

56. Chief (Education)
Planning Commission
New Delhi
57. Shri T.K. Vaidyanathan
Principal
Technical Teachers' Training
Institute
Chandigarh
58. Dr. A.K De
Director
Indian Institute of Technology
Bombay
59. Secretary
Council of Indian
School Certificate
Examination
New Delhi
- 60 Shri V.K. Pandit
Secretary, NCERT
New Delhi *Secretary*

C-2 Executive Committee

- (i) President of the Council who shall be the ex-officio President of the Executive Committee
- 1 Dr. P. C. Chunder
Union Minister of Education and Social Welfare
Shastri Bhavan
New Delhi
- (ii) (a) The Minister of State in the Ministry of Education and Social Welfare who shall be the ex-officio Vice President of the Executive Committee.
- 2 Smt Renuka Devi Barakataki
Minister of State
Ministry of Education & Social Welfare, Shastri Bhavan
New Delhi
- (b) A Deputy Minister in the Ministry of Education and Social Welfare nominated by the President, NCERT
3. _____

- (c) Director of the Council
4. Prof. S`K. Mitra
Director
National Council of Educational Research and Training,
New Delhi
- (iii) Chairman of the University Grants Commission
Member (ex-Officio)
5. Prof. Satish Chandra
Chairman
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi
- (iv) Four educationists with known interest in school education (two of whom shall be school teachers) nominated by the President
6. Prof. M. V. Mathur
Director
National Staff College for Educational Planners and Administrators, New Delhi
7. Prof. C. N. R. Rao
Indian Institute of Science
Malleswaram
Bangalore-560012 (Karnataka)
8. Smt. Anutai Vagh
Sanchalika, Gram Bal
Shiksha Kendra
Vikaswadi-Kosbad Hill
Tal. Dahanu, Distt. Thana
(Via Dahanu Road Stn. W. Rly), Maharashtra
Pin Code-(401703)
9. Shri A. A. Kaifi
Mughal Bagh
Bagwan Pora, Lal Bazar
Srinagar (J & K)
Pin Code-190011
- (v) Joint Director of the Council
10. Dr. A N. Bose
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 of the level of Professors and Heads of Departments, nominated by the President of the Council
11. Prof. B. S. Parakh
Head of the DESSH
NCERT
New Delhi
12. Dr. R. C. Das
Dean (A) and Head of the Department of Teacher Education, NCERT, New Delhi
13. Dr. K. P. Nayak
Principal
Regional College of Education
Mysore
- (vii) One representative of the Ministry of Education and Social Welfare ; and
14. Mrs. J. Anjani Dayanand
Joint Secretary
Ministry of Education and Social Welfare, Shastri Bhavan, New Delhi
- (viii) One representative of the Ministry of Finance, who shall be the Financial Adviser of the Council
15. Shri J. A. Kalyanakrishnan
Financial Adviser, NCERT
Room No 109
Shastri Bhavan
New Delhi
16. Shri V. R. David
Secretary
From (April 1, 1978 to August 10, 1978)
Shri V. K. Pandit
Secretary
(From August 11, 1978 to date)
National Council of Educational Research and Training, New Delhi
Secretary

C-3 Establishment Committee

- (i) The Director, NCERT
1. Dr. S.K. Mitra —*Chairman*
Director, NCERT
- (ii) The Joint Director, NCERT
2. Dr. A.N. Bose
Joint Director, NCERT

- (iii) A nominee of the Ministry of Education to be nominated by the President
- (iv) Four educationists to be nominated by the President of whom at least one is a scientist
- (v) One representative from the Regional Colleges of Education to be nominated by the President
- (vi) One representative of the National Institute of Education, Delhi, to be nominated by the President
- (vii) Two representatives, one each from the regular academic and non-academic staff of the Council
3. Mrs. J. Anjani Dayanand
Joint Secretary
Ministry of Education and Social Welfare
Shastri Bhavan
New Delhi
4. Prof. M.S. Sodha
Department of Physics
Indian Institute of Technology
Hauz Khas
New Delhi-110029
5. Prof. (Miss) Malathi Bolar
Director
Institute of Applied Manpower Research
Indraprastha Estate
Ring Road
New Delhi-110 002
6. Dr. Amrik Singh
Vice-Chancellor
Panjabi University
Patiala (Punjab)
7. Prof. S. Manzoor Alam
Department of Geography
Osmania University
Hyderabad-500 007 (A.P.)
8. Shri S.N. Saha
Principal
Regional College of Education
Ajmer
9. Dr. R.C. Das
Dean (A) and Head of the Department of Teacher Education, NCERT
10. Prof. R.P. Singh
Journals Cell
NCERT

- | | |
|---------------------------------|--|
| (viii) Financial Adviser, NCERT | 11. Shri K.M. Georgē
Supdt.
Recruitment Section, NCERT |
| (ix) Secretary, NCERT | 12. Shri J.A. Kalyanakrishnan
Financial Adviser
NCERT, Room No. 109 'C'
Shastri Bhavan, New Delhi |
| | 13. Shri V.R. Dravid
Secretary, NCERT
(from April 1, 1978 to
August 10, 1979)
Shri V.K. Pandit
Secretary
NCERT
(From August 11, 1978 to-date)
<i>Member Convenor</i> |

C-4 Finance Committee

1. Prof. S.K. Mitra *Chairman*
Director
National Council of Educational
Research and Training
New Delhi
2. Mrs. 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
Malleswaram
Bangalore-560 012 (Karnataka)

5. **Shri J.A. Kalyanakrishnan**
Financial Adviser
Ministry of Education and Social
Welfare and NCERT
Room No. 109 'C'
Shastri Bhavan
New Delhi
Shri V.R. Dravid (from April 1, 1978 to August 10, 1978)
Secretary, NCERT
Shri V.K. Pandit (from August 11, 1978 to date)
Secretary
NCERT *Convenor*

C-5 Building and Works Committee

- | | |
|---|---|
| 1. Director, NCERT
(ex-Officio) | 1. Dr. S.K. Mitra (<i>Chairman</i>)
Director, NCERT |
| 2. Joint Director
NCERT, (ex-Officio) | 2. Dr. A.N. Bose
Joint Director, NCERT |
| 3. Chief Engineer, CPWD
or his nominee | 3. Shri N. Lakshmiah
Superintending Surveyor of
Works (Food), C.P.W.D.
Indraprastha Bhavan
Indraprastha Estate
New Delhi |
| 4. A Representative of the
Ministry of Finance
(Works) | 4. Shri Mehr Singh, A.F.A.
Ministry of Finance (Works)
Nirman Bhavan, (Third Floor)
New Delhi |
| 5. The Consulting Architect
of the Council | 5. Shri K.M. Saxena, Senior
Architect (C) I, C.P.W.D.
Nirman Bhavan
New Delhi |
| 6. Financial Adviser of the
Council or his nominee | 6. Shri J.A. Kalyanakrishnan
Financial Adviser, NCERT
Room No. 109 'C'
Shastri Bhavan
New Delhi |

- | | |
|---|---|
| <p>7. A Nominee of the Ministry of Education and Social Welfare</p> | <p>7. Mrs. J. Anjani Dayanaid
Joint Secretary
Ministry of Education and Social Welfare
Shastri Bhavan
New Delhi</p> |
| <p>8. A Civil Engineer of Standing (nominated by the President)</p> | <p>8. Prof. H.U. Bijlani
Housing and Urban Development Corporation
Jamnagar House
New Delhi</p> |
| <p>9. An Electrical Engineer of Standing (nominated by the President)</p> | <p>9. Shri I.C. Sangar
Addl. Chief Engineer (D)
Delhi Electric Supply Undertaking
Link House
New Delhi</p> |
| <p>10. A Member of the Executive Committee nominated by the Committee</p> | <p>10. Prof. M V. Mathur
Director
National Staff College for Educational Planners and Administrators
New Delhi-16</p> |
| <p>11. Secretary, NCERT</p> | <p>11. Shri V.R. David
Secretary
NCERT (April 1, 1978 to August 10, 1978)
Shri V.K. Pandit
Secretary
NCERT (from August 11, 1978 to date)</p> |

C-6 Programme Advisory Committee

1. **Prof. Shib K. Mitra** *Chairman*
Director
2. **Prof. A.N. Bose** *Vice-Chairman*
Joint Director
3. **Dr. S.B. Adaval**
Professor and Head
Department of Education
University of Allahabad
Allahabad
4. **Prof. R.K. Yadav**
Old D-1, Banaras Hindu University
Varanasi-221005
5. **Dr. N. Vedamani Manuel**
Professor and Head
Department of Education
University of Kerala, Thycaud
Trivandrum-14
6. **Dr. A.W. Oak**
Department of Research
Premconverbai Vithaldas Damodar Thackersey
College of Education for Women
1, Nathibai Thackersey Road
Bombay-10
7. **Prof. (Miss) Philomena Andrew**
Women's Training College
Department of Education (Campus)
Patna University
Patna
8. **Director**
State Council of Educational
Research and Training
Alia School Compound
Hyderabad-500002
9. **Vice- Principal-In-Charge**
State Institute of Education
P.O. Banipur, Distt. 24-Parganas (W.B.)

10. **Principal**
State Institute of Education
Allahabad (U.P)
11. **Director**
State Institute of Education
Raikhad
Ahmedabad-380001
12. **Director**
State Institute of Education
Govt. College of Education
Srinagar (J & K)
13. **Head of the Department**
Department of School Education
NCERT, New Delhi
14. **Prof. Baquer Mehdi**
Department of School Education
NCERT, New Delhi
15. **Head of the Department**
Department of Education in
Science and Mathematics
NCERT, New Delhi
16. **Prof. B. Ganguli**
Department of Education in
Science and Mathematics
NCERT, New Delhi
17. **Head of the Department**
Department of Education in Social
Sciences and Humanities, NCERT
New Delhi
18. **Prof. Anil Vidyalkar**
Department of Education in Social
Sciences and Humanities
NCERT, New Delhi
19. **Head of the Department**
Department of Teacher Education
NCERT, New Delhi
20. **Prof. P N Dave**
Department of Teacher Education
NCERT, New Delhi

21. **Head of the Department**
Department of Educational
Psychology and Foundations of Education
NCERT, New Delhi
22. **Prof. Perin H. Mehta (Mrs)**
Department of Educational Psychology and
Foundations of Education
NCERT, New Delhi
23. **Head of the Department**
Department of Textbooks
NCERT, New Delhi
24. **Prof. K.G. Rastogi**
Non-Formal Education
Department of Textbooks
NCERT, New Delhi
25. **Head of the Department**
Department of Teaching Aids
NCERT, New Delhi
26. **Dr. Nalini Nandchahal**
Reader
Department of Teaching Aids
NCERT, New Delhi
27. **Head of the Department**
Publication Department
NCERT, New Delhi
28. **Miss K. Wadia**
Editor
Publication Department
NCERT, New Delhi
29. **Head of the Department**
Workshop Department
NCERT, New Delhi
30. **Shri R K. Gupta**
Reader
Workshop Department
NCERT, New Delhi
31. **Principal**
Regional College of Education
Ajmer

32. Prof. N. Vaidyā
Regional College of Education
Ajmer
33. Principal
Regional College of Education
Bhopal
34. Prof. S.N. Tripathi
Regional College of Education
Bhopal
35. Principal
Regional College of Education
Bhubaneswar
36. Prof. (Mrs.) G.R. Ghosh
Regional College of Education
Bhubaneswar
37. Principal
Regional College of Education
Mysore
38. Prof. A.K. Sharma
Regional College of Education
Mysore
39. Principal
Centre for Educational Technology
NCERT, New Delhi
40. Prof. (Mrs.) S. Shukla
Centre for Educational Technology
NCERT, New Delhi

APPENDIX D

Major Decisions taken by the Committees during 1978-79

D-1 The Executive Committee

- 1.1 The Report of the Ishwarbhai Patel Committee was considered and accepted with the following minor modifications;
- (a) Socially useful productive work may be evaluated by continuous internal assessment and not by external evaluation, as external evaluation is considered neither feasible nor desirable.
 - (b) The reduction in instructional time may be tried out at the first stage for classes I, II and III. The Committee further desired that a package of inexpensive teaching materials should be developed by the NCERT which could of use to the teachers in their work particularly in Single Teacher Schools.
- 1.2 Report of the Review Committee on Higher Secondary Education with special reference to vocationalisation was considered and accepted with the following modifications :
- (a) The time distribution between the theory and practice in the vocational courses may 20% and 50% of total weekly hours of instruction, respectively.
 - (b) The duration of a vocational course need not always be two years but may vary depending on the nature of the course.
 - (c) The Adiseshiah Committee recommended three models of schools :
 - (i) those which offer only general education spectrum ;
 - (ii) those which offer only vocationalised education spectrum ;
 - (iii) those which offer both.

For the Sixth Plan, the Adiseshiah Committee recommended that the generality should be the third model. The Executive Committee, however, recommended that this may be left to State governments.

- 1.3 The permission to start M.Sc. Ed. (Life Sciences) course at the Regional College of Education, Bhubaneswar, was given.
- 1.4 While considering the report of the Administrative Staff College of India, Hyderabad, on "Strategic Objectives and Organisation Design for NCERT" the President, NCERT, constituted a small committee to consider in detail the ASCI Report and submit the recommendations for a full discussion. Subsequently, two of the major aspects contained in the report were considered and following decisions were taken :

(a) The Role of the Regional Colleges of Education

The Regional Colleges of Education should develop into Centres of Teacher Education, and resources of the Colleges be utilised in the implementation of the important task before country in the field of universalisation of elementary education, which requires monitoring feed-back. This requires upgrading of elementary teacher training institutions. Regional Colleges should play a major role in developing these institutions. In order to maintain the nation perspective preparation of curriculum and textbooks and work of coordination in this behalf should be done at the Regional level and need not be entrusted to the Regional Colleges of Education as recommended by the Committee ?

(b) Textbook policy

The proposal for setting up a separate body for production and distribution of school textbooks by a new agency was considered. It was, however, decided that no separated society for this is necessary. This function should be separated from the Council by establishing a functionally autonomous Unit within the NCERT.

- 1.5. While approving the deterrent of examination at B.Sc. level, the Committee expressed concern about the large proportion of drops-outs in the National Talent Search Scheme. The Committee was, however, informed that for monitoring the progress of each individual student, a professor had been posted for the job.

D-2 Finance Committee

- 2.1** The rationalisation of the posts of Assistant Secretary, Superintendents, Special Assistants/Confidential Assistants was considered and it was decided that the system design proposed on the basis of the Administrative Staff College report be followed; i. e. all Sections in the Secretariat be headed by a Section Officer and the Academic Department by Superintendent. However, in the case of those Departments where drawing and disbursing powers have been given to the Section Officers or will be given in future, such Departments may also be headed by Section Officers. Accordingly, eight posts of Section Officers were approved by abolishing an equivalent number of posts in the immediate lower cadre. The Committee also approved six posts of Special Assistants Grade-1 to be designated as Asstt. Programme Coordinators.
- 2.2** In accordance with the earlier decision of the Finance Committee the Deputy Financial Adviser visited one of the Regional Colleges of Education to assess the work-load of the Administrative Officer in the R. C. E. for the rationalisation of pay scale of this category of officers. The Committee accordingly approved that since the duties and responsibilities of the Administrative Officer are of much more importance in nature than what are attached to his counterpart in other autonomous organisations in the Ministry of Education, the Administrative Officer should be of the rank of Under-Secretary in the scale of Rs. 1200-1600 and this post should be made inter-changeable with the post of Under-Secretary in the NCERT. In view of the peculiar nature of duties, the Committee also agreed for giving rent-free accommodation to Administrative Officers.
- 2.3** The Committee approved the introduction of the revised tariff rates with effect from February, 1979 for the NIE Guest House.
- 2.4** The Committee approved the creation of one post of Accounts Officer in the scale of Rs. 840-1300 in each of the four Regional Colleges of Education.
- 2.5** The Committee approved the creation of one post of Security Officer in the scale of Rs. 425-800 in each of the four Regional Colleges of Education.

- 2.6 The Committee approved the creation of the following posts :**
- (i) One post of Librarian (Documentation) in the NIE Library on regular basis.
 - (ii) Conversion of two posts of Accountant into Superintendent till February 28, 1978.
 - (iii) One post of Asstt. Editor (English) for the Journals Cell.
 - (iv) Chowkidars for the RCEs, Mysore, Bhopal and Bhubaneswar.
 - (v) Attendant for the Regional College of Education, Mysore.
 - (vi) Safaiwala for the Regional Colleges of Education, Ajmer, Bhopal and Bhubaneswar.
 - (vii) Cleaners for Regional College of Education, Mysore
 - (viii) Malis for the RCEs, Ajmer, Bhubaneswar and Mysore.
 - (ix) One post of Driver for F. A., Jaipur.
 - (x) Twenty-three posts of Watch and Ward staff/Chowkidars
 - (xi) Four posts of Farash and ten posts of Safaiwala for the new Library Building in NIE Campus.
 - (xiii) One post of UDC, One post of Library Attendant and one post of Safaiwala for CET.
 - (xiii) One post of Asstt. Business Manager for the Journals Cell.
 - (xiv) Four posts of Chowkidar in the Regional College of Education, Ajmer.

D-3 Establishment Committee

- 3.1 The recruitment rules for technical posts in the Department of Teaching Aids/Centre for Educational Technology were approved with some remarks. The Committee felt that the desirable qualifications for Laboratory Technicians should separately be done for science and psychology.
- 3.2 The recommendations regarding the anomaly in respect of various technical posts were accepted. The Committee further recommended that wherever selection grades were available in accordance with the Government orders, the procedure for selection grade may be followed in the alternative.

APPENDIX E

External Research Projects supported by the Council during 1978-79

<i>Sl. No.</i>	<i>Name of Institution</i>	<i>Title of Research Project</i>	<i>Amount of Grant Released</i>	<i>Remarks</i>
1	2	3	4	5
1.	M.S. University of Baroda Baroda (Gujarat)	Problems of Education of the Weaker Section of the Society	Rs. 15,000.00	
2.	Registrar University of Indore Indore (M.P.)	A Study of Teaching Competency of Secondary School Teachers	Rs. 8,000.00	
3.	S.V. University Tirupati (A.P.)	A Psychological Study of Work Adjustment and Teaching Success	Rs. 6,000.00	
4.	S.G. University Surat (Gujarat)	Developing an Effective Model of Non-formal Education for Rural Development	Rs. 10,000.00	
5.	Jawaharlal Nehru University New Delhi	Psychological Development and Learning in Young Children in Poverty and Effects of Interventions	Rs. 15,000.00	
6.	University of Poona Poona	Innovation in Learning Methodology to Supplement Lecturing		

1	2	3	4	5
		in the First and Second Year of B.Sc. in Physics		Rs. 3,000.00
7.	C.C. College of Education, Bombay	To Study the Effects of Noise on the Teaching, Learning Process, etc.		Rs. 1,500.00
8.	Calcutta University Calcutta	Survey of Area Skills in Some Selected District of West Bengal		Rs. 5,000.00
9.	Registrar, Jamia Millia Islamia	Developing Instruc- tional Strategies for Teaching Hindi as a Second Language to the Urdu Medium Students of Delhi		Rs. 1,800.00
10.	State Institute of Education, Udaipur	A Study of the Effec- tiveness of Pre- service Teaching Training Programme at Elementry Level in Rajasthan		Rs. 2,350.00
11.	State Institute of Education, Udaipur	A Study of the Effec- tiveness of Some Measures Adopted for Increasing Enrol- ment and Attendance in Primary Schools in Rajasthan		Rs. 2,565.00
12.	Research Centre in Rural Education Gokran (Karnataka) State)	Elementary Non-for- mal Education for Non-enrolled and Drop-out Children Below the Age of 14		Rs. 4,500.00

1	2	3	4	5
13.	Institute of Historical Studies and Research Jaipur	Diagnosis of Language Error and a Programme of Remedial Teaching in Sanskrit	Rs. 6,000.00	
14.	Karnataka University Dharwar	Educational Problems of Scheduled Castes	Rs. 379.00	
15.	Banaras Hindu University, Varanasi	Pattern of Students' Participation in the University Administration	Rs. 9,000.00	
16.	A.N.S. Institute of Social Studies, Patna	The School Complex	Rs. 6,000.00	
17.	Northern-Eastern Hill University Shillong	A Study of the Effect of Micro-teaching Upon General Teaching Competence and Teacher Attitude of B.Ed. Trainees in Shillong	Rs. 2,000.00	
18.	Xavier Institute of Social Service Ranchi	Education for Integral Rural Development in Ranchi District.	Rs. 9,000.00	
19.	University of Delhi Delhi	Study of the Problems of Book Trade in India	Rs. 4,473.17	
20.	Punjabi University Chandigarh	Identification Selection Criteria for National Talent—An Exploratory Study	Rs. 6,000.00	
21.	Patna University Patna	A Study of Educational Backwardness of the Scheduled Caste Students and a Need-oriented Plan for Their Development	Rs. 10,000.00	

1	2	3	4	5
22.	Calcutta Girls' B.T. College, Calcutta	Role of Lady Teachers in the Universalisation of Primary Education	Rs. 6,200.00	
23.	Ramanathan Sasthanagar Karmana Trivandrum	An Investigative Study of Training Colleges of the Country and Suggestion for Reforms	Rs. 284.00	
24.	Vidya Bhawan Udaipur (Rajasthan)	An Experiment in Open Classroom Free Learning Environment	Rs. 10,000.00	
25.	D.S.N. College Unnao (U.P.)	Programmed Learning as Function of Anxiety Under Different Motivational Conditions	Rs. 5,000.00	
26.	Bal Kunj, Delhi	Orientation Programmes, Working Holidays Projects and Evaluation Meets for Promoting Education Among the Underprivileged Classes	Rs. 3,158.91 + 670.00 = 3,828.91	
27.	Indian Institute of Technology, Kanpur	Children Judgement of Personal Happiness	Rs. 9,000.00	
28.	Indian Association for Extra-curricular Scientific Activities Calcutta-9	Investigation on Non-formal Science Education and Development of Inexpensive Resource Material	Rs. 10,000.00	

1	2	3	4	5
29.	Sri Aurobindo Centre New Delhi	To Organise Workshop Introducing Social, Moral and Spiritual Values in School Curri- culum		Rs. 27,700.00
30.	Eastern India Centre for Mass Communica- tion Studies, Nicco House, Calcutta	Mass-copying in Secondary Schools Final Examination		Rs. 500.00
31.	Gandhi Peace Founda- tions, 221/3, Deen Dayal Upadhyaya Marg, New Delhi	Orientation Camp for Teachers under Teach- ing Gandhi to Schools		Rs. 14,610.00
32.	Administrative Staff College of India Hyderabad	Policy of Non-deten- tion in Andhra Pra- desh—An Education Research		Rs. 8,000.00
33.	Madurai University Madurai-21	Vocationalisation of the Higher Secondary Stage of the 10+2+3 Pattern of Educa- tion		Rs. 8,000.00
34.	Gandhi Peace Founda- tions, New Delhi	Documented Case History of the Seva- gram Experiments		Rs. 9,000.00
35.	D.A.V. (P.G.) College Dehradun	Experimentation in Methods for Improving Instructions in Train- ing Colleges		Rs. 5,000.00
36.	Calcutta University	Effects of Socio- economic Background on Academic Attain- ment		Rs. 3,500.00
37.	Shri L.P. Bhardwaj Retd. Principal Lucknow (U.P.)	The Survey of Kaval Town with regard to the Availability and		

1	2	3	4	5
		Use of Teaching Aids in Schools	Rs. 2,500.00	
38.	Jnana Probhinee Poona	Construction of Battery of Psychological Tests	Rs. 15,000.00	
39.	Banasthali Vidyapith College of Education Rajasthan	The Diagnosis of Language Errors and a Programme of Remedial Teaching Hindi	Rs. 10,000.00	
40.	Government Teachers' Training Institute Hassan	A Study of the Effectiveness of Using Educative Toys in Teaching Science to II Class over the Traditional Methods	Rs. 1,000.00	
41.	University of Delhi Delhi	Determination of Communicability in the New Hindi Poetry from the Point of View of Its Teaching in the Upper Secondary and Under-graduate Classes	Rs. 5,000.00	
42.	Rajasthan Academy of Education, Science and Culture, Udaipur	Development of Educational Programme in Science for Upper Primary Level based on Environmental Approach	Rs. 5,000.00	
43.	Sri Rama Krishna Mission Vidya Teachers' College, Coimbatore	Establishing Norms for Speed in Reading Tamil in Standards 6 to 8	Rs. 5,000.00	

1	2	3	4	5
44.	Visva Bharati, Santiniketan (West Bengal)	Case Study of Shiksha Ben-Niketan—A Work-Oriented Rural Institute in the District of Burdwan (West Bengal)	Rs. 5,000.00	
45.	Tata Institute of Social Sciences, Bombay-88	Identity Formation of Scheduled Caste Students	Rs. 6,000.00	
46.	University of Udaipur Udaipur	Research in Physics Education Using Non-formal Methods	Rs. 3,000.00	
Total			Rs. 3,05,690.08	

APPENDIX F

Participation in International/Exchange Programmes

(a) *Bilateral cultural exchange programmes*

1. Shri I.D. Gupta, Lecturer, Regional College of Education, Bhopal, visited Yugoslavia for a period of 10 days with effect from 17 April, in 1978 under Indo-Yugoslav Cultural Exchange Programme 1976-78 to study educational system of Yugoslavia, with special reference to diversification of secondary school curriculum.
2. Prof. C.V. Govinda Rao, Head, Vocationalisation of Education Unit visited USSR for a period of two weeks with effect from September 25, 1978 under Indo-USSR Cultural Exchange Programme 1976-78 for a study tour in the field of secondary education.
3. Prof. A.N. Bose, Joint Director, NCERT, visited Vietnam and Thailand for a period of 17 days with effect from December 11, 1978 as a member of delegation of the Government of India to work out details of the cultural exchange programme with Vietnam and Thailand.

(b) *Deputation of Council's officers abroad for advanced training*

1. Miss Indira Malani, Reader, DEPF, was deputed to UK for short-term training under the British Government Technical Cooperation Training Programme in the field of pre-school education for a period of three months with effect from April 12, 1978.
2. Shri Om Prakash Gupta, Lecturer, ERU, was deputed to UK for short-term training under the British Government Technical Cooperation Training Programme in the field of evaluation for a period of four months with effect from January 4, 1979.
3. Dr. Jagdish Singh, Reader, Centre for Educational Technology, was deputed to UK for short-term training under the British Government Technical Cooperation Programme in the field of educational technology for a period of three months with effect from January 3, 1979.

4. Dr. (Miss) I.G. Sumitra, Reader, C.E.T., was deputed to UK to develop training course in "Radio Production in Non-formal Education" from April 26, 1978 to July 28, 1978.
 5. Shri R.R. Sharma, Reader, C.E.T., was deputed to USA from December 6, 1978 to April 29, 1979 for an internship programme in the South Caroline, USA, under a UNESCO/UNDP fellowships programme.
- (c) *Deputation of Council's officers abroad for participation in international seminars/workshops/conferences*
1. Dr. B. Ganguly, Professor in Biology in the DESM, attended the International Conference on Integrated Science held at the University of Nijmegen, the Netherlands, from March 28 to April 7, 1978.
 2. Shri Jaipal Nangia, Head, Publication Department, attended the UNESCO Regional Workshop for Writers and Editors of Children's Books held at Seoul, Korea, from April 24 to 29, 1978.
 3. Shri R.K. Gupta, Reader, Department of Teacher Education, attended the World Conference of the International Council for Correspondence Education held in New Delhi from November 8 to 15, 1978.
 4. Dr. (Mrs.) R. Muralidharan and Shri Dilip Bakshi, Readers, CET, were deputed to attend the Sub-Regional Workshop in Educational Technology with special reference to development of low-cost educational materials organised by the UNESCO Regional Office for Education in Asia, Bangkok, in Nepal from November 7 to 21, 1976 in accordance with the work plan of the Asian Programme of Educational Innovation for Development in Bangkok, Thailand, from December 4 to 19, 1978.
 5. Prof. B. Ganguly, Professor in Biology in the DESM, Prof. A.K. Sharma, Professor in Science, Regional College of Education, Mysore, and Prof. J.S. Rajput, Principal, RCE, Bhopal, were deputed to participate in a Study Group on Development of Curriculum Materials, Teacher Education Materials and Science Instructional Materials organised by the ACEID in accordance with the work plan of the Asian Programme of Educational Innovation for Development in Bangkok, Thailand, from December 4 to 19, 1978.
 6. In accordance with the work plan of the Asian Programme of Educational Innovation for Development (APEID), the UNESCO granted

Study Groups for training of the key personnel in the open learning systems. Under this activity, Shri R.K. Gupta, Reader, DTE, was deputed to Korea and Mr. Im In Jea, a Korean Expert, was given training in the NCERT from September 18 to 25, 1978. These two officers then met at UNESCO office Bangkok on September 28 and 29, 1978, for synthesis of their experiences.

7. Shri G.D. Dhall, Lecturer, Department of Education in Science and Mathematics, was deputed for attachment/programme in the field of Science (including mathematics) and Technology Education—Curriculum Development in Science and Mathematics at elementary school level at the Science Education Centre, University of Philippines, Quzeon City, from October 1 to 30, 1978 under the UNESCO's Special Technical Cooperation Programme. The attachment was offered in accordance with the work plan of APEID.
8. Dr. (Mrs.) Kamla Arora, Reader, Department of Teacher Education, was deputed to participate in the APEID Regional Workshop and Seminar on Correspondance Education convened at Australia, jointly by the Asian Centre of Educational Innovation for Development (ACEID) and the Australian National Commission for UNESCO from September 17 to 30, 1978.
9. Prof. C.K. Basu, Head, Department of Educational Psychology and Foundations of Education, and Prof. K.C. Panda, Professor in Education, Regional College of Education, Bhubaneswar, were deputed to attend the UNESCO Regional Workshop on Systems Approach for Education—Teacher In-service Programme of the UNESCO Regional Office, Bangkok, from November 20 to December 2, 1978.
10. Dr. B.R. Goyal, Lecturer, Department of School Education, was deputed to attend the Second Regional Workshop on Pupil Evaluation with particular reference to Moral Education in Asia organised by National Institute for Educational Research, Japan, (NIER) from September 12 to October 10, 1978.
11. Shri Arjun Dev, Reader, Department of Education in Social Sciences and Humanities, participated in the Workshop on Teaching about the Commonwealth organised by the Commonwealth Secretariat in association with the African Social Studies Programme at the University of Nairobi from August 20 to September 1, 1978.

12. Prof. B.S. Parakh, Head, Department of Education in Social Sciences and Humanities, and Shri S.P. Chawla, Senior Project Associate, DESSH, were deputed to participate in the UNESCO Inter-Country Mobile Training Programme in Population Education from September 11 to 28, 1978. During the programme the two officers forming the 'out of school group' first visited Indonesia and Philippines for studying ongoing programmes in population Education. They then visited Bangkok from September 24 to 28, 1978 to attend synthesis meeting with 'in school group'.
13. Shri A.K. Mukerjee, Librarian (Documentation), Library and Documentation Unit, was deputed to participate in the Internship Programme in Documentation and Information Services for Population Education organised by the UNESCO Regional Office for Education in Asia, Bangkok, through its Population Education Programme Service from November 13 to December 8, 1978 at the UNESCO Regional Office, Bangkok. He also attended another Seminar on Information and Documentation in the field of planning organised by ESCAP at the Regional UNESCO Office, Bangkok, as an observer on November 20-21, 1978. This was part of the UNESCO internship programme.
14. Shri K.C. Das, Headmaster, Demonstration Multipurpose School, Regional College of Education, Bhubaneswar, was deputed to the Commonwealth Regional In-service Teacher Education Workshop for Asia held in Colombo (Sri Lanka) from October 23 to November 3, 1978.
15. Prof. A.N. Bose, Joint Director, NCERT, participated in the UNESCO's meeting of the Regional Experts for Research and Training in Literacy held in Delhi from September 19 to 25, 1978. Participants from Afghanistan, Bangladesh, Burma, Indonesia, India, Iran, Laos, Nepal, Pakistan, Philippines, Thailand, Vietnam and Papua New Guinea, took part in the meeting.
16. Prof. D.S. Rawat, Head, Department of School Education, was deputed to the International Congress on the Teaching of Human Rights held in Vienna, Austria, from September 12 to 16, 1978.
17. Mrs. Adarsh Khanna, Head, Department of Textbooks, was deputed to attend the Technical Working Group Meeting on Alternative Structures Linking Formal and Non-formal Education

with Special Emphasis on Universalisation of Education organised by the Asian Centre of Educational Innovation for Development (ACEID) in Bangkok from October 2 to 14, 1978.

18. Shri S.B. Singh, Reader in Physics, Regional College of Education, Ajmer, and Shri A.P. Verma, Store Officer, Workshop Department, were deputed to participate in the Technical Working Group Meeting on Selection, Maintenance and Repair of Science Equipment organised by the Asian Centre of Educational Innovation for Development (ACEID), Bangkok, in accordance with the work plan of the APEID at the Regional Centre of Education in Science and Mathematics (RECSAM), Penang, Malaysia, from November 2 to 11, 1978.
19. Shri N.K. Sanyal, Reader, attended the meeting on Policy Studies in Training of Educational Personnel held in Bangkok from January 3 to 6, 1979, sponsored by UNESCO Regional Office for Education in Asia and Oceania, Bangkok. Mr. Sanyal presented a paper on policy studies in the training of educational personnel entitled "Preparation of Educational Personnel with Special Reference to Universalisation of Education both at the Early School Levels and in Functional Education for Out-of-school Youths and Adults".
20. Shri P.K. Bhattacharya, Incharge Head, Workshop Department, was deputed to attend the Regional Workshop on the Development of Low-cost Aids for Science Teaching at the first level at Education organised by the National Institute for Educational Research, Tokyo, Japan, in collaboration with the ACEID at NIER Tokyo from January 18 to February 17, 1979. Mr. Bhattacharya, also assisted in the completion of the work for the Workshop by the end of February, 1979.
21. Shri H.S. Sharma, Asstt. Librarian, was deputed to attend the APEID Participatory Internship Training Programme on Documentation and Information Support for Educational Innovation at the UNESCO Regional Office for Education in Asia and Oceania, Bangkok, from December 4 to 29, 1978.
22. Prof. Anil Vidyalankar, DESSH, and Shri C. Seshadri, Reader in Education, Regional College of Education, Mysore, were deputed to the Regional Workshop for a Joint Study on Moral Education

in Asia organised by the National Institute of Educational Research from March 2 to 31, 1979.

23. Prof. M.M Chaudhri, Head, Department of Teaching Aids, was deputed to attend the Second Meeting of the Indo-American Joint Media Working Group on Films and Broadcasting held at Charleston from February 22 to 24, 1979
- 24 Prof. (Mrs.) Vijaya Mulay, Principal, Centre for Educational Technology, attended the First Asian Seminar on Educational Technology held in Tokyo, Japan, from March 21 to 30, 1979.
25. Dr. Shib K. Mitra, Director, NCERT, participated in the meeting of Special Task Force in connection with Sixth Regional Consultation Meeting of the Asian Programme on Educational Innovation for Development (APEID) held in Bangkok from March 26 to 31, 1979.
26. Prof. A.N. Bose, Joint Director, NCERT, and Smt. Adarsh Khanna, Head, Department of Textbooks, proceeded on deputation from May 21, 1978 to June 11, 1978 as members of the delegation to study Decentralised Area Planning and Educational Resource Development in Philippines, Thailand and Malaysia in regard to UNICEF-assisted Project—'Universalisation of Elementary Education'.
27. Miss Indira Malani, Reader, DEPF, attended an International Conference on Pre-school Education held at Tokyo and Kyoto from July 22 to 30, 1978.
28. Dr. (Mrs.) U. Bevi, Reader, DEPF, represented India at a Regional Meeting of Experts on New Approaches to Education of Children of Pre-school Age convened by UNESCO at UNESCO Regional Office for Education in Asia and Oceania, Bangkok, Thailand from September 4 to 12, 1978.
29. Prof. M.M.S. Arora, Professor of Mathematics, in the Department of Education in Science and Mathematics, participated in the Conference on "Cooperation between Science Teachers and Mathematics Teachers" Bielefeld, West Germany, sponsored by CTS/ICMI, UNESCO from September 17—23, 1978.

(d) Council's officers who went abroad on special assignment

1. Dr. Shib K. Mitra, Director, NCERT, went to Bangkok from August 29, 1978 to October 13, 1978 to teach in the Asian Regional

Training Course on Educational Evaluation conducted jointly by the International Institute of Educational Planning in Paris and UNESCO Regional Office, Bangkok.

- 2. Dr (Mrs.) R. Muralidharan, Reader, Department of Educational Psychology and Foundations of Education, was deputed to Malta as a UNESCO Consultant in Pre-school Education for a period of one month in August, 1978. Seventy-one participants were trained as Kindergarten Assistants.**
- 3. Prof. M.M S. Arora, Professor in Mathematics, Department of Education in Science and Mathematics, has gone to Manama, Bahrain, as an expert in Mathematics under a UNESCO assignment for a period of one year with effect from January 1, 1979.**

APPENDIX G

Publications brought out by the Council during 1978-79

(S. S. indicates Special Series)

(R. P. indicates Reprint)

(a) TEXTBOOKS

(i) English Textbooks

1. Let's Learn English Book-I(S.S.) Class I (R.P.)
2. Let's Learn English Book-II (S.S.) Class II (R.P.)
3. Let's Learn English Book-III (S.S.) Class III (R.P.)
4. English Reader-I (S.S.) Class IV (R.P.)
5. English Reader-II Class V (R.P.)
6. English Reader-III (S.S) Class VI (R.P.)
7. English Reader IV Class VII (R.P.)
8. English Reader V (S.S.) Class VIII (R.P.)
9. A Course in Written English Class XII
10. Six One Act Plays Class XI (R.P.)
11. English Supplementary Reader-II Class XI
12. On Top of the World Class XII
13. Dear to All the Muses Class XII
14. English Reader Part-II (R.P.) (Core) Class XI

(ii) English Workbooks

1. Workbook to Let's Learn English Book-I Class I (R.P.)
2. Workbook to Let's Learn English Book-II Class II (R.P.)
3. Workbook to Let's Learn English Book-III Class III (R.P.)
4. Workbook to English Reader-I Class IV (R.P.)
5. Workbook to English Reader Book-II Class V (R.P.)
6. Workbook to English Reader-III Class VI (R.P.)

(iii) Hindi Textbooks

1. Bal Bharati Bhag-I (Revised Edition) Class I
2. Arun Bharati Praveshika Class-I (For Arunachal Pradesh)

3. Bal Bharati Bhag-I Class I (R.P.)
4. Bal Bharati Book-II Class II
5. Aao Padhen Aur Samjhen—Meri Teesari Pustak Class III (R.P.)
6. Aao Padhen Aur Khojen—Meri Panchveen Pustak Class V (R.P.)
7. Rashtra Bharati Class VIII (R.P.)
8. Kavya Bharati Class XI (R.P.)
9. Gadya Bharati Class XI (R.P.)
10. Nibandh Bharati Class XI (R.P.)
11. Sahitya Shastra Parichaya Class XI-XII
12. Rangini Class XI-XII (R.P.)
13. Akhyanika (Sanskrit) Class XII
14. Akhyanika (Sanskrit) Class XII (R.P.)
15. Hindi Sahitya Ka Parichayatmak Itihas Class XII
16. Katha Bharati Class XII (R.P.)
17. History of Sanskrit Language and Literature for Class XII
18. Vividha for Class XII (R.P.)

(iv) Hindi Workbooks

1. Abhyas Pustika Bal Bharati Class II
2. Abhyas Pustika Bal Bharati Class II (R.P.)
3. Meri Abhyas Pustika—Meri Teesari Pustak Class III (R.P.)
4. Meri Abhyas Pustika—Aao Padhen Aur Seekhen—Meri Chauthi Pustak Class IV (R.P.)
5. Meri Abhyas Pustika—Aao Padhen Aur Khojen—Meri Panchveen Pustak Class V (R.P.)

(v) Mathematics Textbooks

1. Mathematics for Primary School Book-I Class I
2. Insight into Mathematics-II Class II (R.P.)
3. Insight into Mathematics Book III Class III (R.P.)
4. Insight into Mathematics Book-IV Class IV (R.P.)
5. Insight into Mathematics Class V (R.P.)
6. Mathematics Book-II Part-I Class VII
7. Ganit Book-II Part-I Class VII
8. Mathematics Book-II Part-II Class VII
9. Mathematics-II Part-I Class VII (R.P.)
10. Geometry Part-III Class VIII (R.P.)

11. Arithmetic Algebra-III Class VIII (R.P.)
12. Mathematics Part-II Class X (R.P.)
13. Ganit Part-II Class X (R.P.)
14. Mathematics Book-I Class XI
15. Ganit Pustak-I Class XI
16. Ganit Bhag-II Class XI (R.P.)
17. Mathematics Book-III Class XII
18. Ganit Pustak-III Class XII
19. Mathematics Book-IV Class XII
20. Ganit Pustak-IV Class XII
21. Mathematics Part-II Class XI (R.P.)

(vi) Science Textbooks

1. Learning Science Through Environment Class IV
2. Paryavaran Se Vigyan Seekhna Class-IV
3. Science is Doing Class V (R.P.)
4. Learning Science Part-I Class VI (R.P.)
5. Learning Science Part-II Class VII
6. Aao Vigyan Seekhen Bhag-II Class VII
7. Learning Science Part-II Class VII (R.P.)
8. Physics Part-III Class VIII (R.P.)
9. Biology Part-III Class VIII (R.P.)
10. Chemistry Part-III Class VIII (R.P.)
11. Rasayan Vigyan Class IX-X (R.P.)
12. Chemistry Class IX-X (R.P.)
13. Bhautiki Class IX-X (R.P.)
14. Physics Class IX-X (R.P.)
15. Biology Part-I Vol. II Class XI-XII
16. Rasayan Vigyan Part-II Vol. I Class XI-XII
17. Biology Part-II Vol. II Class XI-XII
18. Physics Part-II Vol. I Class XII
19. Biology Part-II Vol. I Class XII
20. Biology Part-II Vol. I Class XII (Hindi)
21. Chemistry Part-II Vol. I Class XII
22. Physics Part-II Vol. II Class XII
23. Chemistry Part-II Vol. II Class XII
24. Rasayan Vigyan Part-II Vol. II Anubhag-I Class XII
25. Jeev Vigyan Part-II Vol. II Anubhag-I Class XII

26. Jeev Vigyan Part-II Vol. II Anubhag-II Class XII
27. Rasayan Vigyan Part-II Vol. II Anubhag-II Class XII
28. Physics Part-II Vol. II Class XII
29. Bhautiki Part-II Vol. II Class XII
30. Physics Part-II (Vol. I) Class XII (Hindi)

(vii) Social Studies Textbooks

1. Our Country India Book-II Class IV (R.P.)
2. Hamara Desh Bharat Part-II Class IV (R.P.)
3. Shashan Aur Sanvidhan Class VII (R.P.)
4. Australia and America for Middle Schools Class VII (R.P.)
5. Medieval India Class VII (R.P.)
6. Modern India for Middle Schools Class VIII (R.P.)
7. Adhunik Bharat for Middle Schools Class VIII (R.P.)
8. Europe and India Class VIII (R.P.)
9. Story of Civilization (History) Class IX
10. Sabhyata Ki Kahani Bhag-I (History) Class IX
11. General Geography of the World Part-II Class X
12. Vishwa Ka Samanya Bhugol Bhag-II Class X
13. The Story of Civilization Part-II Class X
14. Sabhyata Ki Kahani Bhag-II Khand-I Class X
15. Sabhyata Ki Kahani Bhag-II Khand-II Class X
16. Vishwa Ka Samanya Bhugol Part-II Class X (R.P.)
17. Human and Economic Geography Class XII
18. Manav Evam Aarthik Bhugol Class XII
19. Bhartiya Arthvyavastha Ka Vikas Class XI (R.P.)
20. Political System Class XI (R.P.)
21. Rajnitik Vyavastha Class XI (R.P.)
22. Bharat Ka Bhugol Part-I Class XI (R.P.)
23. Geography of India Part-I Class XI (R.P.)
24. Evolution of Indian Economy Class XI (R.P.)
25. Medieval India Part-I Class XI (R.P.)
26. Madhyakalin Bharat Part-I Class XI (R.P.)
27. Indian Constitution and the Government Class XII
28. Medieval India Book-II Class XII
29. Madhyakalin Bharat Book-II Class XII
30. National Accounting System Class XII
31. Rashtriya Lekha Padhati (Arthashastra) Class XII
32. Indian Constitution and the Government Class XII (R.P.)

33. Indian Democracy At Work Class XII
34. Bharat Me Loktantra Class XII
35. National Accounting System Class XII (R.P.)
36. Introduction to Economic Theory Class XII
37. Arthik Sidhant Ka Parichay Class XII
38. Geography of India Part-II Class XII
39. Bharat Ka Samanya Bhugol Part-II Class XII
40. Bhartiya Sanvidhan Aur Shashan Class XII (R.P.)
41. Madhyakalin Bharat Part-II Class XII (R.P.)
42. Modern India Class XII
43. Adhunik Bharat Class XII
44. National Accounting System Class XII (R.P.)

(viii) **URDU TEXTBOOKS**

1. We and Our Country Class III
2. Learning Science Through Environment Class III
3. Mathematics Class VI
4. Learning Science Part-I Class VI
5. Mathematics Class VII
6. Mathematics Class IX
7. Chemistry Class IX
8. Life Sciences Class IX
9. General Geography of the World Class IX
10. History of Mankind Class IX
11. We and Our Government Class IX
12. Chemistry Class XI
13. Physics Class XI
14. Physical Basis of Geography Class XI
15. Geography Workbook Class XI
16. Elementary Statistics Class XI
17. Medieval India Part-I Class XI
18. Human and Economic Geography Class XI
19. Understanding Society Class XI
20. Field Work Laboratory Techniques in Geography Class XI
21. Evolution of Indian Economy Class XI
22. Political System Class XI
23. Biology Classes XI-XII (Part-I) (Vol.I)
24. Medieval India Part-II Classes XI-XII
25. Biology Part-I; Vol. II Class XII

26. Physics Part-II Vol. I Class XII

(b) SUPPLEMENTARY READERS

1. Bird Migration
2. The Fight Against Diseases
3. Iqbal (Urdu)

(c) RESEARCH MONOGRAPHS AND OTHER PUBLICATIONS

1. Guidance Services in Schools
2. Play-way Activities
3. Identification of Gifted Children
4. Guidance in Schools
5. New Education Pattern
6. *Methods of Teaching Home Science*
7. Effective Use of School Curriculum
8. Teacher Education Curriculum
9. Annual Report-1977-78 (English)
10. Varshik Report 1977-78
11. Reforming Examination
12. Mobile Team Workshop in Curriculum Development
13. ERIC—Second Report
14. Curriculum in Transaction
15. Occupational Literature—An Annotated Bibliography-1978
16. Is Intelligence Inherited ?
17. Documents on Social, Moral and Spiritual Values in Education

(d) JOURNALS

1. NCERT Newsletter April 1978, May 1978, June 1978, July 1978, August 1978, Sept. 1978, November 1978, December 1978, January 1979, March 1979.
2. Indian Educational Review January 1978, April 1978, July 1978, October, 1978, January, 1979.
3. School Science March 1978, June 1978, Sept. 1978, December 1978 (in Press), March 1979 (in Press).
4. The Primary Teacher January 1978, April 1978, July 1978, October 1978, January 1979, April 1979 (in Press).

5. **Primary Shikshak** **January 1978, April 1978, July 1978, October 1978, January 1979, April 1979 (in Press).**
6. **Journal of Indian Education** **January 1978, March 1978, May 1978, July 1978, September 1978, November 1978, January 1979 (in Press).**

**Class-wise Statement of Textbooks published by
Private Publishers during 1978-79**

<i>Sl. No.</i>	<i>Class</i>	<i>Name of the Title</i>	<i>Name of the Publisher</i>
1.	III	We and Our Country Part—I (English)	M/s Frank Brothers & Co Delhi-110006
2.	III	We and Our Country Part—I (Hindi)	-do-
3.	III	Learning Science through Environment (English)	M/s Macmillan Co. of India Limited New Delhi
4.	III	Learning Science through Environment (Hindi)	-do-
5.	VI	Mathematics (English)	-do-
6.	VI	Mathematics (Hindi)	-do-
7.	VI	Bharati Bhag—I	M/s Jnananda Prakashan New Delhi
8.	VI	Lands and Peoples (English)	M/s Oxford University Press New Delhi
9.	VI	Lands and Peoples (Hindi)	-do-
10.	VI	History and Civics (English)	M/s Oxford & IBH Publishing Co. New Delhi
11.	VI	History and Civics (Hindi)	-do-
12.	VI	Sankshipt Ramayan	M/s Rajpal and Sons Delhi
13.	VII	Our Constitution and the Government (English)	M/s Frank Brothers & Co. Delhi-110006
14.	IX	We and Our Government (English)	M/s Oxford & IBH Publishing Co. New Delhi

<i>Sl. No.</i>	<i>Class</i>	<i>Name of the Title</i>	<i>Name of the Publisher</i>
15.	IX	We and Our Government (Hindi)	M/s S. Chand & Co. New Delhi
16.	IX	Mathematics (English)	M/s S. Chand & Co. New Delhi
17.	IX	Mathematics (Hindi)	-do-
18.	IX	General Geography of the World Volume-I and Volume-II (English)	M/s Allied Publishers Pvt. Ltd. New Delhi
19.	IX	General Geography of the World Volume-I and Volume-II (Hindi)	-do-
20.	IX	Life Sciences (English)	M/s Gowarsons New Delhi
21.	IX	Life Sciences (Hindi)	-do-
22.	XI	English Textbook (Core)	M/s Frank Brothers Delhi-6
23.	XI	English Supplementary Reader (Core)	-do-
24.	XI	Physics (English)	M/s Arnold Heinemann Publishers (India) Pvt. Ltd., New Delhi
25.	XI	Physics (Hindi)	M/s Gurdas Kapur & Sons (P) Ltd., Delhi-6
26.	XI	Chemistry (English)	M/s Arnold Heinemann Publishers (India) Pvt. Ltd., New Delhi
27.	XI	Chemistry (Hindi) Volumes-I & II	M/s Gurdas Kapur & Sons (P) Ltd., Delhi-6
28.	XI	Understanding Society (English)	M/s Mahavir Book Depot Delhi
29.	XI	Understanding Society (Hindi)	M/s Jnananda Prakashan New Delhi
30.	XI	Biology (English)	M/s Wiley Eastern New Delhi
31.	XI	Biology Volume-1 & Volume II (Hindi)	M/s Hemkunt Press New Delhi

<i>Sl. No.</i>	<i>Class</i>	<i>Name of the Title</i>	<i>Name of the Publisher</i>
32.	XI	Elementary Statistics Volumes I & II (English)	M/s Allied Publishers Pvt. Ltd., New Delhi
33.	XI	Elementary Statistics Volumes I & II (Hindi)	-do-
34.	XI	Field Work Manual for Geography (English)	M/s Oxford & IBH Publishing Co., New Delhi
35.	XI	Field Work Manual for Geography (Hindi)	M/s Children Book House New Delhi
36.	XI	Physical Basis of Geography (English)	M/s Pitamber Book Depot New Delhi
37.	XI	Physical Basis of Geography Volumes I & II (Hindi)	-do-
38.	XI	Geography Workbook (English)	M/s Neeta Prakashan New Delhi
39.	XI	Geography Workbook (Hindi)	-do-
40.	XI	Science and Society (English)	M/s Rajkamal Prakashan Delhi
41.	XI	Hindi Pratinidhi Ekanki	-do-
42.	XI	Kavya Tarangini	M/s Mahavir Book Depot Delhi
43.	XI	Hindi Pratinidhi Kahaniyan	M/s Shiksha Bharti, Delhi
44.	XI	Parijat	M/s Children Book House New Delhi
45.	XI	Chayanika	M/s Goyal Brothers Prakashan, New Delhi



NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING ·